



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Road Equivalent Tariff Pilot Extension to Islay, Colonsay & Gigha**

## **Evaluation Report**

# Road Equivalent Tariff Pilot Extension to Islay, Colonsay & Gigha Evaluation Report

## CONTENTS

Executive Summary	5
1 Introduction	11
1.1 Overview	11
1.2 Structure of this report	11
2 Background	12
2.1 Road Equivalent Tariff	12
2.2 Pilot area	12
2.2.1 Demographic context	14
2.2.2 Economic context	15
2.2.3 Ferry service profile	16
2.3 Change in fares	17
3 Key research findings	18
3.1 Method	18
3.2 Patronage	19
3.2.1 Is there additional patronage on the routes?	19
3.2.2 Has RET had an impact on the number of trips made by residents and visitors (Islay only)?	22
3.2.3 Is the additional patronage a consequence of existing or new users or both?	24
3.2.4 Has RET had an impact on the frequency of usage of existing users?	25
3.2.5 How sensitive is patronage to the reduction in fares?	25
3.2.6 Has RET had an impact on the decision of existing and new users to use the ferry services?	28
3.3 Displacement	29
3.3.1 Have RET fares had an impact on displacement from other routes?	29
3.3.2 Have RET fares displaced traffic/patronage from other modes?	30
3.4 Purpose of travel	31
3.4.1 For what purpose are people travelling on services to Islay, Colonsay and Gigha?	31
3.4.2 Has the introduction of RET affected the purposes for which people travel?	33
3.5 Average expenditure by residents and visitors	35
3.5.1 What type of accommodation were island visitors using?	36
3.5.2 Has the introduction of RET resulted in an increase in spending by visitors?	36
3.5.3 Has the introduction of RET resulted in island residents spending more on the mainland?	37
4 Capacity of the ferries	39
4.1 Current capacity	39
4.1.1 Vessels	39
4.1.2 Capacity utilisation	40
4.2 Ferry users' views on capacity utilisation	42
4.2.1 Booking ahead	42
4.2.2 Travelling on preferred time and day	43

4.3	Future capacity	44
4.3.1	Overview	44
4.3.2	Increasing capacity utilisation	44
5	ANNEX A: Secondary data analysis	45
	Economic data	45
	Highlands and Islands Enterprise fragile areas	45
	Scottish Index of Multiple Deprivation	45
	Gross Value Added	46
	Labour market	48
	Tourism data	51
	Annual events	52
	Whisky tourism	52
	Housing market data	53
	Residential property values	53
	Second or holiday residence	54

## Table of Figures

Figure 2.1:	Map of the pilot area ferry routes	13
Figure 2.2:	Population figures in the pilot area	15
Figure 3.1:	Impact of RET reduced fares on using the ferry on last trip	29
Figure 3.2:	Purpose of trip among survey respondents in 2014	32
Figure 3.3:	Purpose of trip for visitors, 2012-2014, summer only	33
Figure 3.4:	Purpose of trip for Islay residents, 2012-2014, summer only	34
Figure 3.5:	Purpose of trip for Colonsay, Gigha and Jura residents, 2012-2014, summer only	35
Figure 3.6:	Type of Accommodation for 2014 visitors	36
Figure 4.1:	Ferry users' perceptions of how booking ahead has changed since the introduction of RET	42
Figure 4.2:	Ferry users' perception of how travelling on preferred day and time has changed since the introduction of RET	43

## List of Tables

Table 2.1: Population figures and trends in the pilot area	14
Table 2.2: Ferry Routes and Operators – 2015	16
Table 2.3: Service Characteristics – Summer 2015	17
Table 2.4: Published RET fares and absolute and percentage change following the introduction of RET	18
Table 3.1: Survey sample distribution	19
Table 3.2: Full year passengers on ferry services to Colonsay, Gigha and Islay, November 2011 – October 2012 (pre-RET) and November 2012-October 2014 (during-RET)	21
Table 3.3: Full year cars on ferry services to Colonsay, Gigha and Islay, November 2011 – October 2012 (pre-RET) and November 2012-October 2014 (during-RET)	21
Table 3.4: Carryings percentage change, winter and summer, services to Colonsay, Gigha and Islay	22
Table 3.5: Total patronage for winter and summer period – visitor and resident estimated share	23
Table 3.6: Additional trips by Islay visitors and residents (Summer only)	23
Table 3.7: Price elasticity of demand, winter and summer periods	26
Table 3.8: Change in fares, patronage and price elasticity of demand following the introduction of RET	28
Table 3.9: Expenditure by visitors to the islands	37
Table 3.10: Expenditure of island residents to the Scottish mainland economy	38
Table 4.1: Routes Vessel Characteristics and Capacity	39
Table 4.2: Capacity Utilisation Banding in the first two years of the pilot operation	41

## Executive Summary

### Background

This report analyses the findings from surveys conducted to inform the evaluation of the introduction of Road Equivalent Tariff (RET) pilot scheme for ferry services to Islay, Colonsay and Gigha. It also provides additional information on patronage levels and trends and analyses the economic, tourism and housing baseline of the pilot area.

The RET fares scheme involves setting ferry fares on the basis of the cost of travelling an equivalent distance by road with the intention to promote remote island economies by reducing the cost of ferry travel. In 2008, a pilot RET scheme was introduced for the Western Isles, Coll and Tiree (WICT)<sup>1</sup>. In 2011, the Scottish Government announced the continuation of RET as a permanent feature on the WICT for passengers and cars and a phased roll-out of pilot RET fares to other West Coast and Clyde islands, commencing with Islay, Colonsay and Gigha (ICG) on 21 October 2012.

### Description of pilot area

The pilot area comprises the islands of Islay, Colonsay and Gigha in the Argyll and Bute Council area. Figure A below provides information on the population of the pilot area.

Jura is considered as part of the pilot area since Jura residents can travel to the mainland via the Islay ferry service<sup>2</sup>. The island of **Islay** is the largest and most populated in the pilot area. According to the 2011 Census results<sup>3</sup> Islay has 3,228 usual residents. The island of **Colonsay** is located north of Islay and Jura and south of Mull. The island's population is 124 as recorded by the 2011 Census. The island of **Gigha** is located west of the Kintyre peninsula and east of Colonsay and Islay. The Census 2011 recorded a population of 163 on the island. The island of **Jura** lies north-east of Islay and has 196 usual residents according to the 2011 Census.

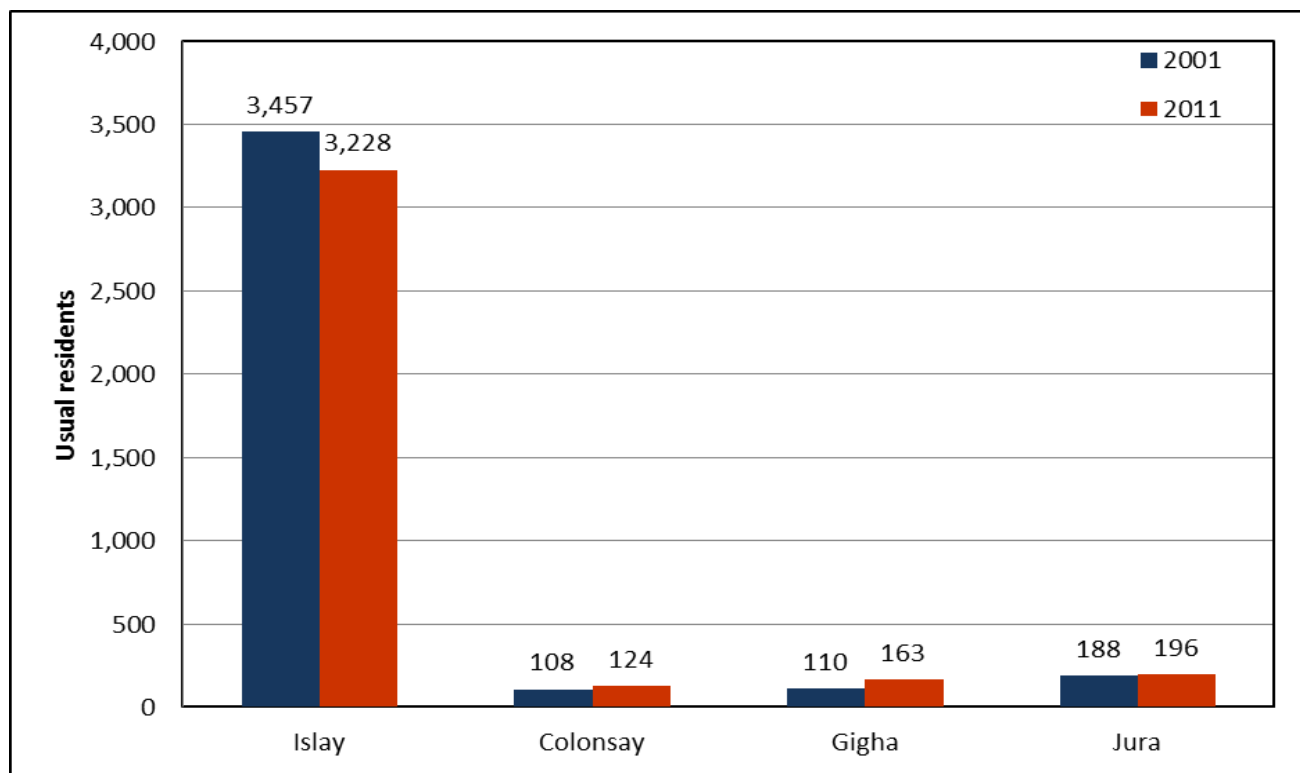
---

<sup>1</sup> The WICT ferry routes are: Oban – Castlebay / Lochboisdale; Uig – Tarbert / Lochmaddy; Ullapool – Stornoway; and Oban – Coll / Tiree.

<sup>2</sup> Car access to Jura during the entire year and passenger access to Jura outside the summer season is only possible by using the ferry between Islay and Jura.

<sup>3</sup> <http://www.scotlandscensus.gov.uk/documents/censusresults/release1c/rel1c2sb.pdf>

**Figure A: Population figures in the pilot area**



Source: Scotland Census 2011

Table A below sets out the ferry routes that connect the islands of the pilot area with the Scottish mainland. **Islay** is served by two ferry routes linking Kennacraig (located on the north-west coast of the Kintyre peninsula) with Port Askaig and Port Ellen. The journey time takes around 2 hours and 5 minutes to Port Askaig and 2 hours and 20 minutes to Port Ellen. **Colonsay** is served by a single vessel service that connects the island with Oban on the mainland. The journey takes 2 hours and 20 minutes. **Gigha** is served by a single ferry service that links the main settlement at Ardminish with Tayinloan on Kintyre. The crossing time is 20 minutes.

**Table A: Ferry Routes – 2015**

Island	Ferry Route	Category	Operation Period	Operator
<b>Islay</b>	Kennacraig – Port Ellen	Vehicle	Annual	CalMac
	Kennacraig – Port Askaig	Vehicle	Annual	CalMac
<b>Colonsay</b>	Oban – Colonsay	Vehicle	Annual	CalMac
	Oban – Colonsay – Port Askaig – Kennacraig	Vehicle	April to November	CalMac
<b>Gigha</b>	Tayinloan – Gigha	Vehicle	Annual	CalMac

Source: CalMac

## Method

In 2012, Transport Scotland commissioned Vector Research to conduct on-board surveys on the Islay, Colonsay and Gigha ferry services and household surveys on Colonsay, Gigha and Jura to inform the evaluation of the RET pilot. The aim of the surveys was to provide information from service users (both residents of the islands and visitors) on their use of the ferry services before and during the pilot.

The surveys were carried out over a three year period, which commenced in June 2012 (prior to the introduction of RET) and ran until October 2014. Each round of on-board surveys was executed in two waves, summer (August) and winter (October). Household surveys were not undertaken in separate waves and no strict monthly quotas were used<sup>4</sup>. Table B below shows the distribution of sample sizes among the surveys and the execution waves.

**Table B: Survey sample distribution**

	Islay, Colonsay and Gigha visitors on-board survey		Islay residents on-board survey		Colonsay, Gigha and Jura household survey
	Summer	Winter	Summer	Winter	
<b>2012</b>	1,154	525	161	134	107
<b>2013</b>	1,246	515	130	108	110
<b>2014</b>	1,158	568	150	90	112

## Findings

### Patronage

Fare and patronage changes per route in the first year of the RET pilot operation are shown at Table C below<sup>5</sup>.

**Table C: Summary of fare changes and patronage per route during the first year of the RET pilot**

Route	FARE				PATRONAGE			
	Passengers		Cars		Passengers		Cars	
	Absolute change	% change	Absolute change	% change	Absolute change	% change	Absolute change	% change
Islay-Kennacraig	-£3.90	-38%	-£24.00	-44%	3,742	2%	5,163	9%
Colonsay-Oban	-£7.45	-52%	-£38.00	-52%	1,267	9%	502	12%
Gigha-Tayinloan	-£1.10	-32%	-£5.75	-45%	2,272	4%	1,568	12%
Average (3 routes)		-44%		-48%		3%		10%

**Source: TS calculations**

<sup>4</sup> Depending on the interview date the household survey data may be considered as part of the summer or winter wave.

<sup>5</sup> Note that a comparison is made between first year RET fares and summer 2012 (pre-RET) fares. The comparison in patronage data is made between patronage in the first year of RET (November 2012 to October 2013) and pre-RET year (November 2011 to October 2012).



For the first year of RET:

- Fares fell by an average 44% and 48% for passengers and cars respectively. The Oban to Colonsay route saw the greatest decrease in fares with the passenger fare falling 52% and the car fare falling 52%
- The average increase in patronage across all three routes was 3% for passengers and 10% for cars
- For all three islands, there was a greater percentage increase in the number of cars carried than in the number of passengers

During the second year of the pilot:

- The average increase in patronage across all three routes was 5% for passengers and 7% for cars.

### Tourism

Analysis has been undertaken of the visitor share on the on-board surveys across the period of the RET pilot operation. The analysis considers only Islay visitors (excluding Colonsay, Gigha and Jura) and findings from the summer on-board surveys. For the second year of RET:

- An additional 12,888 passenger trips and 7,526 car trips were undertaken by visitors to Islay.

Findings from the 2014 on-board visitors surveys suggest:

- 48% of visitors used the ferry route for the first time
- Lower fares has influenced 17% of visitors to use the ferry service for their trip
- 77% of visitors paid for accommodation. Over a third (35%) stayed at a hotel or guest house with a further 21% staying at a B&B whilst 18% chose self-catering accommodation.

### Residents

Findings from the 2014 residents surveys suggest:

- The increase in patronage is mainly due to existing service users using the ferry route more frequently
- Changes to ferry fares were an important or very important factor for over half of existing service users who had used the ferry more since the introduction of RET with 16% of Islay residents and 23% of Colonsay, Gigha and Jura residents influenced by fares to use the ferry for their trip
- The most common purpose of travelling has remained unchanged since the introduction of RET. For Islay residents holiday or short-break was the most common purpose of travel and shopping was most common for Colonsay, Gigha and Jura residents

### Capacity

Table D below sets out the main characteristics of the vessels on the routes. Capacity levels for passengers range from 200 (MV Loch Ranza) to 951 (MV Isle of Mull) and for cars range from 12 (MV Loch Ranza) to 98 (MV Hebrides).

**Table D: Routes Vessel Characteristics and Capacity**

Route	Vessel(s)	Year of Build	Length (m)	Passengers	Cars
Islay-Kennacraig	MV Finlaggan	2011	89.9	550	85
	MV Hebridean Isles	1985	85.15	494	62
	MV Isle of Arran	1983	84.92	448	76
	MV Lord of the Isles <sup>6</sup>	1989	84.6	506	54
Colonsay-Oban	MV Lord of the Isles	1986	84.6	506	54
	MV Isle of Mull	1988	90.03	951	70
	MV Hebridean Isles	1985	85.15	494	62
	MV Hebrides <sup>7</sup>	2000	99.0	612	98
Gigha-Tayinloan	MV Loch Ranza	1986	30.2	200	12
	MV Loch Linnhe <sup>8</sup>	1986	30.2	200	12

Source: CalMac

Capacity data is commercial in confidence, therefore, it is not presented in this report. Nevertheless, whilst some routes may not have maximum capacity utilisation, particular sailing times or sailing legs may be more affected than others and in excess of their capacity utilisation.

<sup>6</sup> Supported the service in winter 2012/13, between 5<sup>th</sup> December and 28<sup>th</sup> March as winter relief vessel

<sup>7</sup> Supported the service in winter 2012, between 3<sup>rd</sup> and 21<sup>st</sup> December as winter relief vessel

<sup>8</sup> Supported the service in winter 2013/14, between 29<sup>th</sup> December and 3<sup>rd</sup> March as winter relief vessel

Over the period of RET:

- Capacity on the Islay routes has become more constrained. For the Gigha and Colonsay routes the increase in demand does not appear to have led to capacity issues
- Some island residents have found that booking ahead has become more difficult.
- Findings from the on-board Islay residents surveys suggest that whilst 44% of islanders found booking ahead about the same, 33% indicated that booking ahead has become more difficult since the introduction of RET.
- Findings from the household surveys suggest that whilst 25% of islanders found booking ahead about the same 38% of the Colonsay, Gigha and Jura residents find booking ahead more difficult since the introduction of RET.
- For Islay residents, travelling on preferred day and time has become more difficult whilst for the majority of visitors and Colonsay, Gigha and Jura residents it has remained the same.

## Introduction

### 1.1 Overview

This report analyses the findings from surveys conducted to inform the evaluation of the introduction of Road Equivalent Tariff (RET) pilot scheme for ferry services to Islay, Colonsay and Gigha. On-board and household surveys were conducted in summer and winter waves between 2012 and 2014. It also provides additional information on patronage levels and trends and analyses the economic, tourism and housing baseline of the pilot area.

The report aims to examine the key research questions as outlined below:

- is there additional patronage on the routes and, if so, is this a consequence of existing or new users or both?
- how sensitive is patronage to the reduction in fares and how does it compare to the Western Isles, Coll and Tiree pilot?
- is there any evidence that any additional patronage is the result of displacement?
- for what purpose are people travelling and has the introduction of RET affected this?
- is there an impact on 'leakages' and 'injections' from the island economies?

An additional scope of this research is to investigate any capacity issues brought about by the introduction of RET and propose possible demand management options.

### 1.2 Structure of this report

Following this introductory chapter this report continues with the following structure: Chapter 2 provides background information on the RET, the phased roll out to the CHFS network and the basic characteristics of the pilot area of this study. Chapter 3 looks into the key findings of the primary research combining the on-board and household survey results and CalMac data on patronage and trends to examine the three key research questions. Chapter 4 discusses the characteristics and capacity utilisation of vessels serving the routes of the pilot area. Finally, a high level analysis of secondary data to provide sufficient backdrop on the impact of RET on economy, tourism and housing of the pilot area is provided on Annex A.

## Background

### 1.3 Road Equivalent Tariff

The 'Ferries Plan 2013-2022'<sup>9</sup>, published in December 2012, committed to rolling out the RET fares scheme across the ferries network. The RET fares scheme involves setting ferry fares on the basis of the cost of travelling an equivalent distance by road. The rationale behind the scheme is to reduce the economic disadvantage suffered by remote island communities and to secure ferry travel, with the intention of promoting the local economies as well as the wider national economy.

The RET formula for calculating fares is a combination of a fixed element<sup>10</sup> and a variable element<sup>11</sup> – a rate per mile so that fares are a function of the length of ferry route. In 2008, a pilot RET scheme was introduced for the Western Isles, Coll and Tiree (WICT)<sup>12</sup>. In 2011, the Scottish Government announced the continuation of RET as a permanent feature on the WICT for passengers and cars and a phased roll-out of pilot RET fares to other West Coast and Clyde islands, commencing with Islay, Colonsay and Gigha (ICG) on 21 October 2012, in time for the CalMac winter timetable<sup>13</sup>.

### 1.4 Pilot area

The pilot area comprises the islands of Islay, Colonsay and Gigha in the Argyll and Bute Council area. According to 2011 Scotland's Census, the Argyll and Bute council area has 23 inhabited islands<sup>14</sup> and covers 6,909 square kilometres of mainland. Jura is considered part of the pilot area since Jura residents can travel to the mainland via the Islay ferry service. RET was not introduced on the Jura ferry service since this is run by the Local Authority, however, car access to Jura during the entire year and passenger access to Jura outside the summer season is only possible using the ferry between Islay and Jura. Figure 2.1 illustrates the geographic location of the islands and the ferry routes being considered in this study.

---

<sup>9</sup> Transport Scotland, December 2012, 'Ferries Plan 2013-2022'

[http://www.transportscotland.gov.uk/sites/default/files/documents/rrd\\_reports/uploaded\\_reports/j254579/j254579.pdf](http://www.transportscotland.gov.uk/sites/default/files/documents/rrd_reports/uploaded_reports/j254579/j254579.pdf)

<sup>10</sup> The fixed element is to ensure services remain sustainable by ensuring adequate revenue to cover fixed costs such as maintaining harbour infrastructure and vessels.

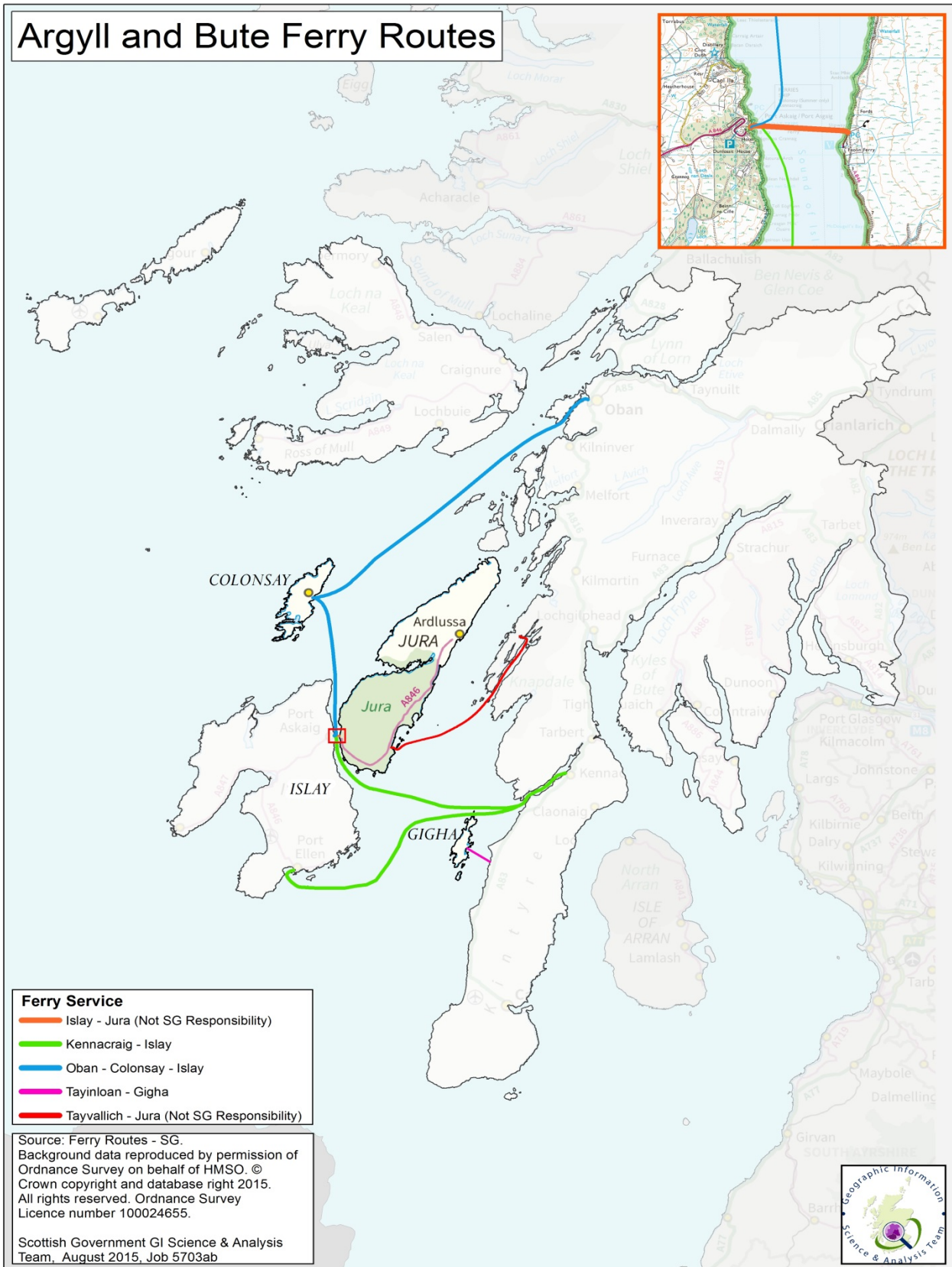
<sup>11</sup> The variable element was calculated based on data by independent research by RAC on illustrative cost of running a car by fuel type and engine size.

<sup>12</sup> The WICT ferry routes are: Oban – Castlebay / Lochboisdale; Uig – Tarbert / Lochmaddy; Ullapool – Stornoway; and Oban – Coll / Tiree.

<sup>13</sup> The CalMac winter timetable runs from the end of October to the end of March and the summer period runs from the start of April to the end of October.

<sup>14</sup> The Argyll and Bute islands are the following 23 inhabited islands: Bute, Coll, Colonsay, Danna, Easdale, Elean da Mheinn, Erraid, Gigha, Gometra, Inchtavannach, Innis Chonain, Iona, Islay, Jura, Kerrera, Lismore, Luìng, Mull, Oronsay, Seil, Shuna, Tiree, Ulva.

**Figure 2.1: Map of the pilot area ferry routes**



Source: The Scottish Government - Geographic Information Science

### 1.4.1 Demographic context

Table 2.1 and figure 2.2 below provide information on the population of the pilot area. The island of **Islay** is the largest and most populated in the pilot area. According to the 2011 Census<sup>15</sup> results Islay has 3,228 usual residents. The population of Islay saw a decrease of 7 per cent since the previous census in 2001. Islay residents account for 21% of the total population of Argyll and Bute islands.

The island of **Colonsay** is located north of Islay and Jura and south of Mull. The island's population is 124 as recorded by the 2011 Census and has increased by 15% since the last Census in 2001. The population of Colonsay accounts for less than 1% of the island population of Argyll and Bute.

The island of **Gigha** is located west of the Kintyre peninsula and east of Colonsay and Islay. The Census 2011 recorded a population of 163 on the island. Compared to the 2001 Census results the population of Gigha increased by 48% and now accounts for 1.1% of the total population of the Argyll and Bute islands.

The island of **Jura** lies north-east of Islay. Despite its large geographic area, Jura has much fewer residents than Islay and is one of the least densely populated islands of Scotland. Jura's population is 196 residents and has decreased by 4% since 2001. Jura residents account for 1.3% of all residents of the Argyll and Bute islands.

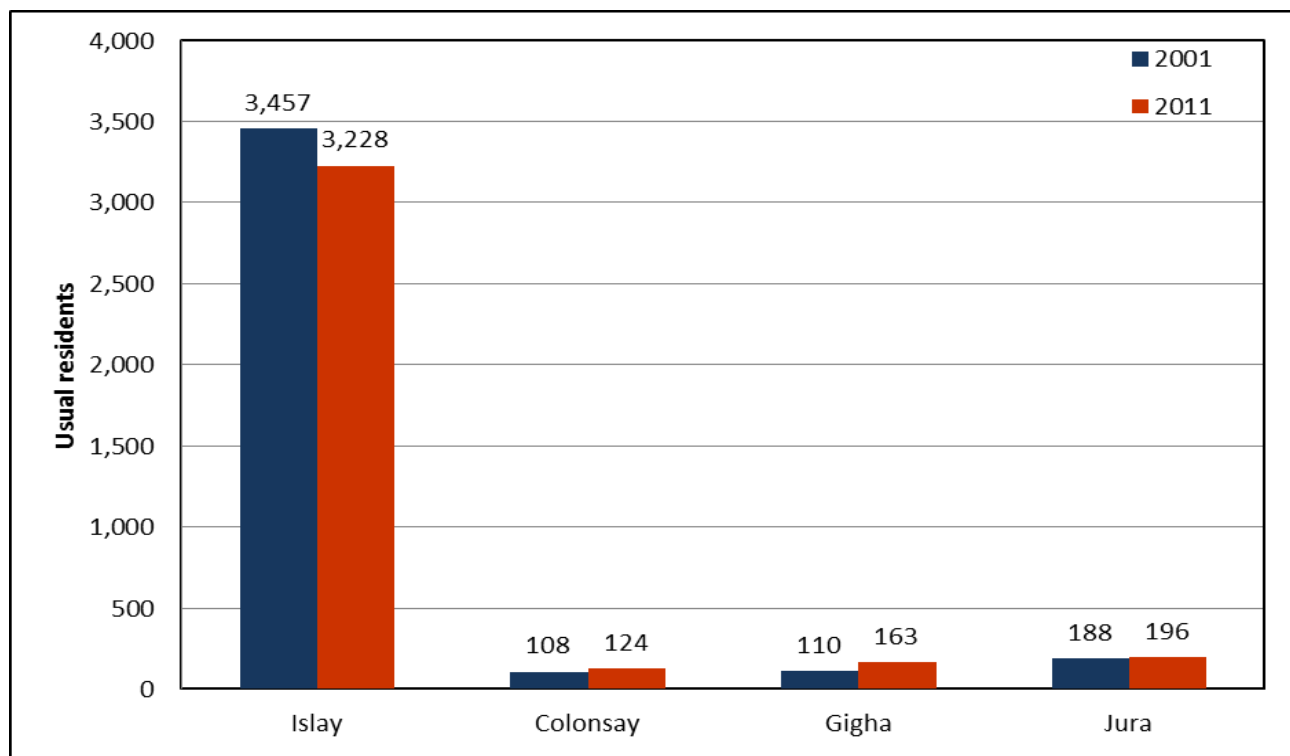
**Table 2.1: Population figures and trends in the pilot area**

Island and Council Area	2001	2011	% change	% share of the Argyll & Bute islands	% share of Argyll & Bute Council	% share of all inhabited Scottish islands
<b>Islay</b>	3,457	3,228	-6.6%	21.4%	3.1%	3.7%
<b>Colonsay</b>	108	124	14.8%	0.8%	0.1%	0.1%
<b>Gigha</b>	110	163	48.2%	1.1%	0.2%	0.2%
<b>Jura</b>	188	196	4.3%	1.3%	0.2%	0.2%
<b>Argyll &amp; Bute islands</b>	15,889	15,105	-4.9%			
<b>Argyll &amp; Bute Council</b>	91,306	88,166	-3.4%			
<b>All Inhabited Scottish islands</b>	99,739	103,702	3.9%			

Source: Scotland Census 2011

<sup>15</sup> <http://www.scotlandscensus.gov.uk/documents/censusresults/release1c/re11c2sb.pdf>

**Figure 2.2: Population figures in the pilot area**



Source: Scotland Census 2011

#### 1.4.2 Economic context

The islands economies largely depend on the primary and secondary sector.

**Islay's** economy is the largest within the pilot area. The strongest areas of the island's economic activity are agriculture and fishing, distilling and tourism. The island has eight whisky distilleries which attract thousands of tourists per year. The island also has a wave power station, becoming the world's first commercial wave power station in 2000. The key export products of the island are whisky and livestock (cattle and lamb) whilst the key imports are agricultural supplies, retail, barley and fuels.

**Colonsay** locally produces honey from the black bees population on the island. It also has a micro-brewery producing three different beer products. Tourism and fishing have some fair share of the island's economy. The key export products of the island are honey and livestock whilst the key import products are agricultural supplies, retail and fuels.

**Gigha's** economy relies on livestock and fish farming as well as tourism. The island also has a creamery producing goat cheese. The key export products of the island are fish (farmed halibut) and livestock whilst the key import products are agricultural supplies, halibut feed, retail and fuels.

The most significant area of economic activity in **Jura** is the Jura whisky distillery. Tourism also plays important role on economy together with forestry and agriculture. The key export products of the island are whisky and livestock whilst the key imports are agricultural supplies, retail, barley and fuels.



### 1.4.3 Ferry service profile

Table 2.2 below sets out the ferry routes that connect the islands of the pilot area with the Scottish mainland. The main service characteristics are presented on table 2.3.

**Islay** is served by two ferry routes linking Kennacraig (located on the north-west coast of the Kintyre peninsula) with Port Askaig and Port Ellen. The journey time takes around 2 hours and 5 minutes to Port Askaig and 2 hours and 20 minutes to Port Ellen. Services operate seven days per week from either Port Askaig or Port Ellen, with the majority of services, around three in every four, arriving and departing from Port Ellen.

**Colonsay** is served by a single vessel service that connects the island with Oban on the mainland. The journey takes 2 hours and 20 minutes, which makes Colonsay to Oban the longest route in the pilot area. The ferry service runs four times a week during winter and six times a week during the summer season. There is also an additional summer service from Kennacraig via Islay.

**Gigha** is served by a single ferry service that links the main settlement at Ardminish with Tayinloan on Kintyre. The crossing time is 20 minutes and a frequent service operates seven days per week.

A vehicle ferry service to Islay which is run by ASP Ships on behalf of Argyll and Bute Council serves **Jura** residents. The crossing time is 5 minutes and the service runs every day. There are frequent crossings linking Jura residents to the mainland via the Islay services. An alternative travel option for accessing the Scottish mainland is via the passenger only service between Craighouse on Jura and Tayvallich on Kintyre. The service is run by Jura Development Trust and is available only on the summer period.

**Table 2.2: Ferry Routes and Operators – 2015**

Island	Ferry Route	Category	Operation Period	Operator
<b>Islay</b>	Kennacraig – Port Ellen	Vehicle	Annual	CalMac
	Kennacraig – Port Askaig	Vehicle	Annual	CalMac
<b>Colonsay</b>	Oban – Colonsay	Vehicle	Annual	CalMac
	Oban – Colonsay – Port Askaig – Kennacraig	Vehicle	April to November	CalMac
<b>Gigha</b>	Tayinloan – Gigha	Vehicle	Annual	CalMac
<b>Jura</b>	Port Askaig – Feolin	Vehicle	Annual	ASP on behalf of A&BC
	Kennacraig – Port Askaig – Feolin	Vehicle	Annual	CalMac
	Tayvallich – Craighouse	Passenger	April to September	Jura Development Trust

Source: CalMac

**Table 2.3: Service Characteristics – Summer 2015**

<b>Kennacraig – Islay</b>							
First sailing of the day	0700	0700	0700	0700	0700	0700	0945
Last sailing of the day	1800	1800	1800	1800	1800	1800	1800
Number of crossings	5	5	3	5	5	4	3
Crossing time (minutes)	115-130	115-130	115-130	115-130	115-130	115-130	115-130
<b>Oban - Colonsay</b>							
	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
First sailing of the day	1700	-	1530	0900	1500	1630	1730
Last sailing of the day	1700	-	1530	0900	1500	1630	1730
Number of crossings <sup>16</sup>	1	-	1	1	1	1	1
Crossing time (minutes)	140	-	150	160	140	150	140
<b>Tayinloan - Gigha</b>							
First sailing of the day	0800	0800	0800	0800	0800	0800	1000
Last sailing of the day	1800	1800	1800	1800	1900	1800	1700
Number of crossings	10	10	10	10	11	10	7
Crossing time (minutes)	20	20	20	20	20	20	20
<b>Jura - Islay</b>							
First sailing of the day	0735	0600	0735	0735	0735	0735	0830
Last sailing of the day	2300	2300	2300	2300	2300	2300	1830
Number of crossings	17	18	18	17	17	17	7
Crossing time (minutes)	5	5	5	5	5	5	5

Source: CalMac

## 1.5 Change in fares

Table 2.4 shows how fares on services to Islay, Colonsay and Gigha changed with the introduction of RET in October 2012<sup>17</sup>. All fares data<sup>18</sup> used for comparisons prior and during RET are standard single fares. As summer and winter fares differed prior to the introduction of the year-round RET fare, the change in fares differs when comparing between winter and summer fares. The greatest absolute and percentage decreases in fares are seen in summer as pre-RET fares were higher in summer than in winter.

Comparing the three islands, Colonsay saw the greatest fares decrease across patronage type in both summer and winter. For each island, the absolute and percentage decrease in fares was generally greater for cars than for passengers. The average change in passenger fares across all three routes was -29%, when comparing with pre-RET winter fares, and -44%, when comparing with pre-RET summer fares. The average change in car fares across all three routes was -35%, when comparing with pre-RET winter fares, and -48%, when comparing with pre-RET summer fares.

<sup>16</sup> This is for a one-way sailing

<sup>17</sup> The absolute and percentage change for winter fares is calculated by comparing RET fares for winter 2012/13 (the first winter RET was in operation on the routes) with winter 2011/12 (pre-RET). The absolute and percentage change for summer fares is calculated by comparing RET fares for summer 2013 (the first summer RET was in operation on the routes) with summer 2012 (pre-RET).

<sup>18</sup> The fares for this analysis are published fares on CalMac's website and they are expressed in nominal terms.

**Table 2.4: Published RET fares and absolute and percentage change following the introduction of RET<sup>19</sup>**

Route	Passengers					Cars				
	RET fare	Winter		Summer		RET fare	Winter		Summer	
		Abs change	% change	Abs change	% change		Abs change	% change	Abs change	% change
Islay-Kennacraig	£6.30	-£1.35	-18%	-£3.90	-38%	£31.00	-£12.50	-29%	-£24.00	44%
Colonsay-Oban	£6.90	-£4.25	-38%	-£7.45	-52%	£35.00	-£23.00	-40%	-£38.00	52%
Gigha-Tayinloan	£2.35	-£0.60	-20%	-£1.10	-32%	£7.00	-£3.25	-32%	-£5.75	45%
Average across all 3 routes			-29%		-44%			-35%		-48%

Source: CalMac

## Key research findings

### 1.6 Method

In 2012, Transport Scotland commissioned Vector Research to conduct on-board surveys on the Islay, Colonsay and Gigha ferry services and household surveys on Colonsay, Gigha and Jura to inform the evaluation of the RET pilot. Since Jura residents use the Islay ferry service to travel to the mainland<sup>20</sup> they were also surveyed. The aim of the surveys was to provide information from service users (both residents of the islands and visitors) on their use of the ferries before and during the pilot, in particular, to explore the key research questions outlined in Section 1. The survey data were supplemented by carryings data from CalMac.

The surveys were carried out over a three year period, which commenced in June 2012 (prior to the introduction of RET) and ran until October 2014. Each round was executed in two waves, summer (August) and winter (October). Household surveys were not undertaken in separate waves and no strict monthly quotas were used<sup>21</sup>. Table 3.1 below shows the distribution of sample sizes among the surveys and the execution waves. This report provides an overview of the key findings of the summer and winter 2014 surveys<sup>22</sup> and draws comparisons with previous years.

<sup>19</sup> Note that the comparison in fares is between winter 2012/13 (the first winter RET was in operation on the routes) and winter 2011/12 (pre-RET) and between summer 2013 (the first summer RET was in operation on the routes) and summer 2012 (pre-RET).

<sup>20</sup> Car access to Jura during the entire year and passenger access to Jura outside the summer season is only possible by using the ferry between Islay and Jura.

<sup>21</sup> For the purpose of the analysis household survey data may be considered in summer and winter waves based on the date the interviews were carried out.

<sup>22</sup> After the first year of surveys (2012), the data gathered were examined and used to review the questionnaires. Some amendments were made in an attempt to improve the quality of the data collected and the robustness of results. This means that for some questions, the results may not be directly comparable with the previous survey round. Where this is the case, this is highlighted.

**Table 3.1: Survey sample distribution**

	Islay, Colonsay and Gigha visitors on-board survey		Islay residents on-board survey		Colonsay, Gigha and Jura household survey
	Summer	Winter	Summer	Winter	
<b>2012</b>	1,154	525	161	134	107
<b>2013</b>	1,246	515	130	108	110
<b>2014</b>	1,158	568	150	90	112

This section draws on the findings from the on-board and household surveys and CalMac patronage data to examine the key research questions:

- is there additional patronage on the routes and, if so, is this a consequence of existing or new users or both?
- how sensitive is patronage to the reduction in fares and how does it compare to the Western Isles, Coll and Tiree pilot?
- is there any evidence that any additional patronage is the result of displacement?
- for what purpose are people travelling and has the introduction of RET affected this?
- is there an impact on ‘leakages’ and ‘injections’ from the island economies?

## **1.7 Patronage**

### 1.7.1 Research question: Is there additional patronage on the routes?

To determine whether there is additional patronage on the routes, we examine CalMac data on the number of passengers and cars carried on services to and from Islay, Colonsay and Gigha over the pre-RET period and the RET period. The pre-RET period covers the 12 months prior to the introduction of RET<sup>23</sup>, November 2011 – October 2012. The RET period is defined as the 2 years of the RET pilot in operation. The months November 2012 – October 2013 (the first 12 months of RET) cover the first RET pilot year and the months November 2013 – October 2014 cover the second RET pilot year.

#### Full year Breakdown

Tables 3.2 and 3.3 below demonstrate respectively passenger and car carryings data for the pre-RET year and the two consecutive pilot years of RET. They also present percentage changes by comparing pre-RET with first year of RET pilot carryings, first year with second year of RET pilot carryings and pre-RET with second year of RET pilot carryings.

<sup>23</sup> It should be noted that RET was introduced on the routes on 21 October 2012. This period will therefore comprise several days where RET was in operation.

Patronage on the Islay route is significantly higher, approximately 190,000 passengers and 66,000 cars over the second year of the pilot operation, compared to both the Gigha (64,000 passengers and 16,000 cars) and Colonsay (14,000 passengers and 4,500 cars) routes.

For the first year of RET:

- there was an increase in foot and car patronage on the Islay, Colonsay and Gigha ferry services
- for all three islands, there was a greater percentage increase in the number of cars carried than in the number of passengers
- the Colonsay-Oban route saw the greatest percentage increase in both passengers (9%) and cars (12%)
- the average increase in patronage across all three routes was 3% for passengers and 10% for cars

During the second year of the pilot operation:

- whilst the increasing patronage trend continued for both passengers and cars in Gigha and Islay, the Colonsay-Oban route saw a decrease in both passenger and car carryings compared to the previous year
- there was a decrease of 12% for passengers and 6% for cars for the Colonsay-Oban route
- the Gigha-Tayinloan route saw the greatest percentage increase in passengers (9%), whilst the Islay-Kennacraig route saw the greatest percentage increase in cars (16%)

For the overall change in patronage between the pre-RET year and the second year of the pilot:

- whilst there was an increase in foot patronage on the Islay and Gigha ferry services, foot patronage decreased for the Colonsay-Oban route. Car carryings increased significantly across all routes
- there was an overall decrease of 4% for passengers for the Colonsay-Oban route but an increase of 7% for the Islay-Kennacraig route and 14% for the Gigha-Tayinloan route
- car carryings increased by 24% for the Gigha service and by 17% and 5% for the Islay and Colonsay services respectively
- the average increase in patronage across all three routes was 8% for passengers and 18% for cars

**Table 3.2: Full year passengers on ferry services to Colonsay, Gigha and Islay, November 2011 – October 2012 (pre-RET) and November 2012-October 2014 (during-RET)**

Passengers						
Route	pre-RET	RET pilot year 1	RET pilot year 2	% change (pre-RET and RET pilot year 1)	% change (RET pilot years 1 and 2)	% change (pre-RET and RET pilot year 2)
Islay-Kennacraig	176,889	180,631	189,912	2%	5%	7%
Colonsay-Oban	14,237	15,504	13,603	9%	-12%	-4%
Gigha-Tayinloan	56,090	58,362	63,753	4%	9%	14%
Total across all 3 routes	247,216	254,497	267,268	3%	5%	8%

Source: CalMac

**Table 3.3: Full year cars on ferry services to Colonsay, Gigha and Islay, November 2011 – October 2012 (pre-RET) and November 2012-October 2014 (during-RET)**

Cars						
Route	pre-RET	RET pilot year 1	RET pilot year 2	% change (pre-RET and RET pilot year 1)	% change (RET pilot years 1 and 2)	% change (pre-RET and RET pilot year 2)
Islay-Kennacraig	56,328	61,491	66,132	9%	8%	17%
Colonsay-Oban	4,266	4,768	4,491	12%	-6%	5%
Gigha-Tayinloan	12,625	14,193	15,713	12%	11%	24%
Total across all 3 routes	73,219	80,452	86,336	10%	7%	18%

Source: CalMac

### Seasonal Breakdown

Table 3.4 below shows the percentage change in passenger and car patronage for each of the three routes (and the average across the three routes) for the CalMac winter (November – March) and summer (April – October) periods separately during the two years of the RET pilot operation<sup>24</sup>.

In the first year of the pilot operation, for all routes, there was a greater percentage change in car and passenger patronage over the summer period than over the winter period. The greatest percentage increase in car carryings over the summer period was seen on the Gigha route (19%) whilst the smallest increase (10%) was seen on the Islay route. Conversely, in terms of the change in winter patronage, the greatest percentage change was seen on the Islay route (7%) whilst a percentage decrease (-3%) was recorded on the Gigha route.

During the second year of the pilot operation, for the Islay route, there was a greater percentage change in car and passenger patronage over the summer period than over the winter period, with an increase of 7% for passengers and 9% for cars over summer. However, for the Gigha route there was a greater percentage increase in both foot and car

<sup>24</sup> Full data for the third year of the RET pilot are not yet available.

patronage over the winter period than over the summer period. Passengers increased by 11% and cars increased by 13% over the winter while the respective figures over the summer period are 9% and 10%. Finally for the Colonsay route there was a decrease in passenger patronage over both winter and summer periods of 6% and 13% respectively. Whilst car patronage saw a decrease of 8% over the summer, it increased by 2% over winter.

**Table 3.4: Carrying percentage change, winter and summer, services to Colonsay, Gigha and Islay**

<b>Year 1</b>	<b>% change (winter 2011/12 - winter 2012/13)</b>		<b>% change (summer 2012 - summer 2013)</b>	
<b>Route</b>	<b>Passengers</b>	<b>Cars</b>	<b>Passengers</b>	<b>Cars</b>
Islay-Kennacraig	0.2%	7.0%	2.7%	10.0%
Colonsay-Oban	5.2%	3.2%	9.5%	14.0%
Gigha-Tayinloan	-12.3%	-3.4%	9.3%	19.4%
Average across all 3 routes	-2.5%	4.8%	4.6%	11.8%
<b>Year 2</b>	<b>% change (winter 2012/13 - winter 2013/14)</b>		<b>% change (summer 2013 - summer 2014)</b>	
<b>Route</b>	<b>Passengers</b>	<b>Cars</b>	<b>Passengers</b>	<b>Cars</b>
Islay-Kennacraig	-0.1%	3.9%	6.8%	8.9%
Colonsay-Oban	-6.0%	2.1%	-13.3%	-7.7%
Gigha-Tayinloan	11.4%	13.4%	8.7%	9.7%
Average across all 3 routes	2.1%	5.5%	5.9%	8.0%

**Source: CalMac**

**1.7.2 Research question: Has RET had an impact on the number of trips made by residents and visitors (Islay only)?**

Analysis has been undertaken of the visitor and resident split from the Islay on-board surveys across the period of the RET pilot operation. This analysis only considers Islay since the on-board residents survey was carried out for Islay residents only. It should be highlighted that Islay forms the biggest island of the pilot area in terms of population and ferry carryings. Another limitation is that only the surveys carried out in summer 2012 can be treated as baseline for this exercise.

The on-board surveys provide a limited sample from which the approximate numbers of trips by visitors can be estimated. However, given the very small sample these figures should be taken only as a broad indication of trends. From the summer 2012 pre-RET survey it is estimated that around 86% of trips were generated by visitors to Islay and around 14% by Islay residents. Similarly estimates from the on-board survey for summer 2013 indicate that 89% of trips were made by Islay visitors and 11% by Islay residents with 87% of trips were made by Islay visitors and 13% by Islay residents for summer 2014. Applying these ratios to the overall ferry traffic, the change in Islay visitor travel is shown in table 3.5 along with the total patronage for the winter and summer periods.

**Table 3.5: Total patronage for winter and summer period – visitor and resident estimated share**

Year / period	Total patronage (Winter and Summer)	Winter only patronage (residents and visitors)	Summer only patronage (residents and visitors)	Summer only visitors	
				Number	% Share of summer total
<b>Passengers</b>					
2012	176,889	42,969	133,920	114,551	86%
2013	180,631	43,066	137,565	121,836	89%
2014	189,912	43,027	146,885	127,439	87%
<b>Cars</b>					
2012	56,328	15,358	40,970	35,044	86%
2013	61,491	16,431	45,060	39,908	89%
2014	66,132	17,066	49,066	42,570	87%

Source: TS calculations

Table 3.6 shows the number of additional trips made by Islay visitors during summer as well as the percentage change during the operation of the RET pilot.

Using the carryings data it is estimated that in the first year of RET a total of 121,836 passenger trips and 39,908 car trips were undertaken by visitors to Islay. This provides an estimate of an additional 7,285 passenger and 4,864 car trips compared to summer 2012. It is estimated that in the second summer of RET (2014) 127,439 passenger trips and 42,570 car trips were undertaken by Islay visitors, this represents an additional 12,888 passenger trips and 7,526 car trips compared to summer 2012.

**Table 3.6: Additional trips by Islay visitors (Summer only)**

	Total Islay patronage - Summer		Islay visitors	
	Number of additional trips	% change	Number of additional trips	% change
<b>Summer 2013 (RET year 1) compared to summer 2012 pre-RET</b>				
Passengers	3,645	3%	7,285	6%
Cars	4,090	10%	4,864	14%
<b>Summer 2014 (RET year 2) compared to summer 2012 pre-RET</b>				
Passengers	12,965	10%	12,888	11%
Cars	8,096	20%	7,526	21%

Source: TS calculations



### 1.7.3 Research question: Is the additional patronage a consequence of existing or new users or both?

To determine whether the increase in patronage is a consequence of new users or of existing users using the service more frequently, we draw on survey results from the combined summer and winter 2014 survey waves.

The findings suggest that the increase in patronage is, at least in part, due to new visitor users and does not appear to be due to new Colonsay, Gigha and Jura residents using the service. Information is not available for Islay residents on this question.

- Findings from the 2014 on-board visitors surveys suggest that almost half of visitors (48%) used the ferry route for the first time. This suggests that the increase in patronage is, in part, a consequence of new service users.
- Findings from the 2014 household survey suggest that 5% of Colonsay, Gigha and Jura residents used the route for the first time over the last twelve months<sup>25</sup>. This suggests that the increase in patronage was mainly a consequence of existing service users.

Findings from the 2014 surveys suggest that the increase in patronage is also, at least in part, due to existing users using the services more frequently.

- Findings from the 2014 on-board visitors survey suggest that, following the introduction of RET, the majority of existing users (77%) used the ferry service at the same frequency as before. Of the existing visitor users, 19% stated that they used the service more often since October 2012, indicating that the introduction of RET has brought some additional patronage from existing visitor service users.
- Findings from the 2014 on-board Islay residents survey suggest that, following the introduction of RET, two thirds (67%) of existing users used the ferry service at the same frequency as before RET. The introduction of RET may have brought some additional patronage from existing Islay resident service users since 26% of existing users stated that they used the service more often over the last two years.
- Findings from the 2014 household survey suggest that, following the introduction of RET, 60% of existing users in Colonsay, Gigha and Jura used the ferry service at the same frequency as before RET and 24% used the ferry more often. This indicates that the introduction of RET may have brought some additional patronage from existing Colonsay, Gigha and Jura resident service users.

---

<sup>25</sup> As discussed on chapter 2 of this report there is an alternative service to the mainland during the summer period.

#### 1.7.4 Research question: Has RET had an impact on the frequency of usage of existing users?

To determine the importance of fare changes on how frequently existing users use the ferry services, we examine findings from the combined summer and winter 2014 surveys. The findings suggest that reductions in fares brought about by RET were an important or very important factor in the decision of most existing users to use the ferry services more. It should be noted that, in all three surveys, findings indicate an increase in the impact of RET on the frequency of ferry usage when compared to 2013 results.

- Findings from the 2014 on-board visitors survey show that for 59% of existing service users who stated that they had used the ferry more over the past year, changes to fares were an important or very important factor in their decision to use the ferry service more frequently.
- Findings from the 2014 on-board Islay residents survey suggest that changes to ferry fares were an important or very important factor for over half (59%) of existing service users who stated that they had used the ferry more since October 2012.
- Findings from the 2014 household survey suggest that changes to ferry fares were an important or very important factor for 54% of existing service users residents in Colonsay, Gigha and Jura who stated that they had used the ferry more over the past two years.

#### 1.7.5 Research question: How sensitive is patronage to the reduction in fares?

To determine how responsive patronage is to the reduction in fares brought about by RET, we measure the price elasticity of demand by comparing the percentage change in patronage with the percentage change in fares for both the summer and winter periods. RET was introduced to the winter timetable in late October 2012, and RET fares were then uprated after 18 months rather than 12 months. This means that the percentage change in fares cannot be captured on an annual basis and measuring elasticities for the second and third year of the pilot is challenging. Defining the period before the introduction of RET (November 2011-October 2012) as the base year, the change in fares and patronage can be measured against this base year.

Table 3.7 below demonstrates the price elasticity of demand for passengers and cars on each of the three routes and shows the average figure for the three routes for both winter (November to March) and summer (April to September) periods<sup>26</sup>. It should be noted that an elasticity higher than 1 indicates that patronage is more sensitive to price changes whilst an elasticity lower than 1 indicates that patronage is less sensitive to fare changes.

---

<sup>26</sup> The winter period consists of 5 months (November to March) whilst the summer period accounts for 7 months (April to October). The reason for this is that RET was introduced near the end of October and CalMac's winter timetable commences after the 20th October each year running up to the end of March.

**Table 3.7: Price elasticity of demand, winter and summer periods**

<b>WINTER</b>			
Base period 0 = Nov' 11 - Mar' 12	<b>Price Elasticity of Demand periods 0-1</b>	<b>Price Elasticity of Demand periods 0-2</b>	<b>Price Elasticity of Demand periods 0-3</b>
Period 1 = Nov' 12 – Mar '13			
Period 2 = Nov' 13 – Mar' 14			
Period 3 = Nov' 14 - Mar' 15			
<b>ISLAY (Kennacraig - Port Ellen/Port Askaig)</b>			
Passengers	0.01	0.01	0.11
Cars	0.24	0.39	0.04
<b>GIGHA (Tayinloan - Gigha)</b>			
Passengers	0.60	0.11	0.41
Cars	0.11	0.30	0.22
<b>COLONSAY (Oban - Colonsay)</b>			
Passengers	0.14	0.03	0.40
Cars	0.08	0.13	0.13
<b>Average</b>			
Passengers	0.15	0.04	0.31
Cars	0.07	0.27	0.05
<b>SUMMER</b>			
Base period 0 = Apr '12 – Oct' 12	<b>Price Elasticity of Demand 0-1</b>	<b>Price Elasticity of Demand 0-2</b>	<b>Price Elasticity of Demand 0-3<sup>27</sup></b>
Period 1 = Apr '13 – Oct '13			
Period 2 = April '14 – Oct '14			
Period 3 = April '15 – Oct '15			
<b>ISLAY (Kennacraig - Port Ellen/Port Askaig)</b>			
Passengers	0.07	0.26	n/a
Cars	0.23	0.47	n/a
<b>GIGHA (Tayinloan - Gigha)</b>			
Passengers	0.29	0.62	n/a
Cars	0.43	0.70	n/a
<b>COLONSAY (Oban - Colonsay)</b>			
Passengers	0.18	0.10	n/a
Cars	0.27	0.10	n/a
<b>Average</b>			
Passengers	0.18	0.26	n/a
Cars	0.31	0.43	n/a

**Source: TS Calculations**

As shown in Table 3.6, the price elasticity of demand for both cars and passengers in both the summer and winter periods on all three routes is less than 1.0. This is because, for both passengers and cars in summer and winter on all three routes, the percentage increase in patronage was lower than the percentage decrease in fares. This implies that demand is inelastic, suggesting that patronage on these routes is not very sensitive to the change in fares.

For the winter period, in the first year of the pilot operation, the average price elasticity of demand across all three routes is 0.15 for passengers and 0.07 for cars. The figures change in the second year of the RET pilot where the average price elasticity across the routes during the winter period is 0.04 for passengers and 0.27 for cars. In the third year

<sup>27</sup> Patronage data not yet available

of the RET pilot data report a higher price elasticity for passengers during the winter period (0.31) whilst a lower elasticity for cars (0.05) across the three routes of the pilot area.

During the summer period the average price elasticity across all three routes is 0.18 for passengers and 0.31 for cars in the first year of the pilot operation. In the second year of the RET pilot the average price elasticity across the three routes is 0.26 for passengers and 0.43 for cars during summer. The higher average elasticities calculated for cars relative to passengers indicate that ferry users travelling with cars are more sensitive to changes in fares.

Looking into both winter and summer periods, the higher average elasticities calculated for the summer period compared to the winter period suggest that ferry users, in particular those travelling with cars, are more sensitive to fare changes in the summer period than the winter period. It is worth highlighting that, for the most part, the highest elasticities are seen in the shortest route, Gigha – Tayinloan.

#### *Comparison with Western Isles, Coll and Tiree*

This section assesses the impact of the introduction of RET fares for Islay, Colonsay and Gigha (where RET was introduced in 2012) compared to the impact of the introduction of RET fares for the Western Isles, Coll and Tiree (WICT)<sup>28</sup> (where RET was introduced in 2008) in terms of changes in fares and patronage. The purpose of this comparison is to better assess the relative scale of the impact that RET has had on Islay, Colonsay and Gigha (ICG) in the first year of RET.

Table 3.8 provides an overview of the average percentage change in fares for the first year following the introduction of RET in the two areas; the average percentage change in patronage and the resulting average price elasticities of demand. In the WICT report<sup>29</sup>, the change in fares, patronage and the elasticity of demand are presented for the year as a whole. Whereas, in this report, we present the corresponding information for ICG for the summer (April – October) and winter (November to March) periods separately. It is therefore important to note that when we draw comparisons between results for WICT and ICG, we are not comparing like with like. As can be seen from the table, the introduction of RET on services to ICG resulted in significantly smaller percentage changes in passenger and car patronage (in both summer and winter) and significantly lower elasticities for passengers and cars (in both summer and winter) when compared to the changes for WICT.

---

<sup>28</sup> WICT RET routes: Ullapool-Stornoway, Uig-Tarbert/Lochmaddy, Oban-Castlebay/Lochboisdale and Oban-Coll/Tiree.

<sup>29</sup> [http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCEQFjAAahUKEwiQ\\_bjzduTHAhUGq9sKHTQpB3k&url=http%3A%2F%2Fwww.gov.scot%2Fresource%2Fdoc%2F935%2F0115577.doc&usq=AFQjCNHhIHVCbcN7q0n6E8l58MHNnnEIDw](http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CCEQFjAAahUKEwiQ_bjzduTHAhUGq9sKHTQpB3k&url=http%3A%2F%2Fwww.gov.scot%2Fresource%2Fdoc%2F935%2F0115577.doc&usq=AFQjCNHhIHVCbcN7q0n6E8l58MHNnnEIDw)

**Table 3.8: Change in fares, patronage and price elasticity of demand following the introduction of RET**

	Average percentage change in single fares		Average percentage change in patronage		Average price elasticity of demand	
	Passengers	Cars	Passengers	Cars	Passengers	Cars
Colonsay, Gigha, Islay (summer)	-44%	-48%	5%	12%	0.10	0.25
Colonsay, Gigha, Islay (winter)	-29%	-35%	-3%	5%	0.09	0.14
Western Isles, Coll and Tiree	-36%	-32%	19%	30%	0.56	0.96

Source: CalMac

**Changes in Fares:** For cars, average ferry fares decreased more in the ICG routes in both winter (-35%) and summer (-48%) compared to the WICT routes (-32%). For passengers, the average decline in fares on ICG routes in summer (-44%) was greater than the decline in the year-round average WICT fare (-36%) whilst the decline in ICG winter fares was smaller (29%).

**Changes in Patronage:** The introduction of RET brought about a clear increase in patronage on WICT routes, with passenger patronage increasing by 19% and car patronage increasing by 30%. When compared to these figures, the impact of RET on patronage on ICG routes is significantly lower, with car patronage increasing by 12% in the summer period and 5% in the winter period. The impact of passenger numbers was even less positive, with patronage increasing by 5% in summer and patronage actually falling by 3% in winter.

**Elasticities:** The price elasticity of demand (the responsiveness of demand for ferry services to the fare change) is relatively low for the ICG routes in both summer (0.10 for passengers and 0.25 for cars) and winter (0.09 for passengers and 0.14 for cars). Figures for WICT ferry services report a higher price elasticity (0.56 for passengers and 0.96 for cars). These results indicate that ferry users in the WICT area are more sensitive to fare reductions than ferry users in the ICG area. For both the ICG and WICT areas, the elasticities for cars are higher than those for passengers indicating that demand for ferry use by car is more sensitive to fare changes.

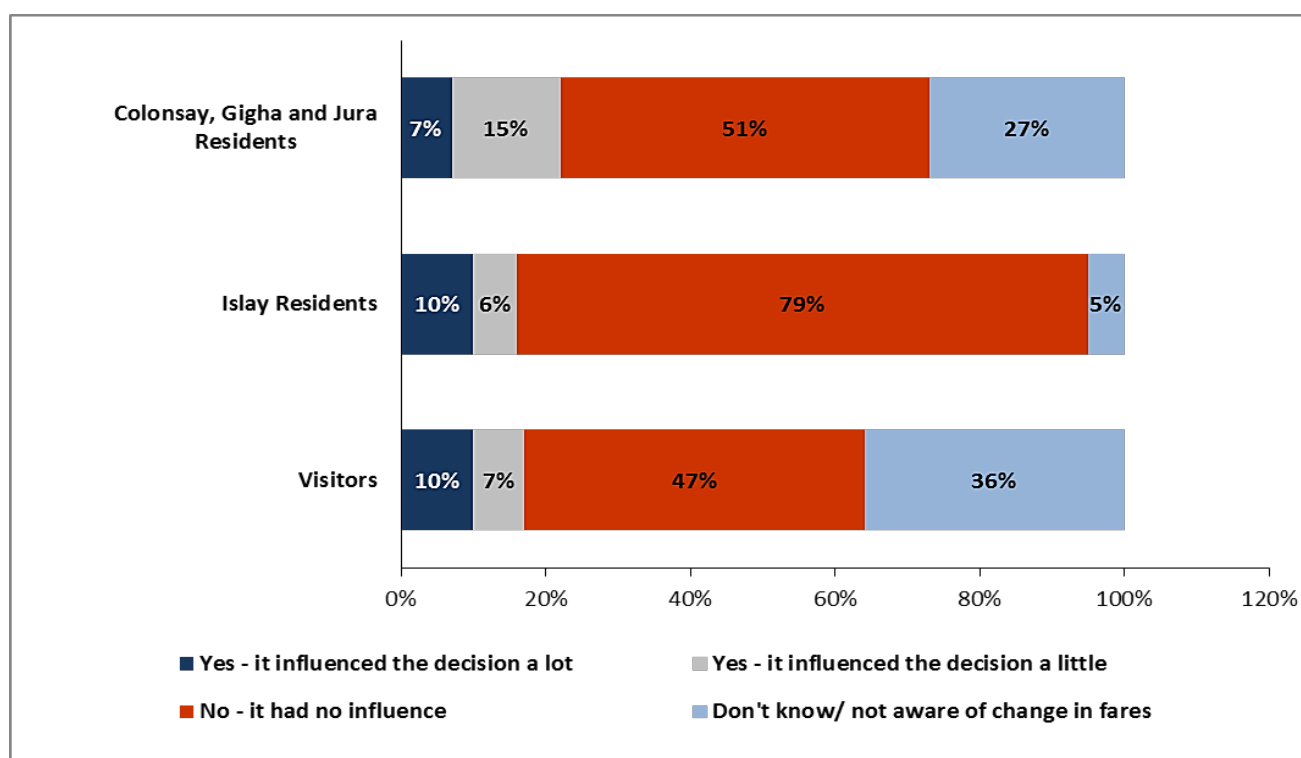
#### 1.7.6 Research question: Has RET had an impact on the decision of existing and new users to use the ferry services?

To determine whether the increase in patronage is a consequence of new users or of existing users using the service due to the introduction of lower fares, we draw on survey results from the combined summer and winter 2014 survey waves.

Figure 3.1 below shows how much RET reduced fares have influenced ferry users to use the ferry on their last trip. The findings suggest that the increase in patronage is, at least in part, due to the introduction of RET. However, it is important to note that in the visitor and household surveys a significant proportion of participants, 36% and 27% respectively, were not aware of fare changes.

- Findings from the 2014 on-board visitors surveys suggest that the introduction of lower fares has influenced 17% of visitors to use the ferry service for their trip. Of this proportion 10% suggested that RET had a lot influence on their decision.
- Findings from the 2014 on-board Islay residents surveys suggest that the introduction of RET influenced 16% of Islay residents to use the ferry for their trip. However, for the vast majority of participants (79%) the introduction of RET had no impact.
- Findings from the 2014 household survey suggest that the introduction of RET had influenced the decision of 23% of Colonsay, Gigha and Jura residents to use the ferry service.

**Figure 3.1: Impact of RET reduced fares on using the ferry on last trip**



Source: on-board and household surveys

## 1.8 Displacement

### 1.8.1 Research question: Have RET fares had an impact on displacement from other routes?

To determine whether the reduced ferry fares had an impact on new or existing users switching from another route we look into the combined summer and winter 2014 surveys. The findings suggest that a small percentage of ferry users, mainly visitors, have been displaced from other routes due to introduction of RET.

- Findings from the 2014 on-board visitors survey suggest that if fares had not been reduced, nearly 1% of visitors would have made a trip by ferry to another Scottish island with Mull and the Northern Isles among the destinations cited. Almost 2% of visitors would have gone somewhere else in Scotland had ferry fares not been

reduced. Among the alternative destinations, driving to Skye and the Highlands were cited.

- Findings from the 2014 on-board Islay residents survey suggest that had ferry fares not been reduced the vast majority of Islay residents would still have made the same trip. However, 5% of the participants would not have made the journey at all had it not been for lower fares.
- Findings from the 2014 household survey show no displacement from other ferry routes because of the introduction of RET. However, 4.5% of the Colonsay, Jura and Gigha residents would not have made the trip at all had RET fares not been introduced and 1% would have travelled to another destination on the mainland.

#### 1.8.2 Research question: Have RET fares displaced traffic/patronage from other modes?

To determine whether the reduced ferry fares had an impact on new or existing users switching from another mode we look into the combined summer and winter 2014 surveys. However, due to limitations of the questionnaires it is not possible to determine whether any additional patronage was due to new users switching from another mode. We therefore focus on whether ferry users overall would have made the same trip by another transport mode. The alternative transport option for Islay and Colonsay is flying whilst for all islands of the pilot area the ferry user also has the option of switching to a foot passenger and travel by ferry without a car.

- Findings from the 2014 on-board visitors survey suggest that had lower ferry fares not been introduced 2% of visitors would have made the same trip by another mode of transport. Of those using another transport mode to travel, 28% would have flown whilst 32% would have travelled without a car.
- Findings from the 2014 on-board Islay residents survey suggest that 2% of participants would have travelled by another mode of transport had lower ferry fares not been in place. From the total number of islanders (5) who would have switched to another mode, 80% would have travelled without car and 20% would have travelled by plane.
- Findings from the 2014 household survey show no displacement from other modes of transport. However, this may be a reflection of the limited alternative transport options for the residents of Gigha and Jura who can only travel by ferry.

We also look into whether users of the Islay and Colonsay ferry services<sup>30</sup> switched from flying following the introduction of RET. To do this we examine the findings from the combined summer and winter 2014 surveys.

- Findings from the 2014 on-board visitors survey suggest that 13% chose not to fly and use the ferry instead due to the reduced RET fares.
- Findings from the 2014 on-board Islay residents survey suggest that the reduced RET fares were a reason for 15% of those choosing not to fly.

---

<sup>30</sup> Islay and Colonsay both have air services as an alternative means of travel whilst Gigha and Jura do not.

- Findings from the 2014 household survey suggest that 10% of Colonsay and Jura residents chose not to fly and use the ferry instead due to the reduced RET fares.

To determine whether switching mode from flying affected the frequency with which existing ferry users use the service, we draw on survey results from the combined summer and winter 2014 survey findings.

Overall, existing Islay and Colonsay ferry users have rated 'switching from flying' as less important factor for increasing the frequency of ferry usage in the years following the introduction of RET. However, looking into the 2013 and 2014 survey findings respectively, there is an increase in the numbers of Islay and Colonsay ferry users in 2014 who state that switching from flying may increase the frequency of their ferry usage. This suggests that the additional patronage resulting from existing users using the service more could be to some extent, a consequence of those users switching from air services.

- Findings from the 2014 on-board visitors survey indicate that 7% of existing Islay and Colonsay ferry service users considered switching from flying, an important or very important factor in their decision to change how frequently they used the ferry service since the introduction of RET in October 2012.
- Findings from the 2014 on-board Islay residents survey suggest that for 10% of Islay residents who were existing Islay ferry service users, switching from flying was an important or very important factor in their decision to change the frequency with which they used ferry service since the introduction of RET two years ago.
- Findings from the 2014 household survey show that 8% of Colonsay residents, who were existing Colonsay ferry service users, rated switching from flying as an important or very important factor in their decision to change the frequency with which they used ferry service over the last two years.

## 1.9 Purpose of travel

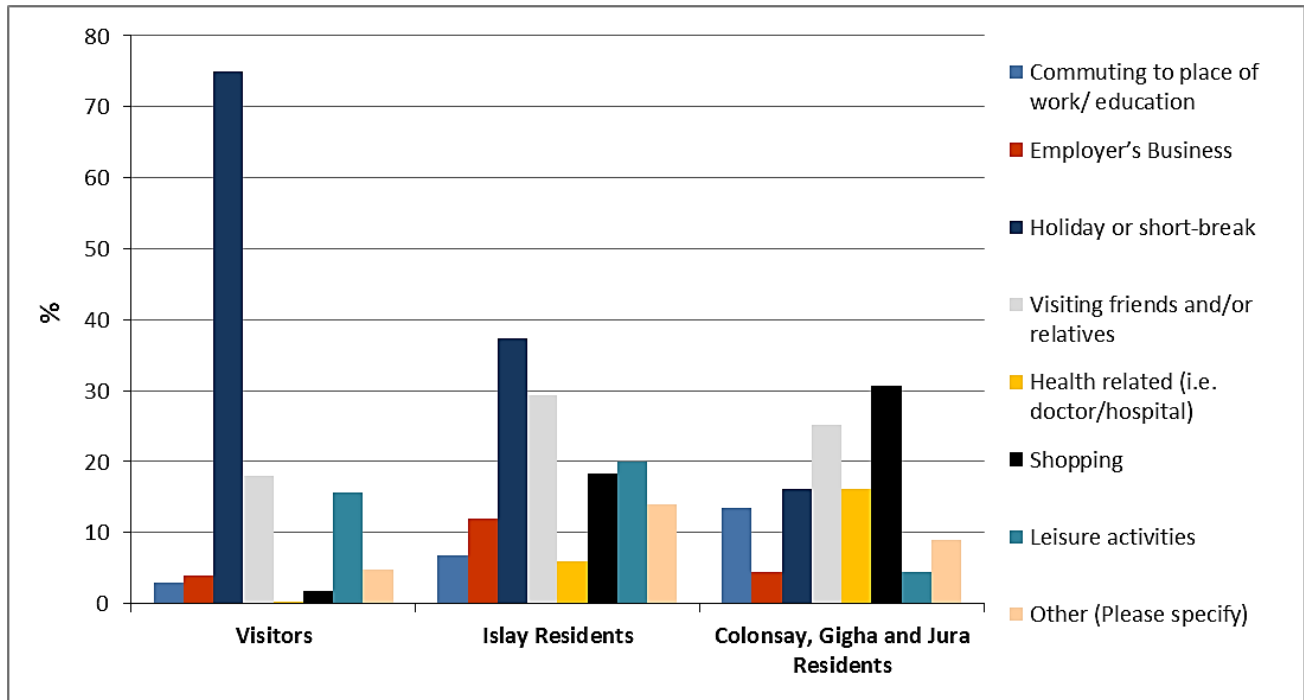
### 1.9.1 Research question: For what purpose are people travelling on services to Islay, Colonsay and Gigha?

To determine the purposes for which people are travelling on the ferry services, we draw on survey results from the combined summer and winter 2014 surveys.

Findings from the 2014 surveys suggest that the purpose of travel differs significantly depending on whether the person travelling is a visitor to the island or a resident. The most common purpose of travelling for visitors was for a holiday or short-break and it was also the most common purpose of travelling for Islay residents. For Colonsay, Gigha and Jura residents, shopping was the most common purpose of travel. Figure 3.2 compares purpose of travel among survey participants for 2014.



**Figure 3.2: Purpose of trip among survey respondents in 2014**



Source: on-board and household surveys

- Findings from the 2014 on-board visitors survey suggest that the most common reason for travelling is a holiday or short break (75%) followed by visiting friends or relatives (18%) and leisure activities (16%).
- Findings from the 2014 on-board Islay residents survey suggest that for Islay residents, the three most common reasons for travelling on the ferry are a holiday or short break (37%), visiting friend or relatives (29%) and leisure activities (25%). Other common journey purposes include shopping (18%) and employer's business (12%). The two least favourable options appear to be, commuting to place of work/education (7%) and health-related reasons, such as doctor or hospital appointments (6%).
- Findings from the household survey found that for residents of Colonsay, Gigha and Jura, the most common reason for travelling by ferry is shopping (31%) followed by visiting friends and relatives with 25% of responses. Other popular journey purposes include travelling for health-related reasons (16%), holiday or short break (16%) and commuting to place of work/education (13.5%). The least popular purposes of travel are employer's business and leisure activities each with 4.5% of responses.

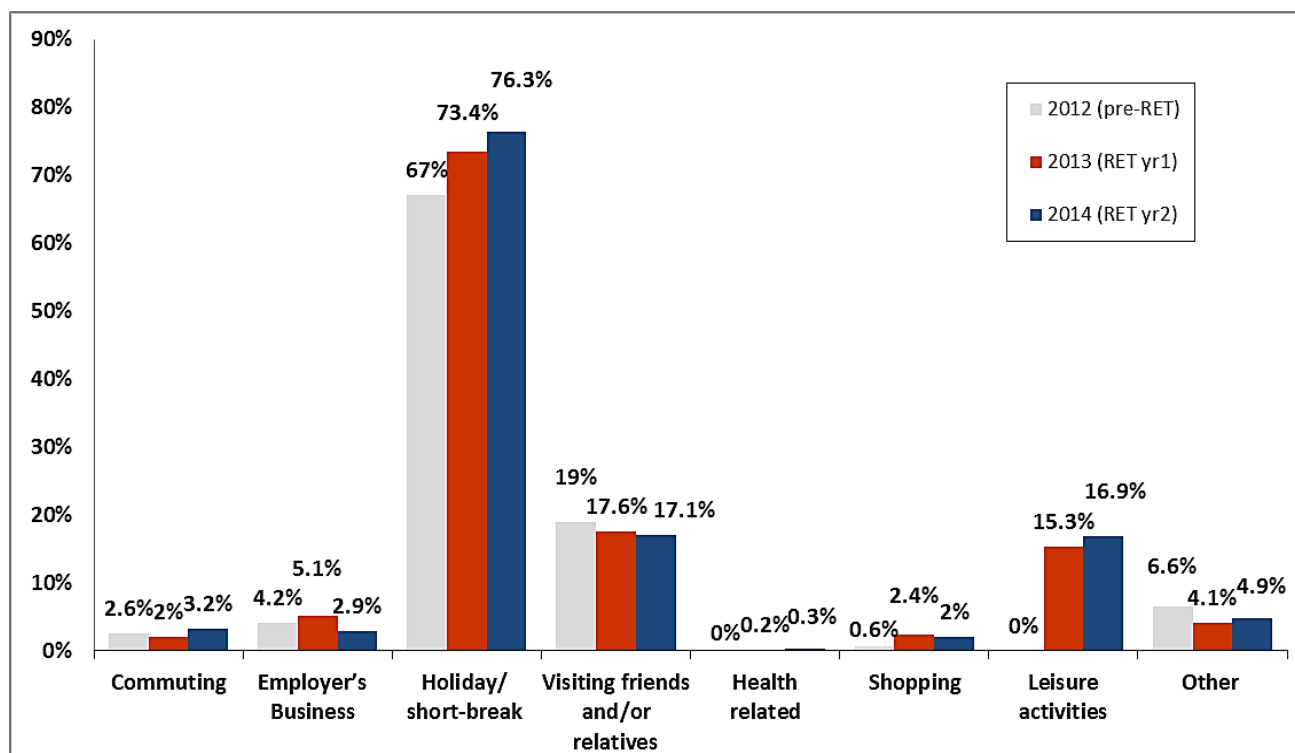
**1.9.2 Research question: Has the introduction of RET affected the purposes for which people travel?**

To determine whether the introduction of RET has affected journey purpose, we compare survey results from summer 2012, prior to the introduction of RET, with survey results from the summer 2014 wave, when RET was in place<sup>31</sup>.

Overall, the survey results suggest that the most common trip purpose for visitors and residents (both of Islay and Colonsay, Gigha and Jura) did not change when RET was introduced.

Figure 3.3 below presents the on-board survey results for Visitors' purpose of travel over the three year evaluation period.

**Figure 3.3: Purpose of trip for visitors, 2012-2014, summer only**



Source: on-board surveys, sample size=1,158

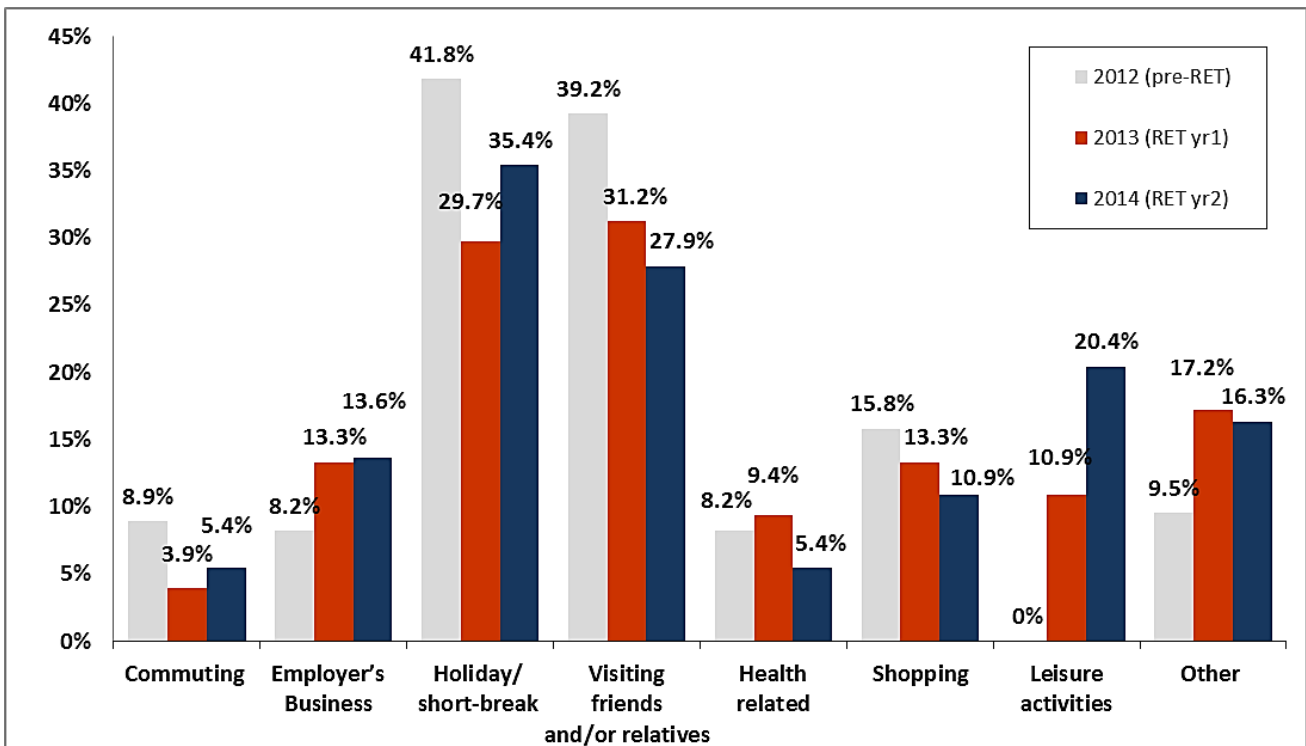
- Findings from the on-board visitors surveys suggest that the most common trip purpose for visitors was the same in both summer 2012 and 2014 - a holiday or short break. The proportion choosing this option is higher in 2014 (76%) than in 2012 (67%). In fact it follows an increasing trend since the introduction of RET as the respective proportion in 2013 was 73%. In 2014, 17% of individuals travelled for leisure purposes, an increase of 1.6 percentage points on the 2013 survey<sup>32</sup>.

Figure 3.4 overleaf sets out the on-board survey results for Islay residents' purpose of travel over the three year evaluation period.

<sup>31</sup> We do not include data from the winter (October) waves as RET was introduced part the way through the October 2012 surveys.

<sup>32</sup> This option was only introduced in the 2013 surveys, therefore no comparison can be made with 2012.

**Figure 3.4: Purpose of trip for Islay residents, 2012-2014, summer only**

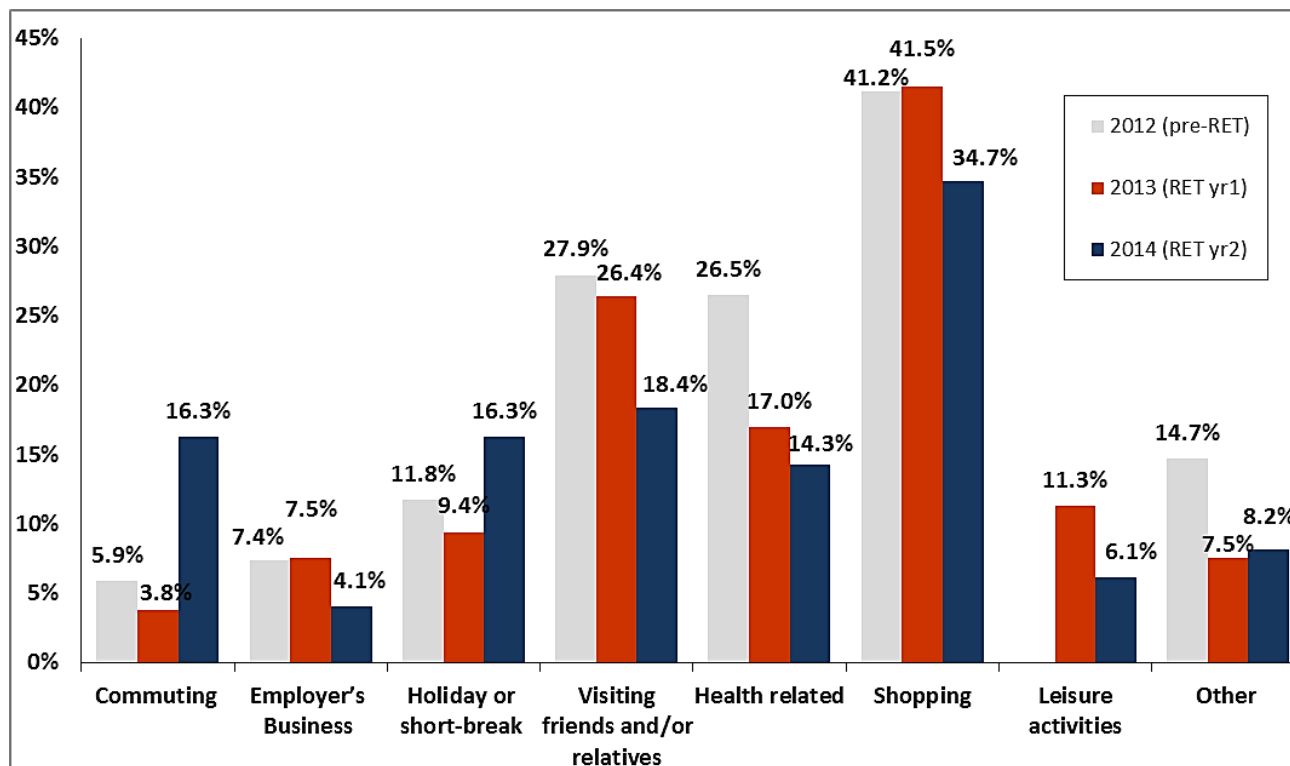


Source: on-board surveys, sample size=150

- Findings from the on-board Islay residents surveys suggest that the most common trip purposes for Islay residents were the same in both summer 2012 and 2014, with the purposes being a holiday/short-break and visiting friends/relatives. The proportion travelling for a holiday/short break decreased from 42% in 2012 to 35% in 2013 whilst the proportion travelling to visit friends or family fell by 11 percentage points to 28% in 2014. The proportion commuting to their place of work/education decreased by 3.5 percentage points to 5.5% in 2014. Conversely, the proportion travelling on employer's business increased by 5 percentage points to 14% in 2014.

Figure 3.5 demonstrates the respective figures and changes for Colonsay, Gigha and Jura residents' purpose of travel and the percentage point changes over the three year evaluation period.

**Figure 3.5: Purpose of trip for Colonsay, Gigha and Jura residents, 2012-2014, summer only**



Source: household surveys, sample size=50

- Findings from the household surveys suggest that the most common trip purpose for residents of Colonsay, Gigha and Jura in both summer 2012 and 2014 was shopping<sup>33</sup>. However the proportion choosing this option was lower in 2014 (35%) than in 2012 (41%). The proportion travelling for a holiday/short break increased by 5 percentage points to 16% in 2014 whilst the proportion travelling to commute to their place of work/education increased by 10 percentage points to 16%. The proportion of Colonsay, Gigha and Jura residents travelling for health related purposes fell by 12 percentage points to 14% in 2014.

### 1.10 Average expenditure by residents and visitors

This section sets out the accommodation arrangements and expenditure of island residents when they travel out with the islands and also the accommodation arrangements and expenditure of visitors to the islands.

It is important to note that the spending figures represent the reported average spending of residents and visitors, at the individual level, following the introduction of RET. It does not consider how the overall level of spending of visitors and residents as a whole (taking into account changes in patronage as well as changes in average spending) has changed.

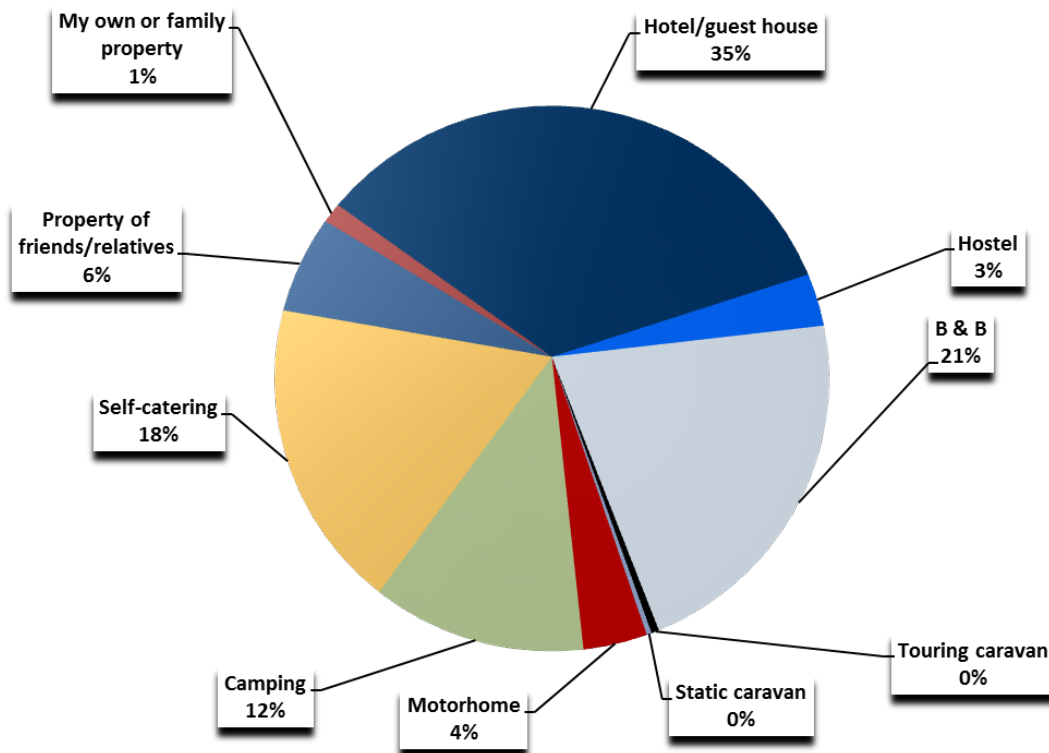
<sup>33</sup> It should be noted that in the summer 2014 household survey the share of Colonsay residents was 14% of the total sample, the share of Gigha residents was 46% of the total sample whilst the Jura residents share was 40%.

1.10.1 Research question: What type of accommodation were island visitors using?

To determine the type of accommodation visitors to the islands selected for their trip we use the on-board visitor survey findings from the summer wave 2014. Findings from summer 2014 on-board Visitors survey suggest that 77% of visitors paid for accommodation.

- Findings from summer 2014 on-board visitors survey suggest that over a third of visitors (35%) stayed at a hotel or guest house with a further 21% staying at a B&B whilst 18% chose self-catering accommodation. Looking at those visitors choosing more economical options or less likely to be paying for accommodation, almost 6% of the visitors stayed at the property of friends or relatives, 1.2% stayed at their own or family property, 3.5% stayed in a motorhome and 12% were camping. Figure 3.6 demonstrates the distribution of accommodation types visitors reported on the summer 2014 on-board survey.

**Figure 3.6: Type of Accommodation for 2014 visitors**



Source: on-board surveys

1.10.2 Research question: Has the introduction of RET resulted in an increase in spending by visitors?

To determine whether the introduction of RET has had an impact on visitors' spending we compare survey findings on reported per person trip expenditure from the summer 2012 on-board visitors survey (before the introduction of RET) with findings from the summer

2014 wave (two years of RET pilot operation)<sup>34</sup>. Spending on accommodation and other goods/services on the islands during their trip is reported at an individual level. We also compare survey findings on reported per person trip expenditure from the summer 2013 on-board visitors surveys with findings from the summer 2014 wave to capture any changes in visitors spending behaviour over the two years of the RET operation.

Table 3.9 below provides the detailed data for visitor spending to the islands for the three year evaluation period.

**Table 3.9: Expenditure by visitors to the islands**

Expenditure per person				
	Survey Summer Wave	Accommodation	Other Costs	Total
Visitors	2012	£479	£291	£770
	2013	£384	£298	£682
	2014	£368	£292	£661
	% change 2014-2013	-4.2%	-1.8%	-3.1%
	% change 2014-2012	-23.2%	0.6%	-14.2%

Source: on-board surveys

- In 2014, the average spending of visitors on accommodation during their last ferry trip was £368, a fall from £384 in 2013.

### 1.10.3 Research question: Has the introduction of RET resulted in island residents spending more on the mainland?

To determine whether the introduction of RET has had an impact on island residents' spending on the mainland at an individual level, we compare survey findings on reported trip expenditure from the summer 2012 on-board Islay residents survey and household Colonsay, Gigha and Jura residents survey (before the introduction of RET) with findings from the summer 2014 waves (the second pilot year of RET)<sup>35</sup>. We also compare reported trip expenditure per person between the two years of the pilot, i.e. summer 2013 waves and summer 2014 waves.

Expenditure figures were collected for spending on accommodation and 'other costs' which may include food, shopping, leisure etc. It should be noted the accommodation spending for the island residents should be treated in effect as 'opportunity cost' as it is the money that could have been spent by residents on the island instead. The data is set out at Table 3.10 overleaf.

<sup>34</sup> We do not include data from the winter (October) survey waves as RET was introduced part the way through the October 2012 surveys.

<sup>35</sup> We do not include data from the winter (October) survey waves as RET was introduced part the way through the October 2012 surveys.

**Table 3.10: Expenditure of island residents to the Scottish mainland economy**

Expenditure per person				
	Survey Summer Wave	Accommodation	Other Costs	Total
Islay Residents	2012	£362	£478	£840
	2013	£358	£436	£795
	2014	£251	£719	£970
	% change 2014-2013	-29.9%	64.7%	22.1%
	% change 2014-2012	-30.6%	50.5%	15.5%
Colonsay, Gigha and Jura Residents	2012	£94	£295	£389
	2013	£70	£367	£437
	2014	£194	£372	£566
	% change 2014-2013	176.9%	1.4%	29.5%
	% change 2014-2012	107.2%	26.2%	45.7%

Source: on-board and household surveys

- Findings from the summer 2014 on-board Islay residents survey suggest that:
  - average spending of Islay residents on accommodation during their trip to the mainland was £251 a decrease from £358 in 2013
  - average spending on other goods and services was £719, an increase from £436 in 2013
- Findings from the summer 2014 household survey suggest that:
  - average spending of the Colonsay, Gigha and Jura residents who required accommodation was £194 an increase from £70 in 2013
  - average spending on other goods and services during their last trip to the mainland was £372 an increase from £372 in 2013

It is important to note that this analysis uses only one indicator (spending) to identify potential 'leakages' and 'injections' and that is the average spending per person of the survey samples. Other aspects of spending such as business investment and turnover which would have economic impacts have not been considered in this analysis. It should also be noted that there will be considerable variation around the average spending figure if, for example, on individual purchases a 'big ticket' item when on the mainland.

## Capacity of the ferries

### 1.11 Current capacity

Whilst the analysis so far has focused on the demand-side, how ferry users have reacted to the introduction of RET on the pilot area, it is also important to consider the supply-side, whether current capacity on the routes has suppressed the reported increase in demand. This section considers the vessel deck utilisation for each route in the pilot area and considers potential capacity constraints as a result of RET.

#### 1.11.1 Vessels

Table 4.1 below sets out the characteristics of the vessels that serve the ferry routes of the pilot area.

The Islay – Kennacraig route is primarily serviced by the MV Finlaggan and MV Hebridean Isles. MV Finlaggan was launched in 2011 and can carry up to 550 passengers and 85 cars. MV Hebridean Isles built in 1985 accommodates up to 494 passengers and 62 cars. MV Isle of Arran and MV Lord of the Isles serve the route as winter relief vessels.

The Colonsay – Oban route does not have a dedicated vessel. Based on sailings figures for financial years 2013 and 2014 the vessel operating most of the sailings is the Lord of the Isles. She was built in 1986 with capacity for 506 passengers and 54 cars and serves the route throughout the year. The route is also served by three additional vessels, the MV Isle of Mull, the MV Hebrides and the MV Hebridean Isles. The MV Isle of Mull with capacity for up to 951 passengers and 70 cars runs the service in the summer timetable.

The primary vessel on the Gigha – Tayinloan route is the MV Loch Ranza built in 1986 with capacity for 200 passengers and 12 cars. MV Loch Linnhe serves the route as winter relief vessel and has the same specifications as MV Loch Ranza.

**Table 4.1: Routes Vessel Characteristics and Capacity**

Route	Vessel(s)	Year of Build	Length (m)	Passengers	Cars
Islay-Kennacraig	MV Finlaggan	2011	89.9	550	85
	MV Hebridean Isles	1985	85.15	494	62
	MV Isle of Arran	1983	84.92	448	76
	MV Lord of the Isles <sup>36</sup>	1989	84.6	506	54
Colonsay-Oban	MV Lord of the Isles	1986	84.6	506	54
	MV Isle of Mull	1988	90.03	951	70
	MV Hebridean Isles	1985	85.15	494	62
	MV Hebrides <sup>37</sup>	2000	99.0	612	98
Gigha-Tayinloan	MV Loch Ranza	1986	30.2	200	12
	MV Loch Linnhe <sup>38</sup>	1986	30.2	200	12

Source: CalMac

<sup>36</sup> Supported the service in winter 2012/13, between 5<sup>th</sup> December and 28<sup>th</sup> March as winter relief vessel

<sup>37</sup> Supported the service in winter 2012, between 3<sup>rd</sup> and 21<sup>st</sup> December as winter relief vessel

<sup>38</sup> Supported the service in winter 2013/14, between 29<sup>th</sup> December and 3<sup>rd</sup> March as winter relief vessel



### 1.11.2 Capacity utilisation

Capacity utilisation is a measure of carrying capacity supplied and the volume of passengers and vehicles utilising it. Vessel capacities are expressed in terms of Passenger Car equivalent Units (PCUs)<sup>39</sup>. According to CalMac, the generally accepted (and quoted) PCU capacity of the vessel is defined as the number of cars which can be loaded on to the car deck within the confines of the vessel turn-round time in port. It should be noted that since PCUs involve an average car size and depend on the mix of traffic and the use of mezzanine decks, the actual vessel capacity on a particular sailing may vary by 15% from the quoted capacity.

Data on route by route sailings and capacity of operating vessels have been collated for the period between October 2012 and September 2014. Based on these data it is possible to estimate the maximum capacity, in terms of numbers of passengers and cars that have been shipped on the ferry routes of the pilot area. Data on capacity utilisation are commercial in confidence and are not reproduced in full detail here. Anecdotal evidence suggests that, for the CalMac ferries network, 70% capacity utilisation is around the point at which capacity starts to become constrained. We therefore apply a factor of 70% to the maximum capacity figures to estimate the 'effective capacity'.

One impact of RET fares may be to increase demand so that capacity becomes constrained on a particular route on specific sailings, days, weeks etc. To assess whether the introduction of RET has resulted in constrained capacity we categorised the sailings into three bandings. The first banding is for sailings where utilised capacity is below 15%, the second banding is for capacity utilisation between 16% and 69% and the third banding is for sailings exceeding 70% of car deck utilisation.

Table 4.2 overleaf sets out the number and proportion of sailings on each route for each of the capacity utilisation bandings and outlines the change between the first two years of the pilot operation.

---

<sup>39</sup> 1 PCU is presently defined as the space which a car of length 4.25m and width of 1.94m occupies - allowing space around the car for access to both interior and exterior compartments.

**Table 4.2: Capacity Utilisation Banding in the first two years of the pilot operation**

Island	Period	Capacity Utilisation ≤15%		Capacity Utilisation 16%-69%		Capacity Utilisation ≥70%	
		Number of Sailings	% Share	Number of Sailings	% Share	Number of Sailings	% Share
Islay	Oct 2012-Sep 2013	91	3%	1428	54%	1135	43%
	Oct 2013-Sep 2014	207	8%	1470	53%	1075	39%
	% change	127 %	4%	3%	0%	-5%	-4%
Colonsay	Oct 2012-Sep 2013	107	30%	237	67%	8	2%
	Oct 2013-Sep 2014	118	32%	245	66%	8	2%
	% change	10%	1%	3 %	-1%	0.0%	0%
Gigha	Oct 2012-Sep 2013	2,251	35%	3,751	59%	362	6%
	Oct 2013-Sep 2014	2,217	33%	4,078	62%	332	5%
	% change	-2%	-2%	9%	3%	-8%	-1%

Source: CalMac

As can be seen from the table, the majority of sailings on the Islay-Kennacraig route lie within the 16%-69% banding in both operating periods with 54% and 53% respectively. It is important to note that the number of sailings where over 70% of the vessel car deck has been utilised is considerably high with 43% in the first year of operation of RET and 39% in the second year of operation of RET.

On the Oban-Colonsay route, most sailings have a capacity utilisation of between 16% and 69%. The sailings where more than 70% of vessel car deck has been utilised account for only 2% in both years of the RET operation. Of the total sailings, 30% fall under the 15% banding in the first year of RET operation whilst this proportion slightly increases in the second year to 32%.

On the Tayinloan-Gigha route, 59% of sailings account for 16% to 69% of deck utilisation during the first year of the RET operation whilst this figure increases to 62% in the second year of the RET operation. In the second year of RET operation a small proportion of sailings (5%) have maximum capacity utilisation exceeding 70% decreasing slightly by 1% since the first year. Within the 15% capacity utilisation banding lie 35% of sailings in the first year of operation of RET and 33% in the second year.

Overall, it would appear that although the introduction of RET fare has generally led to an increase in demand there does not appear to be a particular constraint on capacity on the Gigha and Colonsay routes, however, capacity is now more constrained on the Islay route. Capacity utilisation can be interpreted on the grounds of sailing time, sailing leg, day of the week and month of the year. Whilst some routes may not have maximum capacity utilisation, particular sailing times or sailing legs may be more affected than others and in excess of their capacity utilisation.

## 1.12 Ferry users' views on capacity utilisation

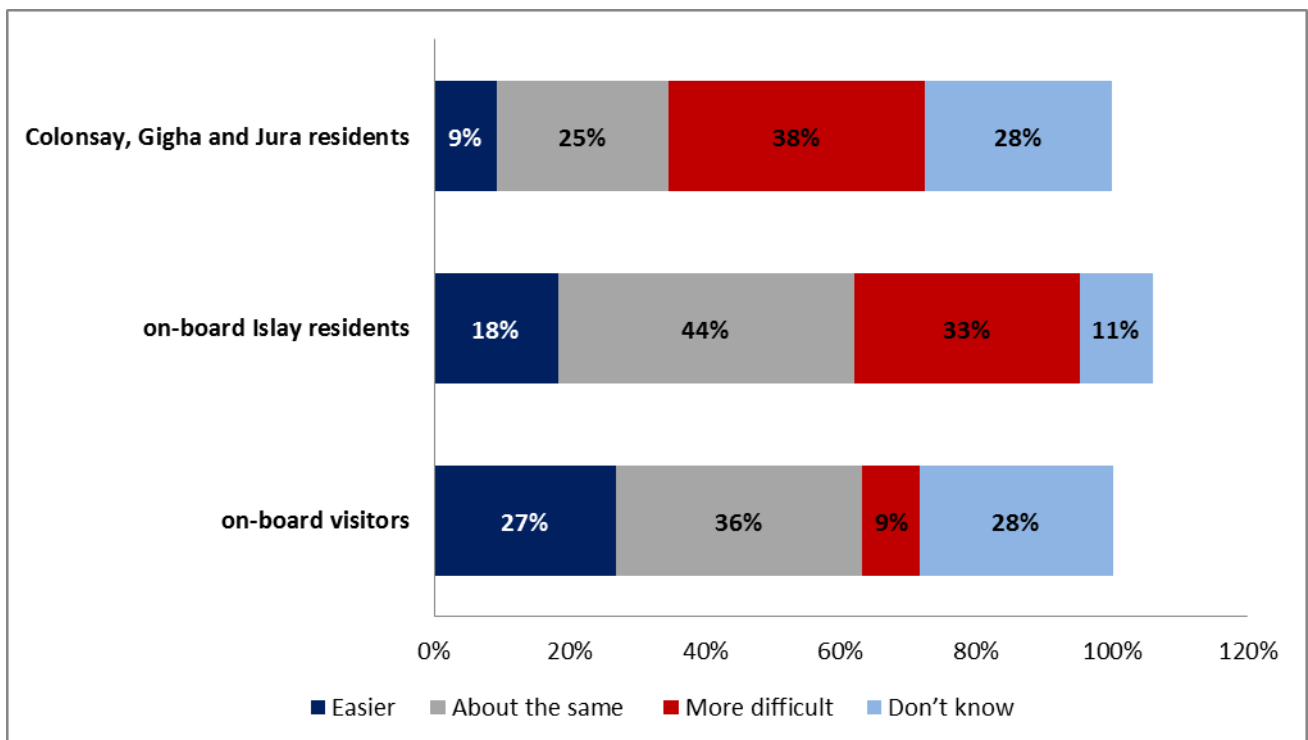
### 1.12.1 Booking ahead

To assess whether the introduction of RET has brought about changes in ferry users' ability to book their tickets ahead of their travel we look into survey results from the combined summer and winter 2014 waves.

Overall, the survey results suggest that for most island residents booking ahead has become more difficult since the introduction of RET whilst for over a third of visitors (38%) it has remained the same.

Figure 4.1 below sets out the ferry users' perceptions of how booking ahead for their trip has changed since October 2012 where RET was introduced to the routes.

**Figure 4.1: Ferry users' perceptions of how booking ahead has changed since the introduction of RET**



Source: on-board and household surveys

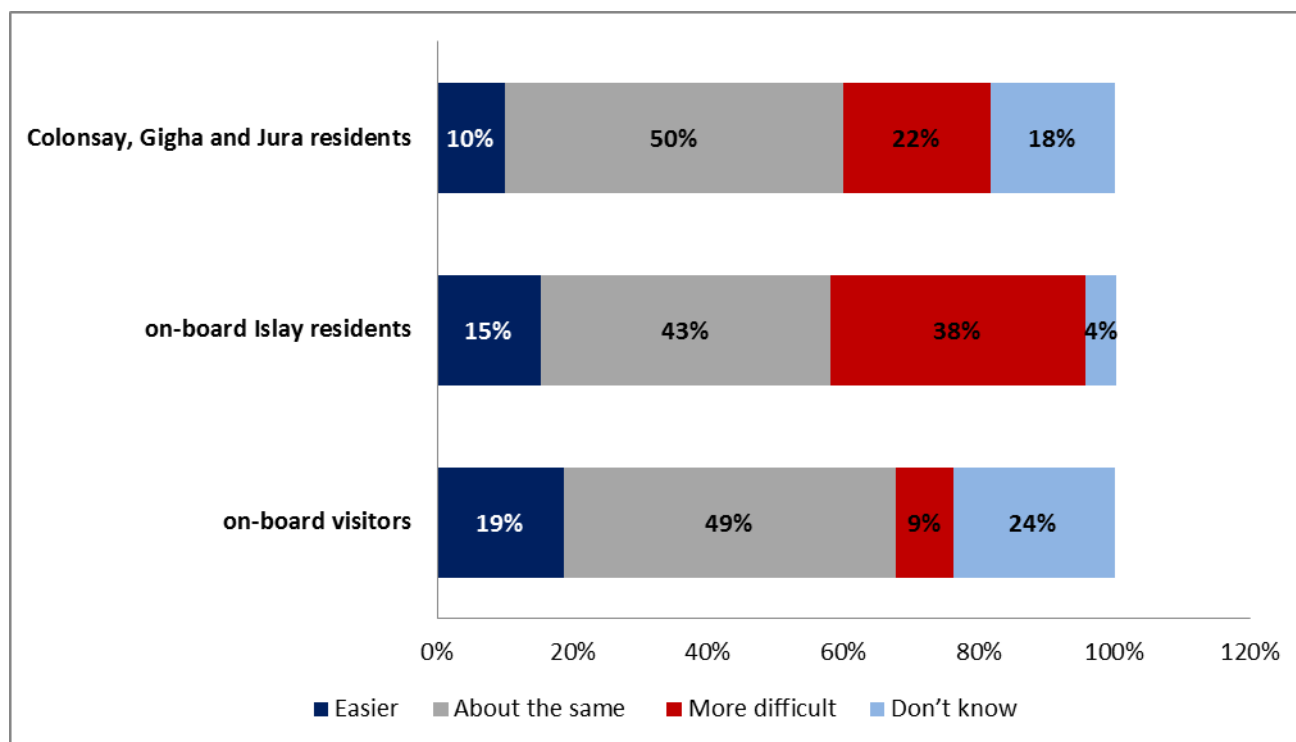
- Findings from the on-board visitors surveys indicate that for 27% of visitors booking ahead has become easier whilst for 9% it has become more difficult. For 36% of the visitors booking their ticket in advance of their trip has remained the same.
- Findings from the on-board Islay residents surveys suggest that whilst 44% of islanders found booking ahead about the same, 33% indicated that booking ahead has become more difficult since the introduction of RET.
- Findings from the household surveys suggest that 38% of the Colonsay, Gigha and Jura residents find booking ahead more difficult since the introduction of RET. For

25% of the participants booking ahead has remained the same and for 9% has become easier.

### 1.12.2 Travelling on preferred time and day

To determine whether the introduction of RET has made travelling on preferred day and time easier or more difficult we look into survey results from the combined summer and winter 2014 waves.

Overall, the survey results suggest that for the 43% of Islay residents travelling on preferred day and time has become more difficult since the introduction of RET whilst for the 50% of visitors and Colonsay, Gigha and Jura residents it has remained the same. Figure 4.2 below sets out the ferry users' perceptions of how travelling on their preferred day and time has changed since October 2012 where RET was introduced to the routes.  
**Figure 4.2: Ferry users' perception of how travelling on preferred day and time has changed since the introduction of RET**



Source: on-board and household surveys

- Findings from the on-board visitors surveys indicate that for 49% of visitors travelling on the time and day of their choice has remained the same whilst for 9% it has become more difficult since the introduction of RET fares. For 19% of visitors travelling on the preferred sailing has become easier.
- Findings from the on-board Islay residents surveys suggest that whilst 43% found travelling on sailings of their choice about the same, 38% indicated that it has become more difficult since the introduction of RET.

- Findings from the household surveys suggest that 22% of the Colonsay, Gigha and Jura residents find travelling on the time and day of their choice has become more difficult since the introduction of RET. For 50% of the participants it has remained the same and for 10% it has become easier.

## 1.13 Future capacity

### 1.13.1 Overview

Analysis of the collated data at the previous section shows that the route with most constrained capacity is the Kennacraig to Islay route. For nearly half of the sailings over 70% of the vessel car deck has been utilised. These figures suggest that with a continued increasing trend in demand, as reported on patronage and survey data, introducing demand management techniques might be required in the near future. Whilst for the other two routes of the pilot area, Oban-Colonsay and Tayinloan-Gigha, a small proportion of sailings fall into the over 70% capacity utilisation banding, it is worth noting that for both routes the majority of sailings fall under the 16% to 69% capacity utilisation banding.

### 1.13.2 Increasing capacity utilisation

As capacity constraints can be a barrier to ferry travel and the desired positive impacts brought about by the cheaper RET fares, it is useful to look into possible ways of increasing capacity utilisation.

- Increasing turn-round times. This would allow vessels a greater time in port between sailings resulting in a more efficient loading of the car deck when the ferry is very full.
- Introducing variable pricing depending on the time of day, day of week or month of year. For example, increasing the ferry fare during peak times in summer seasons would potentially provide an incentive for travellers (especially those travelling with a car) to choose another less busy sailing.
- Increasing capacity by providing more frequent sailings or bigger vessels.

## ANNEX A: Secondary data analysis

This section provides high level analysis of secondary data that could provide complementary backdrop to the evaluation of the impacts of RET on Islay, Colonsay and Gigha. It looks into economic, transport and tourism data. It should be highlighted that information provided in this section is a result of desk research and neither consultations nor surveys have been undertaken to inform the analysis<sup>40</sup>.

### Economic data

#### Highlands and Islands Enterprise fragile areas

The Scottish islands are considered rural areas of Scotland. Highlands and Islands Enterprise have undertaken a Review<sup>41</sup> of fragile areas to assess the characteristics of rural communities in Scotland. To measure fragility and categorise communities four indicators were used:

- Population decline (2001-2005)
- Population density (2005)
- Drive time to a mid-sized service centre
- Income per household (2006)

According to this methodology, all four islands of the pilot area are characterised as fragile areas. 'Fragile areas are characterised by weakening of communities through population loss, low incomes, limited employment opportunities, poor infrastructure and remoteness.'

#### Scottish Index of Multiple Deprivation

The Scottish Index of Multiple Deprivation (SIMD) is the Scottish Government's official tool for identifying those places in Scotland suffering from deprivation. It incorporates several different aspects of deprivation, combining them into a single index. In this context, deprivation is defined more widely as the range of problems that arise due to lack of resources or opportunities, covering health, safety, education, employment, housing and access to services, as well as financial aspects. To measure the multiple aspects of deprivation seven indicators are used, these are:

- Employment
- Income
- Health
- Education, Skills, and Training
- Geographic Access to Services
- Crime
- Housing

The SIMD is available at the Datazone level<sup>42</sup>, although the Datazones reflect local authority boundaries they do not fit neatly into island boundaries. For example, the Gigha

---

<sup>40</sup> The collection of data was undertaken in summer 2015

<sup>41</sup> Highlands and Islands Enterprise Fragile Areas Review, 2007

<http://www.gov.scot/Publications/2010/07/30101940/4>

<sup>42</sup> Datazones were developed as a common, stable and consistent small area geography. There are 6,505 datazones covering the whole of Scotland. Datazones are groups of 2001 Census output areas and have, on average, populations of between 500 and 1,000 household residents and nest within local authority boundaries.

Datazone also includes an area of the Kintyre peninsula and the Datazone for Jura also includes the island of Colonsay and some of Islay.

Table A-1 below presents data for all of the relevant datazones covering the geographic area of Islay, Colonsay, Gigha and Jura.

**Table A-1: Pilot area datazones and SIMD ranking**

<b>Datzone Name</b>	<b>Island</b>	<b>SIMD Domain Rank</b>
S01000755	Jura, Colonsay, part of Islay	Geographic Access – 15% most deprived All other domains least 85% deprived
S01000722	Islay	Least 85% deprived for all domains
S01000724	Islay	Least 85% deprived for all domains
S01000726	Islay	Geographic Access – 15% most deprived All other domains least 85% deprived
S01000726	Islay	Geographic Access – 15% most deprived All other domains least 85% deprived
S01000721	Gigha, part of Kintyre	Geographic Access – 15% most deprived All other domains least 85% deprived

**Source: Scottish Index of Multiple Deprivation 2012**

According to 2012 SIMD results<sup>43</sup> Argyll and Bute has 1% of Scotland's 15% most deprived. Within Argyll and Bute 8.2% of datazones are in the 15% most deprived. Where an area does not have a datazone classified in the 15% most deprived it does not mean that it has no deprivation but that the deprivation is not concentrated in a geographical area.

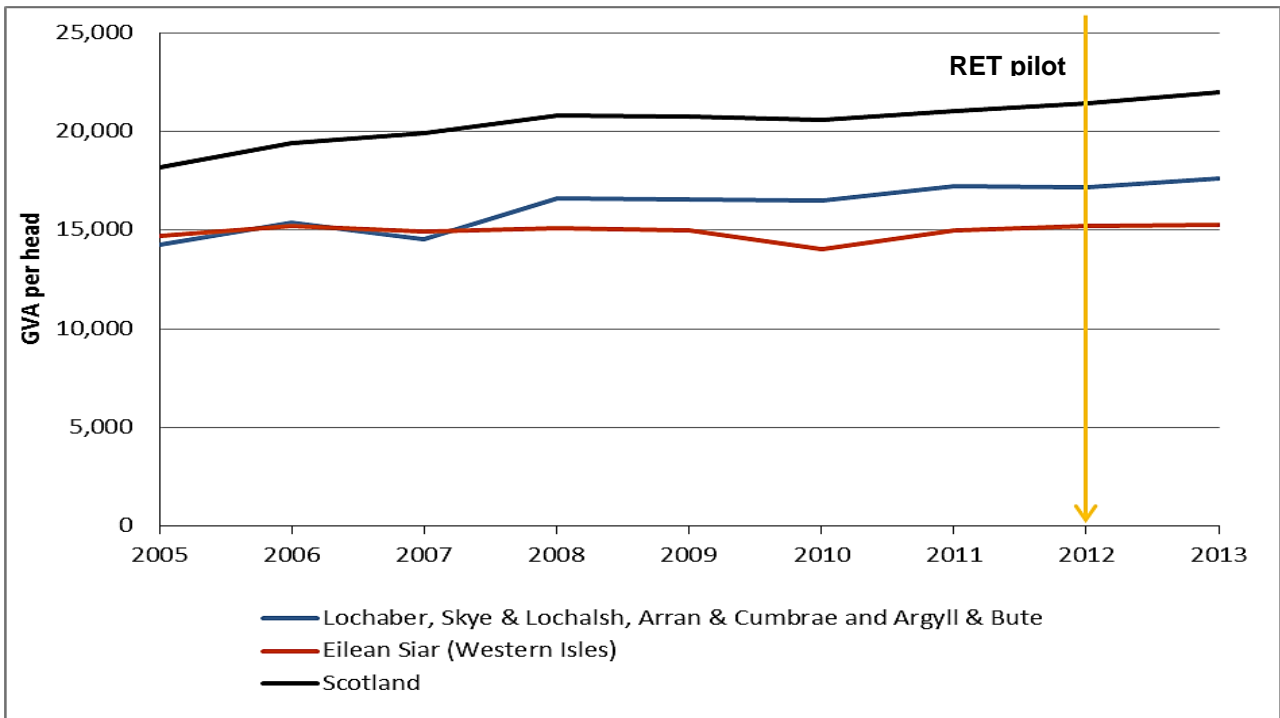
#### Gross Value Added

Data on Gross Value Added (GVA) are not available at individual island level. However, data are available for Nomenclature of Units for Territorial Statistics (NUTS) areas in Scotland. Figure A-1 below presents GVA per head in the period between 2005 and 2013<sup>44</sup> for the NUTS area of Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute and it compares it against the Western Isles (Eilean Siar) and Scotland as a whole. The RET was introduced to the pilot area of Islay, Colonsay and Gigha in 2012. As the chart shows GVA per head is below the level for Scotland but higher than that of the Western Isles. Figure A-2 presents the percentage change in GVA per head over the same period and shows a clear increase between 2012 and 2013. However, considering that the islands of the pilot area have a very small share in the NUTS area presented here, it is not possible to attribute any change in GVA to RET.

<sup>43</sup> <http://simd.scotland.gov.uk/publication-2012/simd-2012-results/>

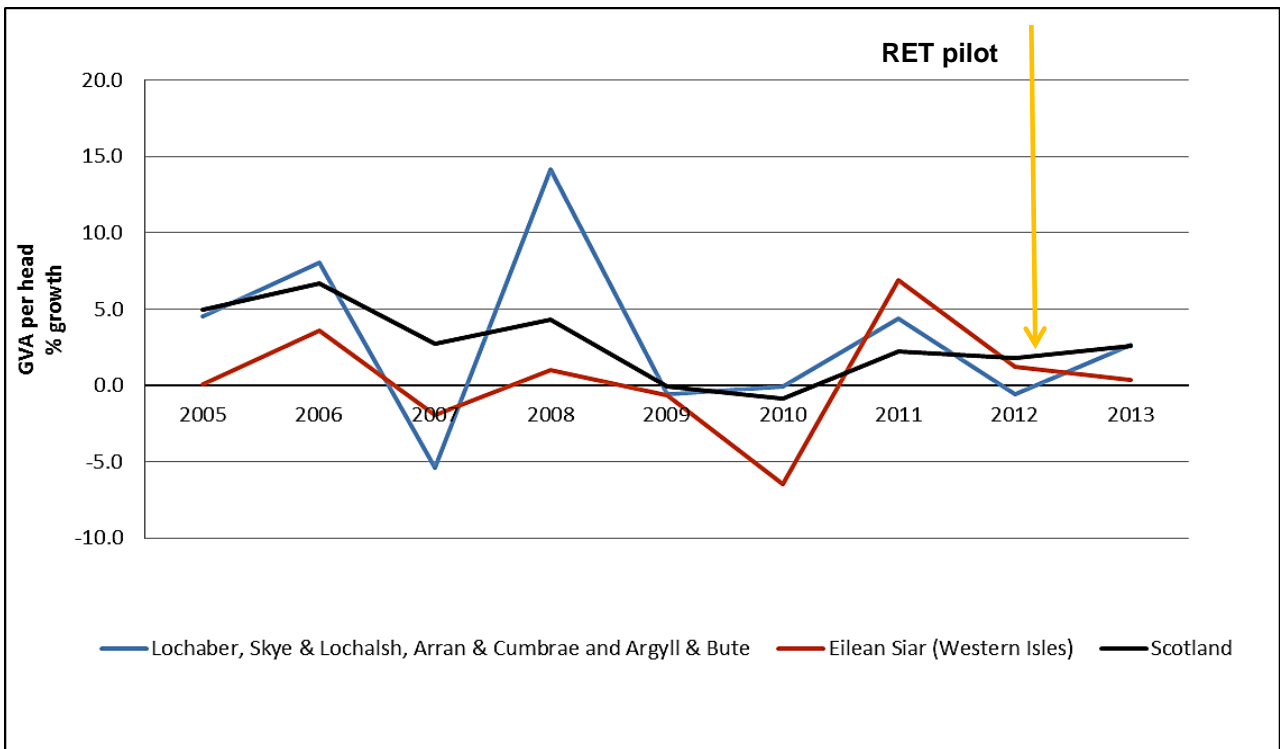
<sup>44</sup> Estimates of workplace based GVA allocate income to the region in which the economic activity takes place. Figures provided for 2013 are provisional.

**Figure A-1: GVA per head between 2005 and 2013**



Source: Office of National Statistics

**Figure A-2: GVA per head percentage change between 2005 and 2013**



Source: Office of National Statistics / National Records of Scotland



Labour market

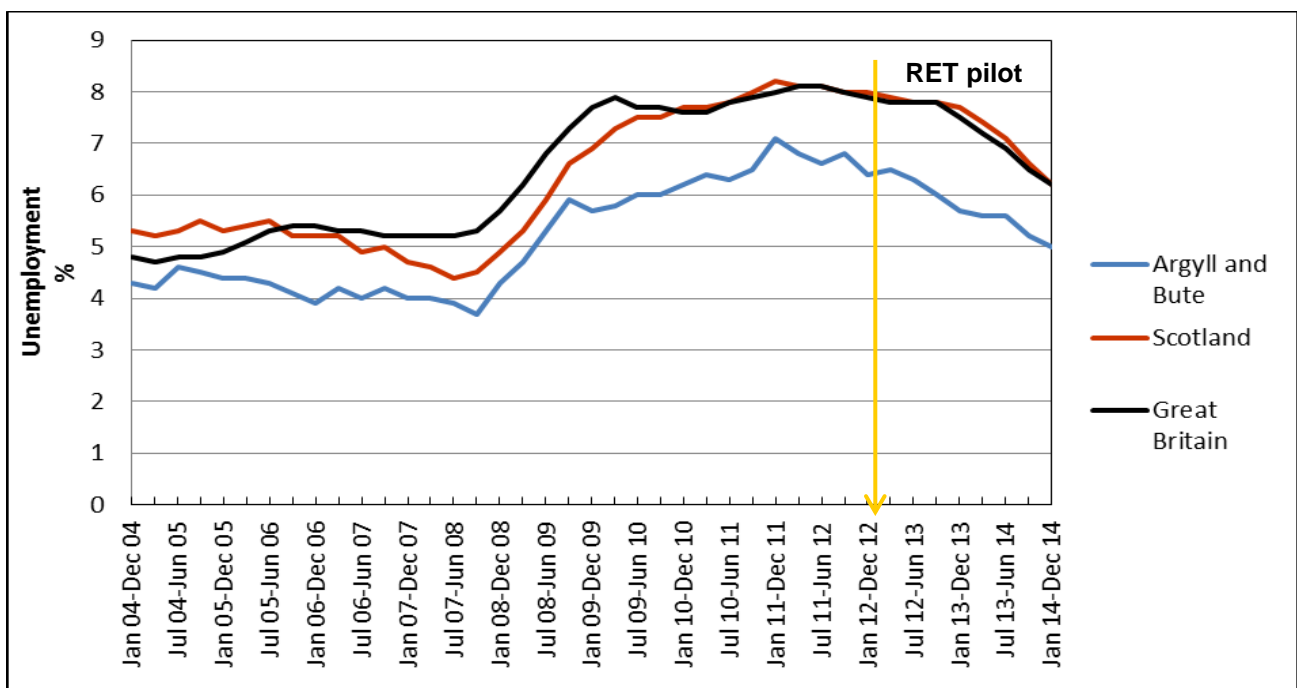
To assess the economic shape of island communities in the pilot area we look into *unemployment figures* and *enterprises profile*.

Economic data for each individual island are not available at such a low geographic area. Scottish Neighbourhood statistics provides data at the Datazone level but as discussed above the Datazones boundaries do not fit perfectly with the island boundaries. Most data discussed in this section are provided on Local Authority level and compared against the overall Scotland and Great Britain level. Whilst data on employment deprivation as reported by SIMD is presented below this is only currently available for the period prior to the introduction of RET.

*Unemployment and Job Seekers Allowance*

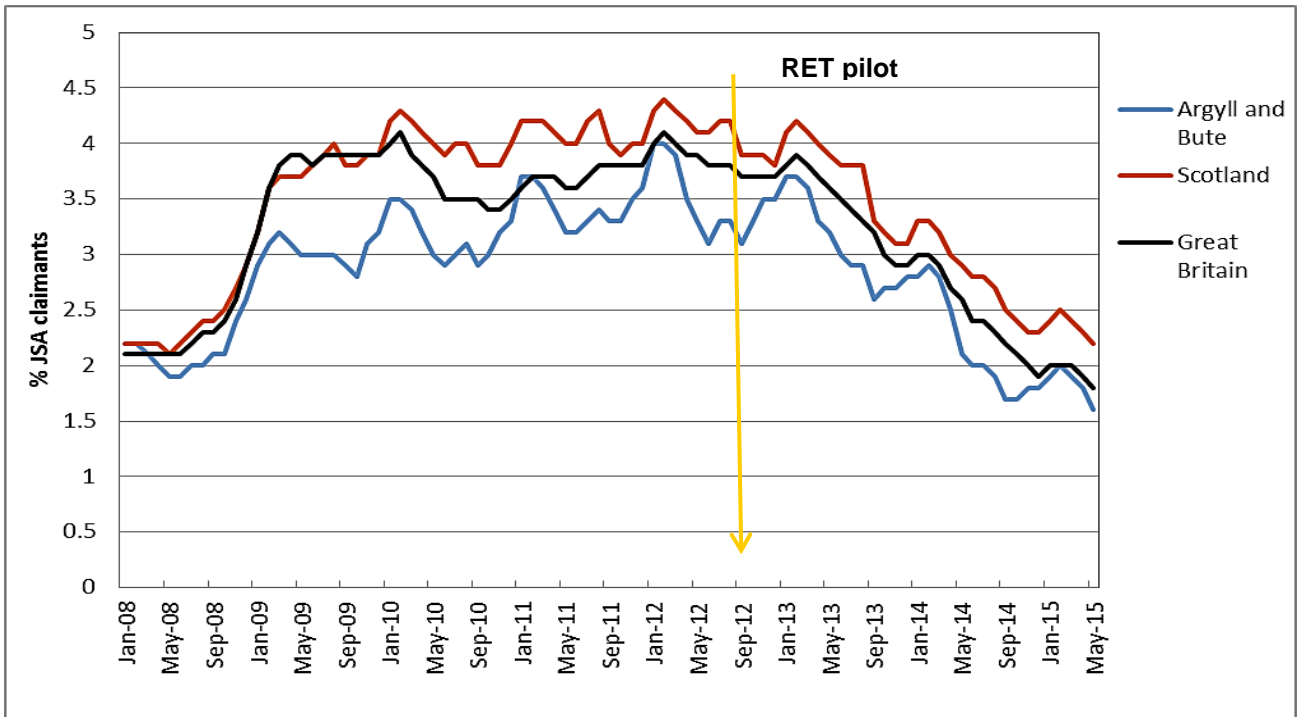
The overall number of economically active Argyll and Bute residents unemployed in 2014 was 2,100. This corresponds to a 5% unemployment rate, well below that for Scotland and Great Britain, with an overall unemployment rate of 6.2% for the same year. Historic data on unemployment rates are plotted in Figure A-3 and suggest that unemployment levels in Argyll and Bute council area are below the Scottish trend fluctuating between 3.7 and 7.1 per cent. Similar findings are presented in Figure A-4 where the change in Job Seekers Allowance (JSA) claimants for Argyll and Bute is lower than for Scotland and Great Britain. In May 2015 861 people sought JSA suggesting a decrease of 50% since the introduction of RET in October 2012. However due to the very small share of the pilot area population (less than 1%) of the overall Local Authority it is not possible to determine whether RET has any influence on this.

**Figure A-3: Unemployment rate of economically active population in Argyll and Bute Council area**



Source: Nomis

**Figure A-4: Job Seekers Allowance Claimants as percentage of economically active population**

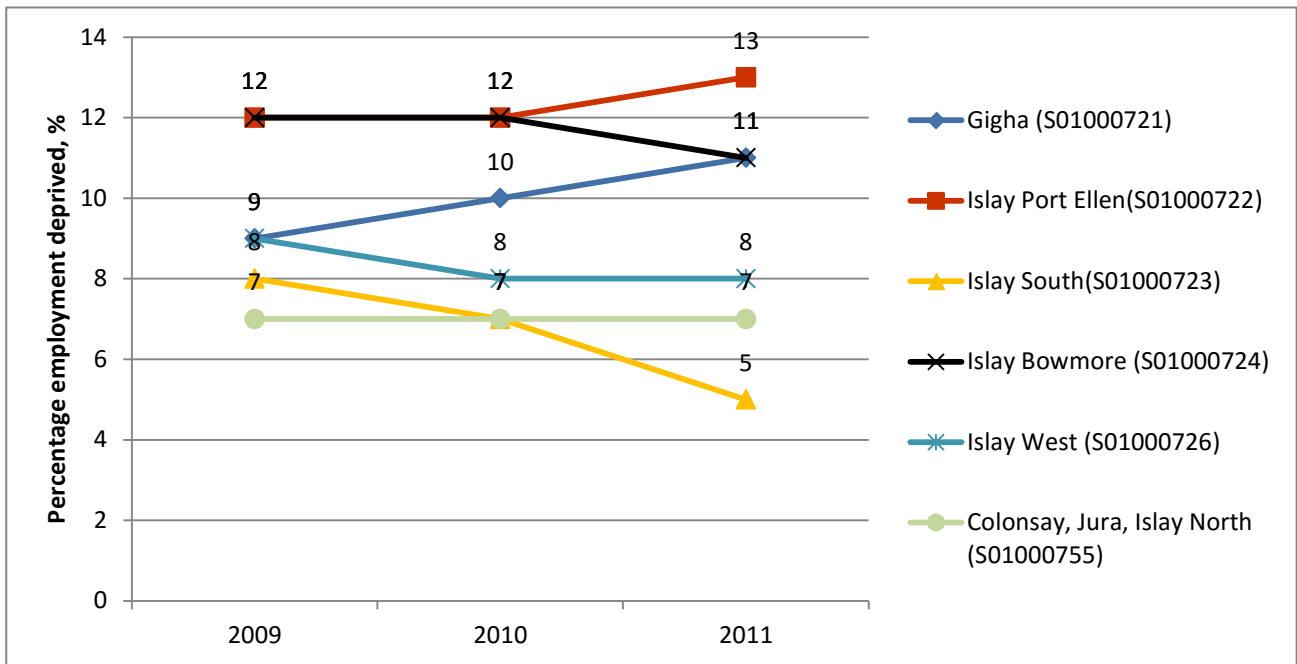


Source: Nomis

*Employment deprivation*

Figure A-5 shows the percentage of the working age employment deprived<sup>45</sup> for each of the Datazones covering the pilot area. For the Argyll and Bute local authority, as a whole, the percentage of people employment deprived in 2011 was 11%. For most of the pilot area Datazones employment deprivation is lower than the Scottish average of 13% although the two less rural Datazones on Islay (Port Ellen and Bowmore) have a higher proportion than the other Datazones over the 3 years of data presented.

Figure A-5: Percentage of working age population employment deprived, 2009-2011



Source: Scottish Neighbourhood Statistics

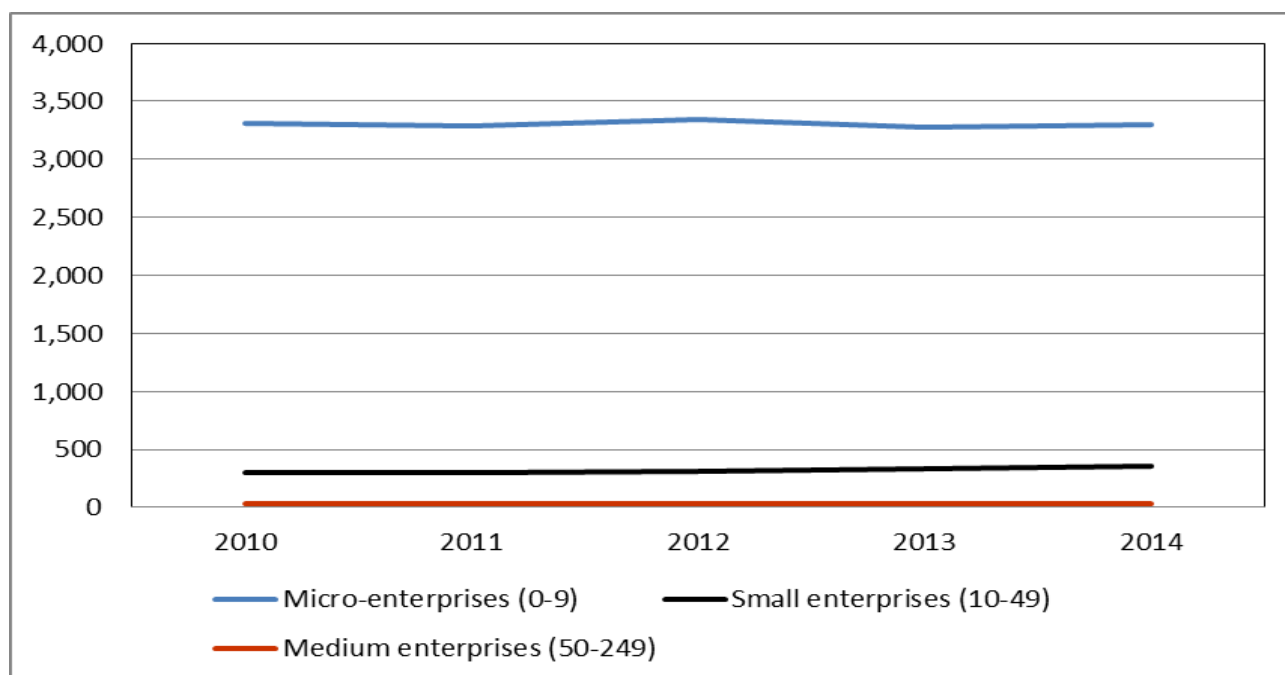
Enterprises

Enterprises are categorised into micro, small and medium enterprises. There are no large enterprises in the Argyll and Bute Council area<sup>46</sup>. According to data presented at Figure A-6 the Argyll and Bute Council area had 3,680 enterprises in 2014 of which the majority were micro-enterprises (3,295) whilst 350 were small and 35 were medium enterprises. Looking at the chart an increase in small and medium enterprises is evident since 2012 (of around 7%) whilst the level of micro enterprises has shrunk since 2012 with a small rise starting in 2014.

<sup>45</sup> This proportion of people defined as employment deprived is a combined count of claimants on the following benefits: working Age Unemployment Claimant Count averaged over 12 months; Working Age Incapacity Benefit claimants, or Employment and Support Allowance recipients; and Working Age Severe Disablement Allowance claimants. Each person is only counted once.

<sup>46</sup> Micro-enterprises occupy staff between 0 to 9, small enterprises occupy staff between 10 to 49, medium enterprises occupy staff between 50 to 249 and large enterprises have a workforce exceeding 250 people.

**Figure A-6: Micro-, small- and medium enterprises in Argyll and Bute Council**



Source: NOMIS

### Tourism data

Findings from the primary research undertaken for this study suggest that tourism plays a central role in the island communities with the number of visitors increasing each year. This section provides an insight into the accommodation categories as listed by Visit Scotland at summer 2015.

### Accommodation profile

As table A-2 sets out Islay has the largest variety of accommodation options for visitors with 41 B&Bs, 58 self-catering spaces and 8 hotels. Colonsay mainly provides self-catering accommodation and has two B&Bs, one hotel and one hostel. Gigha and Jura offer fewer accommodation alternatives with more options for self-catering and B&Bs. It is important to highlight that only Islay and Gigha offer the opportunity for camping with two and one caravan and camping parks respectively.

**Table A-2: Visit Scotland Listed Accommodation**

Accommodation as listed by Visit Scotland (Summer 2015)	Islay	Colonsay	Gigha	Jura
B&B/Guesthouse	41	2	2	3
Hotel	8	1	1	1
Hostel	1	1	0	0
Self-Catering	58	36	5	16
Caravan Parks and Camping	2	0	1	0
Inns and Restaurants with Rooms	2	0	0	1
<b>Total</b>	<b>112</b>	<b>40</b>	<b>9</b>	<b>21</b>

## Annual events

Table A-3 below provides an overview of annual events in Islay, Colonsay, Gigha and Jura. Some of these events are particularly popular and may increase the number of visitors to the islands over specific periods. Considering the proximity of the islands in the pilot area many tourists combine their visit to events with round trips, e.g. the whisky festival in Jura and the Islay Festival of Malt and Music both taking place in May.

**Table A-3: Annual Events on Islay, Colonsay, Gigha and Jura**

<b>Event</b>	<b>Frequency</b>	<b>Month</b>
<b>Islay</b>		
Feis Ile – Islay Festival of Malt and Music	Annual	May
Islay Beach Rugby Tournament	Annual	June
Islay Country Dancing Weekend	Annual	May
Cantilena Festival	Annual	July
Islay Book Festival	Annual	September
Islay Festival of the Sea	Annual	August
Walk Islay	Annual	April
Ride of the Falling Rain	Annual	August
Islay Half Marathon	Annual	August
Islay Jazz Festival	Annual	September
Islay Tope Fishing Festival	Annual	September
<b>Colonsay</b>		
Ceòl Cholasa - Colonsay Folk Festival	Annual	September
Colonsay Book Festival	Annual	April
Festival of Spring	Annual	April-May
Colonsay Rugby Festival	Annual	July
<b>Gigha</b>		
Gigha Music Festival	Annual	June
<b>Jura</b>		
Isle of Jura Fell Race	Annual	May
Whisky Festival	Annual	May
Isle of Jura Musical Festival	Annual	September

## Whisky tourism

Islay with eight whisky distilleries has been characterised as the greatest of whisky-producing islands. Jura also has one of the biggest whisky distilleries in Scotland. Whisky accounts for 80% of Scottish food and drink exports and generates £3.3 billion directly to the UK economy. An important aspect of whisky production is how popular it has become among tourists both British and International. Visiting a whisky distillery is now one of the top twenty activities a visitor in Scotland will do according to the ‘Scotland Visitor Survey 2011 & 2012’. Of the survey participants 20% reported that they visited a whisky distillery on their visit to Scotland. According to Visit Scotland figures<sup>47</sup> there was 1.1 million visits

<sup>47</sup> <http://www.visitscotland.org/pdf/Whisky%20Tourism%20%20Facts%20and%20Insights.pdf>

recorded to distilleries in Scotland during 2013, suggesting a 10.5% increase on 2012 figures. Figures from the Visitor Attractions Barometer<sup>48</sup> indicate that distilleries, breweries, and wineries also generate the highest average spend per trip by visitors at £12.60, significantly higher than other visitor attraction types. Whisky tourism is growing significantly on Islay and Jura, with Ardbeg distillery on Port Ellen ranked within the top 20 distilleries by number of visits in Scotland for 2012-2013. Between 2012 and 2013 visits to the distillery increased by 22% from 8,619 to 10,500.

## **Housing market data**

This section looks at the housing market in the pilot area and examines whether it has changed since the introduction of RET fares on Islay, Colonsay and Gigha. Statistics on second home ownership in the pilot area are also discussed.

### Residential property values

To assess whether cheaper ferry fares have brought about an increase in residential property values we look into the average house prices in the pilot area between 2012 and 2014 as provided on the Right Move webpage. As RET was introduced in late October 2012 the average house prices in 2012 at table A-4 below can be interpreted as pre-RET residential values whilst the average house prices in 2013 and 2014 account for the RET pilot period. According to Right Move, average house prices on Gigha and Jura increased significantly by 86% and 84% respectively within the RET pilot period whilst average house prices on Colonsay and Islay decreased by 18% and 0.5% respectively.

- Colonsay had the highest average house price in 2012 (£216,000) in the pilot area whilst Gigha had the highest average house price in 2014. The average house price on Gigha was at £193,333 in 2012 rising to £360,000 in 2014.
- Looking at the main settlements of Islay, Port Charlotte had the highest average house price in the pilot period of RET. Whilst the average house price on Port Charlotte (£209,000) was significantly higher than Bowmore (£139,250) in 2012, in 2014 Port Charlotte had an average house price of £148,929, very similar to the average house price in Bowmore of £147,140. In effect, between 2012 and 2014 average house price fell by 29% on Port Charlotte whilst it rose by 6% in Bowmore.
- In 2014, average house prices on Colonsay, Gigha and Jura were in excess of the average for Islay's main settlements.
- Whilst average house prices of the main settlements on Islay are well below the average of Argyll and Bute Council (£153,236 in 2013), the average house prices for Colonsay, Gigha and Jura are in excess of those for Argyll and Bute.

---

<sup>48</sup> <http://www.moffatcentre.com/whatwedo/ourprojects/visitorattractionmonitorandbarometer/>

**Table A-4: Average house prices in pilot area between 2012 and 2014**

Area	Average house price in 2012	Average house price in 2013	Average house price in 2014	% change between 2012 and 2014
<b>Islay</b>	<b>129,567</b>	<b>105,268</b>	<b>128,948</b>	<b>-0.5%</b>
Port Ellen	89,085	131,750	119,722	34.4%
Port Askaig	95,500	52,000	n/a	-45.5%
Port Charlotte	209,000	137,083	148,929	-28.7%
Bowmore	139,250	108,256	147,140	5.7%
Portnahaven	115,000	97,250	100,000	-13.0%
<b>Colonsay</b>	<b>216,000</b>	<b>144,167</b>	<b>177,500</b>	<b>-17.8%</b>
<b>Gigha (Ardminish)</b>	<b>193,333</b>	<b>n/a<sup>49</sup></b>	<b>360,000</b>	<b>86.2%</b>
<b>Jura (Craighouse)</b>	<b>101,667</b>	<b>133,019</b>	<b>187,000</b>	<b>83.9%</b>
<b>Argyll and Bute Council</b>	<b>157,236<sup>50</sup></b>	<b>153,236</b>	<b>n/a</b>	<b>-2.5%</b>

Source: Right Move

### Second or holiday residence

To better understand the housing market in the pilot area we draw on Scotland's Census 2011 data on the quantity of homes defined as second residence or holiday accommodation. These data are available at the island level and presented on table A-5 below.

**Table A-5: Second/Holiday homeownership by island, 2011**

Island	All household spaces	Unoccupied household spaces: Second residence/holiday accommodation	% Second residence/holiday accommodation
Islay	1,840	304	17%
Colonsay	130	54	42%
Gigha	95	17	18%
Jura	139	41	29%
Argyll and Bute Islands	9,528	1,778	19%
Argyll and Bute Council	46,073	4,146	9%
All Inhabited Scottish Islands	54,361	5,382	10%
<b>WICT RET study</b>			
Uists and Benbecula	2,524	218	9%
Lewis and Harris	10,600	495	5%
Coll	137	49	36%
Tiree	495	166	34%

Source: Scotland's Census 2011, National Records of Scotland Table LC4403SC - Accommodation type by household spaces All household spaces

<sup>49</sup> Data for the 2013 house prices were not available

<sup>50</sup> This figure stands for 2010 house market prices. Overall figures for the Argyll and Bute Council area are only available for 2010 and 2013 residential prices.

Of the four islands in the pilot area, Colonsay has the greatest proportion of second/holiday home ownership (42%). Jura follows with 29% whilst for Islay and Gigha the proportions are 17% and 18% respectively. Islay as the largest island in the pilot area has the most second/holiday homes in absolute terms (304). Data are also presented for the Argyll and Bute Islands, the Argyll and Bute Council area and all inhabited islands in Scotland. The proportion of second/holiday accommodation on the Argyll and Bute islands is 19%, a figure similar to the one for Gigha and Islay. The proportion of second/holiday homes in all islands of the pilot is well above the proportion of all inhabited islands across Scotland (10%). The share of second/holiday residence in the pilot area is well above the equivalent figure, when comparing with the Uists, Benbecula, Lewis and Harris of the first RET study (9% and 5% respectively). However, Coll and Tiree appear to have a high proportion of second/holiday homes (36% and 34%) comparable to the figures for Colonsay and Jura. Overall, the islands with low levels of population and household spaces appear to have a greater share of second/holiday accommodation than the islands with large populations and more household spaces.





**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

**Transport Scotland**

Buchanan House, 58 Port Dundas Road, Glasgow, G4 0HF  
0141 272 7100  
info@transport.gov.scot

© Crown copyright 2016

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence> or e-mail: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk)

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Further copies of this document are available, on request, in audio and visual formats and in community languages. Any enquiries regarding this document / publication should be sent to us at [info@transport.gov.scot](mailto:info@transport.gov.scot)

This document is also available on the Transport Scotland website: [www.transport.gov.scot](http://www.transport.gov.scot)  
Published by Transport Scotland, February 2016

Follow us:

 [transcotland](https://www.facebook.com/transcotland)  [@transcotland](https://twitter.com/transcotland)

**[transport.gov.scot](http://transport.gov.scot)**

An agency of  
Buidheann Ie



**The Scottish  
Government**  
Riaghaltas na h-Alba