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Evaluation of Road Equivalent Tariff on the Clyde and Hebridean Network

Contents

Executive summary

In October 2008, Transport Scotland introduced the Road Equivalent Tariff (RET) fares policy as a pilot on routes to the Outer Hebrides, Coll and Tiree (made permanent in 2012). The principle of RET is that ferry fares should be set on the basis of travelling an equivalent distance by road plus a fixed fare element aimed at cost recovery. RET was intended to reduce the cost disadvantage faced by island communities and promote the islands as places to live, work, visit, invest and conduct business.

The RET policy was rolled-out across the Clyde and Hebrides Ferry Services (CHFS) network in three further stages, as follows:

- in 2012, the policy was extended to cover Colonsay, Gigha and Islay
- it was then further extended to the two Arran routes and Campbeltown in 2014
- finally, in October 2015, RET was rolled-out to all remaining routes, including the high-volume routes of Oban – Craignure, Wemyss Bay – Rothesay and Largs – Cumbrae

In keeping with the requirements of the Scottish Transport Appraisal Guidance (STAG), and in order to ascertain the value for money of the policy, Transport Scotland has previously commissioned evaluations of the 2008 pilot and the 2012 and 2014 roll-outs. In order to complete this evaluation series, Transport Scotland has commissioned Peter Brett Associates LLP, now part of Stantec, and ProVersa Ltd to:

- evaluate the impact of the 2015 RET roll-out on the islands and peninsular communities concerned
- to consider the longer-term effects of RET across the network as a whole and
- establish the cost of RET to the public purse and its contribution to wider government policy objectives

This report therefore provides an evaluation of the impact of RET on the 2015 tranche of routes together with a long-term analysis of the costs and consequences of the policy for the network as a whole. The report seeks to answer the following key questions:

- what was the scale of the reduction in fares?
- how did this change travel behaviour?
- what have been the consequences of these changes in travel behaviour?

- what have the consequences been for island supply-chains?
- what has been the impact on the communities affected by RET?
- how much has RET cost the government?
- how has RET contributed to government policy?

The responses to the above questions were informed by:

- 2015 RET islands / routes
    - resident survey: 767 responses, although it should be noted that half of the responses came from Cumbrae, Mull and Iona
    - onboard survey: 1,643 responses, of which 21% were permanent island-residents, 4% were second homeowners; and 74% were visitors and
    - business survey: 75 responses, which were supplemented by 14 business in depth interviews
- network-wide
    - operator carryings, performance and revenue data for all routes
    - desk-based socio-economic analysis
    - interviews with island haulage firms to ascertain the impact of RET on island supply-chains

In adopting this reporting style, the analysis in relation to both the 2015 RET routes and the wider network analysis is reported jointly, with references made to the former where appropriate.

What was the scale of the reduction in fares?

Network-wide

- In some places, residents experienced a lesser fares reduction than the headline figure suggested because they made use of multi-journey and other discounted products (including concessionary products) prior to the introduction of RET. This was particularly the case on the Firth of Clyde routes.
- The scale of the reductions on short routes was also relatively small as a consequence of the 'fixed' (i.e. non-distance- based) element of the RET formula.

- Despite the above, fares did reduce significantly on most routes across the network, with major reductions on several high-volume routes such as those to the Outer Hebrides, Ardrossan – Brodick and Oban – Craignure.

- The absolute reduction in car fares was in most cases significantly larger than the corresponding reduction in passenger fares, incentivising those who travelled as foot passengers prior to the introduction of RET to take a car onboard the ferry.

- Across the network, it is estimated that the average fare paid per passenger and car dropped by 34% and 40% respectively. These figures take account of all discounts and concessions.

- It should be noted that, where the impact of RET on e.g. carryings, utilisation etc is assessed, this is done by comparing against a counterfactual 'non-RET' demand scenario, which is used to isolate the impact of the policy.

2015 RET Islands / Routes

- Whilst there was a generally high (although not universal) awareness of RET fares amongst island residents on the '2015 routes', fewer than 20% of visitors surveyed were aware of the policy.

- Of those who were aware of RET, only around a quarter could estimate their pre-RET fare, suggesting that the scale of the fares reduction has been forgotten relatively quickly, with RET fares being the new norm.

How did this change travel behaviour?

Network-wide

- RET stimulated a significant uplift in demand across the network. Whilst passenger numbers have grown across most routes, the growth in car traffic in most cases has been significantly larger, implying that some who previously travelled as foot passengers are now taking a car onboard the ferry.

- The redefinition of the length at which a vehicle is classified as 'commercial' from 5m to 6m has also led to an increase in van and car + trailer movements, at the expense of more traditional commercial vehicle movements over 6m. These factors have inflated car carryings across the network somewhat and depressed commercial vehicle numbers. This is particularly true on shorter routes, where the ferry frequency allows a day return trip (e.g. Ardrossan - Brodick).

- Overall, it is estimated that, by 2018, RET has increased network-wide passenger numbers by 11.6% and cars carried by 20.6%.

2015 RET Islands / Routes

- Around 25% of island residents made more ferry trips as a result of the introduction of RET, with a further 25% making the same number of trips as before RET was introduced, but they are now taking the car onboard more often. The remaining 50% largely make the same number of journeys as prior to the introduction of RET.

- For those who did not make more trips when RET was introduced, the main reasons were the widespread use of discounted multi-journey books prior to the introduction of RET (particularly on the Firth of Clyde routes) and because residents were making all the journeys they wished to make, and therefore had no need to travel more often.

- The resident survey suggests that residents of the '2015 RET' islands are now using the ferry more frequently as both foot passengers and car drivers. However, the responses also suggest a switch from travelling as a foot passenger to now taking a car onboard the ferry, a point which is supported by the carryings data.

- The level of estimated induced demand as a result of RET on the '2015 RET' routes is relatively small, some 6% in total (although it should be noted that this is a more modest increase than the carryings data would suggest).

- The additional trips generated by the reduction in fares in the '2015 islands' are predominantly for visiting friends & relatives, shopping, business travel and day-trips / holidays. There has also been a growth in health-related trips, which are very important from a resident welfare perspective.

- RET has incentivised additional journeys by car amongst residents. This implies that the cost of taking a car was a significant barrier for many and RET has removed this in the '2015 RET' islands.

What have been the consequences of these changes in travel behaviour?

Network-wide

- Vessel vehicle-deck load factors have increased across almost all routes and seasons. The supply on the majority of routes is capable of accommodating this increase in demand, but there are several routes where there are significant summer capacity pressures emerging, including for example Oban-Craignure, Ardrossan-Brodick, Stornoway-Ullapool and Uig-Tarbert/Lochmaddy.

- There is clear evidence of an extension of the tourism season across most islands, with shoulder summer carryings growth generally exceeding peak summer growth on most routes.

2015 RET Islands / Routes

- Of the bookable '2015 RET' routes, 87% of respondents to the resident survey are now finding it more difficult to make a vehicle booking, mainly in the summer period and on summer Saturdays in particular. This is having a negative impact on island residents, either adding a 'hassle-factor' to trips which are being made or preventing trips from being made at all.

- On the evidence of the resident survey, the vehicle booking window has demonstrably moved since RET was introduced - prior to RET, people tended to book 2-3 days in advance but now typically book 2-4 weeks in advance. On higher volume non-bookable routes (e.g. Largs-Cumbrae), queues are reported at the ferry terminals on peak days which are impacting on residents' ability to travel when they need to / wish to.

- The onboard surveys suggest that island residents are not willing to pay more to travel at peak times, but visitors are.

- There is also strong agreement amongst visitors and residents that: vehicle-deck space should be reserved for residents at peak times; bookings should be released in phases; and that people would switch to quieter sailings with reduced fares. There was also minority interest (circa 25% of island residents) in car-share and car-club schemes, whilst 37% of visitors expressed an interest in an island-based car hire scheme.

- Island residents and, to a lesser extent visitors, have noted some deterioration in the level of service since RET was introduced on the '2015 routes'. This is predominantly due to delays associated with slower turnaround times as a result of the increased volumes of vehicular traffic on most routes (a point borne out by operator performance data). CalMac Ferries Ltd has proactively addressed this challenge by amending timetables where possible and increasing port turnaround time as well as recruiting port staff to accommodate growing demand. However, these pressures remain significant and the above measures only go so far in resolving the issues.

- The benefits '2015 RET' residents have derived from making additional trips are closely related to their journey purpose (predominantly visiting friends & relatives more often, shopping and leisure opportunities). Around a quarter of respondents make the same number of trips as prior to RET but now take a car, which has allowed them to access different destinations and widen the range of activities in which they engage whilst on the mainland.

- RET has also facilitated improved access to employment, training and business opportunities for a small number of island residents, generating economic benefits for the communities concerned, which are in addition to the social benefits outlined above. The policy has also facilitated health-related travel, a key benefit of RET.

- It is common in many smaller islands for residents to maintain an old on-island car (or no island car) and keep their primary car on the mainland. This reduces the need to pay a ferry car fare when making a journey. The number of island cars parked on the mainland should have reduced, but no significant impact on car ownership levels was identified, which suggests that residents of the smaller island communities are taking advantage of lower fares to take their car back to the island more often.

- Due to the switch from foot passenger to car travel, a significant proportion of residents surveyed now spend more on fares than they did prior to the introduction of RET. This suggests that the perceived benefits of taking a car onboard the ferry outweigh the marginal fares costs, and that the pre-RET fares were frustrating journeys which people were wanting to make.

- RET has facilitated growth in the crucial 'visiting friends & relatives' market, whilst also making it easier for island residents to access mainland goods and services.

- Where residents have saved money as a result of RET (i.e. they are not paying additional fares through now taking a car onboard), the evidence from the resident survey suggests that the money saved on ferry fares has been recycled back into both the island and mainland economies (and is in effect a transfer from government). Some 37% noted that spending has increased in general, albeit a larger proportion of this has been spent on the mainland than on the island. From the perspective of resident spending, RET has generated a net additional economic benefit for the islands concerned.

- The visitor spend data collected through the onboard survey suggest that visitors are spending fairly substantial sums of money on the islands, ranging from £114 for the average daytripper party to £387 of non-accommodation spend for parties staying more than one night.

- A growth in visitor expenditure has been identified through the business survey and stakeholder interviews. However, feedback suggested that this is by no means universal and has been largely focused in food-based retail. It was also suggested that the comparatively low cost of taking a car since RET was introduced has prompted visitors to buy goods on the mainland and take them over in the car rather than travelling as a foot passenger and buying on-island.

- Overall, the introduction of RET to the '2015 islands' has had a differential effect in terms of exposing the islands to increased competition and economic leakage from residents buying goods or services on the Scottish mainland. The business survey and accompanying interviews have highlighted that the islands closest to the Scottish mainland and with a reasonable scale of on-island retail and service provision have been most affected (i.e. Bute, Cumbrae and Mull). Other islands which are more distant (e.g. the Small Isles) or which have

always had a dependence on the mainland for retail and service provision (i.e. Lismore) have been more insulated against this effect.

- Whilst around 40% of businesses noted that turnover has increased since RET was introduced in 2015, competition has also eroded turnover for around a fifth of businesses surveyed, with these businesses concentrated on islands close to the mainland. The increase in turnover has not particularly fed through to a growth in employment.

- In many cases, the introduction of RET has increased the disposable income of island residents and visitors. Whilst there will be a degree of economic leakage, the policy nonetheless represents an investment in island communities, supporting both GVA and employment growth.

- The new journeys generated by RET have supported an increase in Scottish visitor numbers, national productivity and labour market flexibility. These effects combine to provide a net economic benefit at the national level.

- The type, volume and spatial disaggregation of data covering Scotland's islands does not facilitate a rigorous and robust evaluation of how RET (or indeed other major policies) has impacted on the society and economy of the isles. The absence of appropriate data is in itself an important finding, particularly in the context of carrying out Island Impact Assessments. Data geography is a particular problem in this respect.

- Whilst RET has offered social and economic benefits to the island communities and those who visit them, it has had a net environmental disbenefit. This is primarily as a result of increased vehicle kilometres, increased ferry sailings and, potentially, air quality impacts in ports around urban / residential areas.

- Visitors and residents both highlighted their main reasons for taking a car on the ferry as needing to take luggage / equipment and the convenience of having their own vehicle. This suggests that the absolute level of fares prior to the introduction of RET acted as a deterrent to travel. Some 80% of car users noted that public transport was not an option for their onward journey, a particular issue outwith the Firth of Clyde where rail and bus services are infrequent and journey times long.

- The reasons for not using public transport were similar for the mainland and island legs of the journey. The journey times, interchange times and cost of public transport are the main deterrents to its use for connecting with ferry services at either side of the crossing.

- Whilst it can be argued that RET has had negative environmental implications, the journeys which are now being undertaken by car which were not before are of personal benefit to the individuals concerned, who are now making journeys which were previously frustrated by the cost of travel. The survey suggests that

the scope for growing mode share in active and public transport is currently limited given long onward journey times, limited public transport coverage etc.

What have the consequences been for island supply chains?

Network-wide

- With limited exceptions, the roll-out of RET has not stimulated a significant increase in freight volumes, at least amongst commercial freight providers.

- On shorter, high volume routes, the '6m rule' has led to a reduction in goods moved on conventional commercial vehicles. Consultation suggested that island residents now more readily move goods in their own vehicles (sometimes using a trailer), whilst haulage firms have responded by substituting HGVs for vans less than 6m in length, such is the differential between the commercial and non-commercial tariff levels. It was noted in some cases that this has led to a better level of service for customers, but at the same time has reduced revenue for haulage firms and increased the amount of ferry vehicle deck space used by freight.

- Smaller population islands have noticed a tangible increase in the volume of goods being moved, which is thought to come from increased visitor numbers, and is more noticeable because the volume of background freight is lower. As these islands have always typically been served by vans, the '6m rule' has actually extended fleet choice, to the benefit of the haulier and customer.

- The introduction of RET has had little impact on the structure of the freight market on longer routes, primarily due to the inability to make a day-return journey to the Scottish mainland.

- The increase in demand for vehicle-deck space is proving to be a significant challenge for the haulage industry. Whilst block-booking affords a degree of protection, securing space over and above this can be challenging on peak sailings on the busiest routes. Moreover, recovering from disruption and delay has become more difficult. A strong perception emerged through the haulier interviews that vehicle-related capacity constraints on the ferry are choking off growth and productive investment in the islands.

What has been the impact on the communities affected by RET?

2015 RET Islands / Routes

- There is widespread agreement that RET has increased day-trip visitor numbers to the '2015 RET' communities, but concern that this has led to pressures on local infrastructure, particularly roads and parking. It should be noted though that the sample in the resident survey is dominated by Mull and Cumbrae, where these issues are perhaps most acute.

- The majority of residents in the '2015 RET' islands feel that they have personally benefitted from RET, even where wider perceptions of how the policy has impacted on their community is less positive. This is predominantly a result of increased disposable income and the ability to make journeys which were previously prevented by fare levels. The key exception is the '2015 RET' islands in the Firth of Clyde, largely due to the minimal reductions in fares for residents on these islands.

- A key challenge in validating community concerns about motorhome growth in the islands is that these users are not categorised as a separate type in the carryings data and thus it is challenging to profile the change in carryings as a result of RET.

- In the '2015 RET' islands, more people overall think that their community is worse off as a result of RET, but this finding is strongly driven by the residents of Bute, Cumbrae, Mull & Iona, where concerns over ferry and infrastructure capacity have been widely noted. In all other island groupings, RET has been considered to be positive for communities.

- Reflecting the previous point, more people think RET has made their community a less attractive place to live, but this is again driven by the Firth of Clyde islands and Mull & Iona.

- Given that the primary research here was focussed on the 2015 routes, there may be value in undertaking specific analysis across the whole network covering the key questions regarding how RET has affected individuals and communities from the island resident perspective. This could be achieved through phone-based surveys.

- The evidence suggests that RET has contributed to in-migration to the '2015 RET' islands, boosting in-migration by around 10%.

- Whilst on balance RET is considered a beneficial policy for island businesses, this view is by no means universally held, particularly on islands close to the mainland which have been impacted by competition and visitor number levels which local infrastructure is incapable of accommodating. The impact of RET on ferry capacity is a key issue for island businesses, particularly in Mull.

- The consensus view amongst businesses is that RET has been a good thing for communities. Again, however, there are lower levels of satisfaction with the policy in a subset of islands, predominantly as a result of ferry-related capacity issues and the inability of local infrastructure to accommodate the increased visitor numbers.

- The business survey and stakeholder interviews found that RET has prompted business investment in a small number of businesses across several islands.

These investments have typically been focused on businesses in the tourism sector, which are responding to increased visitor numbers and the extension of the season. It is important to note that, as RET was only introduced to this subset of islands in 2015, the 'investment impacts' have not fully materialised. A number of businesses interviewed identified RET-related investments which were in the pipeline but had not yet been delivered.

How much has RET cost the Scottish Government?

- It is estimated that RET is now costing the Scottish Government around £25m per annum in revenue support, of which around two thirds is attributable to RET for vehicles less than 6m in length. The 2015 roll-out more than doubled the level of revenue support required, due to this roll-out containing a larger number of routes and some of the busiest. Around two thirds of this sum is supporting reductions in car fares, with the remainder largely supporting reductions in passenger fares (as the cost of reduced coach fares is minimal).

- Since RET was first introduced in 2008, it has cost the Scottish Government a cumulative £120m (to 2018) in reduced fares revenue. As previously noted, the expansion of RET to the 2015 islands has significantly ramped-up the annual funding requirement, such that around £100m of revenue support will be required every four years to maintain RET fares at their current level (compared to their previous non-RET level).

- Out with the additional revenue cost of RET, the increase in demand in island communities has created other cost pressures, which in many cases organisations are struggling to address or are diverting money from other sources to mitigate RET impacts. These have included:

    - The increase in visitors to the islands and the increased propensity for both residents and visitors to take their car on the ferry has caused capacity challenges on several routes across the network. This has created challenges for the operator in terms of managing demand, maintaining punctuality and, at various ports, safely and efficiently managing traffic. Vessels' operating days are also longer with fewer lay-up days than previously scheduled. This is putting added wear on already ageing assets which is impacting on the technical reliability of the service.

    - A further impact of the increase in vehicle movements is pressure on local road networks. This is particularly pertinent in 'honeypot' islands such as Mull and Harris, which are dominated by single track roads. The maintenance burden has increased, particularly in relation to verge damage associated with e.g. motorhomes. Traffic management and parking in and around ferry terminals is also proving to be challenging at various locations and is requiring investment to keep pace with demand.

- There is a consistent story emerging across the local authorities about island infrastructure being insufficient to meet the increased demands placed on it. As well as roads and parking, this includes public toilet provision, general and chemical waste facilities, accommodation and campsite provision.

- There is anecdotal evidence to suggest that patronage on local authority subsidised bus services has declined as a result of more residents and visitors taking their car on the ferry. However, there is no quantitative evidence available to support this point.

Conclusion: How has RET contributed to Government policy?

RET was ultimately introduced to contribute towards the transport and wider social and economic policies of the Scottish Government. In this respect, its success can be measured in terms of how it has contributed towards its original investment objectives, which were to:

- increase demand for ferry services by making ferry travel more affordable and accessible
- increase tourism and supporting existing tourism markets
- enhance local economies and the wider national economy

The RET policy overall has largely delivered these objectives, as is highlighted in the table below, which adopts a seven-point scale as follows:

✔ ✔ ✔ - highly positive contribution

✔ ✔ - moderate positive contribution

✔ - slightly positive contribution

O – no impact

✕- slightly negative contribution

✕✕ - moderate negative contribution

✕✕✕ - highly negative contribution

RET objective	Assessment	Comment
Increase demand for ferry services by making ferry travel more affordable and more accessible.	✔ ✔ ✔	Demand has increased across almost all routes on the network, with a significantly larger number of island residents and visitors using the CHFS ferries than prior to the introduction of RET.
Increase tourism and supporting existing tourism markets.	✔ ✔	The observed increase in ferry carryings and survey programmes undertaken in this and previous RET evaluations clearly highlight the growth in the tourism market. There is also clear evidence of an extension of the tourist season. Note however that definitive, island level tourism statistics are not available, and this means that accurate quantification of this impact is not possible.
Enhance local economies and the wider national economy.	✔ ✔	RET has made a positive overall contribution to local economies and the wider economy – it has facilitated: • improved access to employment, training and business opportunities • additional leisure travel (providing social benefits) • increased expenditure – 37% in resident survey noted that spending had increased in general since RET was introduced • growth in visitor numbers, expenditure and the length of the season It is though important to note that these benefits are set against an annual spend of £25m on the policy, and satisfaction is not universal. Again, the lack of island-level statistics means we cannot accurately quantify this impact.

Table S1: Contribution of RET to original objectives

The wider government policy context is also evolving at present, with a range of new strategy documents emerging to guide transport, economic and islands development

in the medium-term. Whilst RET cannot be evaluated against these new strategies as it predates them, there is benefit in 'stress-testing' the policy outcomes against the emerging policy context – this has been done through assessing how RET has contributed towards the headline government policies for:

- transport, as expressed through the National Transport Strategy 2
- the economy, as expressed through Scotland's Economic Strategy
- islands, as expressed through the National Islands Plan
- Scotland as a whole, as expressed through the National Performance Framework, which records how all areas of government are contributing towards the Government's Purpose of *'creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth'*

Overall, RET continues to provide a strong fit with the emerging policy context, and in particular objectives related to economic development, social inclusion and inclusive growth.

Whilst there are elements of dissatisfaction with the policy – most notably ferry capacity and reliability, and the impact on island infrastructure – there is broad consensus that RET has been a good thing for the islands. It is though only fair to note that this sentiment is not universal and there are particular islands where there is significant dissatisfaction with elements of the policy.

In any future review of the RET policy, the research suggests that the following issues should be considered:

- Two key issues emerged from this evaluation from the perspective of island residents:
    - They cannot always travel when they want to travel by car / vehicle: the research suggested an appetite for a range of demand management related measures which should be further explored.
    - Island infrastructure / communities are being overwhelmed: There are perhaps two approaches to addressing this issue - (1) implementing measures to reduce visitor numbers / car-based visitor numbers; or (2) investing in tourism infrastructure (e.g. roads, parking, visitor amenities) and 'greening' it where possible. As businesses have made investments to the benefit of the islands' economy in response to the increased visitor numbers, the first option would be challenging and therefore a better question could be over how infrastructure improvements could best be delivered in the affected communities.

- From the perspective of the Scottish Government, RET has induced a circa 20% growth in car travel by ferry on the CHFS network. As well as putting cost and resilience pressure on the assets, it is leading to network-wide demands for investment in additional services, tonnage and infrastructure. Unless there is a policy decision to reverse at least some of the fares reductions introduced since 2008, there is a strategic choice between 'predict and provide' - which would be contrary to the National Transport Strategy and present substantial capital and ongoing operating costs - or implementing a more balanced approach of additional capacity and demand management measures (of which fares would be a part), which would represent a departure from the current RET policy.

In order to aid transparency and understanding, the objectives of any fares review should reflect the findings of this, and previous RET evaluations, which could be captured in revised / new Transport Planning Objectives, reflecting the greater understanding of the scope and scale of impacts of the current fares policy.

1 Introduction

Overview

In October 2008, Transport Scotland introduced the Road Equivalent Tariff (RET) fares policy as a pilot on routes to the Outer Hebrides, Coll and Tiree. The principle of RET is that ferry fares should be set on the basis of travelling an equivalent distance by road plus a fixed element aimed at cost recovery. RET was intended to reduce the cost disadvantage faced by island communities and promote the islands as places to live, work, invest and conduct business.

The RET policy was rolled-out across the Clyde and Hebrides Ferry Services (CHFS) network in three further stages, as follows:

- in 2012, the policy was extended to cover Colonsay, Gigha and Islay
- it was then further extended to the two Arran routes in 2014
- finally, in October 2015, RET was rolled-out to all remaining routes, including the high-volume routes of Oban – Craignure, Wemyss Bay – Rothesay and Largs – Cumbrae

The investment objectives of the RET policy were to:

- increase demand for ferry services by making ferry travel more affordable and more accessible
- increase tourism and supporting existing tourism markets
- enhance local economies and the wider national economy

In keeping with the requirements of the Scottish Transport Appraisal Guidance (STAG), and in order to ascertain the value for money of the policy, Transport Scotland has commissioned evaluations of the 2008 pilot and the 2012 and 2014 roll-outs. In order to complete this evaluation series, Transport Scotland has commissioned Peter Brett Associates LLP, now part of Stantec and ProVersa Ltd to:

- evaluate the impact of the 2015 RET roll-out on the islands and peninsular communities concerned
- consider the network-wide impact of RET on demand and vessel utilisation and the structure of island supply- chains
- establish the cost of RET to the public purse and its contribution to wider government policy objectives

This report therefore provides an evaluation of the impact of RET on the 2015 tranche of routes together with a long-term analysis of the costs and consequences of the policy for the network as a whole.

Report structure

A key challenge in this piece of research is compiling the wide range of data collected and analysed and distilling this into a set of key outcomes and impacts. It is considered that the most appropriate way to do this is through posing a series of questions about RET and using the data and evidence collected to answer them. This will provide a shorter, focused and more accessible report than would be the case if each element of the research was reported in isolation.

The report seeks to answer the following questions, which were agreed with the project Research Advisory Group (RAG):

- what was the scale of the reduction in fares?
- how did this change travel behaviour?
- what have been the consequences of these changes in travel behaviour?
- what have the consequences been for island supply-chains?
- what has been the impact on the communities affected by RET?
- how much has RET cost the government?
- how has RET contributed to government policy?

In adopting this reporting style:

- the analysis in relation to both the '2015 RET' routes and the wider network analysis is reported jointly, with references made to the former where appropriate

- description of the research approach is provided in the next section. No further commentary on method will be provided in the report

Research approach

This section establishes the research approach adopted in undertaking this evaluation and the manner in which it will be reported.

RET phases

For completeness, the islands and routes included in each phase of RET are set out in the table below.

RET Phase 1: 2008 Pilot (pilot made permanent in 2012)[1]	RET Phase 2: October 2012	RET Phase 3: October 2014	RET Phase 3: October 2015
Oban – Coll / Tiree	Oban – Colonsay	Ardrossan – Brodick	Wemyss Bay – Rothesay
Stornoway – Ullapool	Tayinloan – Gigha	Claonaig / Tarbert Loch – Fyne (LF) - Lochranza	Colintraive - Rhubodach
Uig – Tarbert / Lochmaddy	Kennacraig - Islay	Ardrossan - Campbeltown	Largs - Cumbrae
Oban – Castlebay / Lochboisdale[2]			Fionnphort – Iona
			Tarbert LF – Portavadie
			Oban – Achnacroish (Lismore)
			Oban – Craignure
			Fishnish – Lochaline
			Tobermory - Kilchoan

[1] Commercial Vehicles were included within the RET pilot, with this component of RET being withdrawn in April 2012.
[2] Latterly Lochboisdale – Mallaig / Oban and Castlebay – Oban.

RET Phase 1: 2008 Pilot (pilot made permanent in 2012)[1]	RET Phase 2: October 2012	RET Phase 3: October 2014	RET Phase 3: October 2015
			Sound of Harris (Berneray – Leverburgh)
			Sound of Barra (Eriskay – Ardmhor)
			Sconser - Raasay
			Armadale – Mallaig
			Mallaig – Small Isles

Table 1.1: RET phases

Network-wide evaluation

As all previous tranches of RET have been subject to a standalone evaluation, the network-wide evaluation in the context of this report is based on published secondary data only, such as operator carryings and socio-economic data. No primary research was undertaken except stakeholder interviews with hauliers to determine the long-term evolution in island supply- chains.

A range of tasks were undertaken in delivering the network-wide elements of the evaluation – the approach taken in each is explained below.

Operator data analysis

A key element of the evaluation is understanding the impact of RET on operator carryings, vessel vehicle deck utilisation and performance (i.e. reliability and punctuality). In order to inform this analysis, CFL provided sailing-by-sailing carryings and performance data for the period 2007/08 to 2017/18. Whilst data has been provided at the contract year level, it has been reconciled and reported at the calendar year throughout this report.

These data have been processed at the route level and allows for the analysis of carryings, utilisation and performance by:

- route
- direction
- year

- season
- weekday / weekend
- day of week
- time of day

Key findings from the data analysis are drawn out throughout this report.

It should be noted that where the impact of RET on e.g. carryings, utilisation etc is assessed, this is done by comparing against a **counterfactual 'non-RET' demand** scenario. The counterfactual is developed by applying the pre-RET trend for each route to the last pre-RET year and projecting forward. The 'non-RET' demand scenario can then be compared to the RET outturn to isolate as far as reasonably possible the 'RET effect'.

To make the data presentation and analysis manageable, the network wide data is reported in five geographic areas, as per the CFL website:

- Firth of Clyde
- Southern Hebrides
- Inner Hebrides
- Skye, Raasay and the Small Isles
- Outer Hebrides

Please note: The data used in the generation of this report has been provided from the CalMac performance monitoring system. The analysis and supporting data has not been fully validated by CFL, therefore the responsibility for its interpretation rests with the author.

Commercial Vehicles (CVs) mentioned in this report relate to those vehicles greater than 6m. The reclassification of CVs from 5m to 6m, has led to several commercial vans now travelling as cars, and therefore, will not be picked up in the data as CVs.

Island supply-chains

The RET fares system only applies to passengers and vehicles less than 6m long, and thus it primarily effects the cost of movement of people rather than goods. However, previous RET evaluations have suggested that the policy has impacted on island supply-chains in terms of:

- increased volumes of goods being moved stemming from increased consumption on the islands as a result of higher visitor numbers and / or

- the '6m rule'[3] and the associated substitution of goods from commercial vehicles into vans under 6m now charged at the car rate

In order to more fully explore and evidence the above effects, ProVersa Ltd undertook a series of one-to-one depth interviews with haulage firms serving the islands. Twenty haulage firms were contacted, with a mixture of island-based hauliers and mainland firms serving the islands. Of these twenty firms, seven responded (to respect confidentiality, these firms are not named). Whilst a response was not received from every company, those who did respond offered detailed input and responses were generally achieved from the highest volume routes and across the various phases of the roll-out. Additional information from other combined PBA and ProVersa studies (e.g. the Outer Hebrides STAG and Arran RET Evaluation) was also incorporated into the analysis.

Socio-economic data analysis

Whilst RET is a transport policy, it was partly introduced to support the social and economic development of the Clyde and Hebridean islands, some of which are amongst the most fragile communities in Scotland. To this end, the evaluation considers the extent to which the policy has fed through into wider socio-economic outcomes and impacts.

Whilst an important element of this evaluation, there are two major challenges which limit the use of secondary data in analysis such as this:

- **Spatial definition:** the range of data available reduces as the level of spatial disaggregation increases. In addition, where spatially disaggregate data are produced, this is commonly at the Data Zone level. Whilst suitable for the larger islands, in many cases (e.g. Lismore and Raasay) a single Data Zone can cover one or more of the smaller islands as well as a section of the mainland. In these cases, data would have to be available at the Census output area level to isolate the island, and data at this level is limited.

- **Lag:** it can take several years for some secondary data to be gathered, complied or estimated, especially at sub-local authority level, meaning that the impact of RET may not be seen in these statistics for a number of years. In many cases, the most recent data are from the 2011 Census, which is now almost ten years old.

With this in mind, we adopted a two-tier approach to this task:

[3] When the RET pilot for the Coll, Tiree and the Outer Hebrides was made permanent in 2012, the length at which a vehicle is classed as 'commercial' was redefined from 5 metres to 6 metres. This was an important marginal change as it meant that many vans previously classed as commercial are now classed as cars.

- The first task was to review data availability, with a view to developing an 'RET geography'. However, as anticipated at Inception stage, the level of spatial disaggregation and the data lag meant that there were very little data available at the island level from which to draw meaningful conclusions.

- The second task was to develop a case study based on the Na h-Eileanan Siar (Outer Hebrides) area. RET was introduced on all routes between the Outer Hebrides and the Scottish mainland in October 2008. This means that there is a wider range of statistics and indicators available from secondary sources. Despite this initial expectation - and as will be explained later in this report - the type, volume and spatial disaggregation of data covering Scotland's islands does not facilitate a rigorous and robust evaluation of how RET has impacted on the society and economy of the Outer Hebrides.

Cost to Government

As noted above, an early task in this evaluation was the development of a 'non-RET' counterfactual, estimating what demand and revenue would have been without the introduction of the policy. We have estimated this counterfactual for each phase of RET, providing a 'do nothing' estimate of demand and revenue – that is, what would have happened if RET had not been introduced.

This counterfactual for each phase and over the lifespan of RET is compared to the outturn revenue, therefore identifying the 'cost' of the RET policy.

Consultations have also been held with CMAL and CFL to understand the extent to which RET has given rise to additional capital or revenue costs to accommodate increased levels of demand. Moreover, we have consulted with each of the relevant local authorities to understand investment in island-based infrastructure, predominantly stemming from increased visitor numbers in the islands.

Policy assessment

From a network-wide perspective, the final task was assessing the 'outcomes and impacts' of RET against its original objectives and identifying how it has contributed to wider government policy. The policy mapping exercise is relatively high- level and is focussed on:

- mapping the impacts of RET against its original objectives
    - increase demand for ferry services by making ferry travel more affordable and more accessible
    - increase tourism and supporting existing tourism markets
    - enhance local economies and the wider national economy

- assessing how RET has contributed towards the headline government policies for
    - transport, as expressed through the National Transport Strategy
    - the economy, as expressed through Scotland's Economic Strategy
    - islands, as expressed through the National Islands Plan
    - Scotland as a whole, as expressed through the National Performance Framework, which records how all areas of government are contributing towards the Scottish Government's Purpose of "creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth"

2015 RET routes

In addition to the network-wide analysis, a programme of primary research was carried out on the '2015 RET routes', providing parity in the evaluation of these routes with all previous tranches of RET.

The primary research on the '2015 RET routes' was focused on establishing how island residents, businesses and visitors have responded to the introduction of the policy – i.e. what behavioural changes has RET prompted. Key outputs from the surveys are presented throughout this report and the following sections highlight the main areas which the surveys explored.

<u>Resident survey</u>

The resident survey was online-based and common across all areas. Residents of all island and peninsular communities included in the 2015 RET roll-out were invited to complete the survey. It explored:

1) awareness of RET
2) whether a household had moved to an island as a result of RET
3) perceptions of past and present affordability of travel
4) travel habits before and after RET
    a) by broad purpose
    b) tickets used previously and now

c) consequences of these changes in travel behaviour on (i.e. opportunities taken up)

   i) employment / incomes

   ii) social interactions

   iii) leisure and holidays

   iv) shopping (food / non-food)

   v) use of public services

d) consequences of more car-based travel

   i) implications on mainland public transport

5) changes in travelling experience

6) island residents' views of RET's impacts on aspects of island life including e.g.

   i) employment opportunities on island

   ii) quality of retail on island

   iii) quality of cafes / restaurants on island

   iv) perceptions of economic activity

   v) traffic levels etc

   vi) island facilities generally

   vii) overall positive / negative

There were 767 responses to the survey with around two thirds of these fully completing the survey. Mull & Iona and Cumbrae account for just over half of responses. The breakdown of survey responses by community is shown in the table below:

Community	Count of responses	% of Total	% of Population
Ardnamurchan	5	1%	0%
Barra	34	4%	3%
Benbecula	20	3%	2%
Bute	15	2%	0%
Cumbrae	113	15%	8%
Eigg	18	2%	22%
Harris	11	1%	1%
Iona	38	5%	22%
Kintyre and Cowal	9	1%	0%
Lewis	37	5%	0%
Lismore	23	3%	12%
Morvern	2	0%	1%
Muck	2	0%	7%
Mull	266	35%	10%
North Uist	26	3%	2%
Not a resident of one of these areas	49	6%	
Other	34	4%	
Raasay	4	1%	3%
Rhum	1	0%	5%
Skye	35	5%	0%
South Uist	25	3%	1%
Grand Total	**767**	**100%**	

Table 1.2: Resident survey – Responses by community

For the purposes of analysis in this report, the above survey responses have been aggregated to:

- Clyde
- Mull and Iona
- Lismore
- Outer Hebrides
- Skye and Raasay

- Small Isle
- Mainland peninsula
- Non-2015 routes

Note that those who responded 'other' have been placed in the most appropriate group based on their response.

It is important to note here that, as the resident survey was web-based, the sample was self-selecting and there may therefore be an element of response bias. That is, it is possible that the sample may be skewed by those favourable to RET or those who think that RET has been a negative thing, affecting responses to the key questions about how RET is perceived in each community. If further evidence for these key questions is required, a phone-based or 'panel' validation exercise could be undertaken, across a wider range of RET affected islands.

Onboard survey

The onboard survey programme was undertaken in July and August 2019 – it covered all '2015 RET' routes with the exception of Fionnphort – Iona[4] . The survey was administered on-ferry, with recipients asked to either complete it onboard and hand it back or return it in a reply-paid envelope. A weekday and weekend day survey was undertaken on all routes across the length of the operating day.

The onboard survey explored:

- basic journey details – now and whether the same trip was made pre-RET
- awareness of policy and scale of fares reductions
- importance of the lower fare on the journey being made
- what opportunities are now being taken up as a result of RET and what the consequences of this are?
- what would have happened without RET?
- any difficulties encountered in booking vehicles
- attitudes towards demand management measures

[4] This route is excluded because a permit is required to take cars onto the island, whilst many of the foot passengers are on coach tours, of which the ferry fare is part of the price. The resident survey captured the views of Iona residents, whilst a significant number of passengers travelling to Iona were also picked up on the Oban – Craignure route.

- the extent of switching between ferry routes
- the extent of switching between road and ferry
- level of comfort and services onboard
- for non-residents, level of spend on island split by accommodation and non-accommodation
- for residents, any activities now undertaken off-island that were previously undertaken on-island (capturing economic leakage)

There was a total of 1,643 responses to the onboard survey. Of this sample,

- 21% were permanent island residents
- 4% were second homeowners
- 74% were visitors

The breakdown of responses by routes is shown in the table below:

Route	Responses	% of Total
Ardmhor-Eriskay	63	4%
Berneray-Leverburgh	191	12%
Colintraive-Rhubodach	59	4%
Fishnish-Lochaline	80	5%
Largs-Cumbrae	148	9%
Mallaig-Armadale	124	8%
Mallaig-Eigg/Muck/Rum/Canna	33	2%
Oban Craignure	171	10%
Oban-Lismore	40	2%
Sconser-Raasay	144	9%
Tarbert LF-Portavadie	81	5%
Tobermory-Kilchoan	56	3%
Wemyss Bay-Rothesay	453	28%
Grand Total	**1,643**	

Table 1.3: Onboard survey – responses by route

Business survey

The business survey was similarly online-based, with the survey again common across all areas. Businesses in all island and peninsular communities included in the 2015 RET roll-out were invited to complete the survey, which explored how RET has impacted on customer numbers, turnover, staff recruitment & retention, investment and the community in which the business is based.

Following cleaning to remove non-completions and surveys submitted in error, there was a total of 75 responses to the business survey. The breakdown of survey responses by island is shown in the table below:

Route	Responses	% of Total
Ardnamurchan	0	0%
Barra	1	1%
Benbecula	2	3%
Bute	4	5%
Cumbrae	20	27%
Eigg	5	7%
Harris	2	3%
Iona	4	5%
Kintyre and Cowal	1	1%
Lewis	2	3%
Lismore	2	3%
Morvern	0	0%
Muck	0	0%
Mull	15	20%
North Uist	2	3%
Other	7	9%
Raasay	2	3%
Rhum	0	0%
Skye	4	5%
South Uist	2	3%
Grand Total	**75**	**100%**

Table 1.4: Business survey – responses by community

The business survey is reported in absolute numbers, drawing out key information for each island as appropriate. The analysis contained within it is supplemented by the qualitative findings obtained from 14 depth interviews with individual businesses across the islands.

It should be noted that securing businesses to participate in the depth interviews was highly challenging. A combination of limited business resources, consultation fatigue and a feeling of limited relevance as RET does not apply to commercial vehicles meant that only a small number of the 50 or so businesses we contacted were willing to participate.

2 What was the scale of the reduction in fares?

Overview

In fully understanding the impact of the RET fares policy, it is important to clearly establish the actual reduction in fares on a route-by-route basis.

Whilst RET in most cases led to a significant reduction in standard single and return fares, many passengers (and in particular island residents) previously had access to a range of multi-journey and concessionary tickets, some of which were discontinued when RET was introduced. This meant that they did not pay the standard fare per journey and thus the reduction in average fare paid was therefore less than might have been anticipated.

This chapter first explores the actual reduction in fares across all routes on the network before considering the awareness of fares reductions in relation to the '2015 RET' routes only.

By how much were fares actually reduced to the average user?

The following sections set out the answer to this question looking at each route within each geographic region.

Firth of Clyde

The routes

The Firth of Clyde region consists of seven routes.

- Ardrossan – Brodick
- Ardrossan – Campbeltown
- Colintraive – Rhubodach
- Largs – Cumbrae Slip
- Claonaig – Lochranza
- Tarbert Loch Fyne (LF) – Portavadie

- Wemyss Bay Rothesay

RET was rolled-out to the Arran and Campbeltown routes in 2014, with the remainder of the Firth of Clyde network progressing RET in 2015. The table below sets out each of the routes within the Firth of Clyde network and the year in which RET was introduced, in addition to the years included in the analysis to identify the impact of RET on this section of the wider CHFS network.

Note: Ardrossan - Campbeltown is excluded from the analysis due to the lack of a complete baseline.

Route	RET Year	RET Year-1	RET Year+1
Ardrossan - Brodick	2014	2013	2015
Colintraive - Rhubodach	2015	2014	2016
Largs - Cumbrae Slip	2015	2014	2016
Claonaig - Lochranza	2014	2013	2015
Tarbert Loch Fyne (LF) - Portavadie	2015	2014	2016
Wemyss Bay - Rothesay	2015	2014	2016

Table 2.1: Firth of Clyde – RET roll-out profile

Passengers - key points

The table below shows how RET passenger fares compare to what fares would have been in the counterfactual scenario:

Passengers	RET Year+1(CF)	RET Year+1(CF), %
Ardrossan - Brodick	-£1.61	-33%
Colintraive - Rhubodach	-£0.36	-31%
Largs - Cumbrae Slip	-£0.56	-31%
Claonaig - Lochranza	-£1.64	-40%
Tarbert (LF) - Portavadie	-£1.21	-35%
Wemyss Bay - Rothesay	-£0.95	-29%

Table 2.2: Firth of Clyde – fares reductions compared to RET year+1 counterfactual fares, passengers

- The average fares reduction on the shortest routes between Colintraive - Rhubodach and Largs - Cumbrae is the smallest in absolute terms - this is a consequence of the 'fixed' (i.e. non-distance based) element of the RET fare.

- The reduction in average fare on routes to Bute and Cumbrae is less because residents had access to a greater range of multi-journey products and in many cases were paying well under the published fares. Note that some of these multi-journey ticket products have been maintained post-RET.

- In absolute and proportional terms, the reduction in average fare was greatest on the Arran routes.

Cars – key points

The table below shows how RET car fares compare to what fares would have been in the counterfactual scenario:

Cars	RET Year+1(CF)	RET Year+1(CF), %
Ardrossan - Brodick	-£19.46	-56%
Colintraive - Rhubodach	-£1.51	-22%
Largs - Cumbrae Slip	-£1.94	-24%
Claonaig - Lochranza	-£15.58	-61%
Tarbert (LF) - Portavadie	-£8.67	-51%
Wemyss Bay - Rothesay	-£3.81	-26%

Table 2.3: Firth of Clyde – fares reductions compared to RET year+1 counterfactual fares, cars

- As with passenger fares, the shorter routes witnessed less of a reduction in fares in both absolute and proportional terms due to the non-distance related component of the RET fare.

- The absolute reduction in average vehicle fares was greatest on the two Arran routes.

- The proportional reduction in average vehicle fares was greater than the equivalent for passenger fares – this implies that proportionally fewer pre-RET car journeys were made using multi-journey products. This is particularly true on the Arran routes, where car fares may previously have been considered prohibitive.

The chart below illustrates the changes in the average fare paid by passengers (top) and for cars (bottom) on each route within the Firth of Clyde network, comparing the actual RET fare in the year after it was introduced with the counterfactual for that year. The distance between the two fares on the bar highlights the impact of RET on the route, i.e. the bigger the gap between the two points, the greater the reduction in average fare.

Figure 2.1: Firth of Clyde – Fares reductions compared to RET year+1 counterfactual fares for passengers

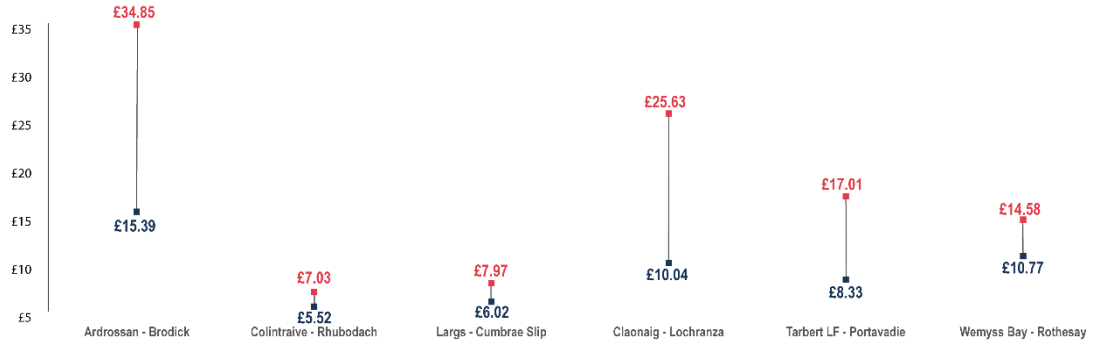


Figure 2.2: Firth of Clyde – Fares reductions compared to RET year+1 counterfactual fares for cars

Southern Hebrides

The routes

The Southern Hebrides region consists of three routes:

- Kennacraig – Islay
- Oban – Colonsay
- Tayinloan - Gigha

RET was rolled-out to all routes in 2012. The table below sets out each of the routes within the South Hebrides network and the year in which RET was introduced, in addition to the years included in the analysis to identify the impact of RET on this section of the wider CHFS network.

Note: Kennacraig - Islay - Colonsay is excluded from the analysis due to the lack of a complete baseline (i.e. there is no pre-RET dataset for this route against which to compare).

Route	RET Year	RET Year-1	RET Year+1
Tayinloan – Gigha	2012	2011	2013
Kennacraig – Islay	2012	2011	2013
Oban - Colonsay	2012	2011	2013

Table 2.4: Southern Hebrides – RET roll-out profile

Passengers – key points

The table below shows how RET passenger fares compare to what fares would have been in the counterfactual scenario:

Passengers	RET Year+1(CF)	RET Year+1(CF), %
Tayinloan – Gigha	-£0.58	-24%
Kennacraig – Islay	-£2.00	-26%
Oban - Colonsay	-£6.39	-47%

Table 2.5: Southern Hebrides – fares reductions compared to RET year+1 counterfactual fares, passengers

- There was a significant proportional reduction in passenger fares across all routes, with fares on the Oban – Colonsay route reducing by 47%.

- Whilst passenger fares reduced by 24% on the Taylinloan – Gigha route, the absolute reduction on a single passenger fare was only 58p.

Cars – key points

The table below shows how RET car fares compare to what fares would have been in the counterfactual scenario:

Cars	RET Year+1(CF)	RET Year+1(CF), %
Tayinloan – Gigha	-£3.09	-33%
Kennacraig – Islay	-£13.33	-29%
Oban - Colonsay	-£29.85	-43%

Table 2.6: Southern Hebrides – fares reductions compared to RET year+1 counterfactual fares, cars

- There was also a significant reduction in car fares across all routes in the Southern Hebrides, with the scale of the reduction ranging from 29% to 43%.

- The absolute scale of the fares reduction was also significant – a single car fare between Oban – Colonsay reduces by some £30, whilst the Kennacraig – Islay fare reduced by £13.

The chart below illustrates the changes in the average fare paid by passengers (top) and for cars (bottom) on each route within the Southern Hebrides network, comparing the actual RET fare in the year after it was introduced with the counterfactual for that year. The distance between the two fares on the bar highlights the impact of RET on the route, i.e. the bigger the gap between the two points, the greater the reduction in average fare.

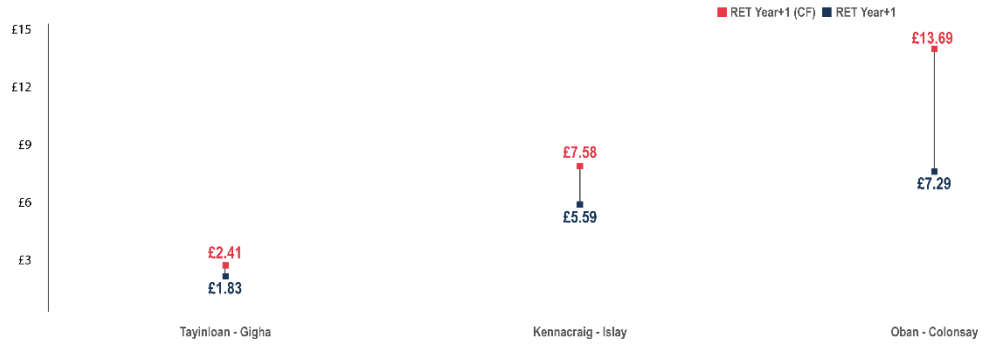


Figure 2.3: Southern Hebrides – fares reductions compared to RET year+1 counterfactual fares for passengers

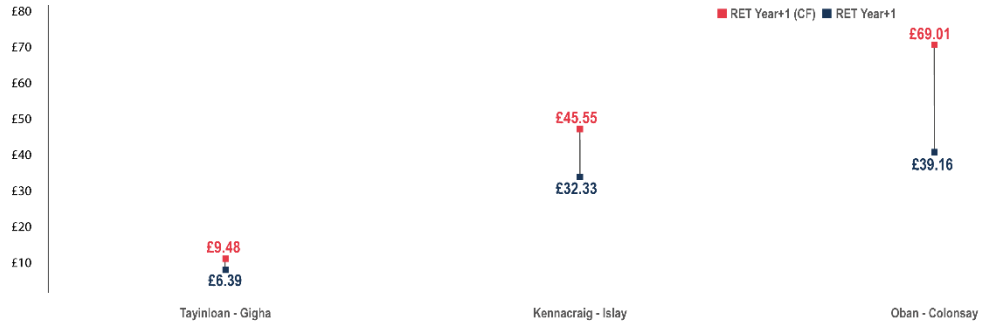


Figure 2.4: Southern Hebrides – fares reductions compared to RET year+1 counterfactual fares for cars

Inner Hebrides

The routes

The Inner Hebrides region consists of six routes.

- Fionnphort – Iona
- Fishnish – Lochaline

- Oban – Coll / Tiree
- Oban – Craignure
- Oban – Lismore
- Tobermory – Kilchoan

RET was rolled-out to five of the routes in 2015, with Oban - Coll / Tiree being one of the first introduced in 2008. The table below sets out each of the routes within the Inner Hebrides network and the year in which RET was introduced, in addition to the years included in the analysis to identify the impact of RET on this section of the wider CHFS network.

Route	RET Year	RET Year-1	RET Year+1
Tobermory - Kilchoan	2015	2014	2016
Fionnphort - Iona	2015	2014	2016
Oban - Coll - Tiree	2008	2007	2009
Oban - Lismore	2015	2014	2016
Oban - Craignure	2015	2014	2016
Fishnish - Lochaline	2015	2014	2016

Table 2.7: Inner Hebrides – RET roll-out profile

Passengers – key points

The table below shows how RET passenger fares compare to what fares would have been in the counterfactual scenario:

Passengers	RET Year+1(CF)	RET Year+1(CF), %
Tobermory - Kilchoan	-£1.87	-45%
Fionnphort – Iona	-£0.95	-39%
Oban - Coll – Tiree	-£3.79	-33%
Oban – Lismore	-£0.44	-17%
Oban – Craignure	-£1.64	-34%
Fishnish - Lochaline	-£0.71	-27%

Table 2.8: Inner Hebrides – Fares reductions compared to RET year+1 counterfactual fares, passengers

- There was a significant reduction in passenger fares across all Inner Hebrides routes.
- The largest proportional reduction in fares was on the Tobermory – Kilchoan route – this is significant as this route is used by school children travelling from Ardnamurchan to Tobermory.

- The 34% reduction in passenger fares on the Oban – Craignure route is also significant given the comparatively high volume of foot passengers on that route.

Cars – key points

The table below shows how RET car fares compare to what fares would have been in the counterfactual scenario:

Cars	RET Year+1(CF)	RET Year+1(CF), %
Tobermory – Kilchoan	-£1.87	-45%
Fionnphort – Iona	-£0.95	-39%
Oban – Coll – Tiree	-£3.79	-33%
Oban – Lismore	-£0.44	-17%
Oban – Craignure	-£1.64	-34%
Fishnish - Lochaline	-£6.11	-48%

Table 2.9: Inner Hebrides – fares reductions compared to RET year+1 counterfactual fares, cars

- The reduction in car fares on the Inner Hebrides routes was also significant, with all routes experiencing marked reductions in fares

- Of particular significance is the 62% reduction in fares on the Oban – Craignure route. Vehicle fares on the main route to Mull had historically been a deterrent to travel, but a reduction of this scale makes it significantly easier and more attractive to take a car on the ferry

- Whilst car fares only came down by 17% on the Fionnphort – Iona route, very few cars are actually carried on this route due to the requirement to have a permit to take a car to or from the island

The charts below illustrate the changes in the average fare paid by passengers (top) and for cars (bottom) on each route within the Inner Hebrides network, comparing the actual RET fare in the year after it was introduced with the counterfactual for that year. The distance between the two fares on the bar highlights the impact of RET on the route, i.e. the bigger the gap between the two points, the greater the reduction in average fare.

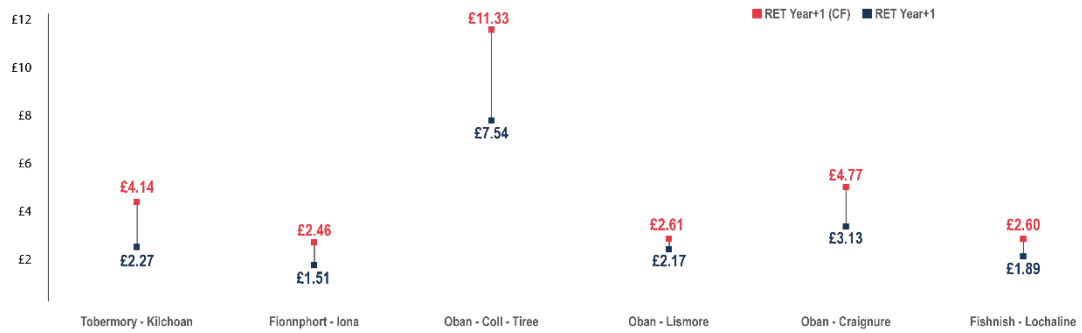


Figure 2.5: Inner Hebrides – fares reductions compared to RET year+1 counterfactual fares for passengers

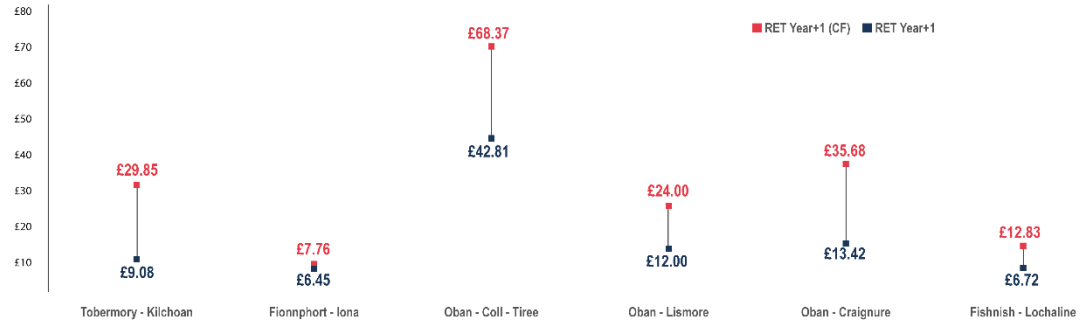


Figure 2.6: Inner Hebrides – fares reductions compared to RET year+1 counterfactual fares for cars

<u>Skye, Raasay & Small Isles</u>

The routes

The Skye, Raasay and Small Isles region consists of three routes:

- Armadale – Mallaig
- Mallaig – Small Isles
- Sconser - Raasay

RET was rolled- out to all routes in 2015. The table below sets out each of the routes within the network and the year in which RET was introduced, in addition to the years included in the analysis to identify the impact of RET on this section of the wider CHFS network.

Route	RET Year	RET Year-1	RET Year+1
Armadale - Mallaig	2015	2014	2016
Sconser - Raasay	2015	2014	2016
Mallaig - Small Isles	2015	2014	2016

Table 2.10: Skye, Raasay and Small Isles – RET roll-out profile

Passenger – key points

The table below shows how RET passenger fares compare to what fares would have been in the counterfactual scenario:

Passengers	RET Year+1(CF)	RET Year+1(CF), %
Armadale - Mallaig	-£1.66	-39%
Sconser - Raasay	-£0.83	-35%
Mallaig - Small Isles	-£5.09	-58%

Table 2.11: Skye, Raasay and Small Isles – Fares reductions compared to RET year+1 counterfactual fares, passengers

- There were significant reductions in passenger fares across all three routes.
- The reduction of 58% on the Mallaig–Small Isles route is important – as a there is a permit system for taking vehicles onto the islands, the route is dominated by passenger traffic and thus a reduction of this scale is significant.
- It should be noted that the fares reduction shown for this route is an amalgam of all potential sailing legs, therefore the distribution of travel across legs impacts on average fare.

Cars – key points

The table below shows how RET car fares compare to what fares would have been in the counterfactual scenario:

Cars	RET Year+1(CF)	RET Year+1(CF), %
Armadale - Mallaig	-£15.82	-60%
Sconser - Raasay	-£2.57	-30%
Mallaig - Small Isles	-£41.68	-68%

Table 2.12: Skye, Raasay and Small Isles – Fares reductions compared to RET year+1 counterfactual fares, cars

- There was also a significant reduction in car fares on each of the routes.

- From a carryings perspective, the 60% reduction in fares on the Mallaig – Armadale route is highly significant, as it is a very popular tourist route, particularly for Skye round-trips and on accommodation changeover days.

- Whilst there are few cars carried on the Mallaig – Small Isles route, the scale of the fares reduction – circa 68% - is significant and may encourage residents to take their vehicle more often. It should be noted that the fares reduction shown for this route is an amalgam of all potential sailing legs.

The chart below illustrates the changes in the average fare paid by passengers (top) and for cars (bottom) on each route within the Skye, Raasay & Small Isles network, comparing the actual RET fare in the year after it was introduced with the counterfactual for that year. The distance between the two fares on the bar highlights the impact of RET on the route, i.e. the bigger the gap between the two points, the greater the reduction in average fare.

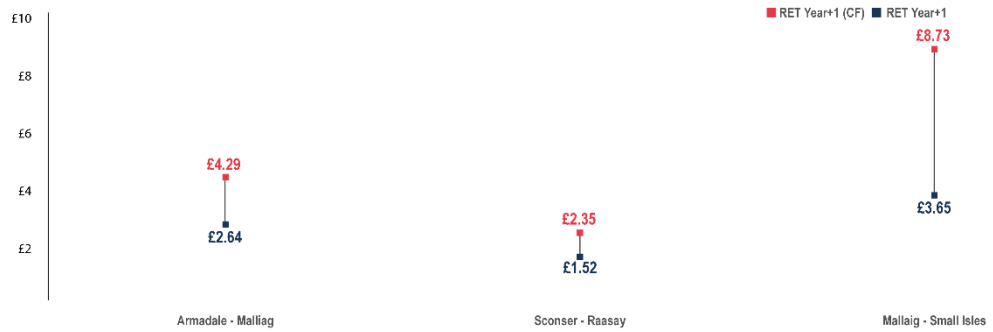


Figure 2.7: Skye, Raasay and Small Isles – fares reductions compared to RET year+1 counterfactual fares for passengers

Figure 2.8: Skye, Raasay and Small Isles – fares reductions compared to RET year+1 counterfactual fares for cars

Outer Hebrides

The routes

The Outer Hebrides region consists of seven routes. When RET was introduced as a pilot in 2008, the route to Barra and South Uist was a triangular route connecting Oban with Castlebay and Lochboisdale. The fares reductions and trends are reported for this route as it experienced the 'RET effect'.

- The carryings and utilisation date are shown for Oban – Castlebay / Lochboisdale from 2007-2015.

- Mallaig – Lochboisdale carryings are shown from 2013 and Castlebay – Oban from 2016. It should be noted that these routes were introduced well after RET and thus, any changes in carryings, utilisation etc are related to the background trend and / or supply-side changes such as the introduction of additional sailings. The one exception to this is where the introduction of RET on the Sound of Barra route has affected demand on the routes from Barra and South Uist to the mainland.

- The above caveats apply to all subsequent Outer Hebrides analysis.

Route	RET Year	RET Year-1	RET Year+1
Ardmhor - Eriskay	2015	2014	2016
Oban - Castlebay - Lochboisdale	2008	2007	2009
Uig - Tarbert	2008	2007	2009
Uig - Lochmaddy	2008	2007	2009
Ullapool - Stornoway	2008	2007	2009
Berneray - Leverburgh	2015	2014	2016

Table 2.13: Outer Hebrides – RET roll-out profile

It should be noted that when RET was introduced as a pilot in October 2008, it was extended to commercial vehicles. When the fares policy was made permanent in 2012, RET for Commercial Vehicles (CVs) was withdrawn and transitional arrangements put in place to progress the fares back to their pre-RET level. The commencement of the Ferry Freight Fares Review meant that not all routes progressed back to their pre-RET level. It should also be noted that the majority of volume and commodity related discounts for CVs were withdrawn when RET was introduced and not reinstated when it was withdrawn for CVs.

Passengers - key points

The table below shows how RET passenger fares compare to what fares would have been in the counterfactual scenario:

Passengers	RET Year+1(CF)	RET Year+1(CF), %
Ardmhor - Eriskay	-£3.24	-56%
Oban - Castlebay - Lochboisdale	-£7.90	-44%
Uig - Tarbert	-£3.57	-45%
Uig - Lochmaddy	-£3.57	-45%
Ullapool - Stornoway	-£5.36	-46%
Berneray - Leverburgh	-£2.82	-49%

Table 2.14: Outer Hebrides – Fares reductions compared to RET year+1 counterfactual fares, passengers

- Passenger fares across the Outer Hebrides reduced by a significant proportion when RET was introduced as a pilot in 2008.

- The largest reductions in fares though was on the Sound routes, as the fare structure on the previous inter-island leg of the triangular routes (i.e. Tarbert - Lochmaddy and Lochboisdale - Castlebay) was retained when the Sound routes were introduced. Fares were thus well in excess of the distance-based equivalent and thus reduced by 56% on the Sound of Barra and 49% on the Sound of Harris.

Cars – key points

The table below shows how RET car fares compare to what fares would have been in the counterfactual scenario:

Cars	RET Year+1(CF)	RET Year+1(CF), %
Ardmhor - Eriskay	-£8.33	-43%
Oban - Castlebay - Lochboisdale	-£22.21	-30%
Uig - Tarbert	-£1972	-46%
Uig - Lochmaddy	-£19.72	-46%
Ullapool - Stornoway	-£24.22	-40%
Berneray - Leverburgh	-£14.03	-50%

Table 2.15: Outer Hebrides – Fares reductions compared to RET year+1 counterfactual fares, cars

- The reduction in car fares across the Outer Hebrides 2008 routes was also significant, ranging from 30% on Oban – Castlebay / Lochboisdale to 46% on the Uig Triangle. More importantly however, the reduction in the absolute fares was substantial, thus significantly increasing opportunities to take a car onto the ferry.

- As with passenger fares, the reductions were greatest on the two Sound routes, as RET dispensed with legacy fares from the Triangular routes.

The charts below illustrate the changes in the average fare paid by passengers (top) and for cars (bottom) on each route within the Outer Hebrides network, comparing the actual RET fare in the year after it was introduced with the counterfactual for that year. The distance between the two fares on the bar highlights the impact of RET on the route, i.e. the bigger the gap between the two points, the greater the reduction in average fare.

Figure 2.9: Outer Hebrides – fares reductions compared to RET year+1 counterfactual fares for passengers

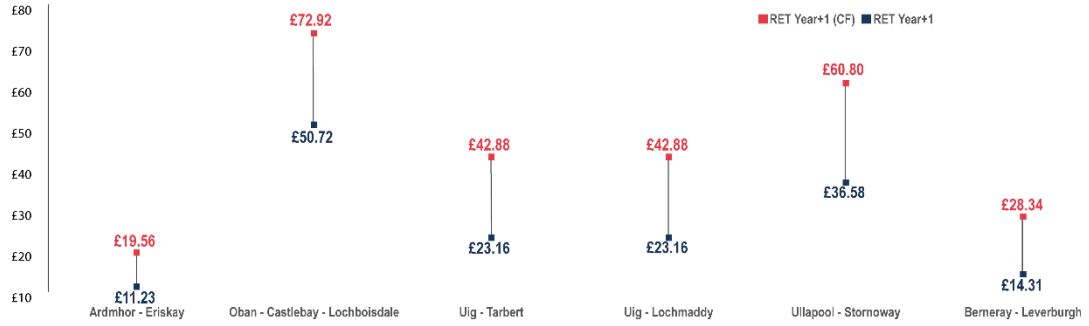


Figure 2.10: Outer Hebrides – fares reductions compared to RET year+1 counterfactual fares for cars

How aware are passengers of the RET policy and actual fares changes (2015 routes)?

In order to place the reduction in fares and subsequent increase in travel volumes in context, respondents to the onboard survey were asked if they were aware that RET had been introduced on that route.

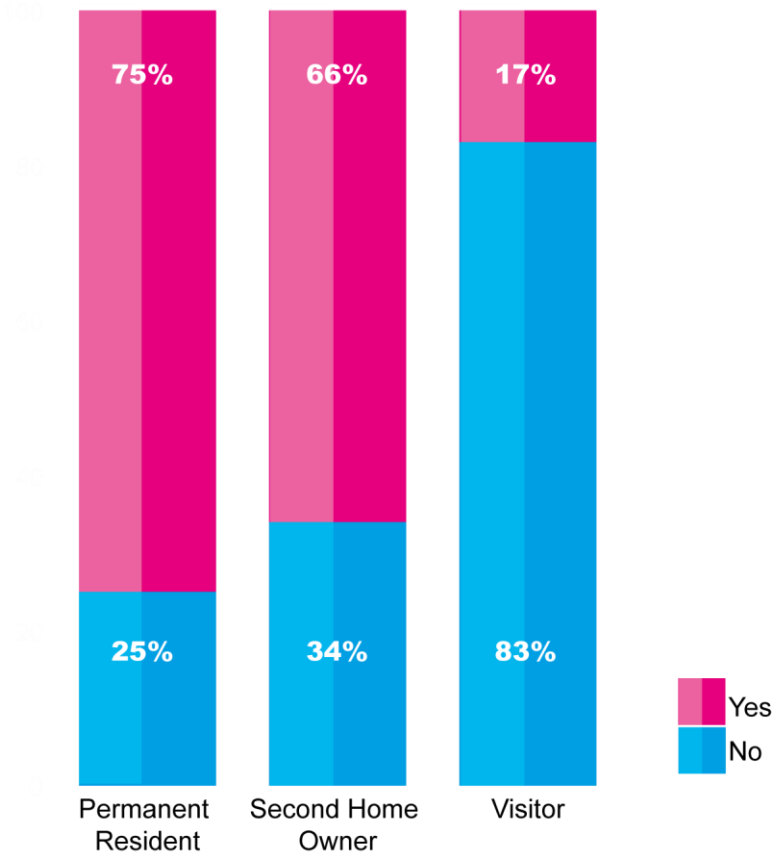


Figure 2.11: Awareness of RET (Source: Onboard survey, n=1,358)

- there was a high awareness of RET fares amongst island residents, although somewhat surprisingly this was not universal.

- awareness of RET was however much lower amongst visitors, with only 17% being aware of the policy

- amongst those who were aware of RET, only 24% of respondents (27% of residents and 20% of visitors) could estimate their 'old' pre-RET (i.e. summer 2015) fare, which suggests that people have forgotten the scale of the fares reduction relatively quickly, with RET fares becoming the new norm

- one of the reasons why awareness may not be universal is the continuation of specific concessions (e.g. the SPT concession scheme), where card holders did not experience an RET-related discount

Key point: Whilst there was a generally high (although not universal) awareness of RET fares amongst island residents on the '2015 routes', fewer than 20% of visitors surveyed were aware of the policy. Of those who were aware of RET, only around a quarter could estimate their pre-RET fare, suggesting that the scale of the fares reduction has been forgotten relatively quickly.

3 How did this change travel behaviour?

Overview

Whilst the decrease in fares brought about by RET was, in many cases and for various reasons, less than the published reduction, the cost of travel nonetheless reduced significantly for most users of the CHFS network. This section explores how travel behaviour responded to RET – it first considers the network-wide volumetric change before exploring how this fed through to the number and types of trips made in the '2015 RET' routes.

How did network-wide demand respond to RET

What was the total change in network carryings?

The graphs below illustrate the estimated passenger and car counterfactual (i.e. what would have been expected if RET did not happen) against the actual recorded carryings.

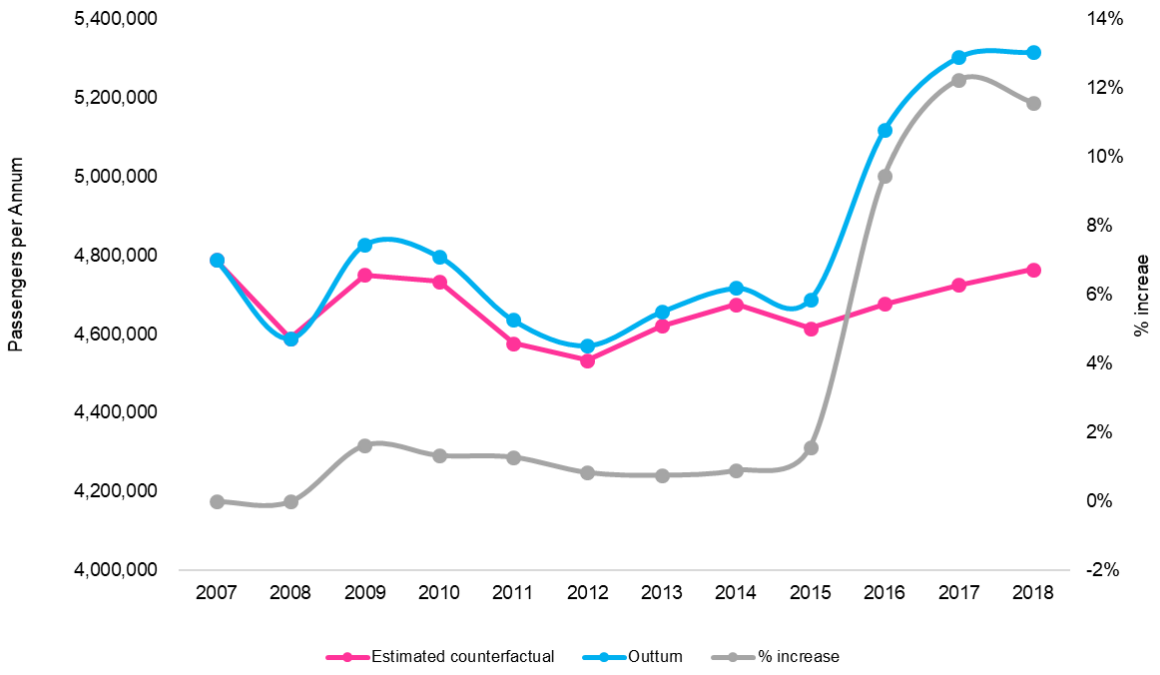


Figure 3.1: Change in network passenger carryings

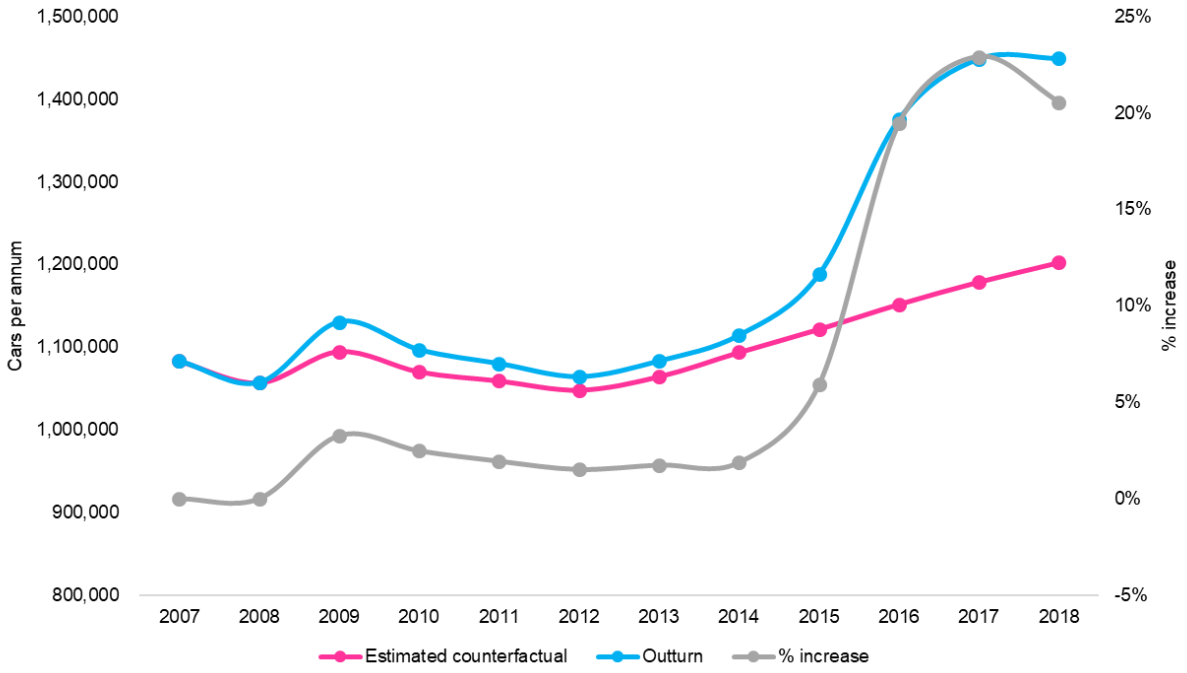


Figure 3.2: Change in network car carryings

In 2018 the passenger carryings chart highlights that the number of passengers travelling on the network was 11.6% higher than it would otherwise have been. For cars this number is even higher at 20.6%. It should be noted that a proportion of this growth will include vehicles between 5m and 6m which would have previously been classed as commercial vehicles.

How responsive was demand to RET and did this vary by distance?

Price elasticity of demand (PED) measures the response of demand to changes in price. Using the published carryings data, a PED was calculated for passengers and cars by dividing the increase in carryings by the change in yield (yield is used as many passengers did not pay the headline published fare pre-RET, so did not benefit from the maximum fares reduction available).

The table below shows, for each route, the:

- distance
- % reduction in passenger fares
- % change in passenger numbers
- passenger elasticity
- % reduction in car fares

- % change in car numbers
- car elasticity

Route	Distance	% Reduction Passenger Fares	% Change Passenger Numbers	Passenger Elasticity	% Reduction Car Fares	% Change Car Numbers	Car Elasticity
Ardrossan - Brodick	11.8	-33%	6%	-0.17	-49%	45%	-0.59
Colintraive - Rhubodach	0.6	-31%	12%	-0.39	-22%	14%	-0.66
Largs - Cumbrae	2.4	-31%	7%	-0.22	-24%	15%	-0.62
Claonaig - Lochranza	5	-40%	26%	-0.65	-61%	39%	-0.63
Tarbert LF - Portavadie	3.4	-35%	31%	-0.88	-51%	41%	-0.81
Wemyss Bay - Rothesay	6.8	-29%	8%	-0.26	-26%	18%	-0.69
Tayinloan - Gigha	2.5	-24%	2%	-0.10	-33%	11%	-0.32
Kennacraig - Islay	32.3	-26%	-2%	0.07	-29%	5%	-0.16
Oban - Colonsay	37	-47%	11%	-0.24	-43%	9%	-0.22
Tobermory - Kilchoan	3.7	-45%	26%	-0.57	-70%	68%	-0.98
Fionnphort - Iona	1.7	-39%	14%	-0.36	-17%	21%	-1.22
Oban - Coll - Tiree	59.7	-33%	8%	-0.23	-37%	14%	-0.39
Oban - Lismore	7.5	-17%	18%	-1.07	-50%	42%	-0.83
Oban - Craignure	9.3	-34%	16%	-0.46	-62%	38%	-0.62
Fishnish - Lochaline	1.9	-27%	-5%	0.18	-48%	-7%	0.14
Armadale - Mallaig	5	-39%	-2%	0.04	-60%	9%	-0.15
Sconser - Raasay	1.9	-35%	15%	-0.43	-30%	20%	-0.65
Mallaig - Small Isles	16.6	-58%	4%	-0.07	-68%	48%	-0.70
Ardmhor - Eriskay	5.9	-56%	17%	-0.29	-43%	25%	-0.58
Oban - Castlebay - Lochboisdale	89.5	-44%	25%	-0.56	-30%	34%	-1.10
Uig - Tarbert	29.2	-45%	13%	-0.28	-46%	18%	-0.39
Uig - Lochmaddy	29.2	-45%	13%	-0.28	-46%	18%	-0.39
Ullapool - Stornoway	52.2	-46%	19%	-0.43	-40%	31%	-0.79
Berneray - Leverburgh	9.5	-49%	13%	-0.27	-50%	20%	-0.41

Table 3.1: How responsive was demand to RET and did this vary by distance?

From the table it can be seen that the price elasticity of demand did not vary significantly by distance.

How did demand respond at the route level?

This section of the report sets out the change in demand at the route level, again grouped by geographic region.

Firth of Clyde

The chart below highlights the changes in carryings for passengers and cars between RET Year+1 and RET Year+1 CF. The difference shown for commercial vehicles and coaches is between RET Year-1 and RET Year+1. This is due to two aspects, firstly RET does not apply to commercial vehicles over 6m and secondly, there was a redefinition of the length at which a vehicle is classed as commercial from 5m to 6m.

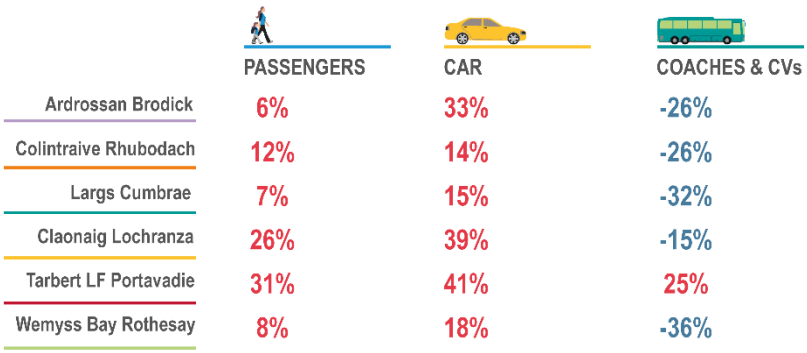


Figure 3.3: Firth of Clyde – change in carryings

Passengers – change in carryings

- Passenger numbers have grown across all routes.
- The most significant proportional increases have been on Tarbert LF - Portavadie (31%) and Claonaig - Lochranza (26%), which may reflect the role of lower fares in promoting circular leisure trips around the Firth of Clyde, and in particular the 'Five Ferries Challenge'.
- Growth on the higher volume routes (Ardrossan - Brodick, Wemyss Bay - Rothesay and Largs - Cumbrae) has been more modest, and less than the CHFS network average. This may in part reflect the relatively low reduction in average fare paid.

Cars – change in carryings

- Double-digit proportional growth in car traffic has been reported on all Firth of Clyde routes.

- The growth in car traffic has significantly exceeded passenger growth on all routes, and in many cases by a significant margin. This reflects a trend towards previous journeys made as a foot passenger only now being made by taking a car.

- The most significant absolute growth has been on the Ardrossan - Brodick route.

CVs and coaches – change in carryings

- CV traffic has declined significantly on the high-volume routes in the Firth of Clyde. There is evidence from the haulier interviews of a significant growth in van-related traffic, moving goods which would previously have travelled in a standard HGV. Indeed, some hauliers have adapted their operational model to work on this basis.

- The Firth of Clyde routes are particularly susceptible to this change given the high frequency ferry service and their close proximity to Central Belt distribution networks.

- The growth in van traffic will account for part of the increase in car traffic, with vans less than 6m in length now being classed as cars.

- Growth on the Tarbert LF - Portavadie routes (the latter in particular) are likely to be driven by an increase in coach travel as CV fares have not changed and there is little commercial traffic moving on these routes.

Passengers – long-term trend in carryings

The figure below shows the long-term trend in passenger carryings on the Firth of Clyde routes:

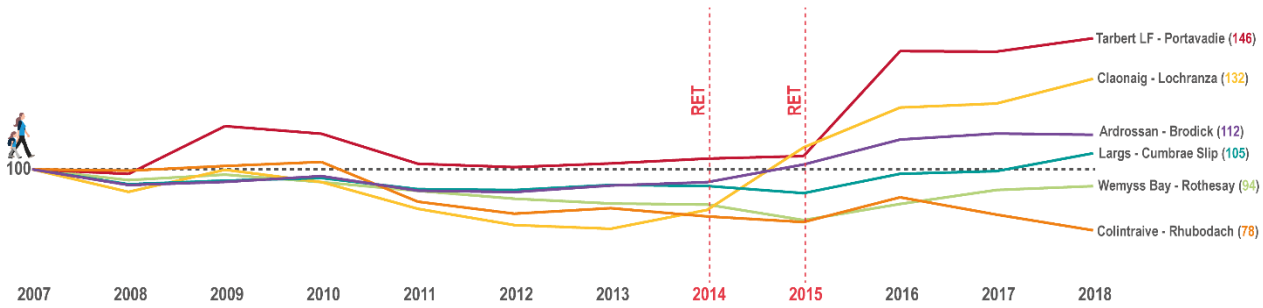


Figure 3.4: Firth of Clyde – change in passenger carryings 2007-18 (2007=100)

Note: RET was initially introduced on the Arran routes in 2014 before being introduced to the remaining Firth of Clyde routes in 2015.

- The introduction of RET has checked or reversed a long-term reduction in passengers across most of the Firth of Clyde routes. Both Bute routes are nonetheless below their 2007 level, with Largs - Cumbrae and Ardrossan - Brodick only marginally above this level.

- RET has generated a significant increase in passenger trips between Kintyre and Arran and Cowal.

Cars – long-term trend in carryings

The figure below shows the long-term trend in car carryings on the Firth of Clyde routes:

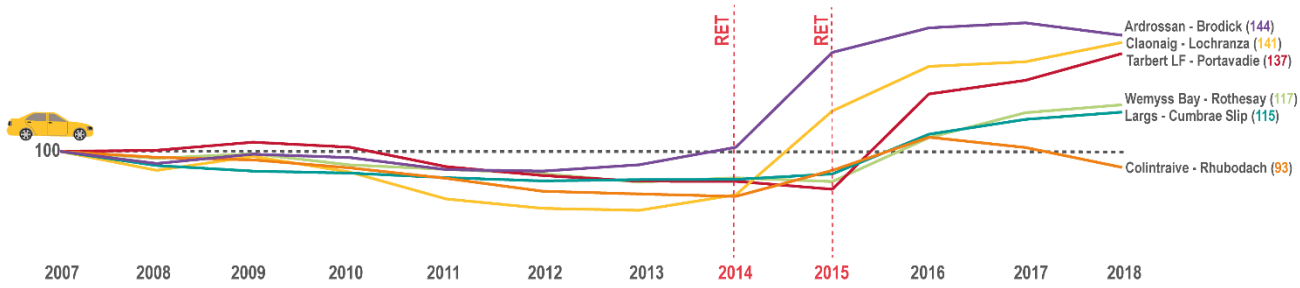


Figure 3.5: Firth of Clyde – change in car carryings 2007-18 (2007=100)

- Vehicle carryings on the Firth of Clyde routes were all below their 2007 level before RET was introduced, suggesting a long-term decline in this part of the CHFS network. The introduction of RET has reversed this trend and stimulated significant growth with all routes except Colintraive – Rhubodach now above their 2007 level.

- As has been common on high volume routes across the network, Ardrossan – Brodick, Wemyss Bay – Rothesay and Largs – Cumbrae experienced a significant step in demand when RET was introduced which largely levelled off thereafter.

- The Colintraive – Rhubodach route has witnessed a decline in carryings since RET was introduced. The reduction in fares on the Wemyss Bay – Rothesay route may have incentivised more people to take this route to the mainland.

- After a sustained period of gradual decline, RET has led to a significant step-change in carryings on the routes between Kintyre and Arran. This may in part be a tourism effect, but it may also be because it makes the 'shortcut' to the mainland via Dunoon and Brodick cheaper.

CVs and coaches – long-term trend in carryings

The figure below shows the long-term trend in CV and coach carryings on the Firth of Clyde routes:

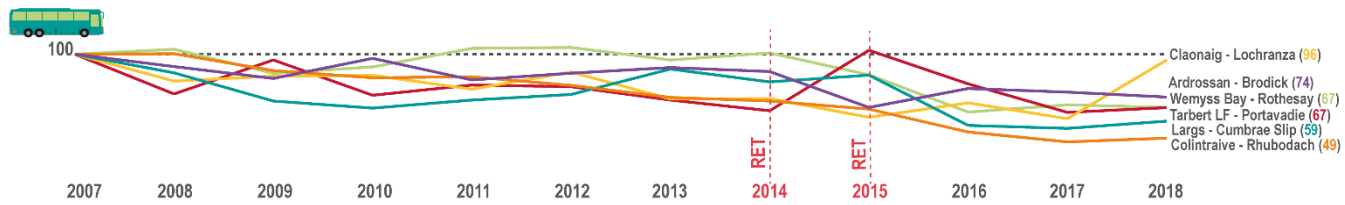


Figure 3.6: Firth of Clyde – change in CV and coach carryings 2007-18 (2007=100)

- In line with the more general Firth of Clyde trend, CV carryings have been in gradual decline on most routes since 2007.

- The introduction of RET on the high-volume routes has to some extent accelerated this decline as a result of the switch into vans less than 6 metres in length.

How did demand vary by timetable season?

*** Peak Summer** = July and August. **Shoulder Summer** = late March to end of June, September to Mid-October. **Winter** = Mid October to Late March

The figures below show how carryings changed by season when RET was introduced, comparing RET Year +1 and RET Year +1 (Counterfactual) passengers and cars. The difference shown for CVs and coaches is between RET Year -1 and RET Year +1 as they were not subject to RET:

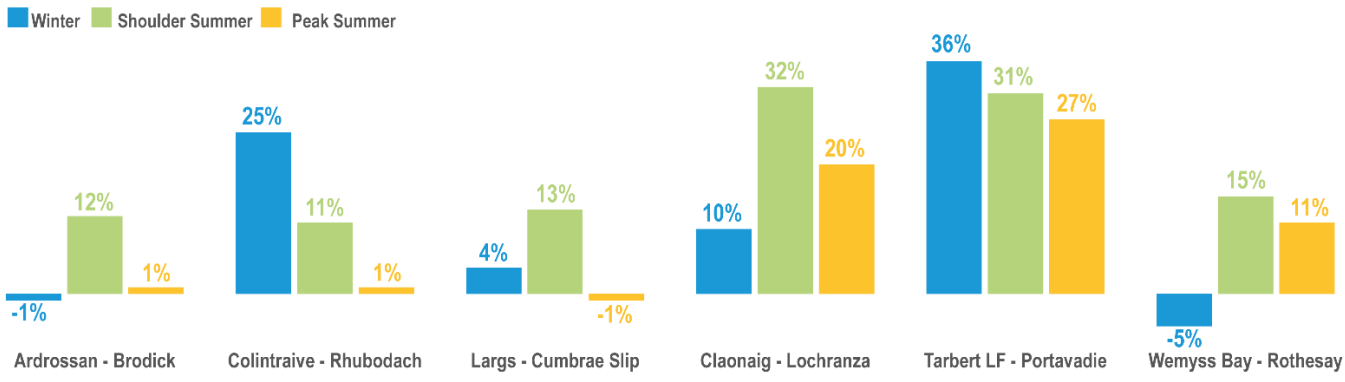


Figure 3.7: Firth of Clyde – change in passenger carryings

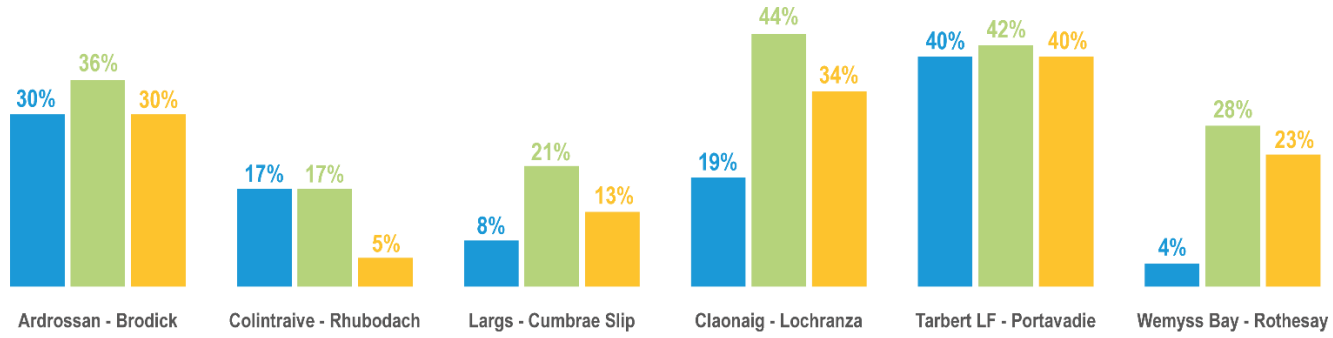


Figure 3.8: Firth of Clyde – change in car carryings by season

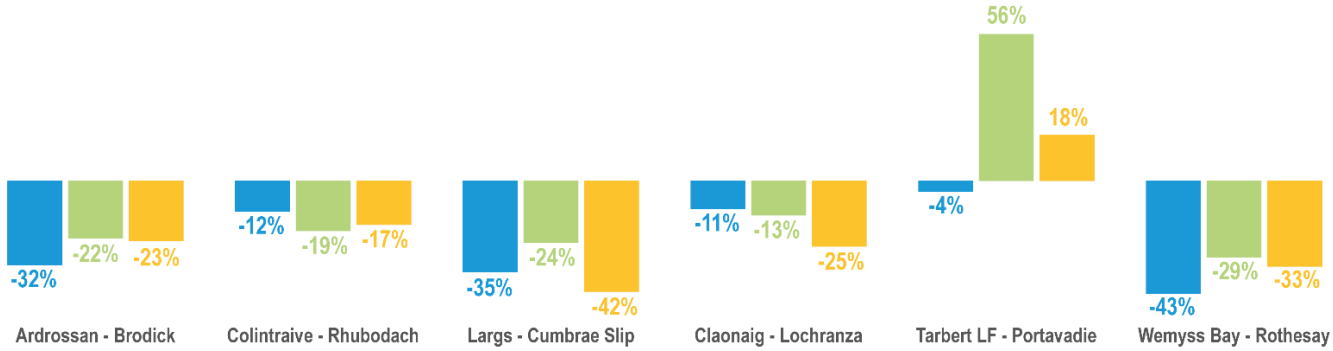


Figure 3.9: Firth of Clyde – change in CV and coach carryings by season

- Across almost all Firth of Clyde routes, passenger growth in the shoulder season has exceeded that in peak summer months – this aligns with the wider research findings that the 'season' is extending across many islands.

- A key finding is that, on almost all routes, the growth in car traffic has significantly exceeded the growth in passenger numbers. This highlights both the tendency for those who previously travelled as a foot passenger now taking a vehicle (the main effect) and the switch of some commercial traffic into vans less than 6m in length.

- As with passenger numbers, the growth in car carryings in the shoulder season has exceeded that in the peak season. This highlights both the growth in shoulder season but, on the Ardrossan – Brodick route, may also highlight vehicle deck capacity issues on peak sailings / sailing days.

- CV demand has declined across almost all routes and seasons, predominantly as a result of the 6m rule.

Southern Hebrides

The chart below the changes in carryings for passengers and cars between RET Year+1 and RET Year+1 CF. The difference shown for commercial vehicles and coaches is between RET Year-1 and RET Year+1. This is due to two aspects, firstly RET does not apply to commercial vehicles over 6m and secondly, there was a redefinition of the length at which a vehicle is classed as commercial from 5m to 6m.

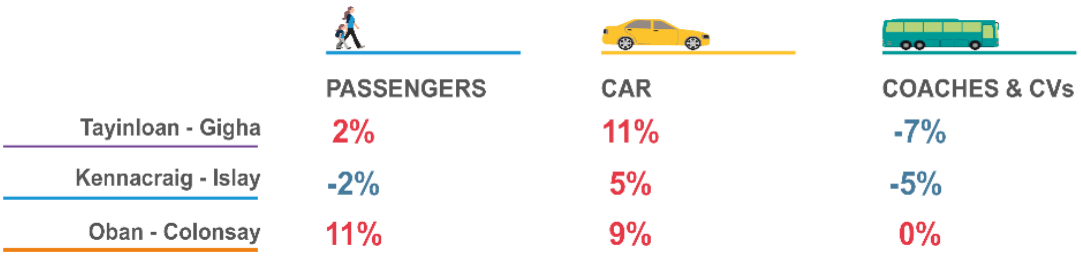


Figure 3.10: Southern Hebrides – change in carryings

Passengers – change in carryings

- Despite the scale of the fares reductions, passenger growth across all three routes was relatively modest.

- Growth in passenger numbers was most significant on the Oban – Colonsay route. This may in part be as a result of this route experiencing the largest reduction in foot passenger fares but is more likely driven by Oban being the ultimate destination (compared to Kennacraig and Tayinloan) where a car is required for the onward journey.

Cars – change in carryings

- Across all three routes, the growth in car carryings has exceeded the growth in passenger carryings, which largely reflects previous journeys made as a foot passenger now being made by car. However, there will also be a degree of growth in van traffic at the expense of conventional commercial vehicles.

- Whilst passenger growth on Oban – Colonsay has been the highest across the three routes, car growth has been the lowest, reflecting the point made above that the final destination for many journeys will be Oban and thus taking a car is unnecessary.

- Car growth on the Islay (10%) and Gigha (12%) routes has been significant but is well below the network average of 20.6%.

CVs and coaches – change in carryings

- As is common across the network, CV numbers have declined on the Islay and Gigha routes, which will principally be a reflection of the 6m rule effect. Note that, whilst the proportions are similar, the absolute reduction on the Islay route is much larger.

- There has been no significant change on the Colonsay route, which is unsurprising given the low volumes of freight on that route, much of which is likely to be moved in vans in any case.

- Whilst there has been a significant variation in Coach and CV carryings on the Gigha and Colonsay routes, the variations in terms of absolute numbers is relatively small.

Passengers – long-term trend in carryings

The figure below shows the long-term trend in passenger carryings on the Southern Hebrides routes:

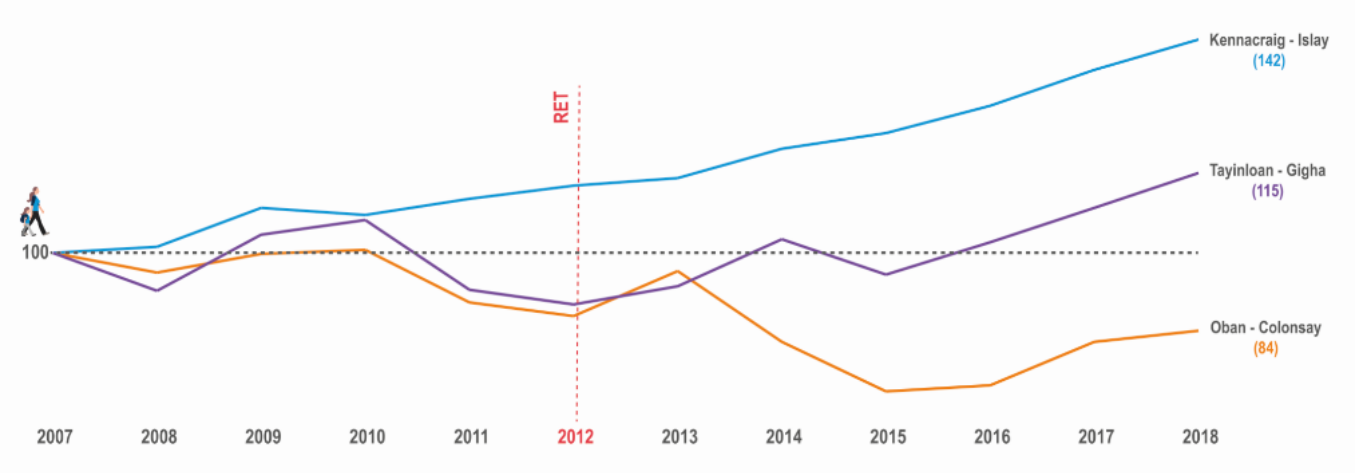


Figure 3.11: Southern Hebrides – change in passenger carryings 2007-18 (2007=100)

- Passenger carryings on the Oban – Colonsay route increased in the first year following the introduction of RET but declined between 2013-16. There has been modest growth in carryings since 2016, which are understood to be attributable to an improvement in the summer timetable, but annual carryings remain below their 2007 level.

- The Gigha route has grown steadily since the introduction of RET in 2012.

Cars – long-term trend in carryings

The figure below shows the long-term trend in Car carryings on the Southern Hebrides routes:

Figure 3.12: Southern Hebrides – change in car carryings 2007-18 (2007=100)

- There has been a steady growth in car carryings on the Islay and Gigha routes since the introduction of RET.
- The car trend for Colonsay broadly mirrors that for passengers, where there was an initial increase after the introduction of RET, a subsequent drop-off and then a gradual increase.

CVs and coaches – long-term trend in carryings

The figure below shows the long-term trend in CV and coach carryings on the Southern Hebrides routes:

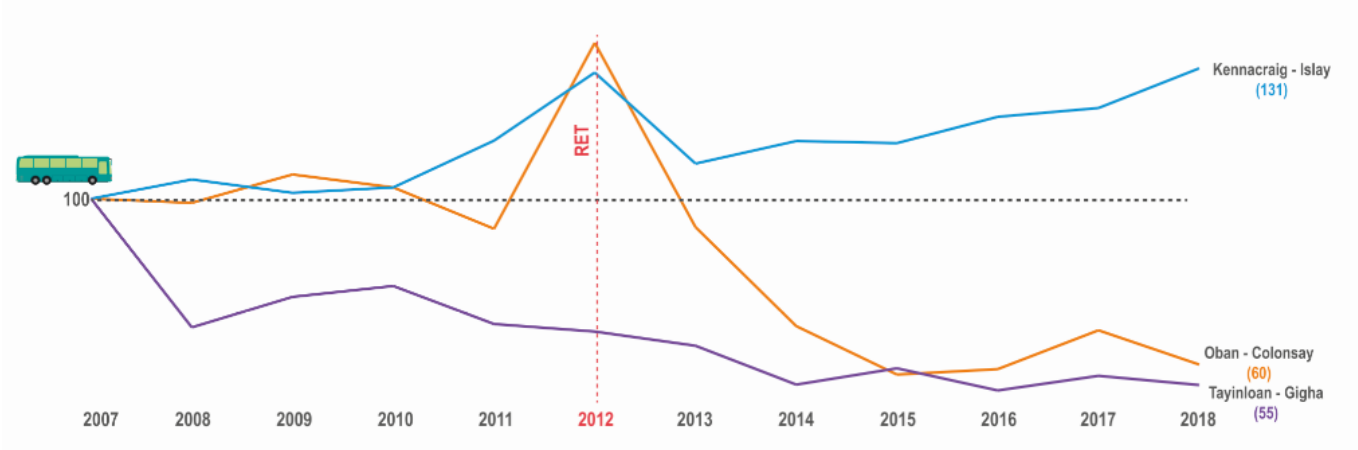


Figure 3.13: Southern Hebrides – change in CV and coach carryings 2007-18 (2007=100)

- Following the initial reduction in CV carryings on the Islay route following the introduction of RET, there has been a gradual recovery in carryings.

- Whilst there has been a significant variation in Coach and CV carryings on the Gigha and Colonsay routes, the variations in terms of absolute numbers is relatively small.

How did demand vary by timetable season?

The figures below show how carryings changed by season when RET was introduced, comparing RET Year +1 and RET Year +1 (Counterfactual) passengers and cars. The difference shown for CVs and coaches is between RET Year -1 and RET Year +1 as they were not subject to RET:

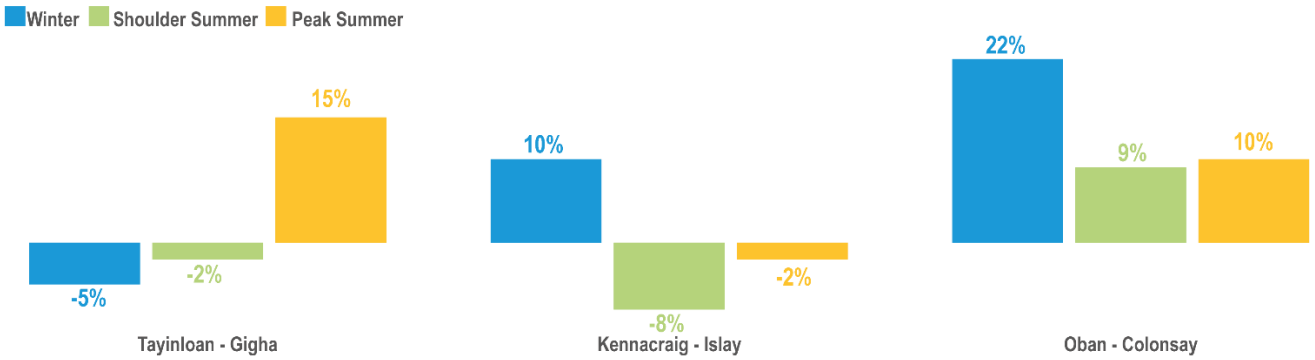


Figure 3.14: Southern Hebrides – change in passenger carryings by season

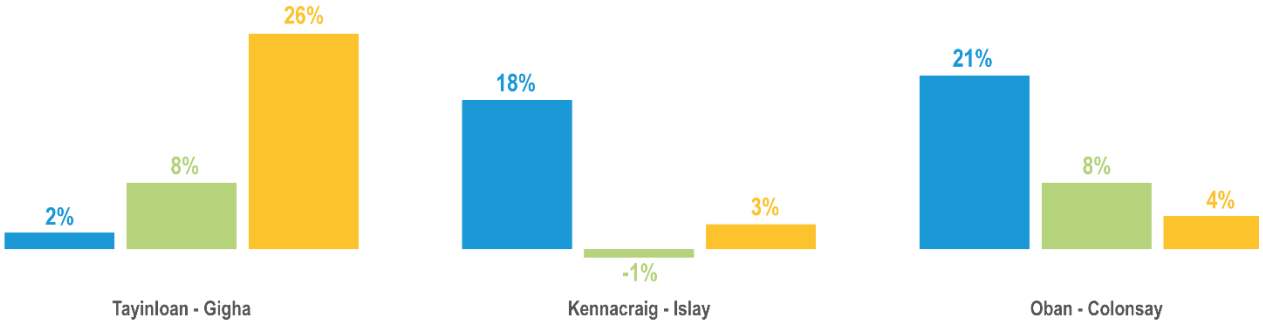


Figure 3.15: Southern Hebrides – change in car carryings by season

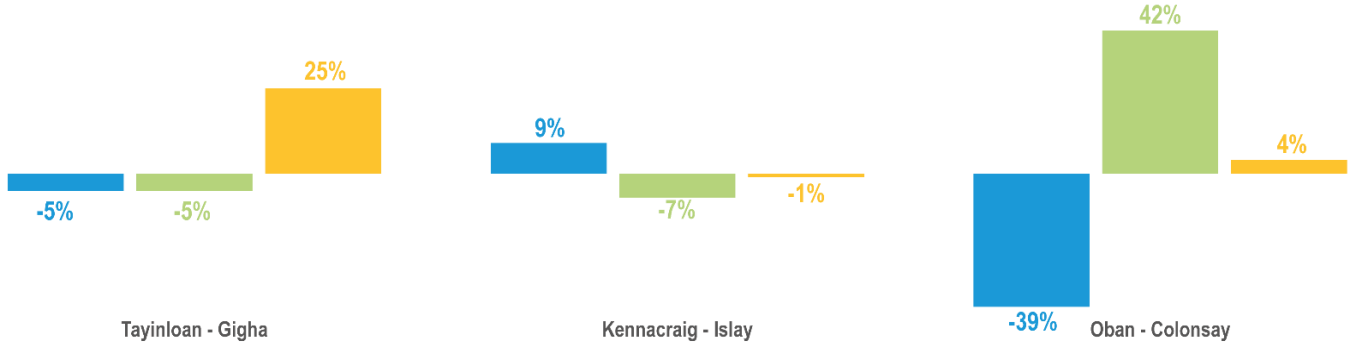


Figure 3.16: Southern Hebrides – change in CV and coach carryings by season

- The growth in demand on the Tayinloan – Gigha route has been heavily concentrated in the peak summer period, which implies that much of the growth is driven by increasing visitor demand. Of particular note is the 25% increase in Coaches and CVs, which given limited freight volumes to the island suggests an increase in coach trips – whilst the proportional increase is significant, the absolute growth is relatively small.

- Growth on the Kennacraig – Islay route has been almost wholly concentrated in the winter months, which is at odds with much of the rest of the network. Indeed, shoulder summer and peak summer carryings have almost declined across the board. This may highlight increasing summer capacity challenges on the Kennacraig – Islay route, with the greatest scope for growth being in the winter months.

- Passenger and car carryings on the Oban – Colonsay route have grown across all seasons, although again this has been most heavily concentrated in the winter months. This suggests that the majority of RET-induced journeys have been undertaken by residents.

Inner Hebrides

The chart below highlights the changes in carryings for passengers and cars between RET Year+1 and RET Year+1 CF. The difference shown for commercial vehicles and coaches is between RET Year-1 and RET Year+1. This is due to two aspects, firstly RET does not apply to commercial vehicles over 6m and secondly, there was a redefinition of the length at which a vehicle is classed as commercial from 5m to 6m.

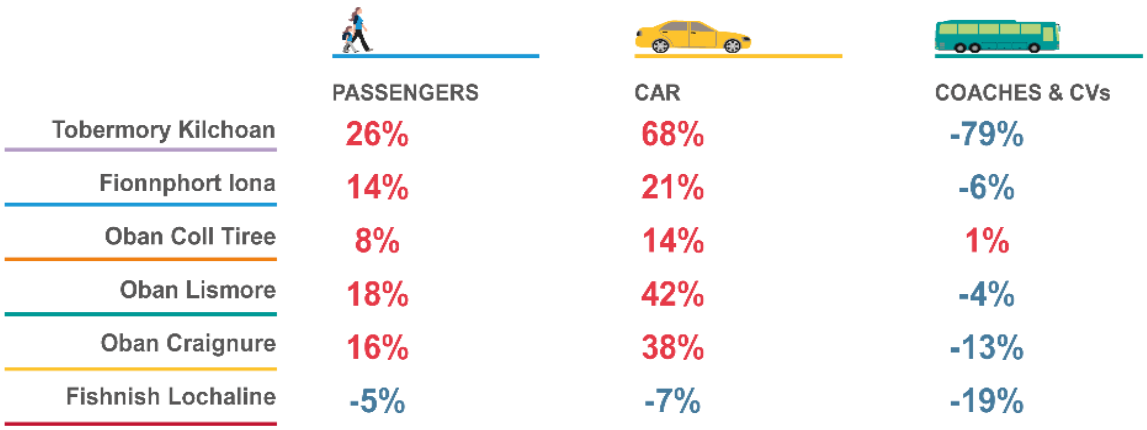


Figure 3.17: Inner Hebrides – change in carryings

Passengers – change in carryings

- Overall, there has been a significant growth in passenger carryings across the Inner Hebrides routes.

- In proportional terms, the most significant growth was on the Tobermory – Kilchoan route, where reduced fares may have provided Ardnamurchan residents with increased opportunities to travel to Tobermory and beyond for personal business and leisure. Moreover, the lower fares to Mull and from Mull to the mainland may be promoting a different route from Ardnamurchan to its main service centres.

- In absolute terms, passenger growth was greatest on the Oban – Craignure route (16% in proportional terms), which exceeded the network average of 12%. Much of this growth is driven by those travelling on coach trips to Mull or day-trippers taking the ferry and using scheduled bus services on Mull.

- Passenger growth on the Oban – Lismore route was 18%. Interestingly, passenger numbers on the Port Appin – Lismore Point route also increased between 2015 and 2016, operated by Argyll & Bute Council, suggesting that overall volumes on the Lismore routes has grown.

Cars – change in carryings

- The growth in car carryings on the Oban – Craignure route has been significant, both in proportional and absolute terms. Mull has now become much more accessible for day-trip and short-break holidays, which is one source of this growth. However, it is important to note that the growth in car traffic has exceeded that of passenger traffic, suggesting that journeys which would previously have been made as a foot passenger are now being undertaken by car.

- As alluded to into relation passengers, the high growth in car carryings on the Tobermory – Kilchoan route may reflect both taking the car to Mull to access retail and other services and the use of Mull as a land-bridge to access Oban and the Central Belt.

- Car growth on Oban – Lismore has also been very strong and well in excess of passenger growth – this again suggests that journeys previously made as a foot passenger are now being made by car, possibly to facilitate e.g. large grocery shops in Oban.

- Car carryings on Fishnish – Lochaline have reduced by 7%, which highlights route-switching to Oban – Craignure, taking advantage of the much reduced fare on that route for accessing the mainland.

CVs and coaches – change in carryings

- Whilst there is a significant reduction in coaches and CVs on the Tobermory – Kilchoan route, the absolute change is actually very small.

- As has been common across the network, CV carryings have declined, largely due to the 6m rule. This is particularly notable on Mull, where CV carryings have witnessed double digit reductions on the Craignure and Fishnish routes.

Passengers – long-term trend in carryings

The figure below shows the long-term trend in passenger carryings on the Inner Hebrides routes:

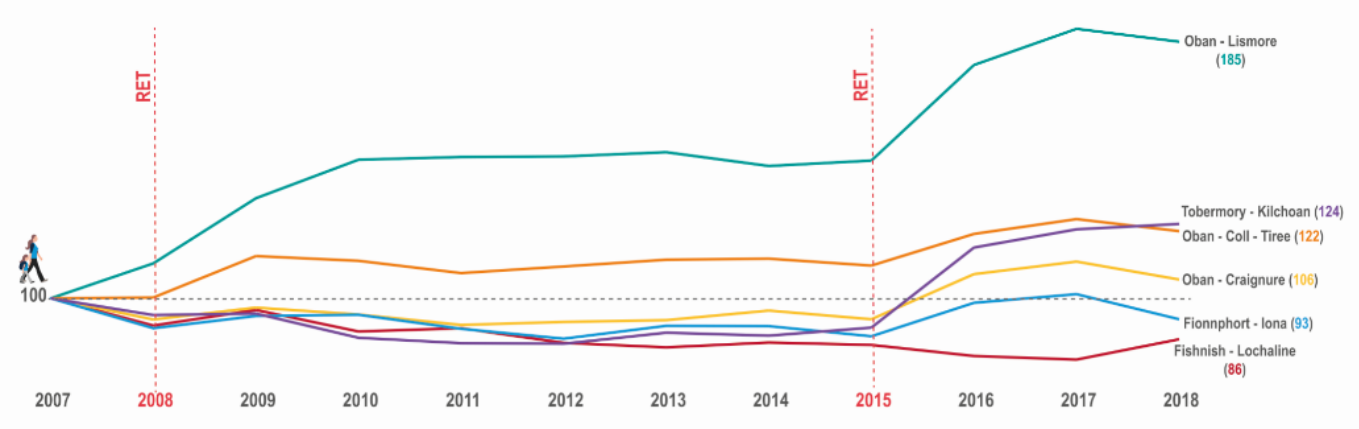


Figure 3.18: Inner Hebrides – change in passenger carryings 2007-18 (2007=100)

- RET has assisted in reducing a long-term reduction in passenger numbers across a number of routes, although a number of routes do remain below their 2007 level

- The growth on Oban – Lismore over the last decade has been significant, with passenger numbers now well above their 2007 level

- There has also been a step-change in passenger travel on the Tobermory – Kilchoan route

Cars – long-term trend in carryings

The figure below shows the long-term trend in car carryings on the Inner Hebrides routes:

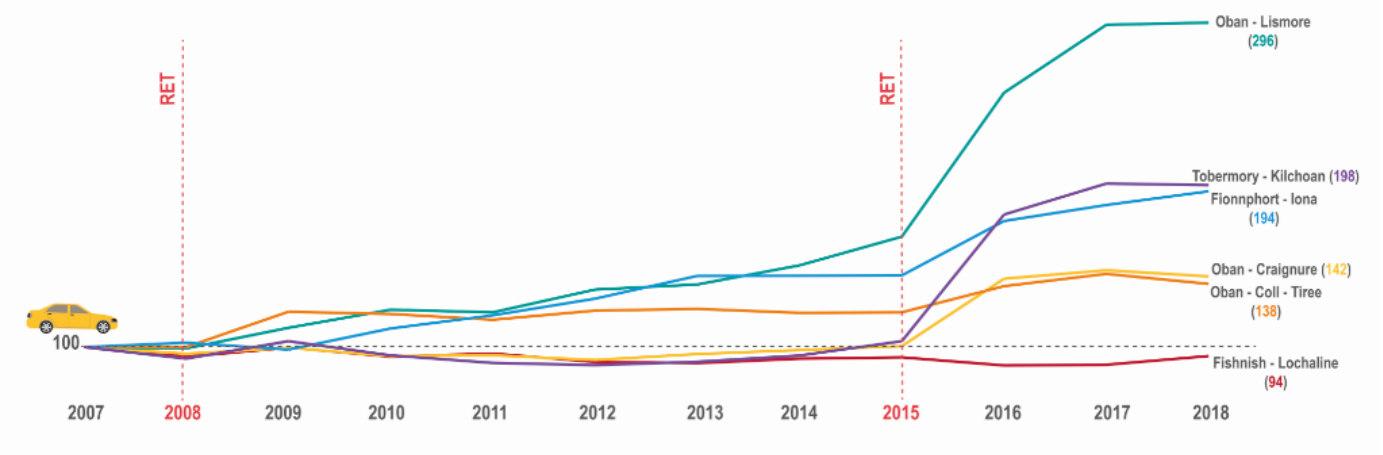


Figure 3.19: Inner Hebrides – change in car carryings 2007-18 (2007=100)

- RET has also prompted a significant growth in car carryings across the Inner Hebrides network, Lochaline – Fishnish aside for reasons previously explained.

- Proportional growth has been most significant on the Oban – Lismore route. This is a product of (i) from circa 2009-13, a potential 'use it or lose it' effect when it was recommended in a 2009 STAG that Lismore's connection should be via a new Port Appin to Point vehicle ferry; (ii) from 2013 onwards, the introduction of the larger Loch Class vessel MV Loch Striven to replace the smaller Island Class vessel MV Eigg; and (iii) from October 2015, the introduction of RET.

- RET has also promoted significant vehicle carrying growth on the Oban – Craignure and Oban – Coll / Tiree routes, the two 'Major Vessel' routes in the Inner Hebrides network.

CVs and coaches – long term trend in carryings

The figure below shows the long-term trend in CV and coach carryings on the Inner Hebrides routes:

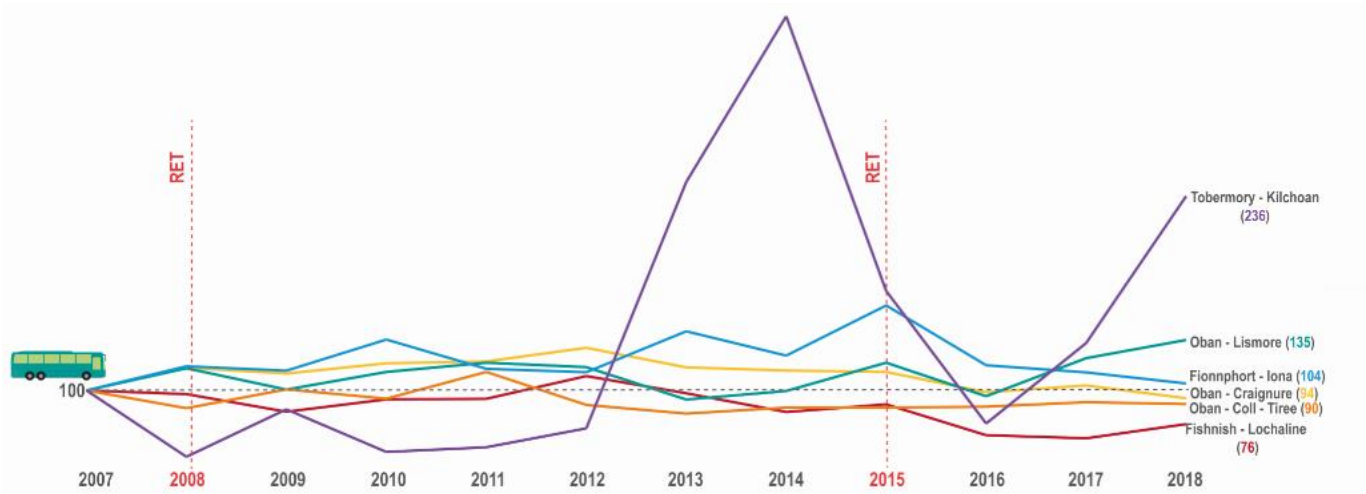


Figure 3.20: Inner Hebrides – change in CV and coach carryings 2007-18 (2007=100)

- CV carryings on Oban – Craignure and Oban – Coll / Tiree routes, the two 'Major Vessel' routes in the Inner Hebrides network, have declined since RET was introduced, reflecting the implementation of the 6m rule.

- CV carryings on other routes have demonstrated a degree of year-on-year volatility but by 2018 were still broadly similar to their 2007 level. The spike is a result of low volumes, meaning small changes can be big percentage changes.

How did demand vary by timetable season?

The figures below show how carryings changed by season when RET was introduced, comparing RET Year +1 and RET Year +1 (Counterfactual) passengers and cars. The difference shown for CVs and coaches is between RET Year -1 and RET Year +1 as they were not subject to RET:

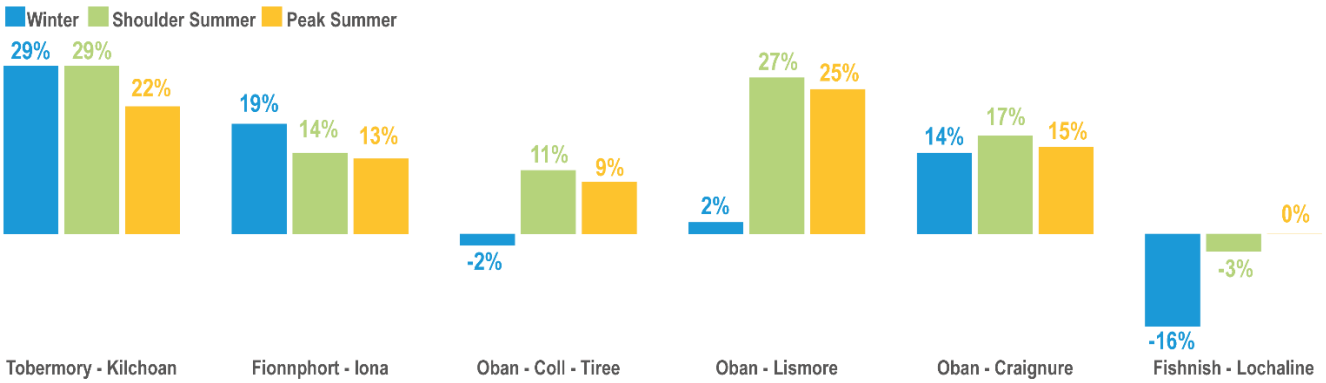


Figure 3.21: Inner Hebrides – change in passenger carryings by season

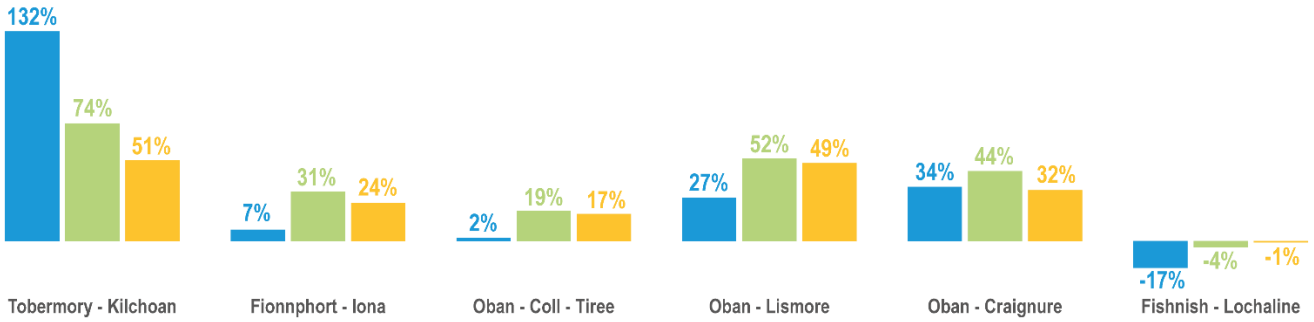


Figure 3.22: Inner Hebrides – change in car carryings by season

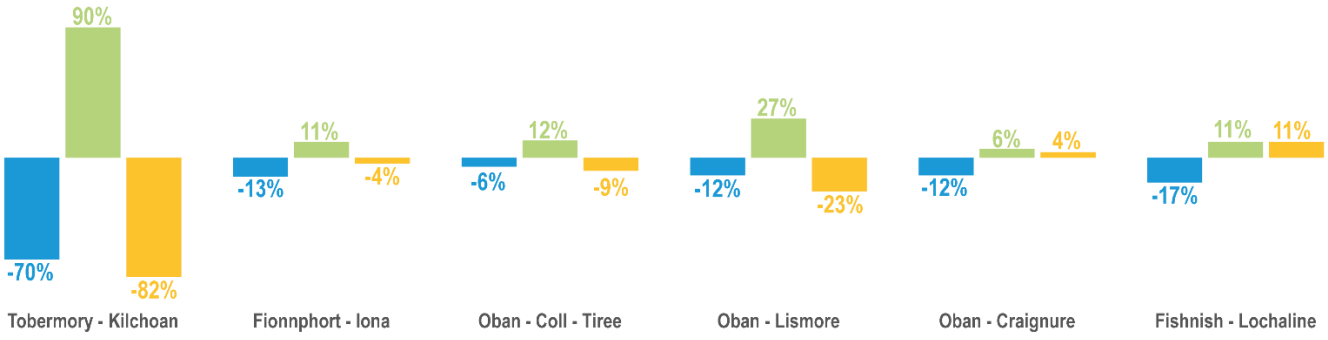


Figure 3.23: Inner Hebrides – change in CV and coach carryings by season

- There was growth across all seasons in passenger and car carryings on the Kilchoan – Tobermory route, but the proportional growth has, by some distance, been greatest in winter. This may reflect the use of Tobermory or Oban as main service centres during winter, reducing the need for long drives to e.g. Fort William on the limited peninsula road network during winter.

- Growth in passenger carryings on the Oban – Lismore route has been heavily concentrated in the shoulder and peak summer seasons, suggesting growth in visitor demand. There has been significantly greater car growth than passenger

growth in winter, suggesting that journeys previously made as a foot passenger are now being made using a car.

- There has been passenger and car growth across all seasons on the Oban – Craignure route. Car growth has been most prevalent in the shoulder summer period, which may reflect a lengthening of the tourist season in Mull and capacity constraints on the most popular sailings in peak summer.

- The decline in all carrying types on the Lochaline – Fishnish route is greatest in winter. This suggests that visitor demand (and in particular visitors accessing Mull by one route and leaving by another) is to some extent offsetting the effect of residents switching to the Oban – Craignure route.

Skye, Raasay & Small Isles

The chart below highlights the changes in carryings for passengers and cars between RET Year+1 and RET Year+1 CF. The difference shown for commercial vehicles and coaches is between RET Year-1 and RET Year+1. This is due to two aspects, firstly RET does not apply to commercial vehicles over 6m and secondly, there was a redefinition of the length at which a vehicle is classed as commercial from 5m to 6m.

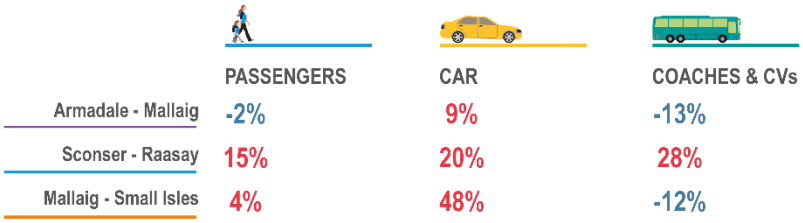


Figure 3.24: Skye, Raasay & Small Isles – change in carryings

Passengers – change in carryings

- The 4% increase in passenger numbers on the Mallaig – Small Isles route may reflect both residents travelling more often and a growth in visitor use of the ferry, and in particular the non-landing Small Isles cruises.

- Passenger numbers have grown significantly on the Sconser – Raasay route, which likely reflects increased visitor numbers to the island (which may in-part be driven by the opening of the Raasay Distillery in 2016, which is walkable from the ferry terminal).

Cars – change in carryings

- The Mallaig – Armadale route experienced car growth of 9% following the introduction of RET. However, this one- year comparison figure underestimates actual growth – the vessel deployment on the route was in a state of flux in

2016 and dampened demand, which grew much more strongly between 2016 and 2017 (see below).

- Proportional growth on the Mallaig – Small Isles route (48%) was also very strong, although absolute growth was more modest given the low overall volumes on the route.

- Car growth on the Sconser – Raasay route has also been very strong. This will in part be due to residents taking their car on the ferry more often, although given that onward travel from Sconser will typically be made by car, the more significant influence is likely to be increased visitor numbers to the island.

CVs and coaches – change in carryings

- The Armadale – Mallaig route carries very few CVs and thus the 13% decline is related almost entirely to coach carryings. The reduction in coach traffic has been driven almost wholly by the reliability issues associated with the current vessel deployment, and in particular the vessels used on the route in 2016.

- There are likewise few CVs on the Sconser – Raasay route. The significant increase in CV movements likely relates more to the construction of the distillery and the subsequent delivery of raw materials rather than being an RET induced demand.

Passengers – long-term trend in carryings

The figure below shows the long-term trend in passenger carryings on the Skye, Raasay and Small Isles routes:

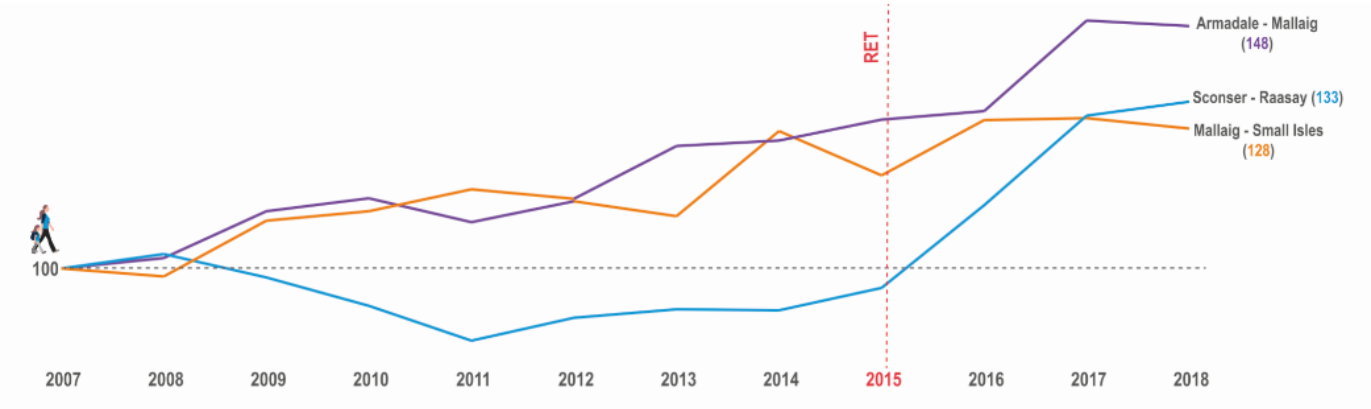


Figure 3.25: Skye, Raasay and Small Isles – change in passenger carryings 2007-18 (2007=100)

- There has been growth across all routes within this mini-network since 2007 but RET has accelerated this for the Mallaig – Armdale and Sconser – Raasay routes.

- Passenger numbers of the Small Isles route are more volatile but have nonetheless increased overall since RET was introduced.

Cars – long-term trend in carryings

The figure below shows the long-term trend in car carryings on the Skye, Raasay and Small Isles routes:

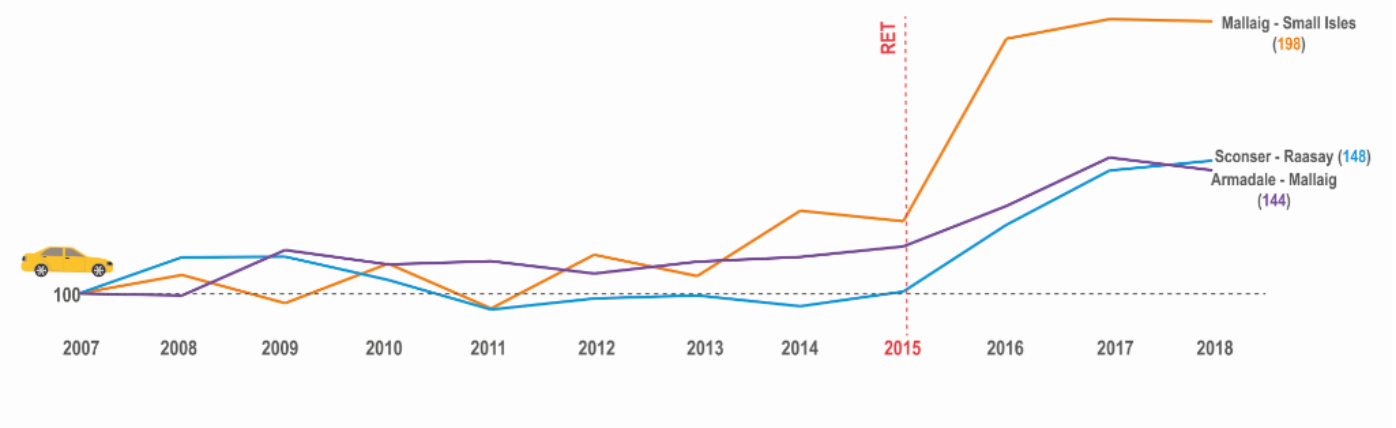


Figure 3.26: Skye, Raasay and Small Isles – change in car carryings 2007-18 (2007=100)

- There has been a strong growth in car traffic on the Mallaig – Armadale route since RET was introduced. The large price reduction has made the 'shortcut' route to the Central Belt more attractive, whilst also allowing tourists to make a circular trip to Skye using the bridge in one direction and the ferry in the other.

- Sconser – Raasay has also witnessed significant car growth in recent years reversing a period of decline since 2007. The introduction of the hybrid ferry MV Hallaig in 2013 supported modest growth on the route, with the combination of RET (2015) and the new distillery (2017) significantly accelerating that growth.

- There has been a notable growth in car carryings on the Mallaig - Small Isles route since RET was introduced. As vehicular access to the islands is almost entirely controlled by a permit system, these will be almost entirely resident trips. Following the spike in growth between 2015 and 2016, carryings have largely levelled off, suggesting a new settled level of demand.

CVs and coaches – long-term trend in carryings

The figure below shows the long-term trend in CV and Coach carryings on the Skye, Raasay and Small Isles routes:

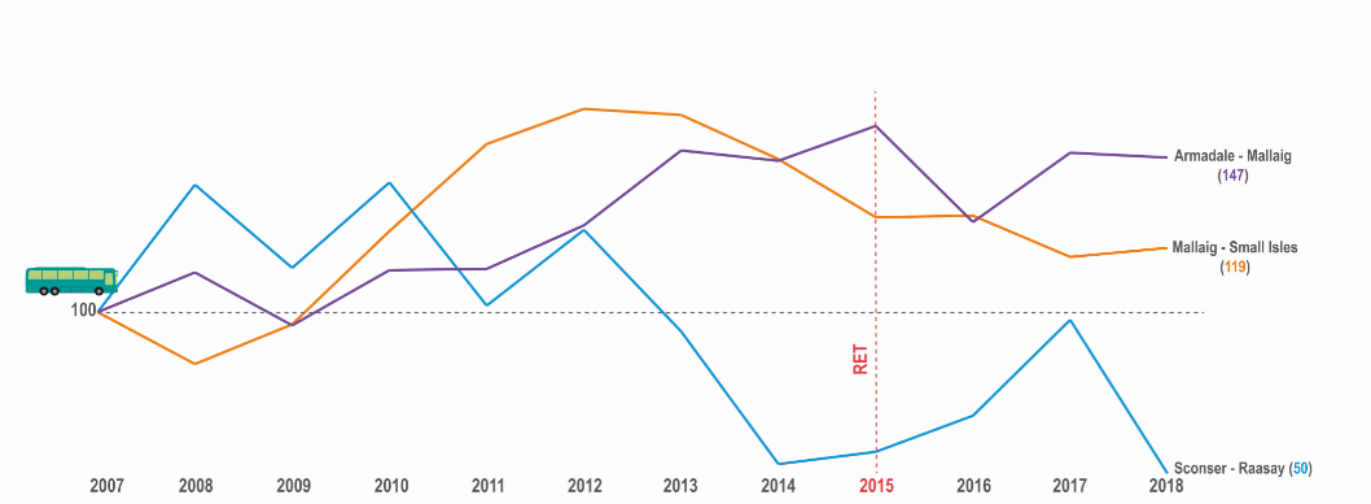


Figure 3.27: Skye, Raasay and Small Isles – change in CV and coach carryings 2007-18 (2007=100)

- Armadale – Mallaig has experienced a steady growth in coach traffic since 2007, although this has been dampened by the vessel deployment issues since summer 2016.

- There was a long-term decline in CV & coach carryings on the Sconser – Raasay route between 2007 and 2014, the reasons for which are not clear. However, the construction of the Distillery led to a growth in CV carryings before a subsequent drop-off in 2018 (despite the ongoing demand for distillery deliveries). Despite the magnitude of the changes, the absolute changes are relatively small.

How did demand vary by timetable season?

The figures below show how passenger carryings changed by season when RET was introduced, comparing RET Year +1 and RET Year +1 (Counterfactual) passengers and cars. The difference shown for CVs and coaches is between RET Year -1 and RET Year +1 as they were not subject to RET:

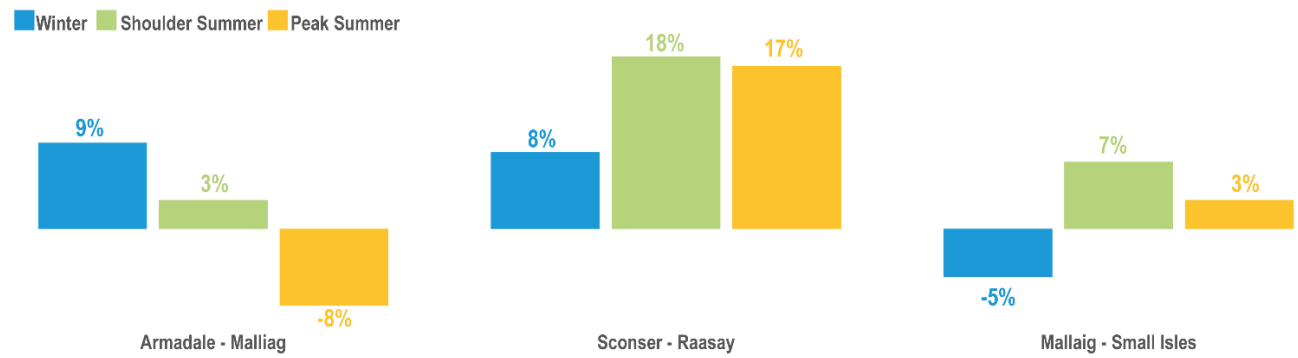


Figure 3.28: Skye, Raasay and Small Isles – change in passenger carryings by season

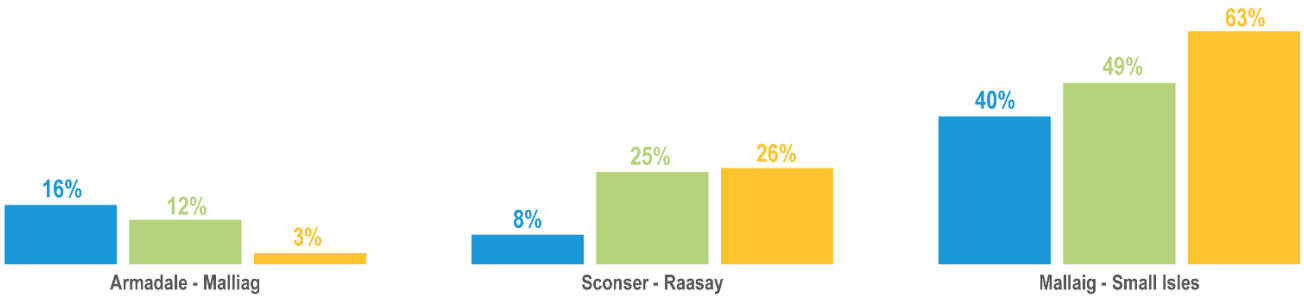


Figure 3.29: Skye, Raasay and Small Isles – change in car carryings by season

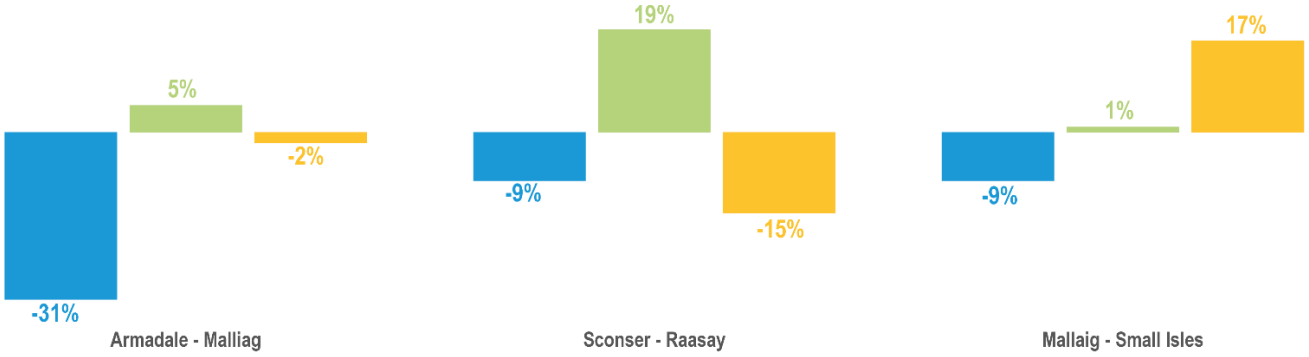


Figure 3.30: Skye, Raasay and Small Isles – change in CV and coach carryings by season

- There has been growth in passenger and car carryings on the Mallaig - Armadale route in the winter period. However, following the commencement of winter timetable, the route reduces to two return sailings per day on a low capacity vessel (MV Lochnevis) and therefore the changes in carryings are likely to be very small in absolute terms.

- The introduction of RET has supported strong shoulder summer growth on the Armadale – Mallaig route across all carrying types. Peak summer passenger

carryings have however reduced by 6% (due to the reduction in coaches using the route (-2%), whilst car growth was a modest 3%. It can be argued that vessel deployment on this route since the summer 2016 timetable period has dampened the RET impact.

- Sconser – Raasay has demonstrated strong growth across all periods, particularly in the shoulder and peak summer periods. Car-based growth has outstripped passenger growth.

- Car growth on the Mallaig – Small Isles route has substantially outstripped passenger growth, which suggests that residents are now taking cars for trips they previously made as a foot passenger.

Outer Hebrides

The figure below highlights the changes in carryings for passengers and cars between RET Year+1 and RET Year+1 CF. The difference shown for commercial vehicles and coaches is between RET Year-1 and RET Year+1. This is due to two aspects, firstly RET does not apply to commercial vehicles over 6m and secondly, there was a redefinition of the length at which a vehicle is classed as commercial from 5m to 6m.

	PASSENGERS	CAR	COACHES & CVs
Ardmhor Eriskay	17%	25%	1%
Oban - Castlebay/Lochboisdale	28%	37%	13%
Uig Lochmaddy	12%	17%	3%
Uig Tarbert	12%	17%	-1%
Ullapool Stornoway	19%	31%	8%
Berneray Leverburgh	13%	20%	-55%

Figure 3.31: Outer Hebrides – change in carryings

Passengers – change in carryings

- There has been strong passenger growth across the Outer Hebrides routes, with the largest growth on the longest routes (where the fares reductions were largest). Passenger numbers increased by 28% on the Oban – Castlebay / Lochboisdale route, despite the infrequency of the service and its susceptibility to weather-related disruption. Ullapool - Stornoway, the second longest route, grew by 19%.

Cars – change in carryings

- The Outer Hebrides set the trend for car growth exceeding passenger growth on most routes, suggesting that journeys previously made as a foot passenger are now being made by car.

- Growth was again very strong on the longest routes, albeit the relatively low carryings on Oban – Castlebay / Lochboisdale meant that the absolute growth was not significant. On the other hand, 31% growth on Stornoway – Ullapool, the volume route to the Outer Hebrides, represents strong absolute growth.

- The Sound routes have also grown strongly, fostering improved connectivity along the spine of the Outer Hebrides.

CVs and coaches – change in carryings

- The picture in relation to CVs is more nuanced in the Outer Hebrides than elsewhere. When RET was introduced in 2008, it included CVs and thus there was an initial increase, which was swiftly reversed when it was withdrawn in 2012 and the 6m rule introduced.

- On the Sound of Harris route, the redefinition of CV length from 5m to 6m when RET was introduced incentivised a switch of CV traffic into vans. This has contributed to a dramatic reduction in CV carryings on this route, which in 2016 were less than half their 2014 level (although there was a degree of recovery in 2017).

- The MV Isle of Lewis took up the Castlebay – Oban route for the summer 2016 timetable. As she is closed deck, she cannot carry certain categories of dangerous goods when in passenger operation. The increase in CV carryings on Ardmhor – Eriskay suggests that these CVs may be routing across the Sound of Barra.

Passengers – long-term trend in carryings

The figure below shows the long-term trend in passenger carryings on the Outer Hebrides routes:

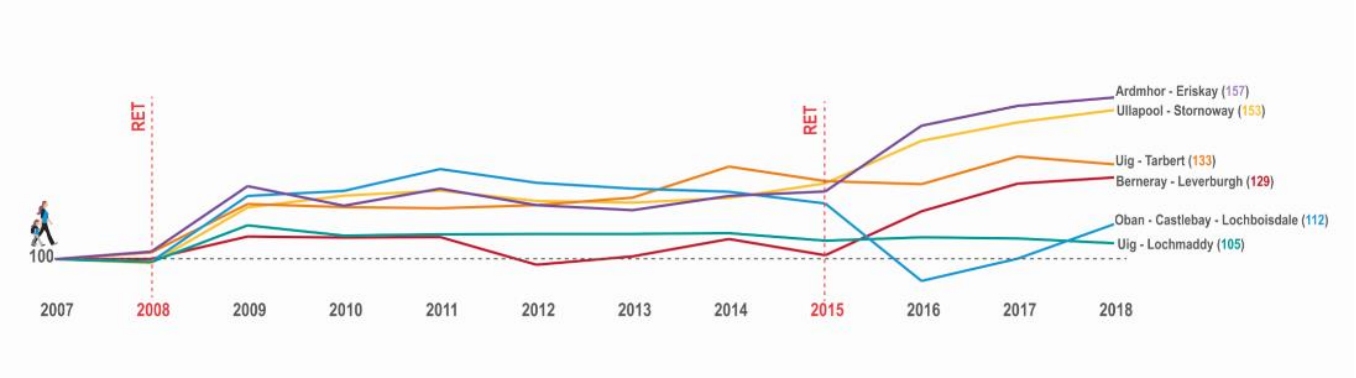


Figure 3.32: Outer Hebrides – change in passenger carryings 2007-18 (2007=100)

- Passenger numbers increased across all Outer Hebrides routes when RET was introduced in 2008. The general pattern was a one-off step change before returning broadly to the pre-RET trend. The RET story around the 2009-11 period is a complicated one, with the financial crash and subsequent recession dampening demand to some degree, but at the same time the 'staycation' effect supported an increase in demand.

- Passenger numbers on the Sound routes also increased when RET was introduced in 2015 – the main difference with these routes is that demand does not appear to have flattened off, with continued growth from 2016 onwards (albeit at a lesser rate than the first year).

- Passenger numbers increased on various routes between 2014 and 2016, but this was as a result of supply-side changes (e.g. the introduction of MV Loch Seaforth).

Cars – long-term trend in carryings

The figure below shows the long-term trend in car carryings on the Outer Hebrides routes:

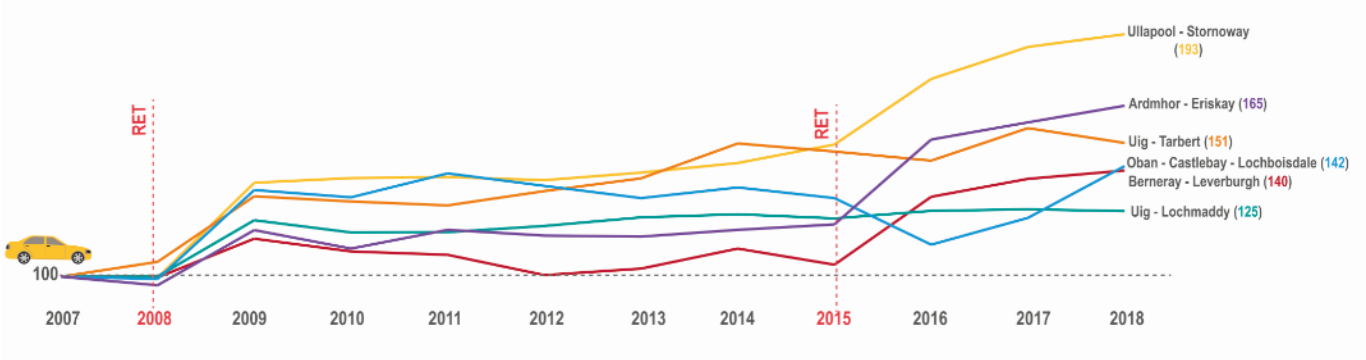


Figure 3.33: Outer Hebrides – change in car carryings 2007-18 (2007=100)

- The growth in car traffic across all routes followed a similar trend, with a one-off step in growth followed by a broad return to trend. The magnitude of growth was though, much larger than was the case for passengers, highlighting the 'foot passenger to vehicle' switching effect.

- Car traffic growth on the Sound routes has also been significant and sustained.

CVs and coaches – long-term trend in carryings

The figure below shows the long-term trend in CV and coach carryings on the Outer Hebrides routes:

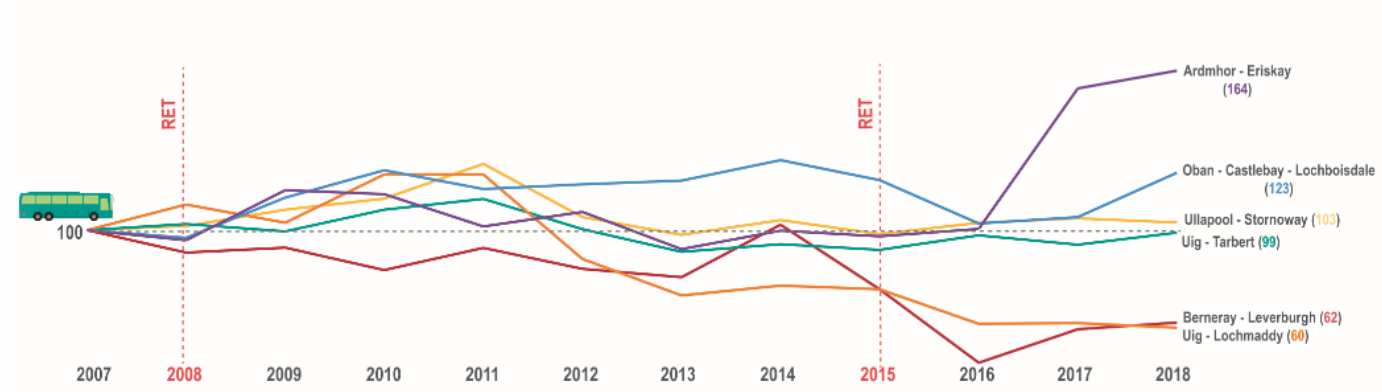


Figure 3.34: Outer Hebrides – change in CV and coach carryings 2007-18 (2007=100)]

- CV numbers increased across most routes when RET was first introduced in 2008 because, at that stage, commercial traffic benefitted from reduced fares. When RET was withdrawn for CVs in 2012, there was an Outer Hebrides-wide decline in commercial traffic, predominantly due to the redefinition of the length at which a vehicle is defined as commercial from 5m to 6m.

- It should be noted that the demise of MacAskill Haulage (one of the larger Lewis hauliers) at around the same time RET was withdrawn confuses the picture to some degree as it led to a state of flux in the market. Nonetheless, there was an evident reduction in CV carryings when RET was removed.

- CV carryings have grown strongly on the Ardmhor – Eriskay route since 2016. However, this is unrelated to RET, rather it reflects the deployment of a closed-deck vessel (the MV Isle of Lewis) on the Castlebay – Oban route, meaning that certain categories of dangerous goods now have to route across the Sound of Barra.

How did demand vary by timetable season?

The figures below show how passenger carryings changed by season when RET was introduced, comparing RET Year +1 and RET Year +1 (Counterfactual) passengers and cars. The difference shown for CVs and coaches is between RET Year -1 and RET Year +1 as they were not subject to RET:

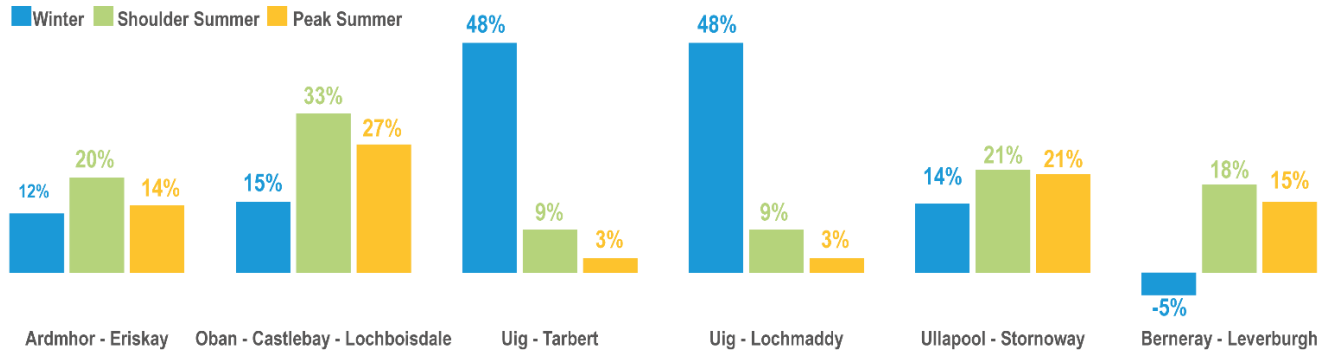


Figure 3.35: Outer Hebrides – change in passenger carryings by season

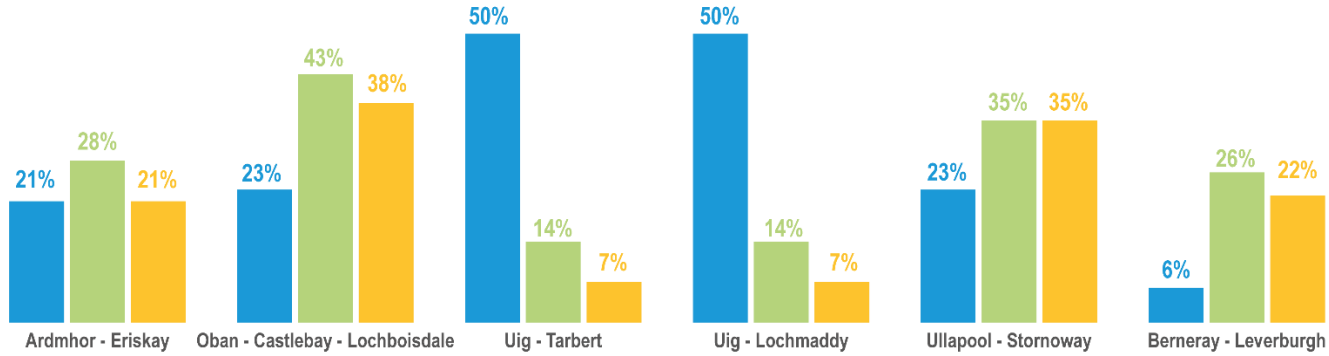


Figure 3.36: Outer Hebrides – change in car carryings by season

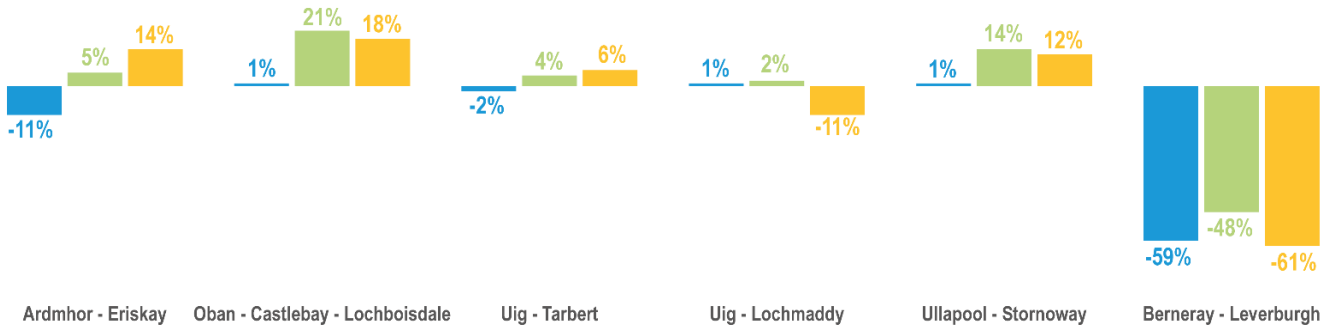


Figure 3.37: Outer Hebrides – change in CV and coach carryings by season

- RET has prompted growth across all seasons on most of the Outer Hebrides routes. Unsurprisingly, growth was strongly concentrated in shoulder and peak summer.

- The winter growth on Berneray – Leverburgh route is much more modest than other routes due to the reduction in the timetable imposed by the operational restrictions on that route.

Has this impacted on other modes of transport?

Non-RET ferry services

- Despite the introduction of RET on the Kennacraig – Islay route in 2012, passenger carryings on the Port Askaig – Feolin (Jura) route actually declined originally, only recovering to their pre-RET level in 2017. In contrast however, vehicle carryings have grown by over 10%, which again highlights that those previously travelling as a passenger are now taking their car to the mainland via Islay.

- Car carryings on the Corran Ferry have grown by around 4% between 2015 and 2017 despite the reduction in vehicle numbers of the Lochaline – Fishnish route (although the Tobermory – Kilchoan route has grown strongly).

- Despite an initial reduction in passenger numbers on the Port Appin – Point route when RET was introduced in 2015, numbers had recovered to their pre-RET levels by 2017. This suggests that the overall travel market from Lismore has grown.

Air

- With the exception of Stornoway, there was no significant reduction in airport terminal passengers in island airports when RET was introduced. There was a brief reduction in passengers at Islay when RET was introduced in 2012, but these promptly recovered in 2013. Terminal passengers at Stornoway have also since recovered to their pre-RET level.

- Whilst RET may have had an impact on air passenger numbers, it is not possible to demonstrate causality given that the aviation market is highly fluid in terms of e.g. routes, schedules, operators etc.

Rail

- In the year following the introduction of RET, rail passenger numbers declined at all ferry interchange stations except Mallaig. This reduction was particularly noticeable at Ardrossan Harbour (-11%) and Wemyss Bay (-7%), which highlights the RET induced switch from people who previously made journeys as a foot passenger now taking a car.

- The growth at Mallaig may reflect the increased frequency service on Mallaig – Armadale and use by passengers on the new Lochboisdale – Mallaig route, albeit the train times do not align well with the ferry timetable on that route.

- With the exception of Ardrossan Harbour (and possibly Wemyss Bay) which is a dedicated ferry interchange station, it is not possible to demonstrate causality

between RET and the change in rail passenger numbers as these stations serve a much wider catchment than ferry passengers alone.

Road

- Ferry traffic accounts for such a small proportion of overall road-based traffic that it is difficult to identify any RET-related impact.

There is a paucity of bus passenger data available but feedback from several island bus companies in the '2015 RET' islands suggests that use of island bus services has diminished as more ferry users now take their car. This finding was supported to some degree in the Arran RET Evaluation, which found that on-island bus passengers declined despite the larger volume of people on the island post the introduction of RET.

The survey and stakeholder feedback raised significant concerns on the impact of RET on bus services and local roads. However, there is only limited empirical data to evidence this point and thus more detailed investigation and analysis would be required in order to properly quantify these impacts.

How did '2015 RET' island residents respond to the reduction in fares?

A key question is how island / peninsula residents responded to the introduction of RET – this is summarised in the figure below:

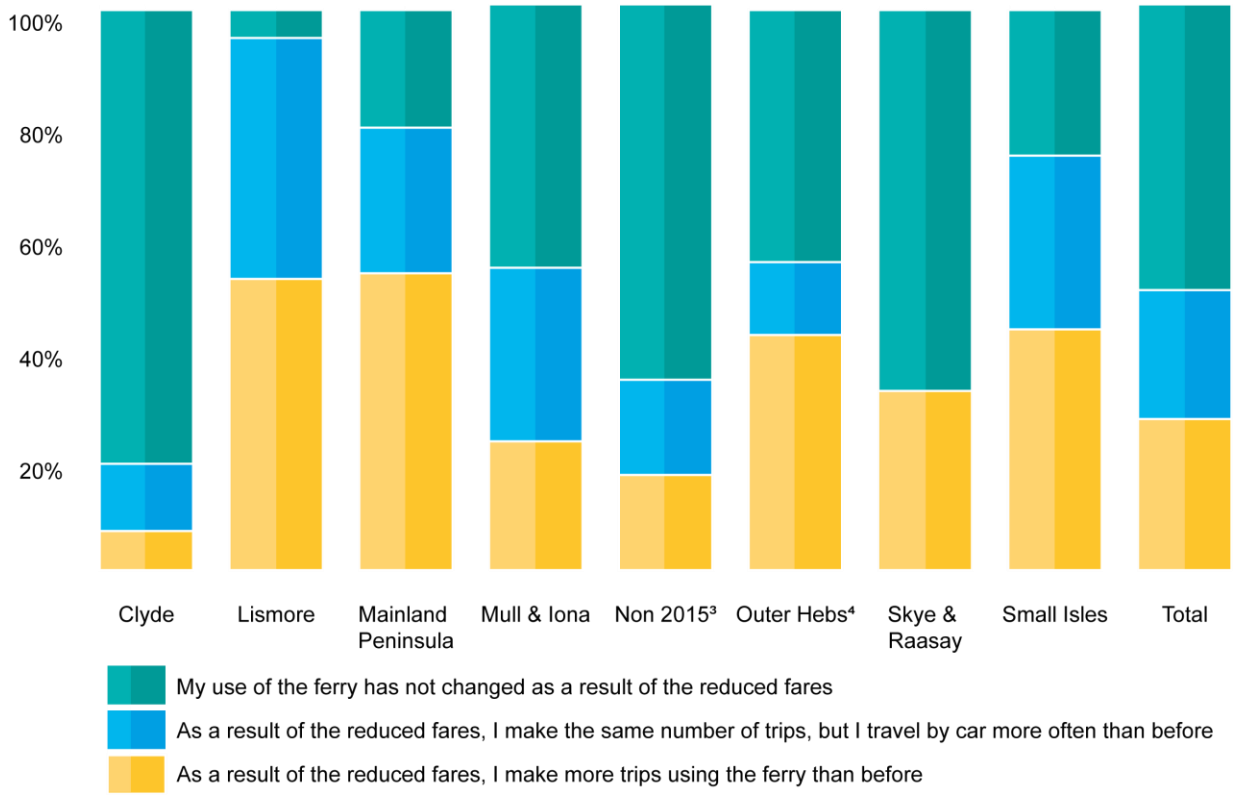


Figure 3.38: How did your use of the ferry change when RET was introduced? (Source: Resident Survey, n=568)

So overall, approximately:

- 50% did not change their use of the ferry
- 25% make more trips
- 25% make the same number of trips but take a car onboard more often

However, it can be seen from the above figure that the Clyde routes are very much the exception – here over 80% of respondents did not change their use of the ferry, reflecting the widespread prior use of multi-journey discounted tickets.

Key point: Around 25% of island residents made more ferry trips as a result of the introduction of RET, with a further 25% making the same number of trips as before RET was introduced, but they are now taking the car onboard more often.

Why did half of the people surveyed not change their use of the ferry?

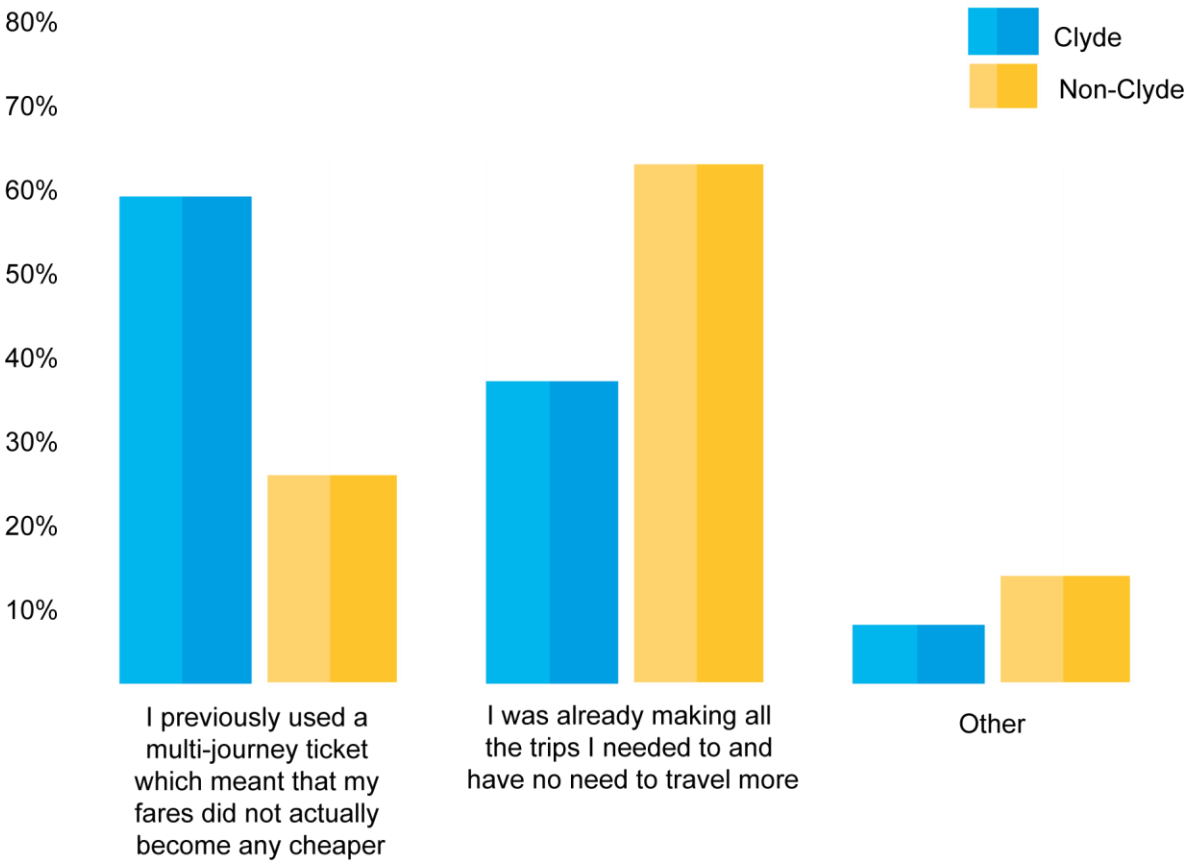


Figure 3.39: Why did your use of the ferry not change when RET was introduced? (Source: Resident Survey, n=272)

- For the Clyde routes, the multi-journey tickets are the main factor. On other routes, most people said they were already making all the journeys they wished to make and had no need to travel more often.

- Related to this, 75% of Clyde-based respondents said that RET had not saved them money. For the other islands, 60% of respondents said that they had saved money. Those who had not saved money overwhelmingly said that the reason for this was their previous use of multi-journey book tickets.

Key point: For those who did not make more trips when RET was introduced, the main reasons were the widespread use of discounted multi-journey books prior to the introduction of RET (particularly on the Clyde routes) and because residents were making all the journeys they wished to make and had no need to travel more often.

How many more trips do people make?

In the resident survey, those who indicated that they now travel more often were asked to indicate how often they travelled as a foot passenger and as a car-based

passenger before and after RET was introduced – the responses to this question are summarised in the figures below for foot passengers and cars respectively:

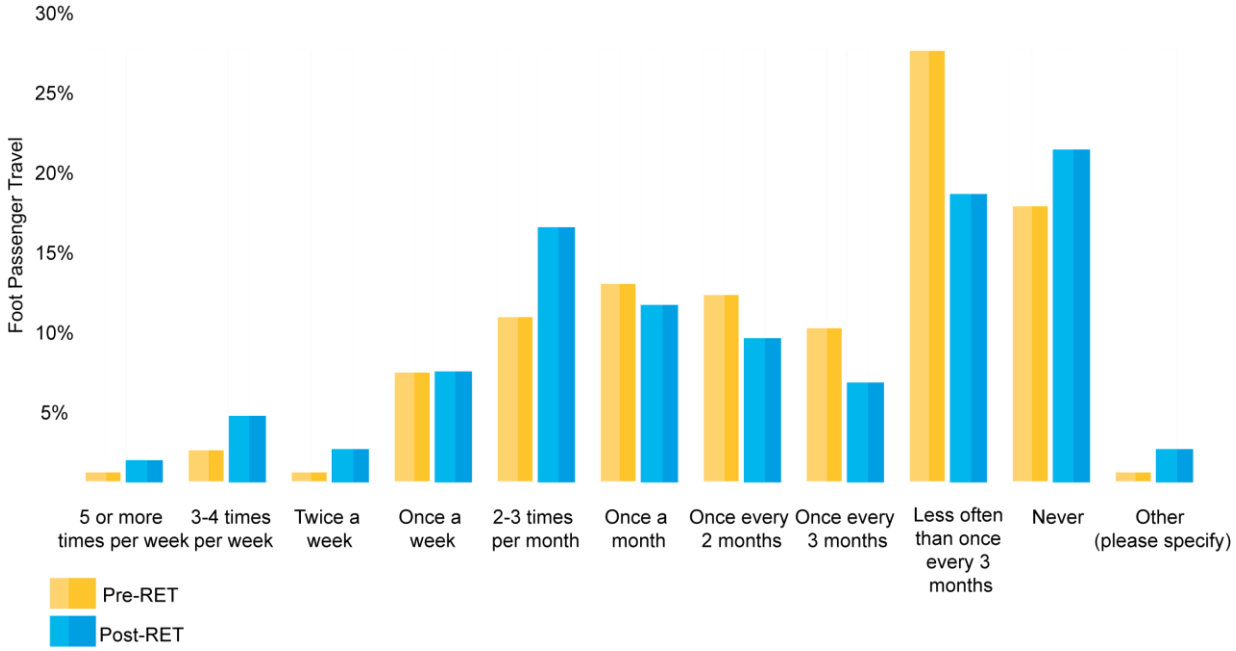


Figure 3.40: How many more foot passenger trips are made following the introduction of RET? (Source: Resident Survey, n=144)

The survey findings suggest that additional foot passenger travel is being made by island residents. All of the less frequent travel categories (i.e. reading from 'once a month' to the right) reduce, whilst all of the more frequent categories increase. This implies that RET has stimulated additional journeys – whilst this aligns with carryings data presented, it should be noted that the figures imply a greater increase in travel than the carryings data would suggest (potentially reflecting a response bias where more frequent ferry users have responded).

It is also notable from the above figure that there is a small increase in those who now 'never' travel as a foot passenger. As there are no foot passenger capacity constraints on the vessels, this is likely to be almost wholly due to those who previously travelled on foot now taking a car on the ferry, responding to the incentive provided by the lower fares.

The equivalent figure for car-based travel is shown below:

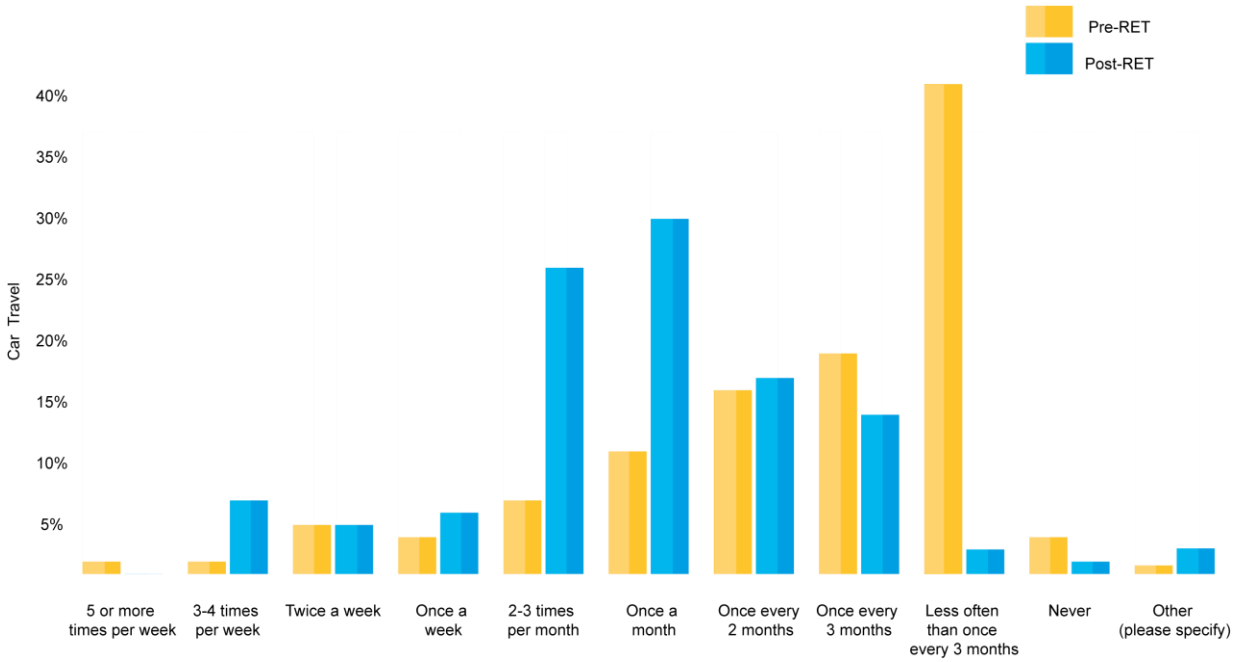


Figure 3.41: How many more car-based trips are made following the introduction of RET? (Source: Resident Survey, n=144)

The figure above aligns with the trend noted in the carryings data, whereby the frequency of car travel on the ferry is increasing across almost all categories. Moreover, those who used to travel infrequently by car (i.e. less than once every 3 months) are now travelling more often. There is also a corresponding reduction in the number of people who 'never' take a car, which aligns with the suggested switch from foot passenger to car driver identified in the commentary on the previous figure.

As with the equivalent data for foot passengers, the responses presented above imply a greater increase in travel than the carryings data would suggest, again potentially indicating a reason bias in favour of more frequent users.

Key point: The resident survey suggests that residents of the '2015 RET' islands are now using the ferry more frequently as both foot passengers and car drivers. However, the responses also suggest a switch from travelling as a foot passenger to now taking a car onboard the ferry, a point which is supported by the carryings data.

In the onboard survey, people were asked whether they would still be making their trip had RET not been introduced. Those unaware of RET were informed that fares would be 20%-30% higher under a no-RET scenario and asked to judge whether they would have still made the journey. The results are presented in the figure below:

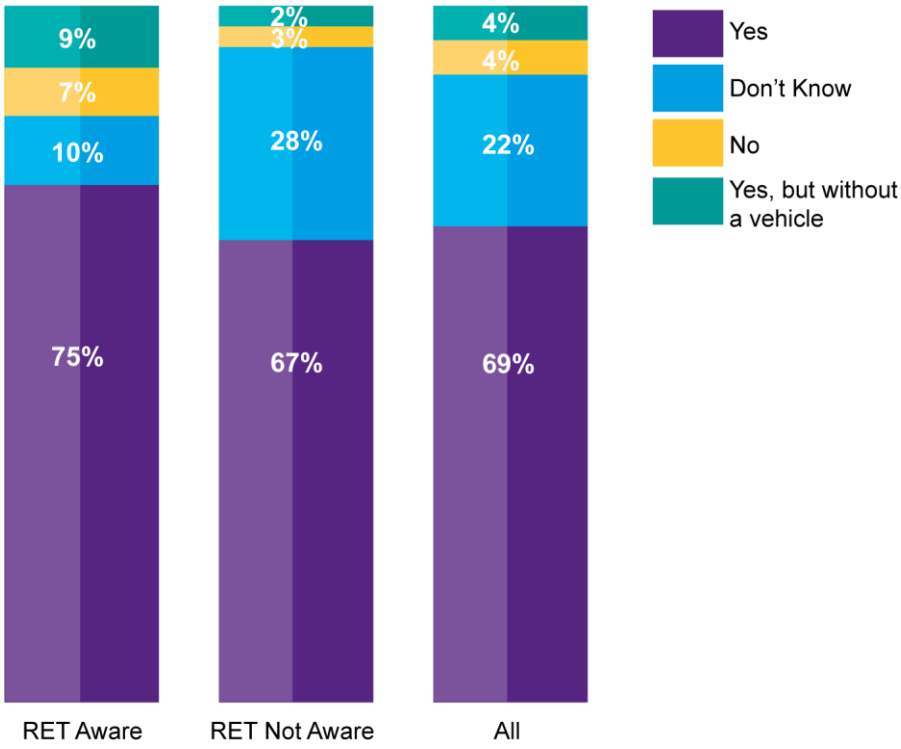


Figure 3.42: Would you still be making this journey had RET fares not been introduced? (Source: Onboard Survey, n=1,320)

The figure above suggests that the growth in ferry travel on the '2015 RET' routes as a result of the fares reduction is actually relatively minimal – in total, if the "don't knows" are excluded, 6% of journeys would not have been made without RET (these proportions did not differ significantly between residents and visitors).

It should though be noted that these figures imply a lower increase in travel as a result of RET than the carryings data would suggest.

Key point: The level of induced demand as a result of RET on the '2015 RET' routes is relatively small, some 6% in total (although it should be noted that this is a more modest increase than the carryings data would suggest).

<u>For what purpose are these additional trips?</u>

In the resident survey, respondents were asked the main purpose they travelled for when making these new trips – the results are shown in the figure below:

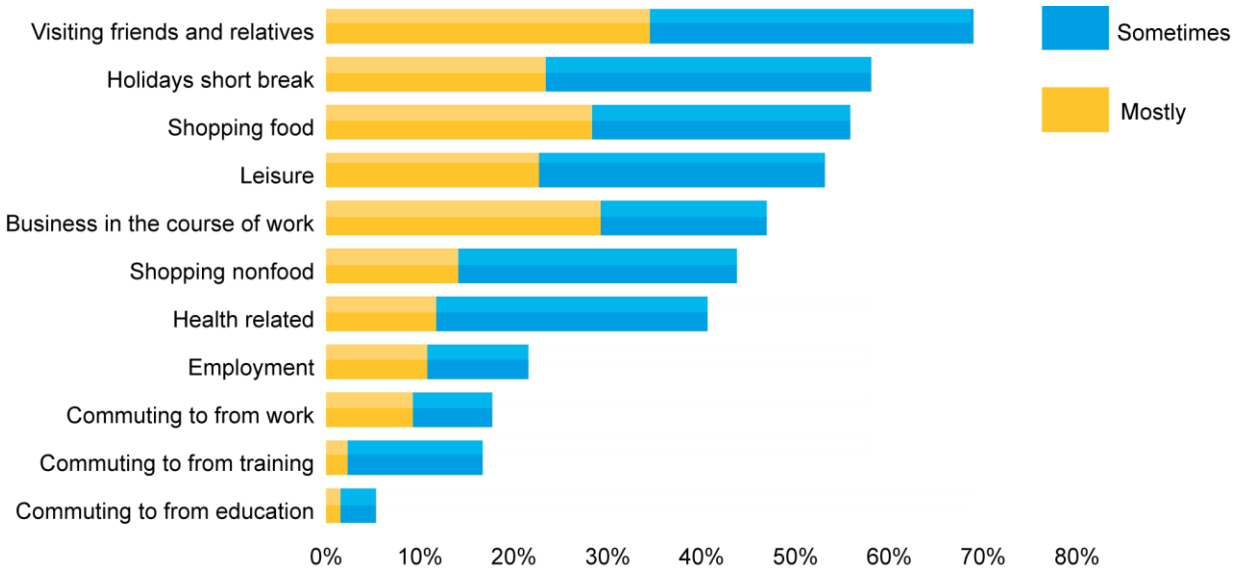


Figure 3.43: Trip purpose of additional resident journeys (Source: Resident Survey, n-133)

The figure suggests that RET-induced journeys by residents are primarily made to:

- visit friends and relatives, which is a social benefit and critically important element of island wellbeing (for example, this could be parents visiting children who have moved away or elderly relatives on the mainland)

- go food shopping, which is beneficial for the consumer but implies a disbenefit for the island as a result of economic leakage (i.e. money being spent off-island)

- undertake business travel in the course of work, implying that new business opportunities are being taken up

The sample sizes for journeys which would not have been undertaken in the absence of RET in the onboard surveys are small. For visitors, all are holiday, day-trip or leisure-based trips. For residents, leisure day-trip, visiting friends and relatives and shopping were the main purposes of these new trips.

Key point: The additional trips generated by the reduction in fares in the '2015 islands' are predominantly for visiting friends and relatives, shopping, business travel and day-trips / holidays. It is also important to note that RET has made a significant contribution to facilitating health-related journey purposes, a highly positive outcome given the significant challenges / inequalities which can be experienced by island residents accessing healthcare.

To what extent have people switched from travelling as a foot passenger to car-based travel?

In the resident survey, those switching from foot-passenger to vehicle-based travel were asked how often they took a car on board before and after RET:

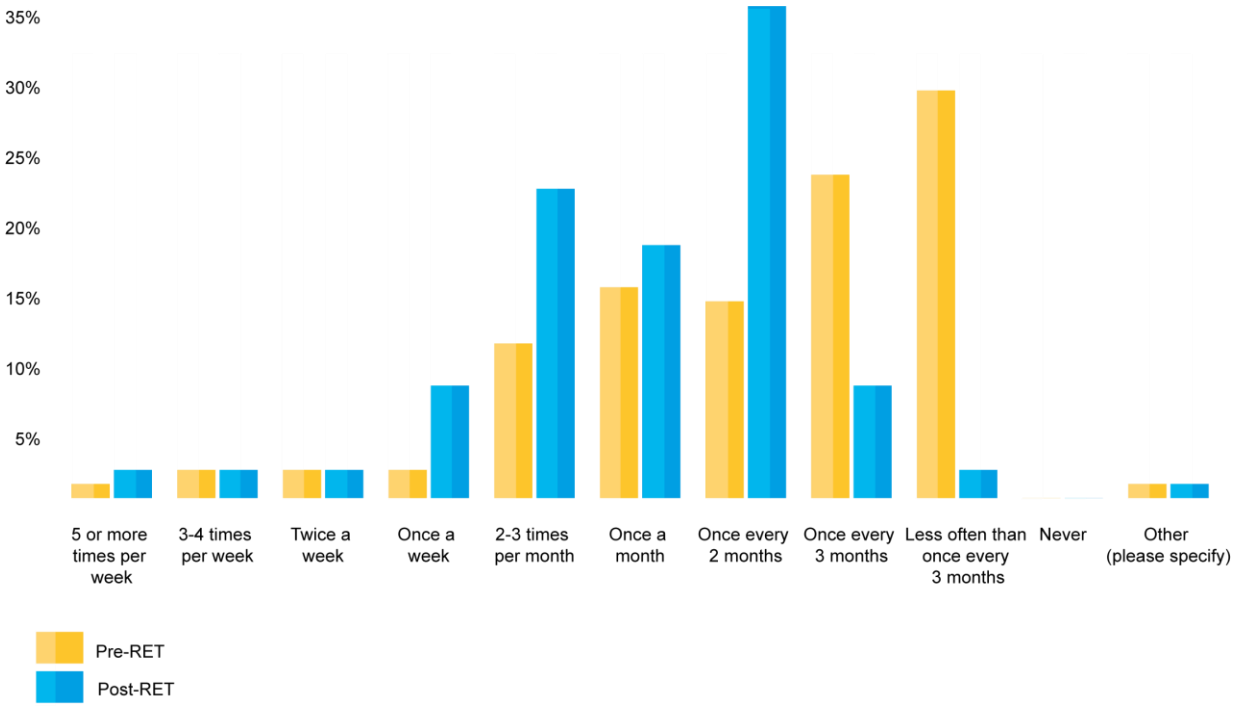


Figure 3.44: How often was a car taken on the ferry before and after RET? (Source: Resident Survey, n=128)

The responses to this question broadly correlate with the question on the number of additional trips being made as a foot passenger and by car. In general, residents are now taking their car on the ferry much more frequently – in the above figure, the less frequent usage categories drop sharply, especially 'less often than once every 3 months'. This implies that cost was a significant barrier for many to travelling by car and RET has removed this.

From the onboard survey, it was estimated that 6% of surveyed trips would have been undertaken as a foot passenger in the absence of RET (if 'don't knows' are excluded).

Key point: RET has incentivised additional journeys by car amongst residents. This implies that the cost of taking a car was a significant barrier for many and RET has removed this in the '2015 RET' islands.

4 What have been the consequences of these changes in travel behaviour?

Overview

The previous chapter highlighted the significant growth in (predominantly car-based) travel as a result of the introduction of RET. This chapter explores the consequences of this growth and the changes in travel behaviour associated with it.

How much fuller did the vessels become?

From the data provided, it is difficult to calculate a definitive load factor, due to a number of reasons set out below:

- The data is recorded in three categories: car, coach and commercial vehicles, with the latter two only also recorded as lane metres. The 'car' category includes vans, trailers, caravans, mortorhomes etc. so we cannot be precise about how many lane metres a given car loading level would imply.

- The deployment of mezzanine decks is not systematically recorded for each sailing, we have assumed that a high volume of commercial vehicles will preclude deployment and hence reduce the lane metres available, based on the vessel characteristic provided by CalMac.

- Some vessels have areas of the vehicle deck which are restricted to certain vehicle types which can impact on the use of space.

- It is not noted when the ferry's vehicle deck is fully used, with no further space available.

With these caveats, we have estimated a 'load factor' based on PCU (passenger car units) carryings and capacity per vessel (i.e. for each route in each season, we have estimated the median usage of the car deck, indicating as a percentage how much of the car deck is taken-up). These are presented in a set of 'box and whisker' charts for each route.

BOX AND WHISKER PLOTS EXPLAINED: The box and whisker diagrams that follow throughout this chapter show the distribution of sailings' individual vehicle deck load factors by season. These 'box and whisker' diagrams include load factors (i.e. how full the car deck is) for every sailing in the three season timetables. Taking each component of the diagram in turn:

- each point represents the load factor of an individual sailing

- each sailing is then allocated to one of four quarters, with an equal number of sailings in each quarter

- those points below the box represent the least busy quarter of sailings, whilst those above the box represent the busiest quarter of sailings

- the box therefore covers the 'middle' two quarters, with the horizontal line within the box representing the median load factor. The 'X' in the box is the mean load factor

- the short horizontal lines at the top and bottom of the chart (i.e. the whiskers), represent either the maximum or minimum load factor

    - note that points above or below these lines as classed as 'outliers' in this statistical approach

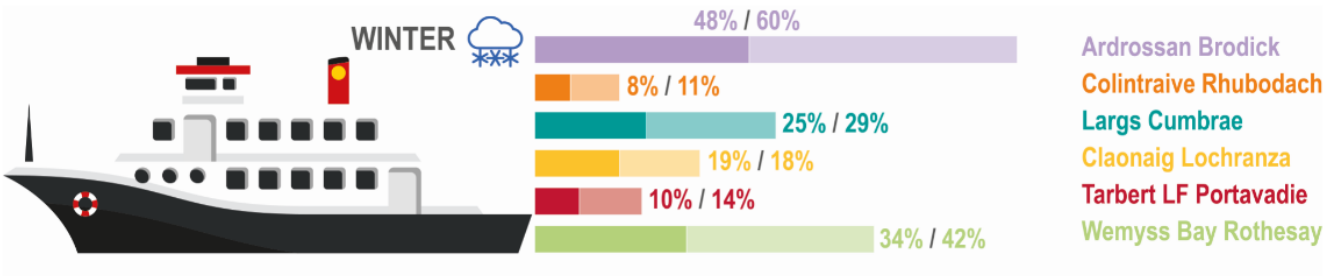
- so, the higher on the chart and the shorter the 'box', the more sailings there are where the ferry is close to capacity

It should be noted that, on some sailings, the load factor may exceed 100%. This is due to the composition of traffic on the ferry and its arrangement on the deck - in the event, for example, that a sailing is dominated by smaller than average cars, it may be possible to board more cars than the vessel's theoretical capacity, which is based on an average car length.

The load factor is based on (i) converting CV & coach metres to passenger car units (PCU), a means of equating all vehicles to an average car length; (ii) adding these to the car PCUs; and (iii) applying the total PCUs to the vessel capacities provided by CalMac Ferries Ltd. There was also an assumption made that if total CV and coach lane meterage was above certain thresholds, it impacts on the ability to deploy the mezzanine decks (on vessels which have them), thus reducing the overall capacity of that sailing.

<u>Firth of Clyde</u>

The figures below illustrate the changes in median load factor on the Firth of Clyde Routes between the RET Year-1 (dark) and RET Year+1 (light).



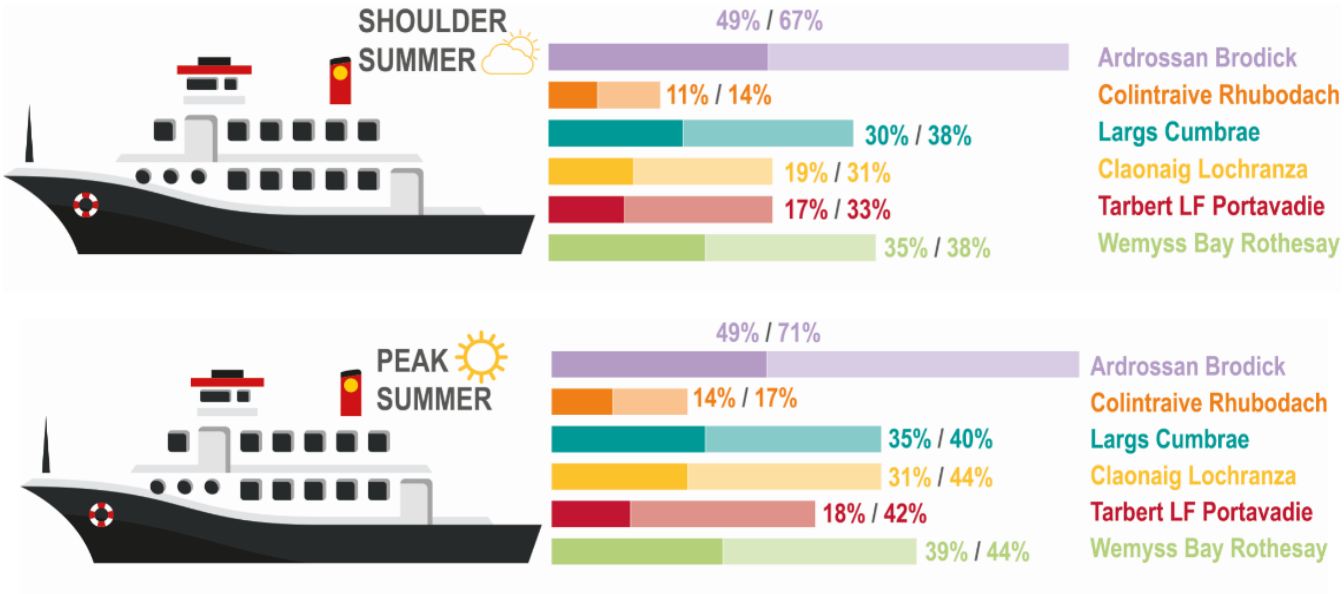


Figure 4.1: Firth of Clyde Routes – change in median load factor by season (RET year -1 versus RET year (+1)

- The charts above indicate the changes in median load factors for the vehicle decks of the vessels serving each of the routes. This statistic provides an overview of how close to capacity the vessels are across the year. The comparison is between the median capacity during the RET Year-1 and RET Year+1.

- The median load factor has increased most significantly on the Ardrossan – Brodick route, with median load factors in the summer suggesting that several sailings are either fully or close to fully utilised.

- Whilst the median load factor has increased on all other routes, there are few evident capacity utilisation issues otherwise.

Ardrossan – Brodick box and whisker chart

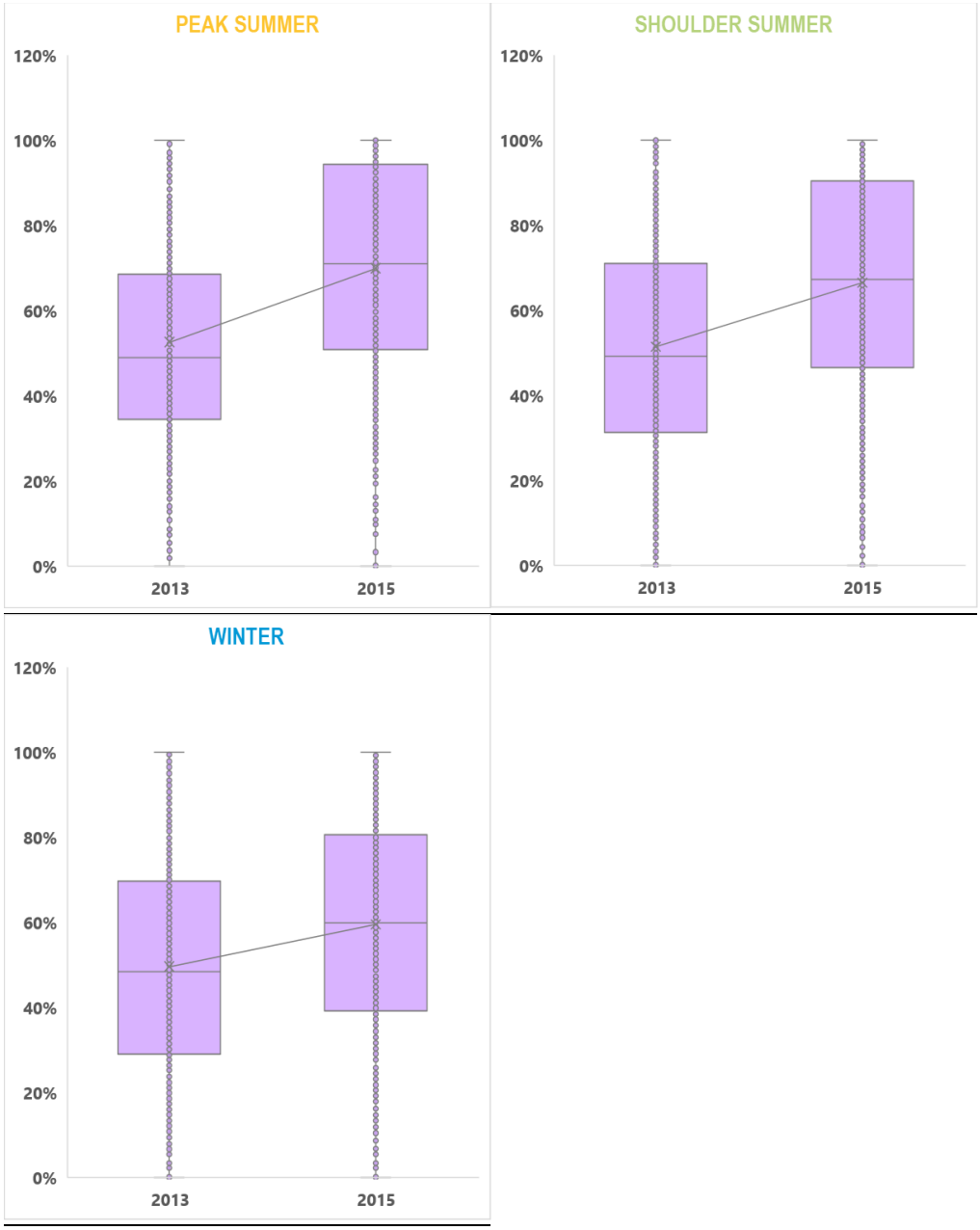


Figure 4.2: Ardrossan Brodick box and whisker chart

- Load factor (Y-axis) on the Ardrossan – Brodick route has increased across all seasons.

- Shoulder and peak summer utilisation have increased to the extent that a higher proportion of sailings are becoming capacity constrained.

- The two vessel solution in the peak summer months broadly allows the shoulder-peak utilisation to be maintained, but significant capacity pressures do remain.

Colintraive – Rhubodach box and whisker chart

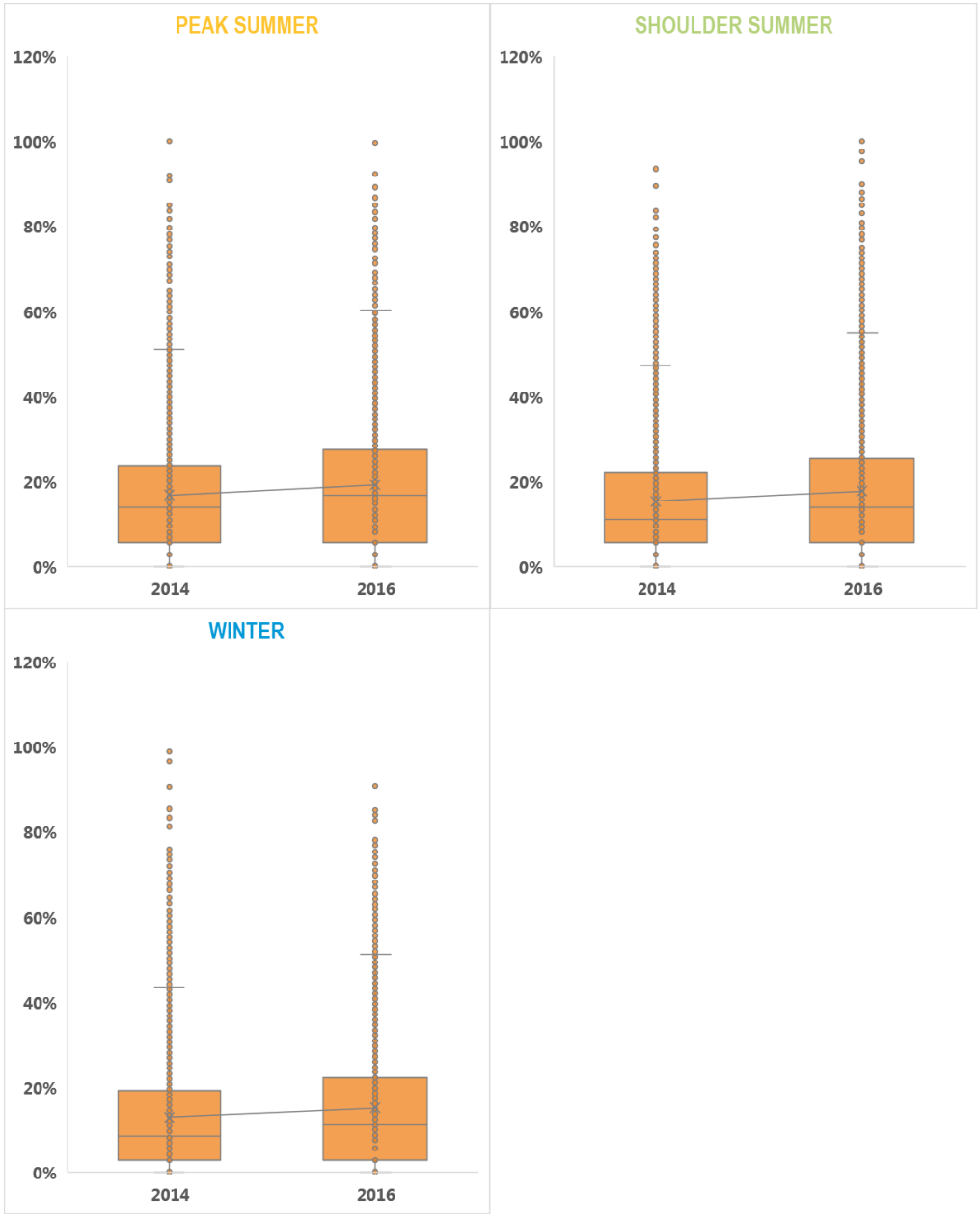


Figure 4.3: Colintraive – Rhubodach box and whisker chart

- Utilisation on the Colintraive – Rhubodch route has increased across all seasons.

- There are however no notable capacity problems on this route.

Claonaig – Lochranza box and whisker chart

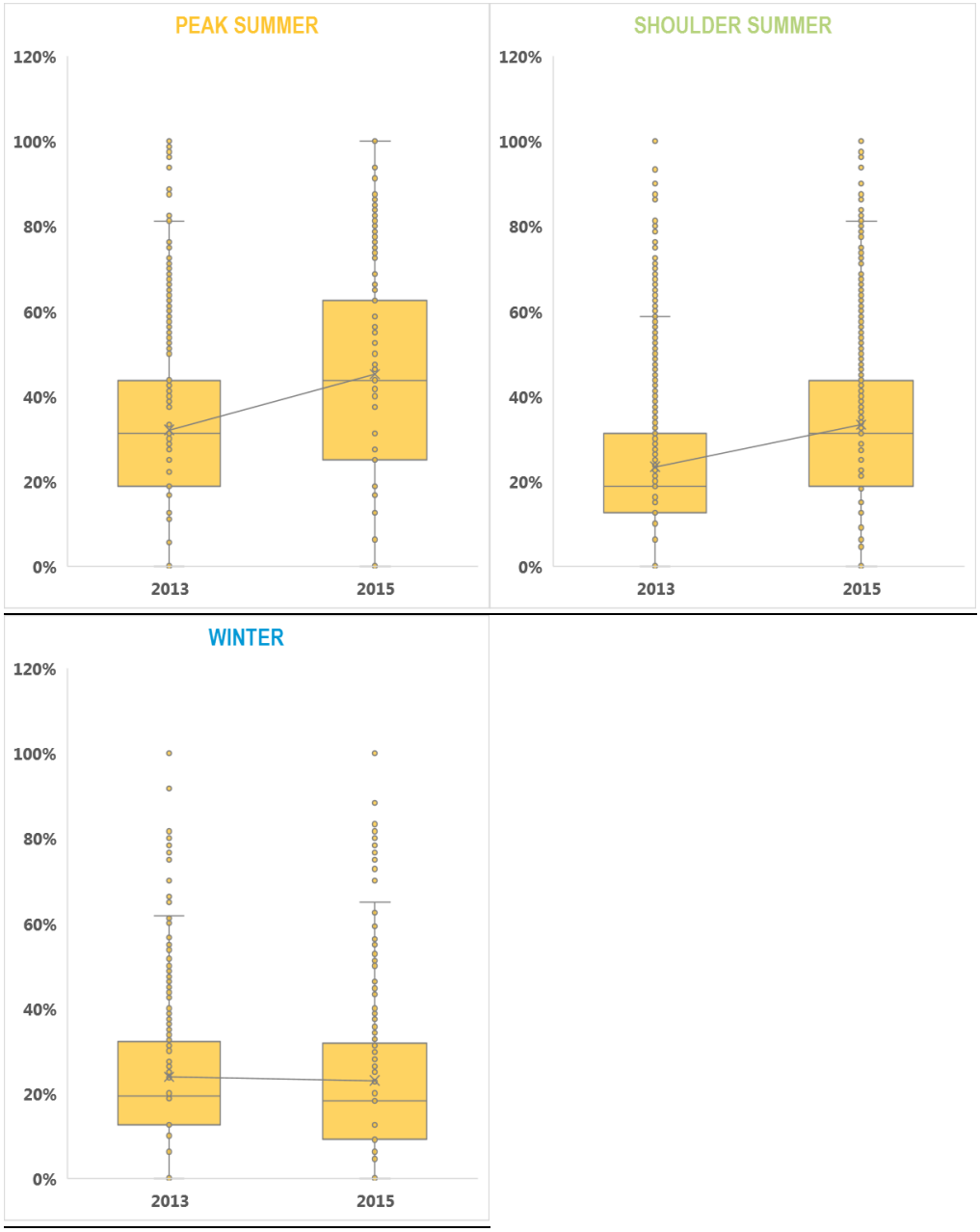


Figure 4.4: Claonaig - Lochranza box and whisker chart

- Utilisation on the Claonaig - Lochranza route has increased across all seasons.
- Peak summer utilisation has increased significantly, reflecting the strong overall summer growth in that season.
- There are however no notable capacity problems on this route.

Largs – Cumbrae box & whisker chart

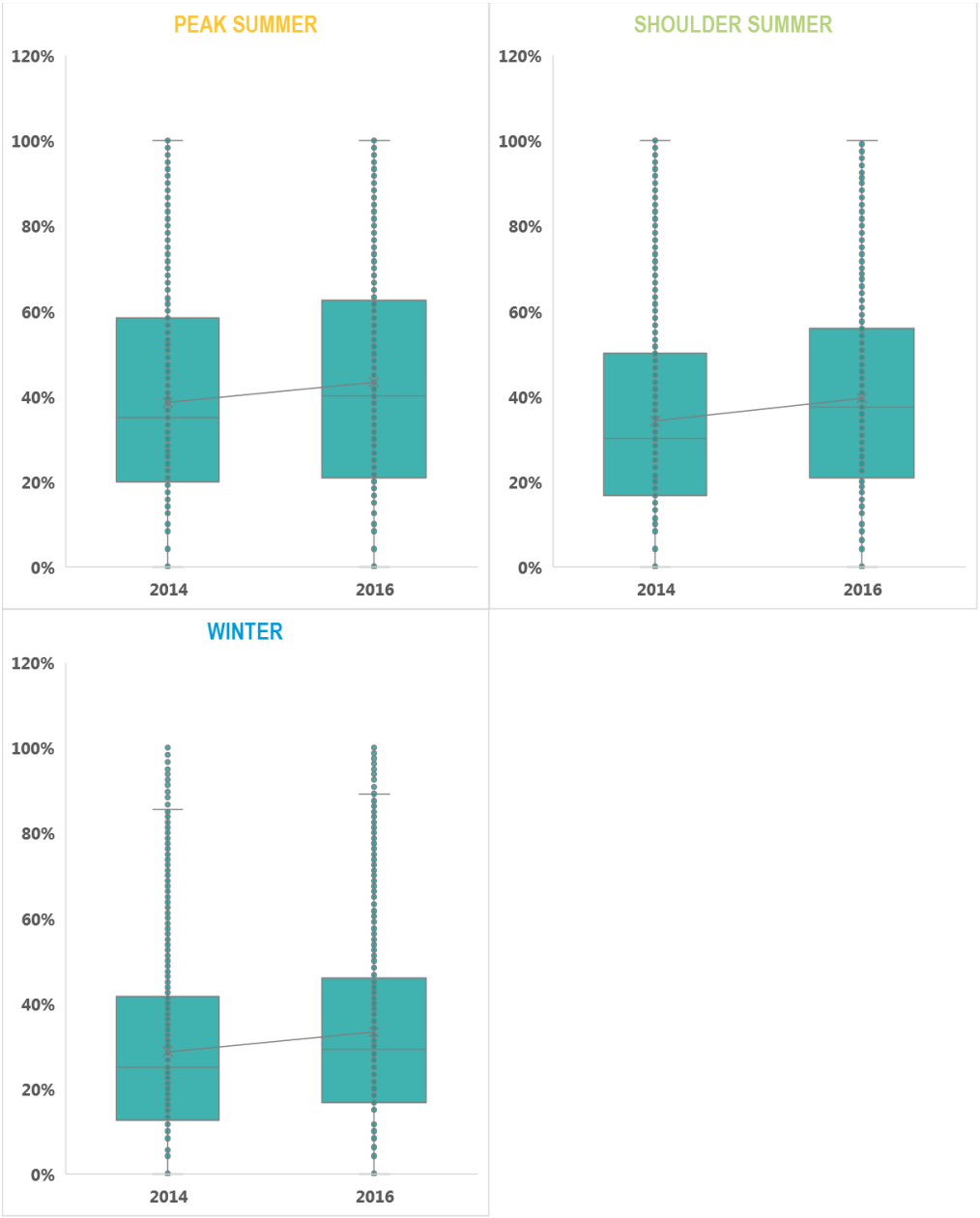


Figure 4.5: Largs - Cumbrae box and whisker chart

- Utilisation on the Largs - Cumbrae route has increased across all seasons, although the scale of the increase has been less than on the Ardrossan – Brodick route despite high summer daytripper demand.

- There are no evident capacity utilisation problems on this route, with the deployment of a second vessel in the summer months allowing demand to be met.

- However, the survey suggests that queues can emerge at peak times due (e.g. Summer Saturdays) to the vehicle deck being full.

Tarbert LF – Portavadie box and whisker chart

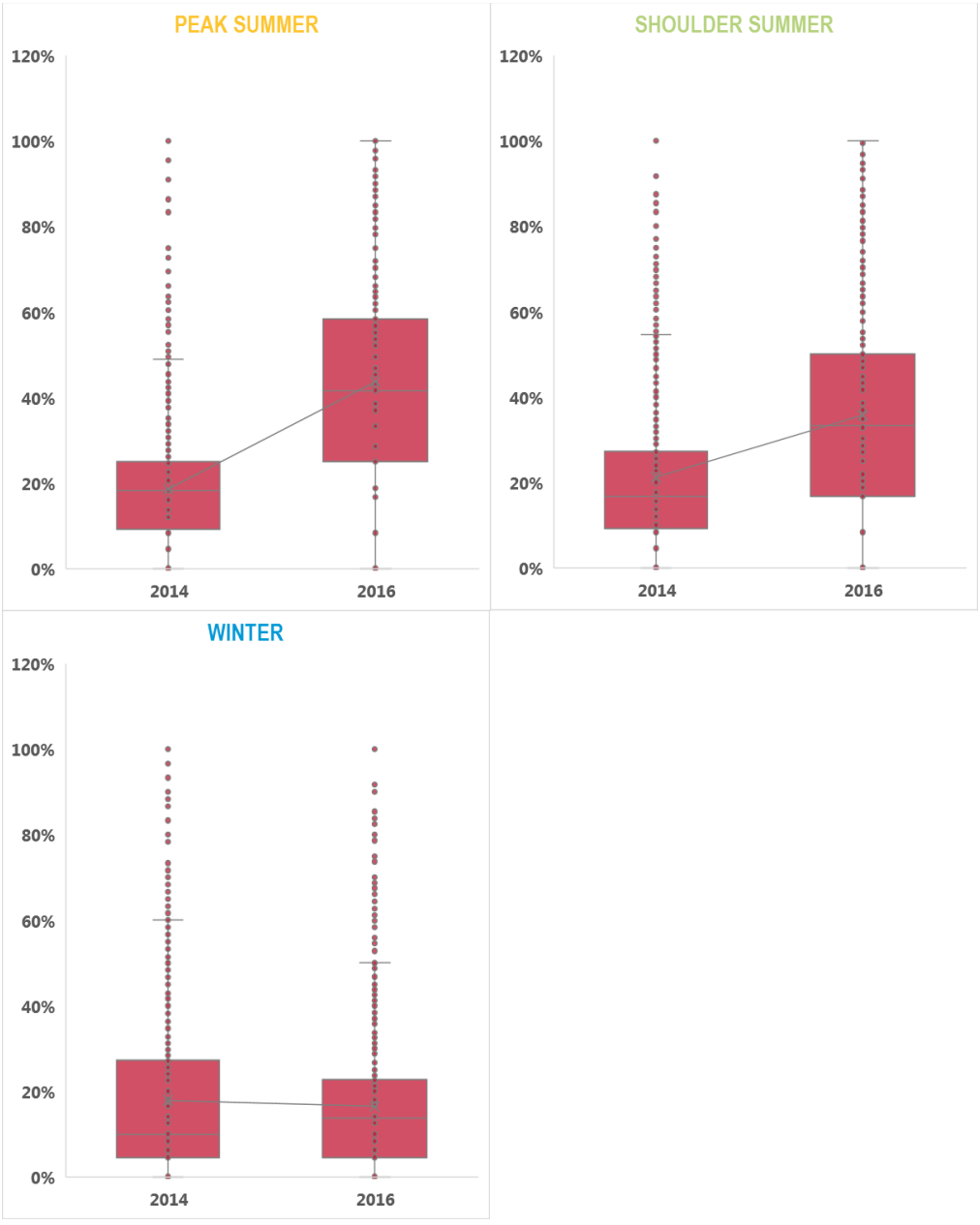


Figure 4.6: Tarbert LF - Portavadie box and whisker chart

- Utilisation on the Tarbert LF – Portavadie route has increased across all seasons, with particularly strong growth in the shoulder and peak summer. This highlights the strong tourist demand on this route, and possibly the growth in coach traffic.

- Whilst overall growth has been strong, there are however no notable capacity problems on this route.

Wemyss Bay – Rothesay box and whisker chart

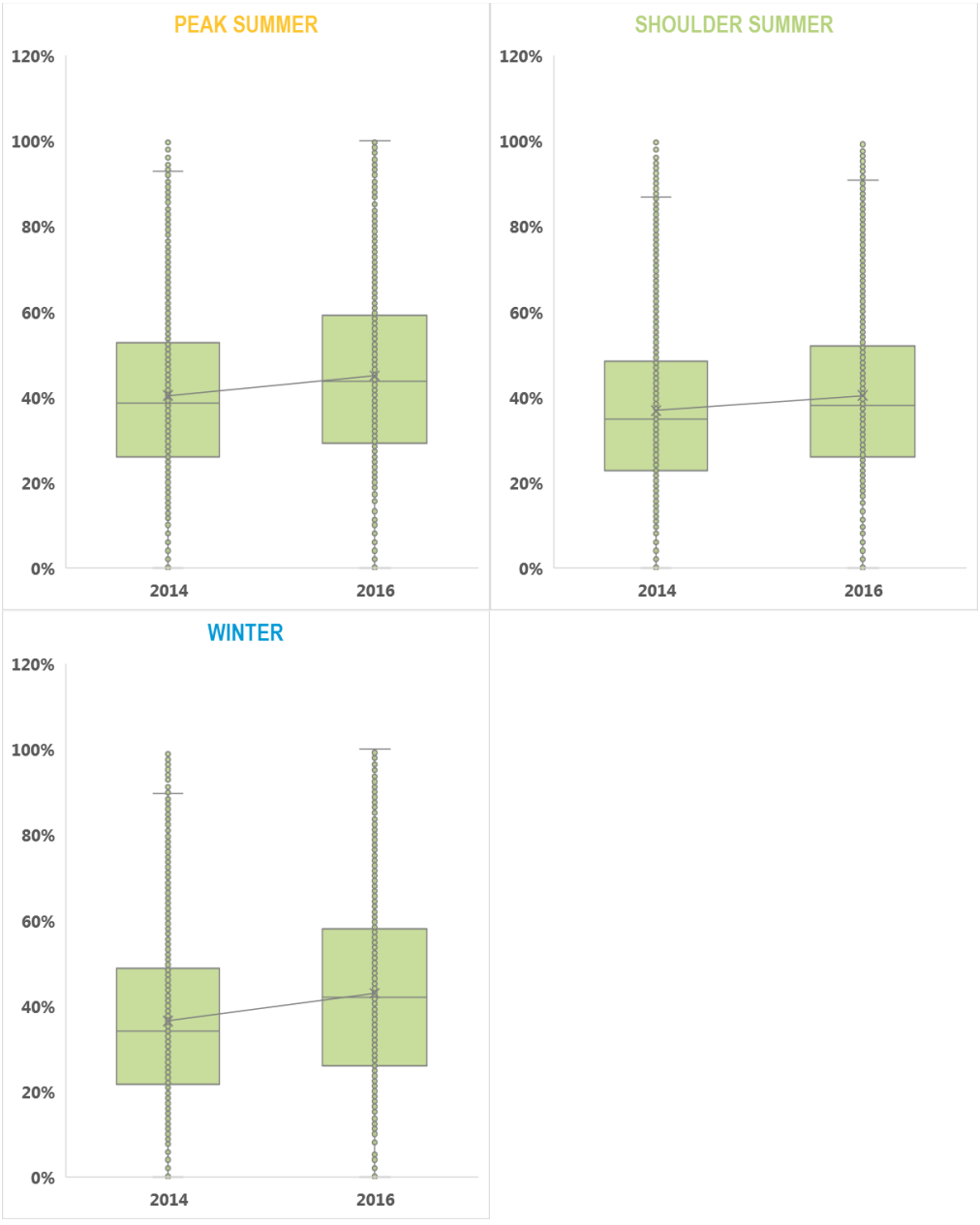


Figure 4.7: Wemyss Bay - Rothesay box and whisker chart

- Despite the introduction of RET, median vehicle deck utilisation has only increased marginally, and by a broadly similar amount across all three seasons. This may reflect the commuter traffic that utilises this route year round.

Firth of Clyde: Peak summer Saturdays box and whisker charts

The box and whisker charts below illustrate the changes in load factors for Saturdays during the Summer Peak (July & August)

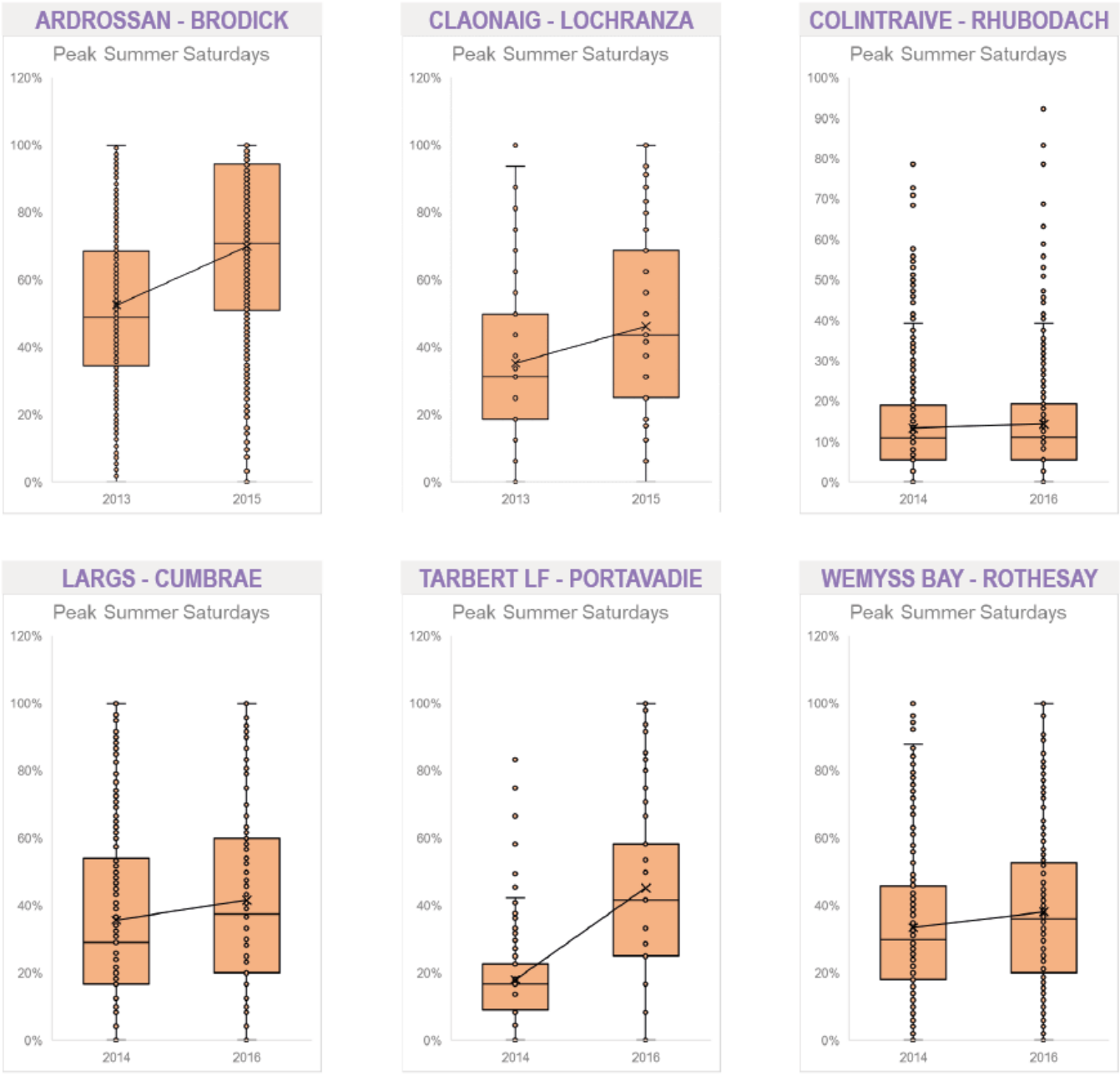


Figure 4.8: Peak Summer Saturday box and whisker chart

- As can be viewed in the diagrams, Saturday sailings became busier across almost all routes in the Firth of Clyde, in particular the Arran routes, with the Ardrossan - Brodick route witnessing an increase in median load factors from 49% to 71% and Claonaig - Lochranza witnessing increases from 31% to 44%.

Southern Hebrides

The figures below illustrate the changes in median load factor on the Southern Hebrides Routes between the RET Year-1 (dark) and RET Year+1 (light).

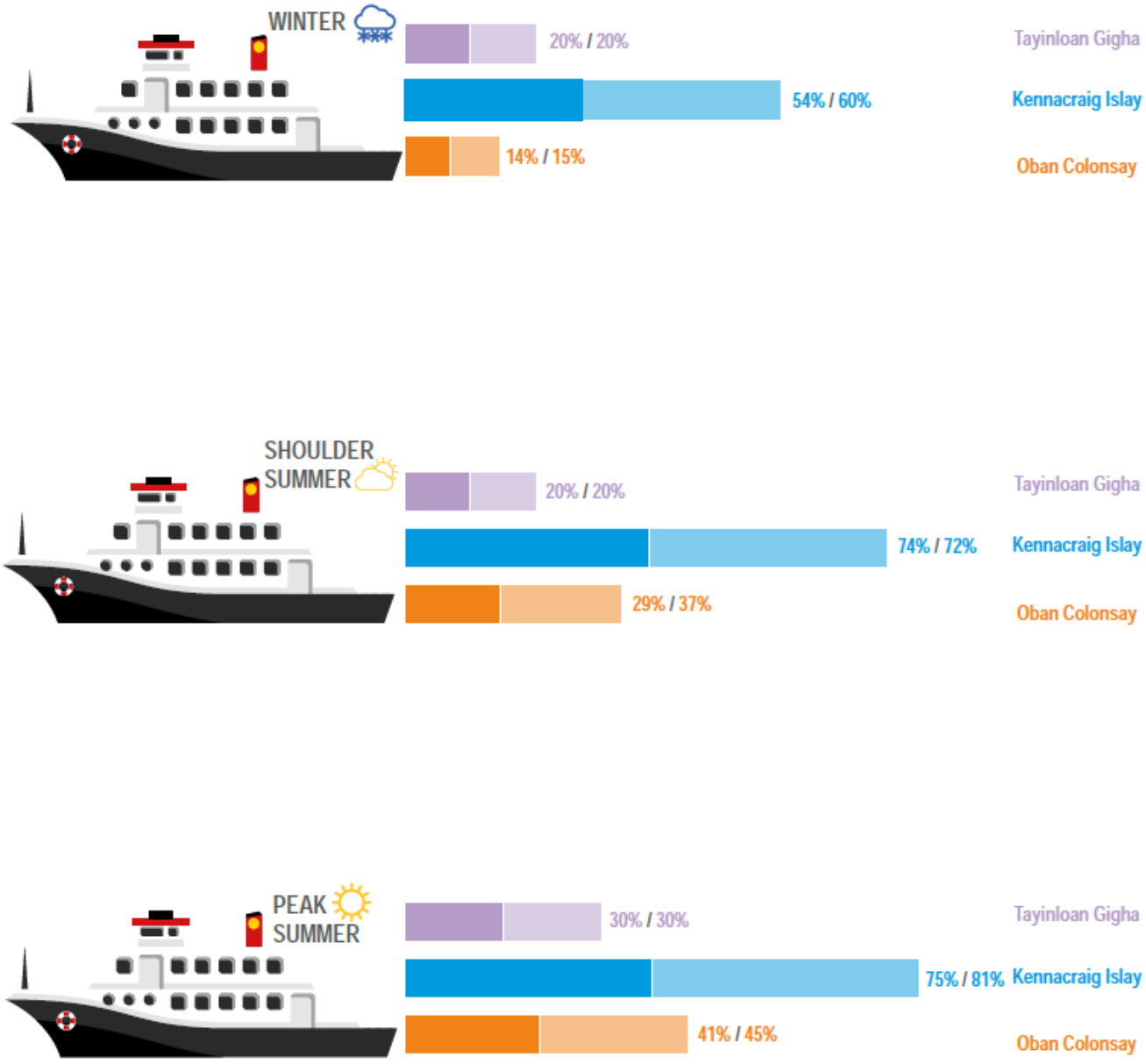


Figure 4.9: Southern Hebrides Routes – change in median load factor by season (RET year -1 versus RET year (+1)

- Whilst the growth in the median load factor on the Islay route has been relatively modest across all three seasons, this growth has been layered on top of already busy sailings and thus has heightened the capacity pressure on the route. There is very little head room for further vehicle growth, particularly in the shoulder and peak summer periods.

- The median load factor has increased on the Oban – Colonsay route, but on average the vehicle deck on Colonsay sailings is typically less than half full.

- Median vehicle deck utilisation has remained unchanged across all seasons on the Gigha route.

Tayinloan – Gigha box and whisker chart

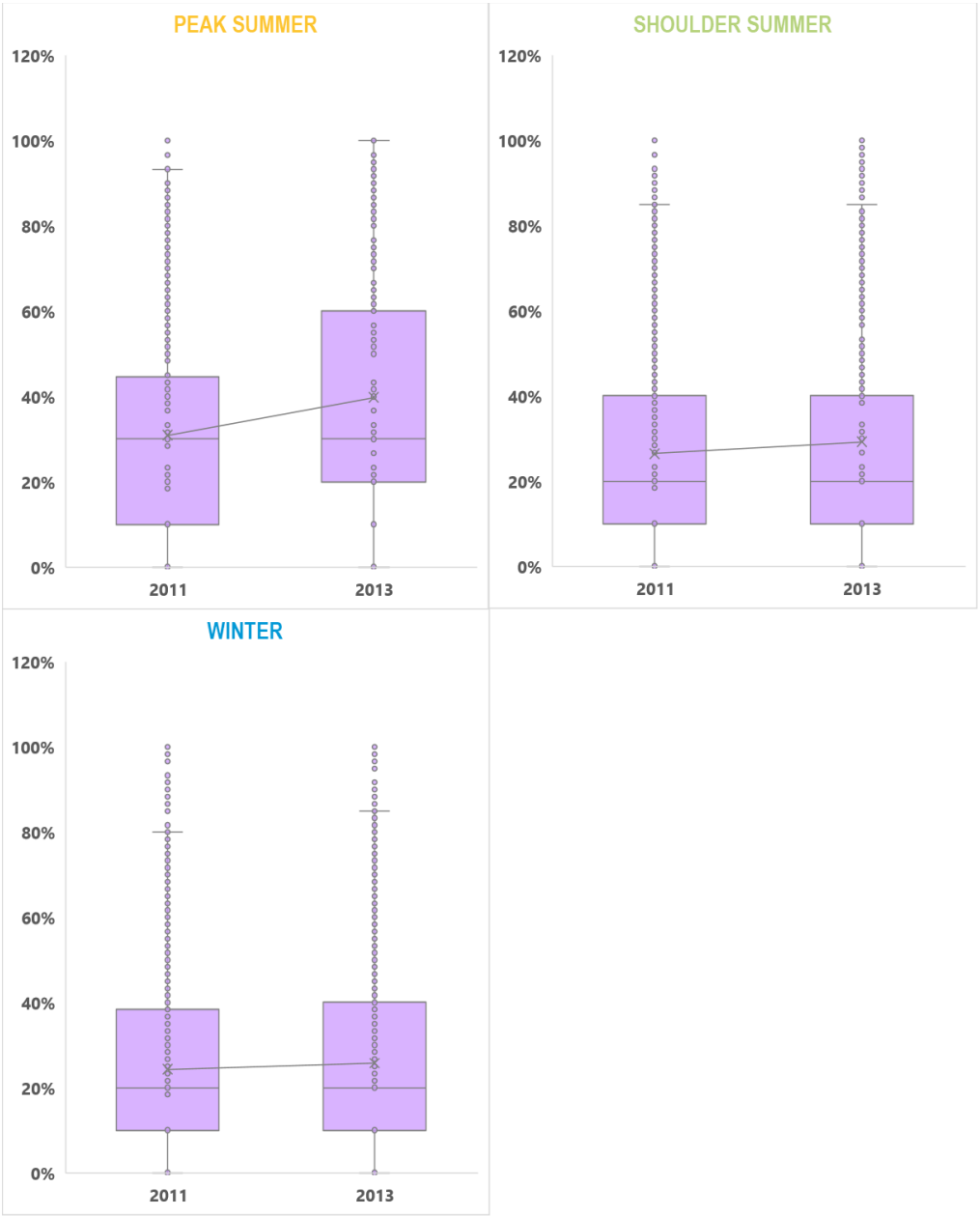


Figure 4.10: Tayinloan - Gigha box and whisker chart

- There has been a marginal growth in peak summer vehicle deck utilisation, but there are no capacity issues on this route.

Kennacraig – Islay box and whisker chart

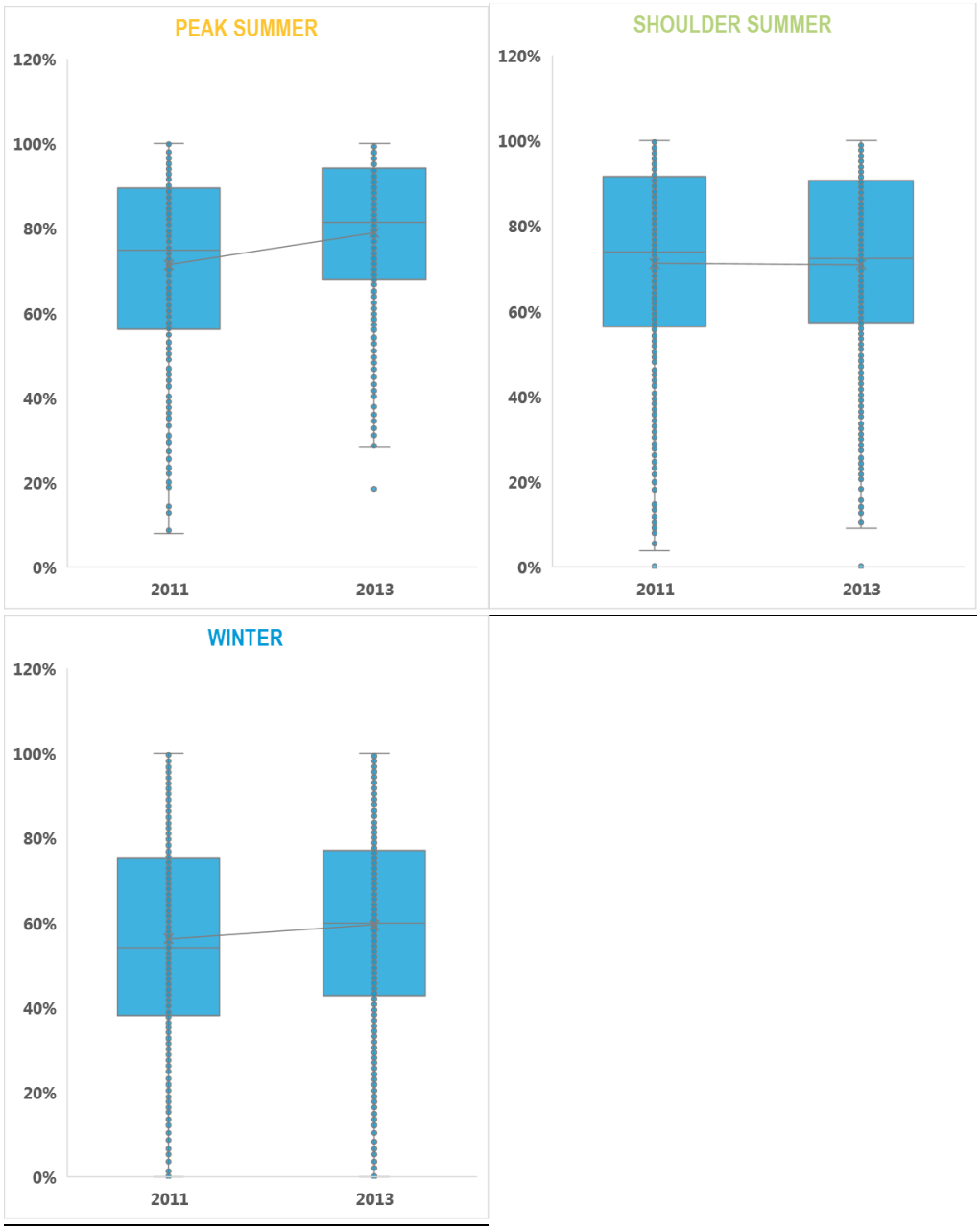


Figure 4.11: Kennacraig – Islay box and whisker chart

- The Kennacraig – Islay route is facing considerable capacity pressures, particularly in peak summer season. RET has amplified the capacity challenges on this route, leaving very little scope for further growth in car traffic.

Oban – Colonsay box and whisker chart

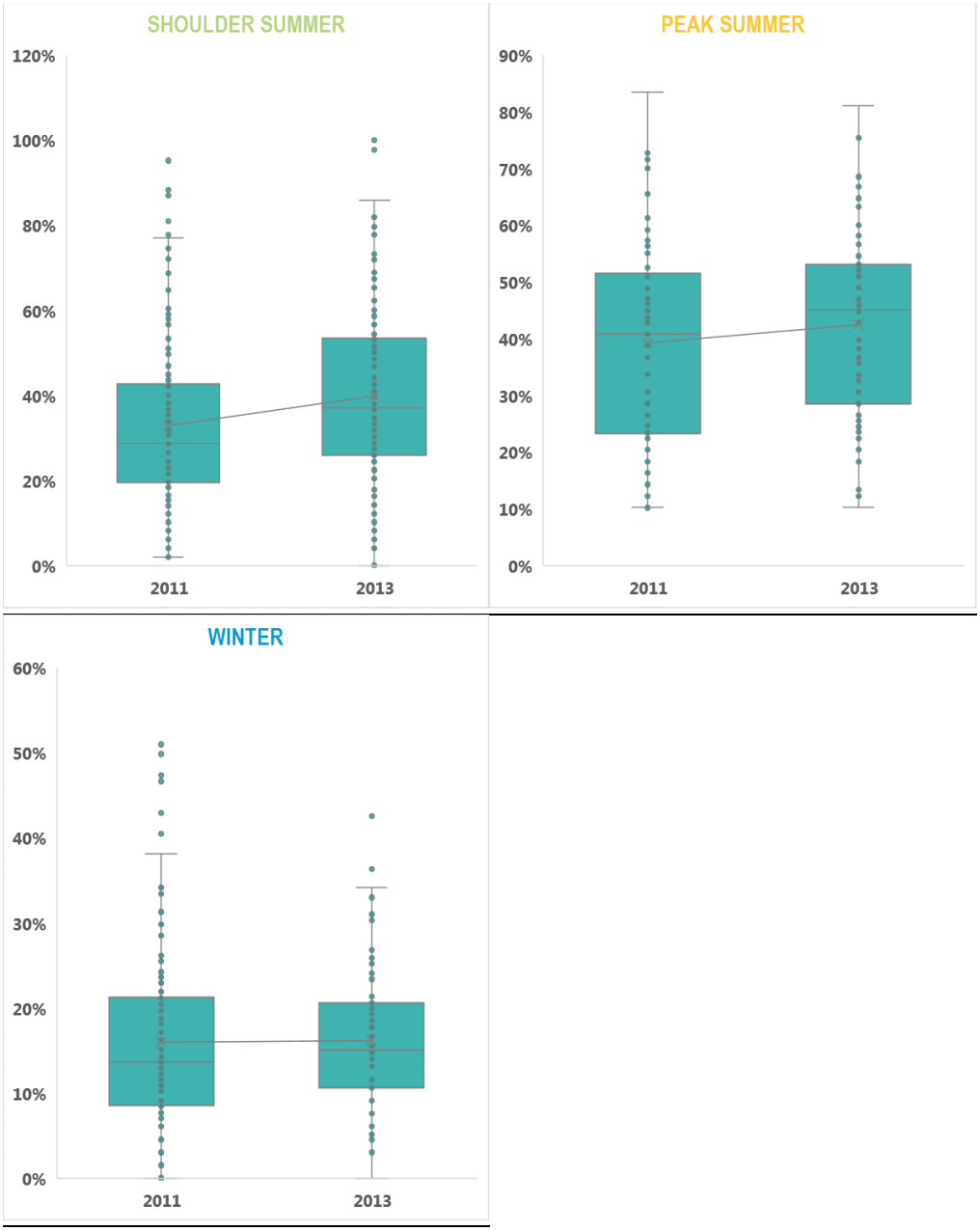


Figure 4.12: Oban – Colonsay box and whisker chart

- Whilst capacity utilisation has increased on the Oban – Colonsay route in both the shoulder and peak summer seasons, there are no evident capacity problems on the route.

Southern Hebrides: Peak summer Saturdays box and whisker charts

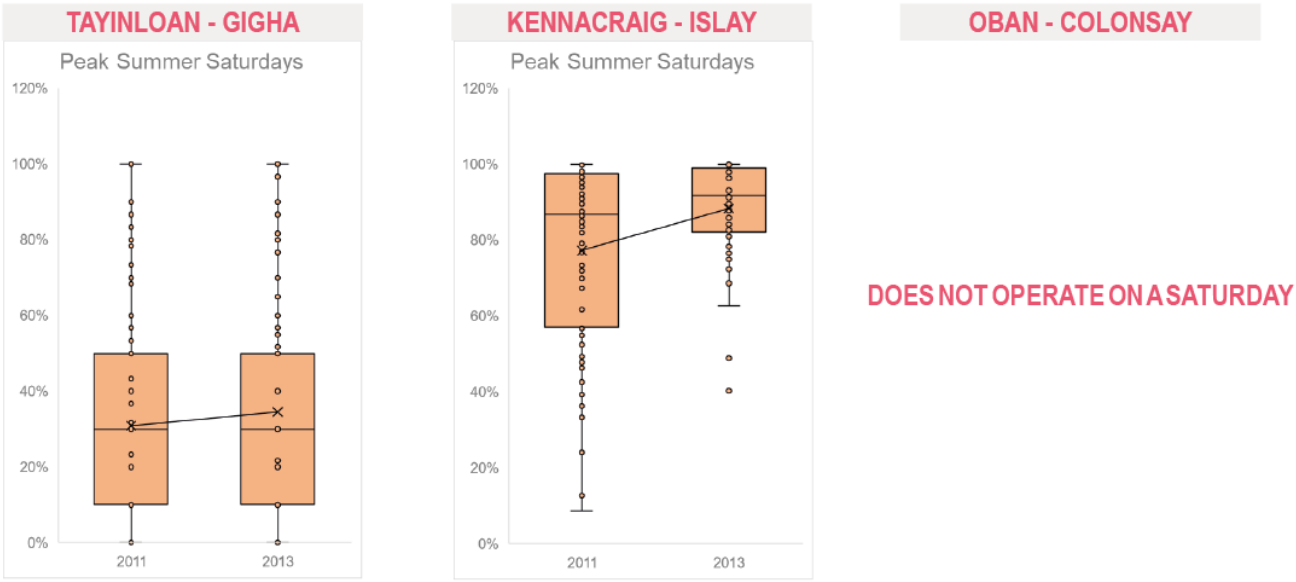


Figure 4.13: Peak Summer Saturday box and whisker chart

The peak Saturday sailings on the Kennacraig - Islay route increased from a median load factor of 89% prior to RET to 92% in the year following the introduction of RET.

Inner Hebrides

The figures below illustrate the changes in median load factor on the Inner Hebrides Routes between the RET Year-1 (dark) and RET Year+1 (light).

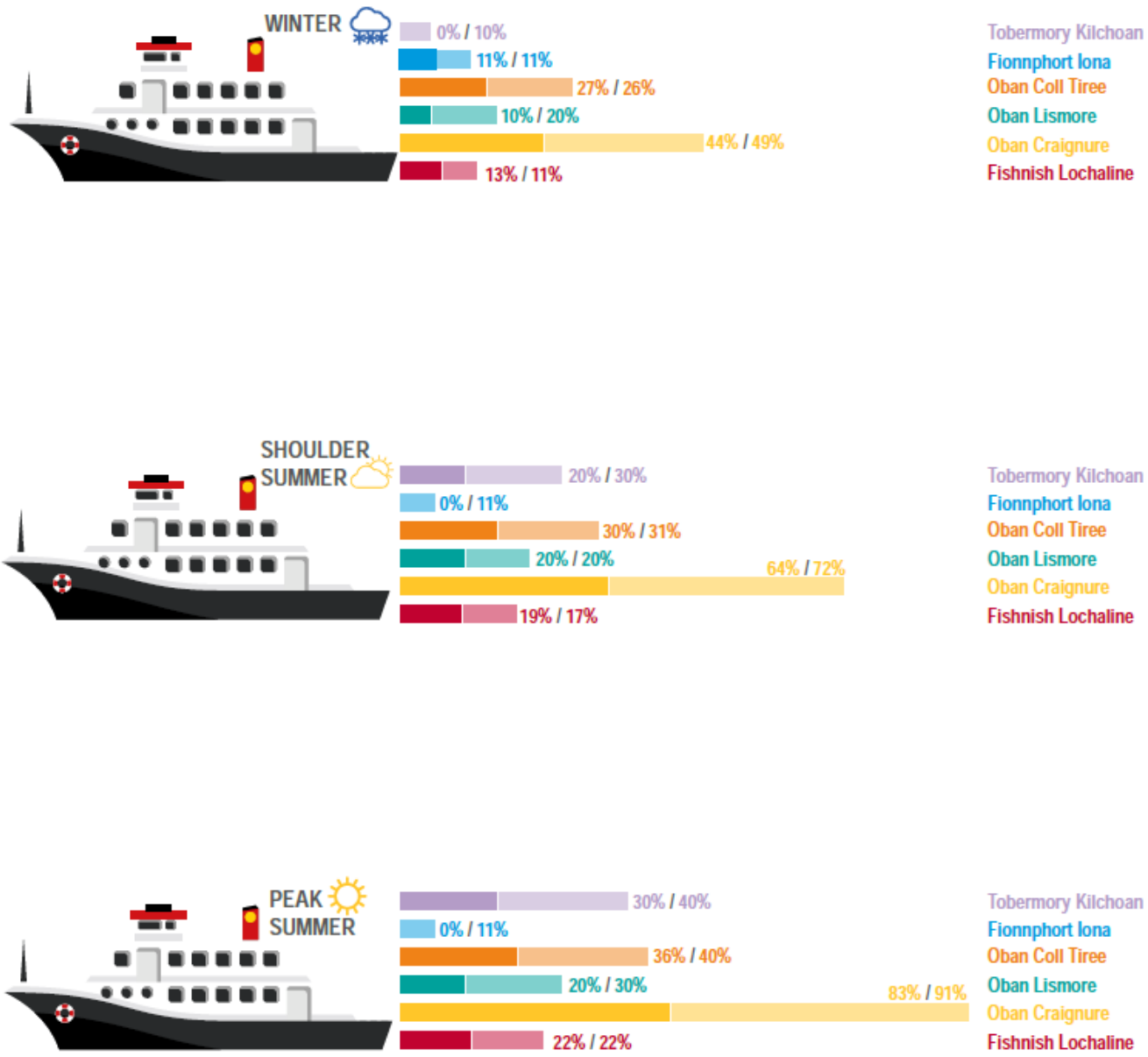


Figure 4.14: Inner Hebrides Routes – change in median load factor by season (RET year -1 versus RET Year (+1)

- Utilisation has grown across the Inner Hebrides network, although on most routes this can be readily accommodated.

- The increase in vehicle deck utilisation on Oban – Craignure is however significant, particularly in peak summer where it stands at 91% (this means that most sailings are effectively full, despite the introduction of a two vessel service).

Tobermory – Kilchoan box and whisker chart

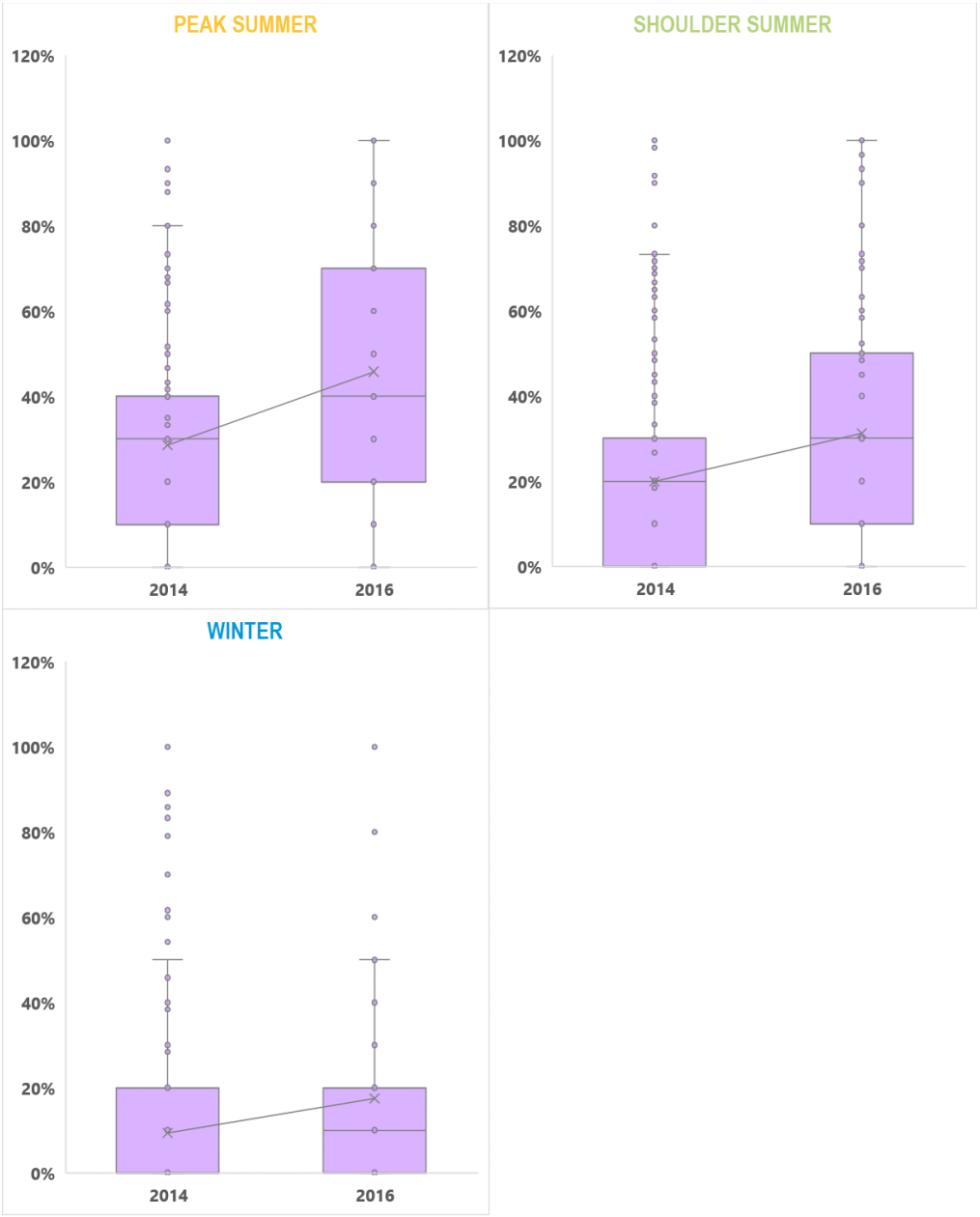


Figure 4.15: Tobermory – Kilchoan box and whisker chart

- Utilisation on the Tobermory – Kilchoan route has increased across all seasons, but particularly in the shoulder and peak summer timetable periods. There are however no notable capacity issues on the route.

Fionnphort – Iona box and whisker chart

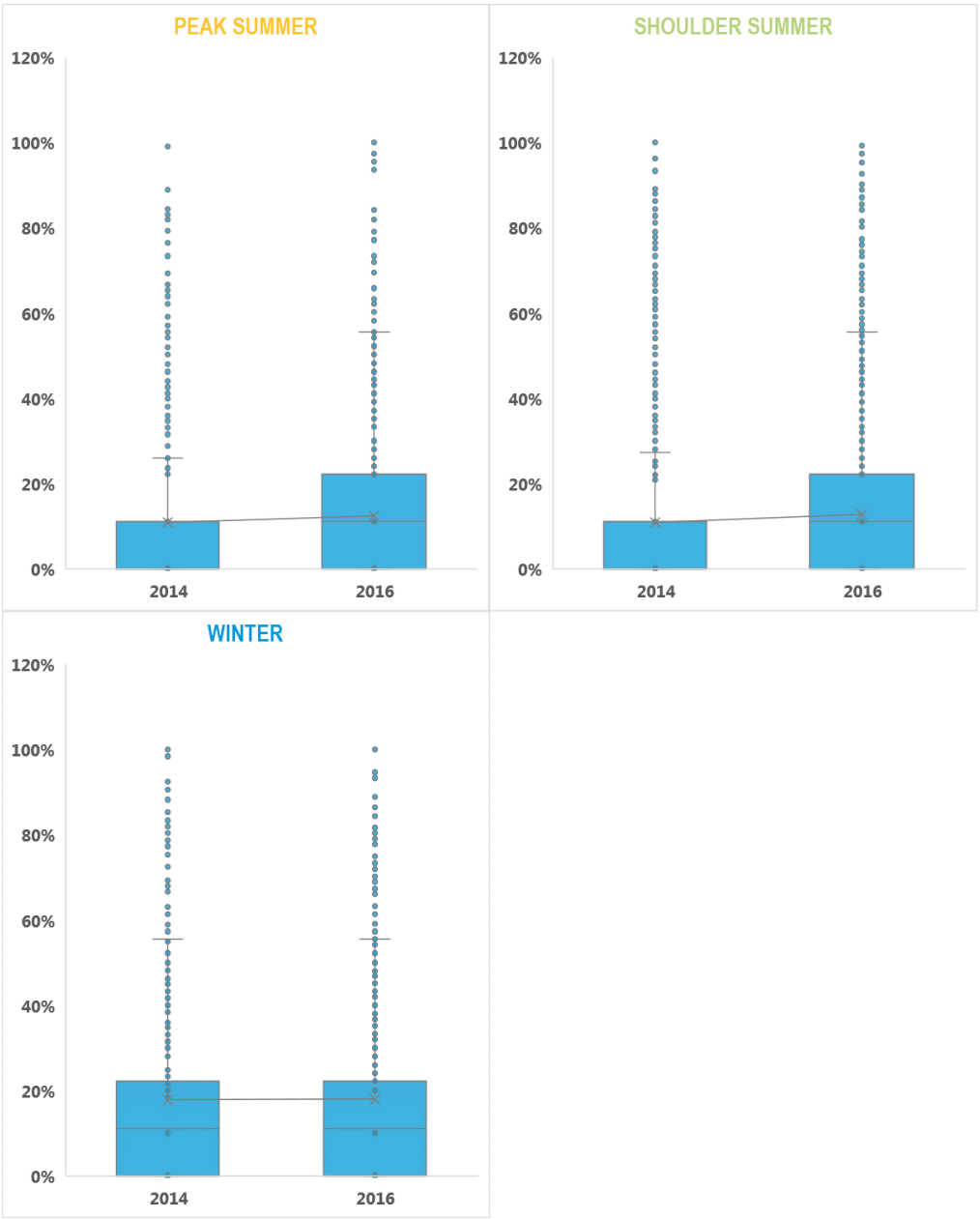


Figure 4.16: Fionnphort – Iona box and whisker chart

- Whilst utilisation on the Fionnphort – Iona route has increased across all seasons, and in particular the shoulder and peak summer periods, the island's vehicle permit system means that utilisation is rarely higher than 20%.

Oban – Coll / Tiree box and whisker chart

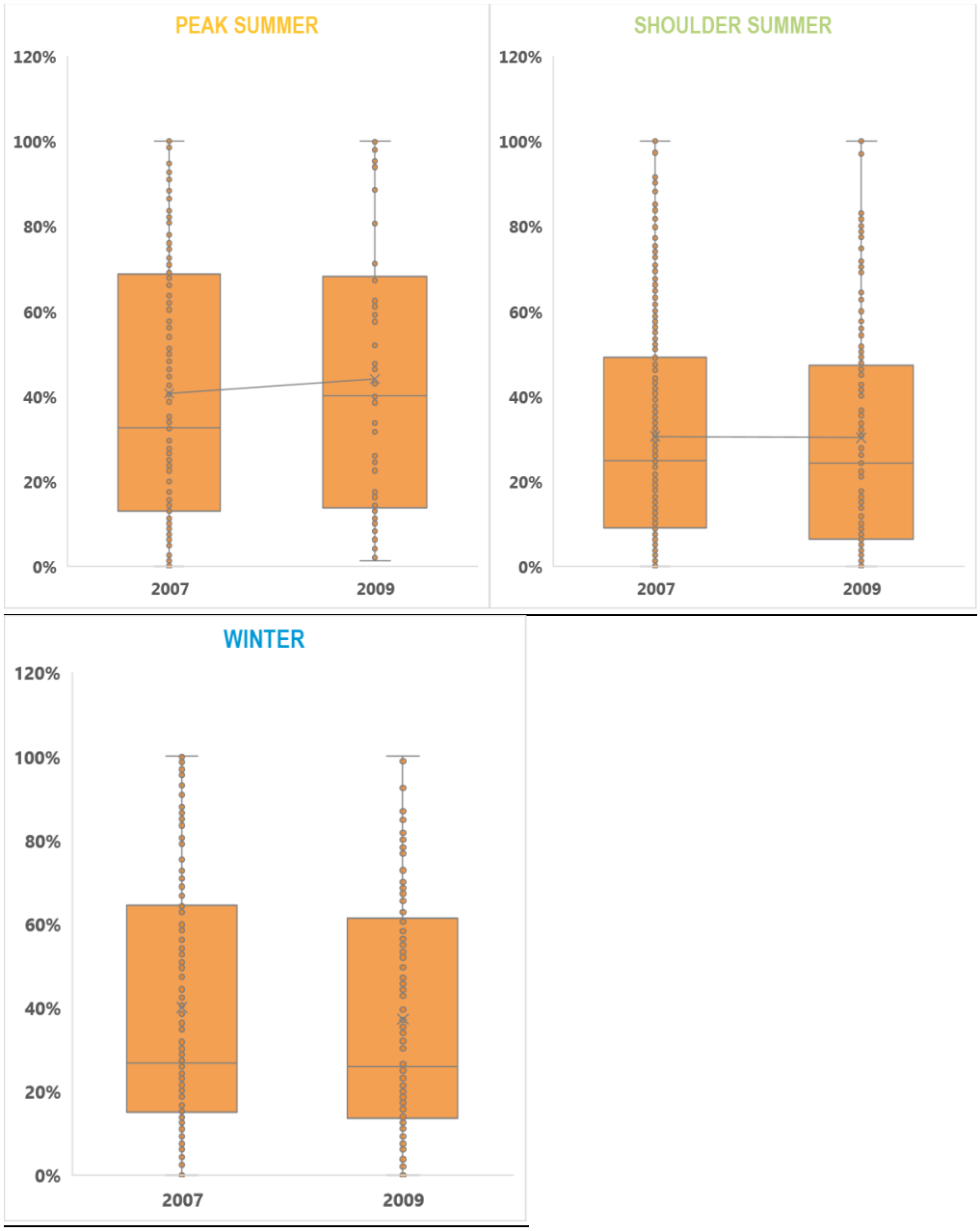


Figure 4.17: Oban - Coll – Tiree box and whisker chart

- Utilisation on the Oban – Coll / Tiree route has increased since RET was introduced but there remains some scope for growth on the route despite there being a number of high utilisation sailings.

Oban – Craignure box and whisker chart

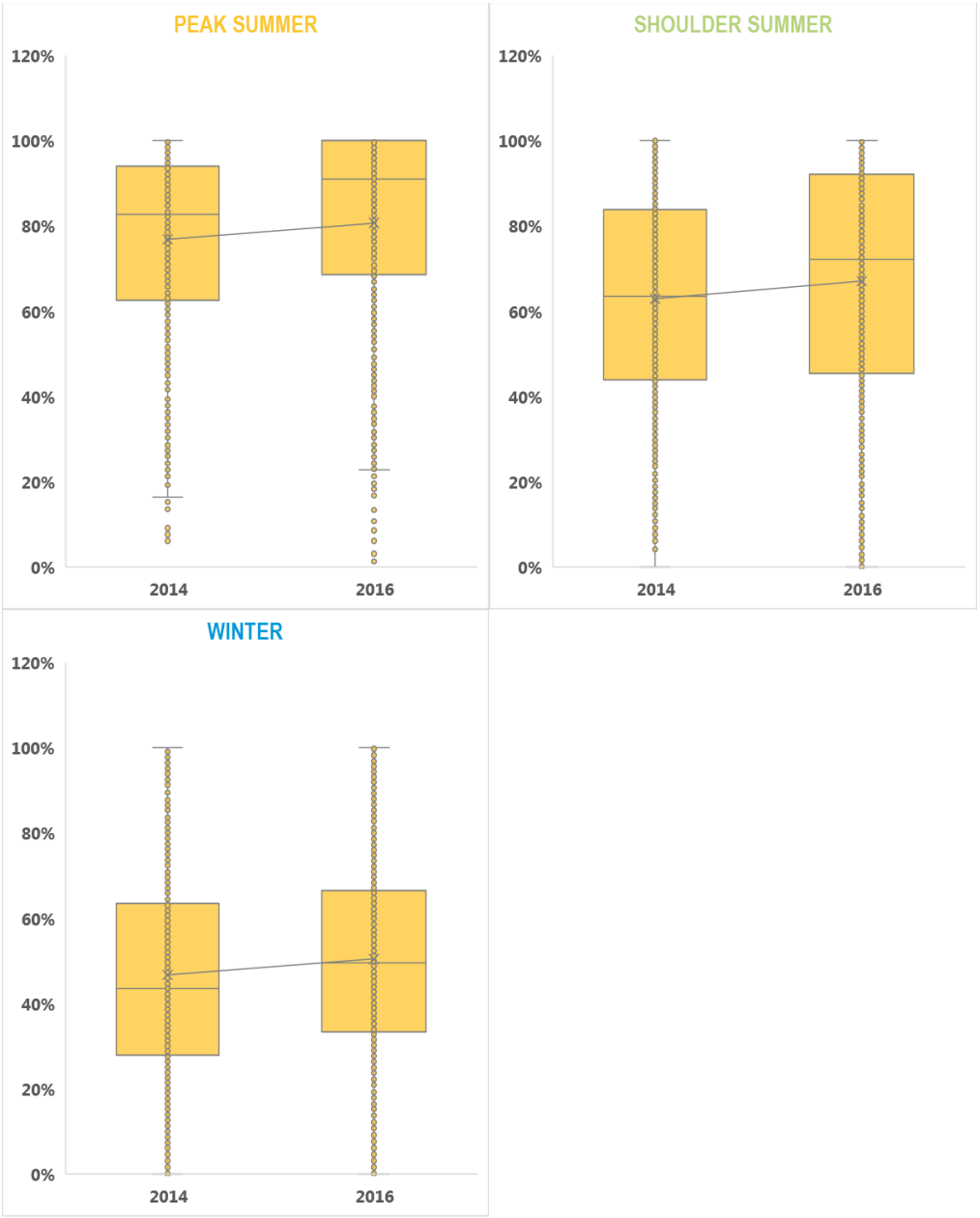


Figure 4.18: Oban – Craignure box and whisker chart

- Utilisation has also increased across all seasons on Oban – Craignure. The shoulder summer and, in particular, the peak summer season are experiencing significant capacity issues, with a high median load factor and many sailings full.

Oban – Lismore box and whisker chart

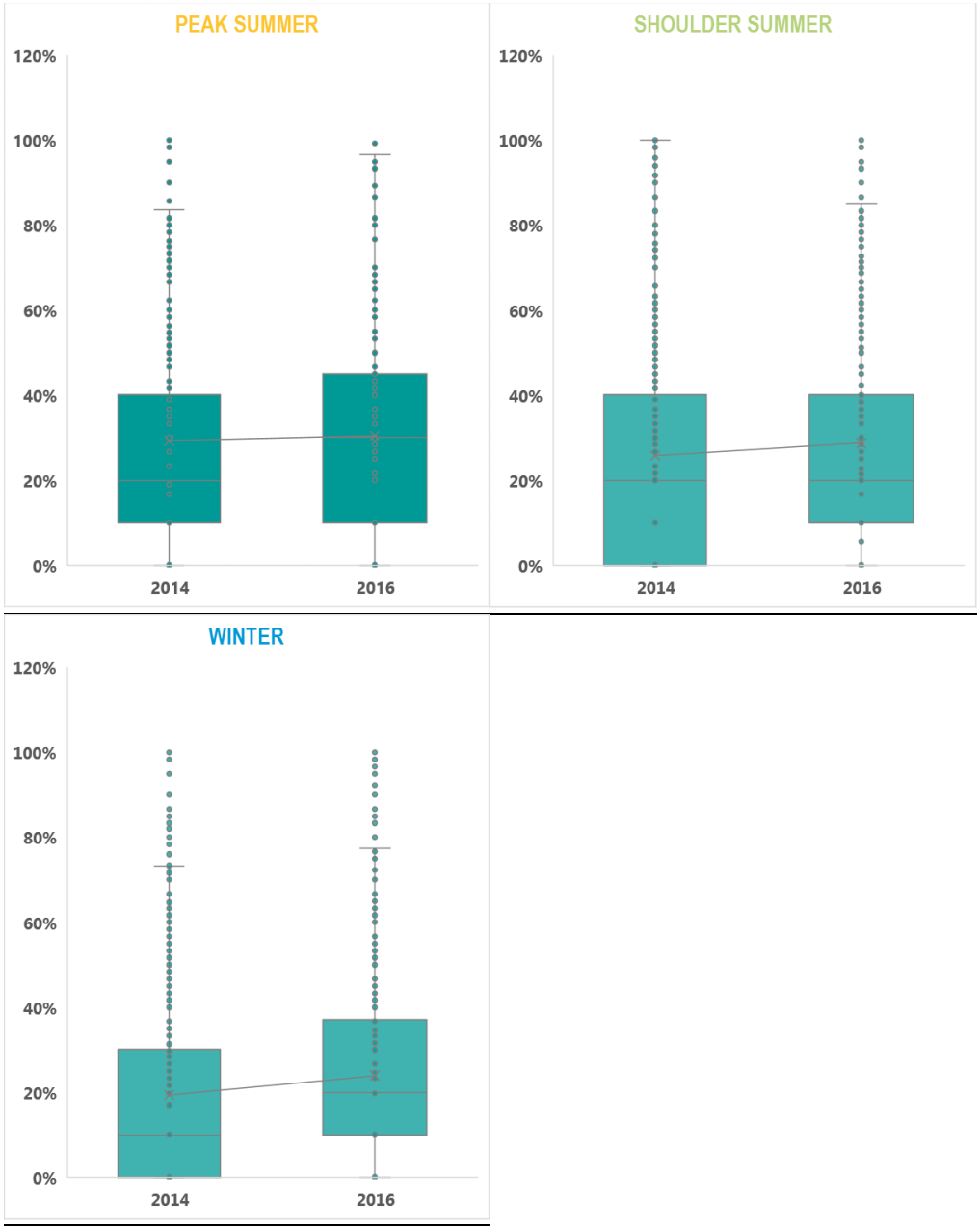


Figure 4.19: Oban – Lismore box and whisker chart

- Utilisation on the Oban – Lismore route has increased across all seasons, but particularly in the shoulder and peak summer timetable periods. There are however no notable capacity issues on the route.

Fishnish – Lochaline box and whisker chart

Figure 4.20: Fishnish – Lochaline box and whisker chart

- The switch of journeys from Lochaline – Fishnish to the Oban - Craignure route means that utilisation has actually declined across all seasons, making this route something of a network outlier.

Peak summer Saturdays

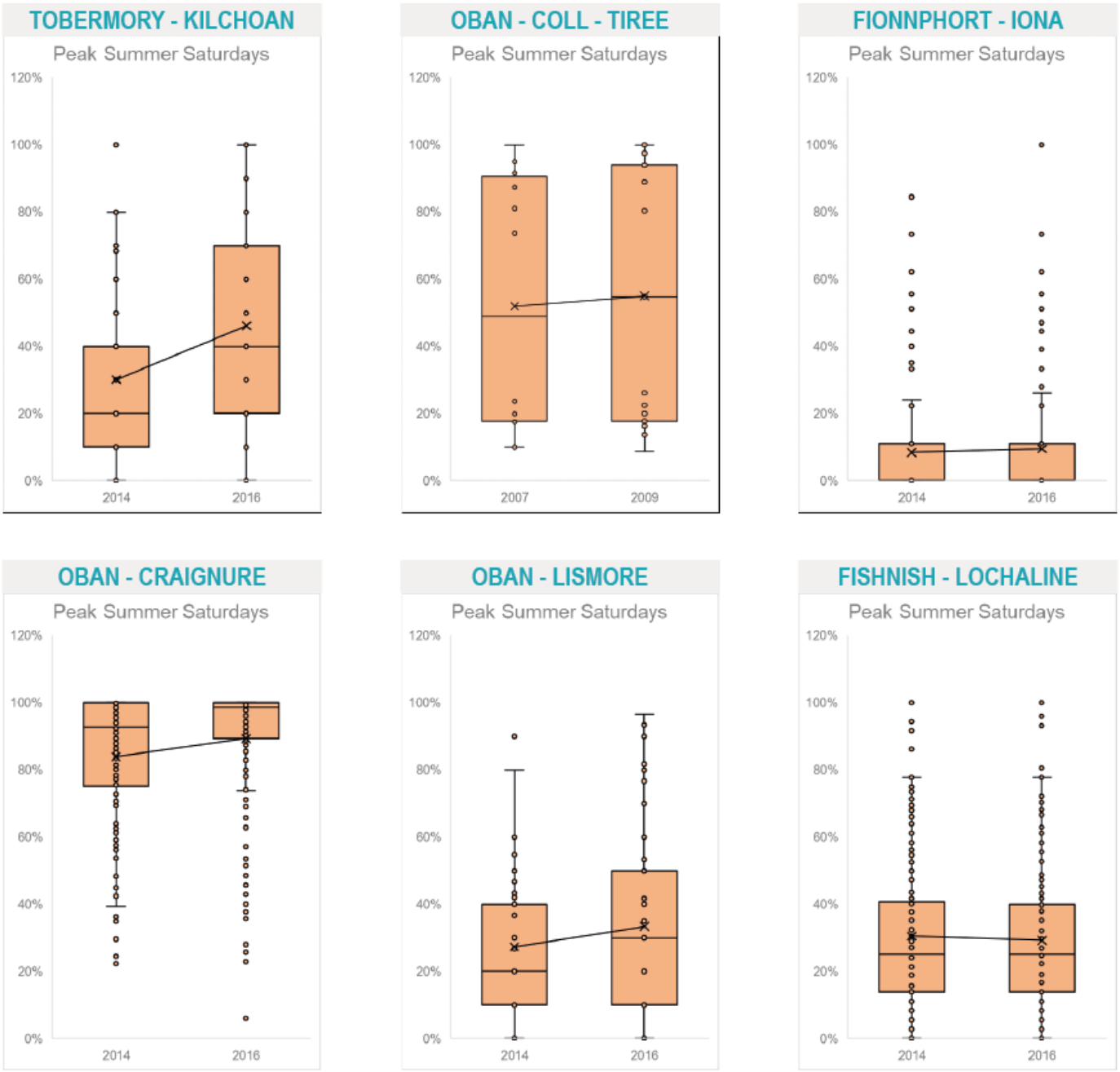


Figure 4.21: Peak Summer Saturday box and whisker chart

- As can be seen in the diagrams above, on peak Saturday sailings, there was a marginal increase in median load factors across all routes.

- The Oban - Craignure route in particular witnessed an increase from 93% to 98%, with most Saturday sailings nearly full during this period.

Skye, Raasay and the Small Isles

The figures below illustrate the changes in median load factor on Skye, Raasay and the Small Isles Routes between the RET Year-1 (dark) and RET Year+1 (light).

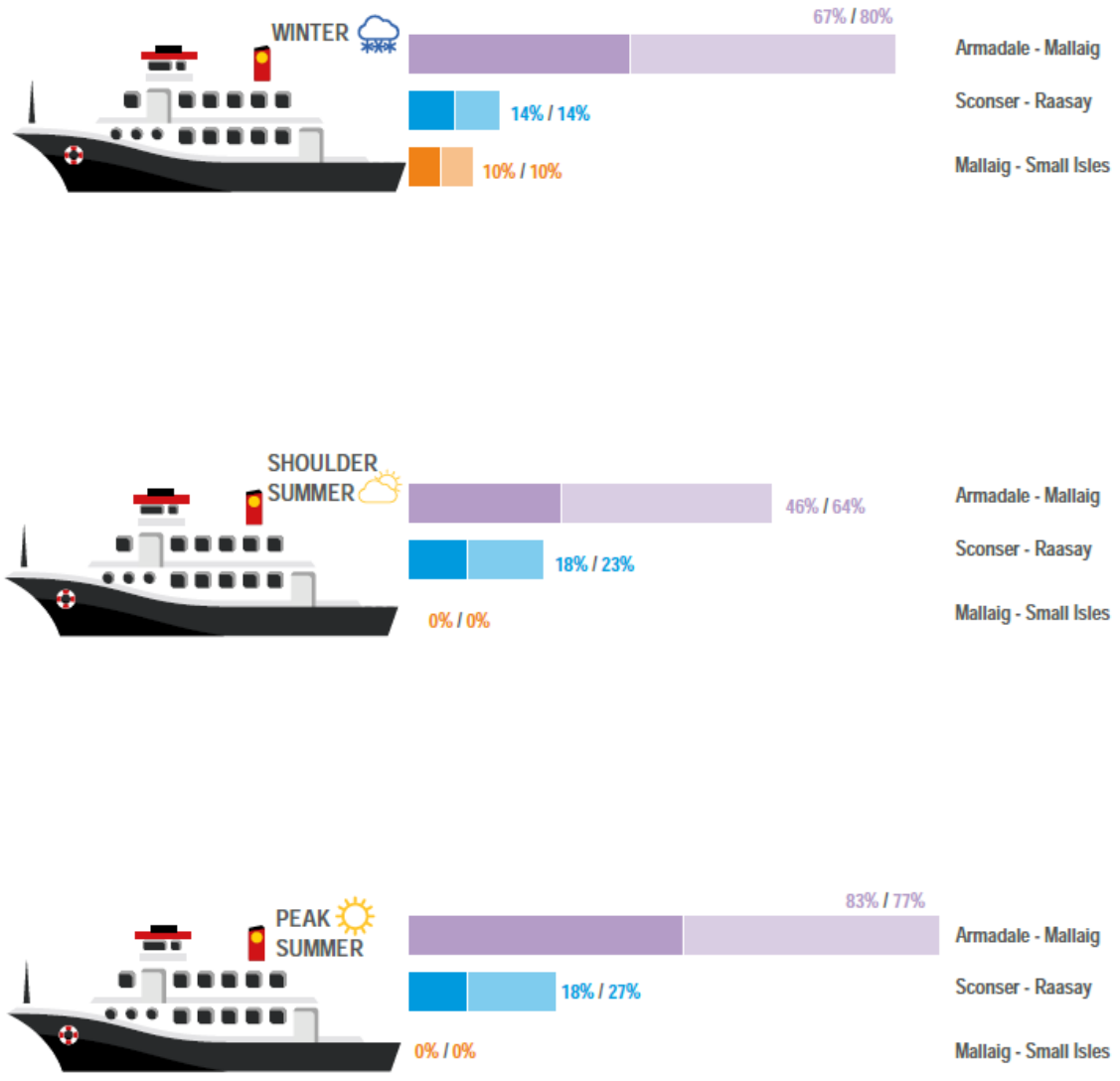


Figure 4.22: Skye, Raasay and the Small Isles – change in median load factor by season (RET year -1 versus RET Year (+1)

- The change in median utilisation on the Mallaig – Armadale route reflects a much wider range of factors than RET alone.

- In the winter months, median utilisation increased by 13% but this represents the low frequency on a capacity constrained vessel (13% accounting for around one extra car on average).

- The significant growth in shoulder summer utilisation reflects in large part the RET-related growth on the route.

- Peak summer utilisation has actually declined from 83% to 77%. Whilst peak summer car carryings have actually increased, the deployment of more capacity on the route in 2016 has facilitated the decline in the median load factor.

- The Sconser – Raasay route has experienced an increase in the median load factor across all three periods.

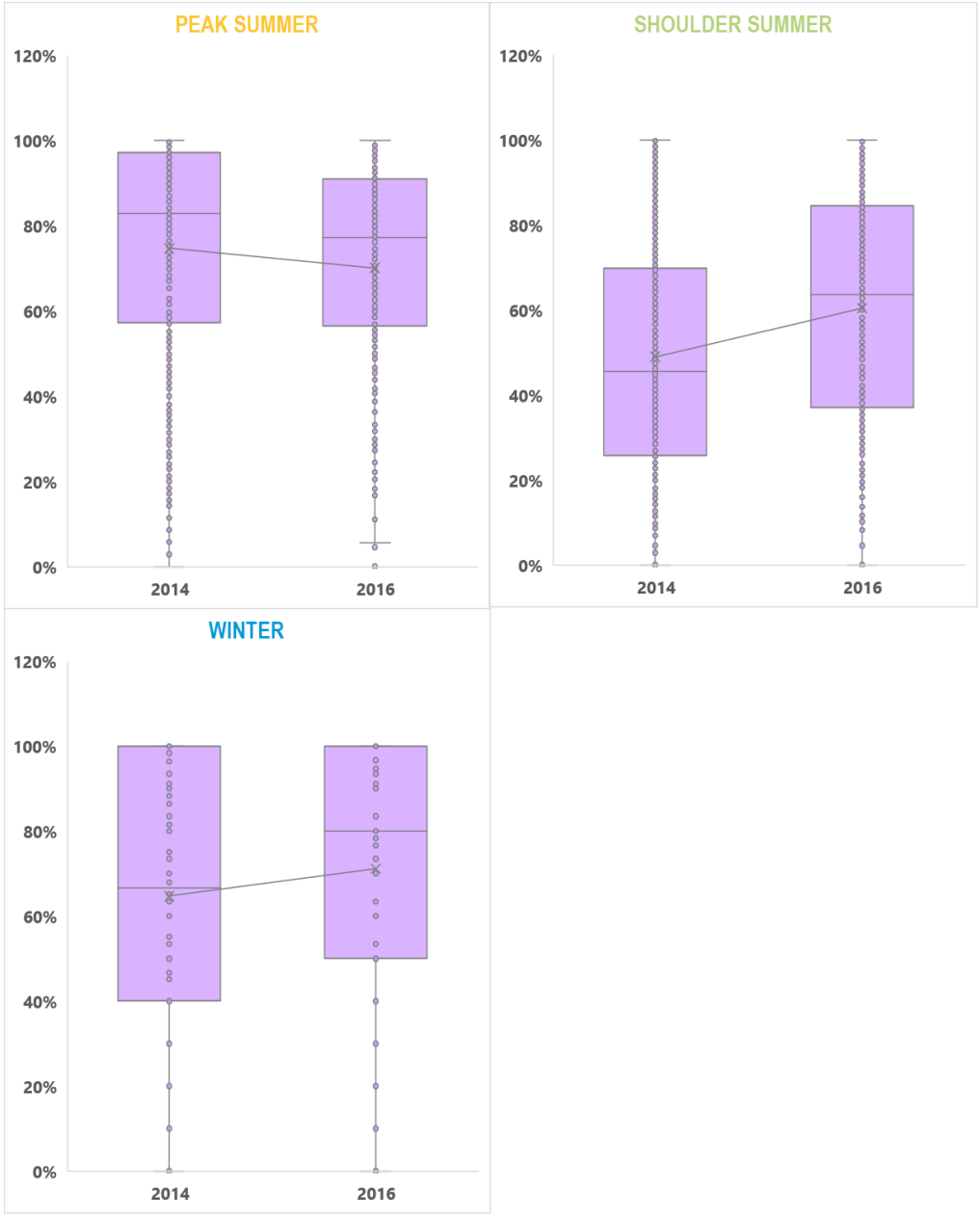


Figure 4.23: Armadale – Mallaig box and whisker chart

- There are capacity pressures on the route in the winter months, but this reflects the limited supply-side rather than a marked growth in demand (although there is evidence to suggest that increasing the sailing frequency or vessel capacity would stimulate additional demand).

- Capacity pressures have increased in the shoulder summer period, with a median load factor of 64% and several sailings at or near capacity.

- There are capacity pressures on this route in the peak summer period, with a median load factor of 77% and several sailings at or near capacity. However, the deployment of additional capacity from the summer 2016 timetable period has reduced pressure on the route (although this is also in part due to a reduction in coach traffic).

Sconser – Raasay box and whisker chart

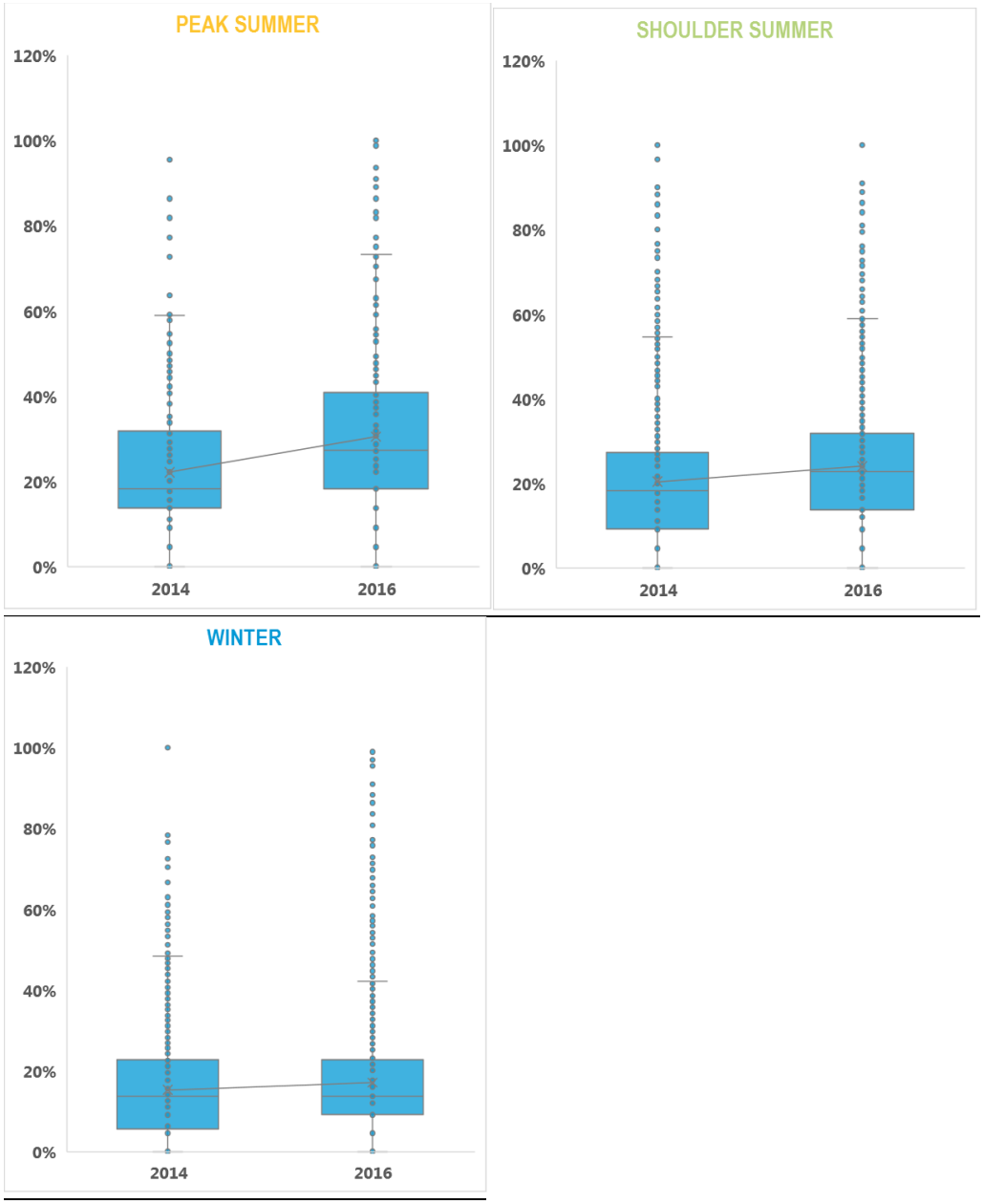


Figure 4.24: Sconser – Raasay box and whisker chart

- Whilst utilisation has increased across all seasons on the Sconser – Raasay route, there are no evident capacity problems.

Mallaig – Small Isles box and whisker chart

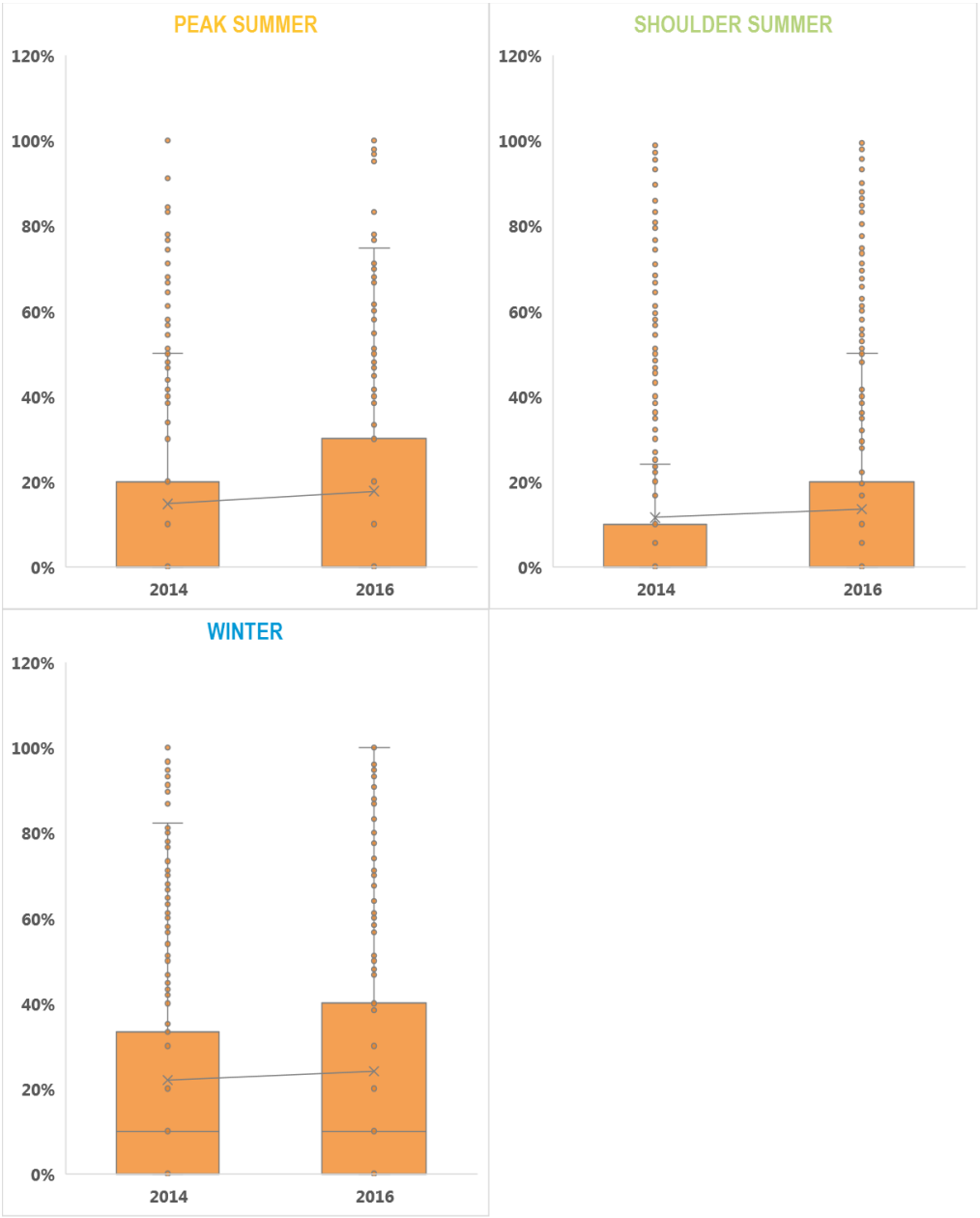


Figure 4.25: Mallaig - Small Isles box and whisker chart

- Load factors have increased across all seasons on the Mallaig – Small Isles route, although vehicle deck capacity issues only occur on a handful of peak sailings.

Peak summer Saturdays

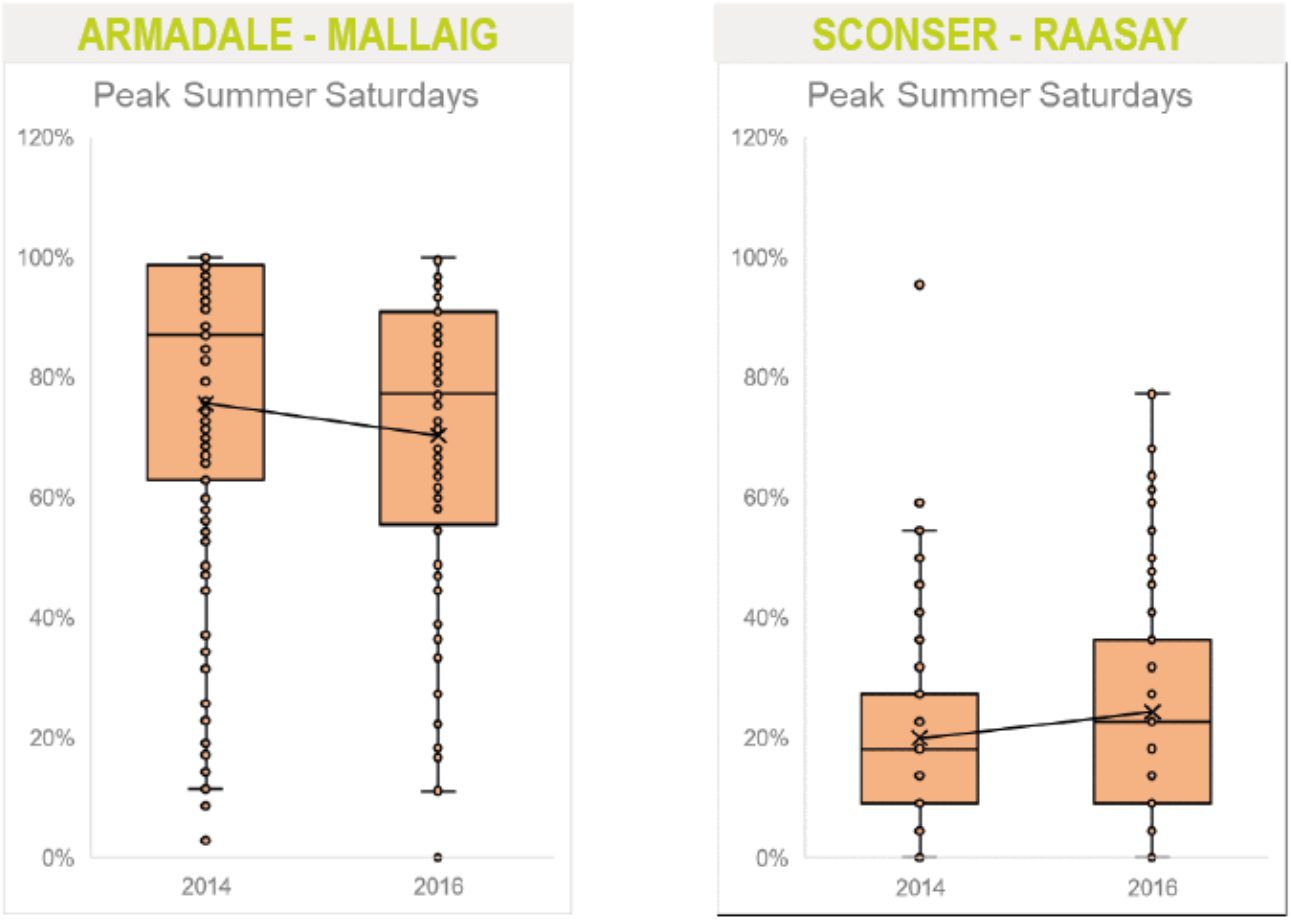


Figure 4.26: Peak Summer Saturday box and whisker chart

- Peak Summer Saturday sailings on the Sconser Raasay route seen an increase in median load factors from 18% to 23% in the summer following RET introduction.

Outer Hebrides

The figures below illustrate the changes in median load factor on the Outer Hebrides Routes between the RET Year-1 (dark) and RET Year+1 (light).

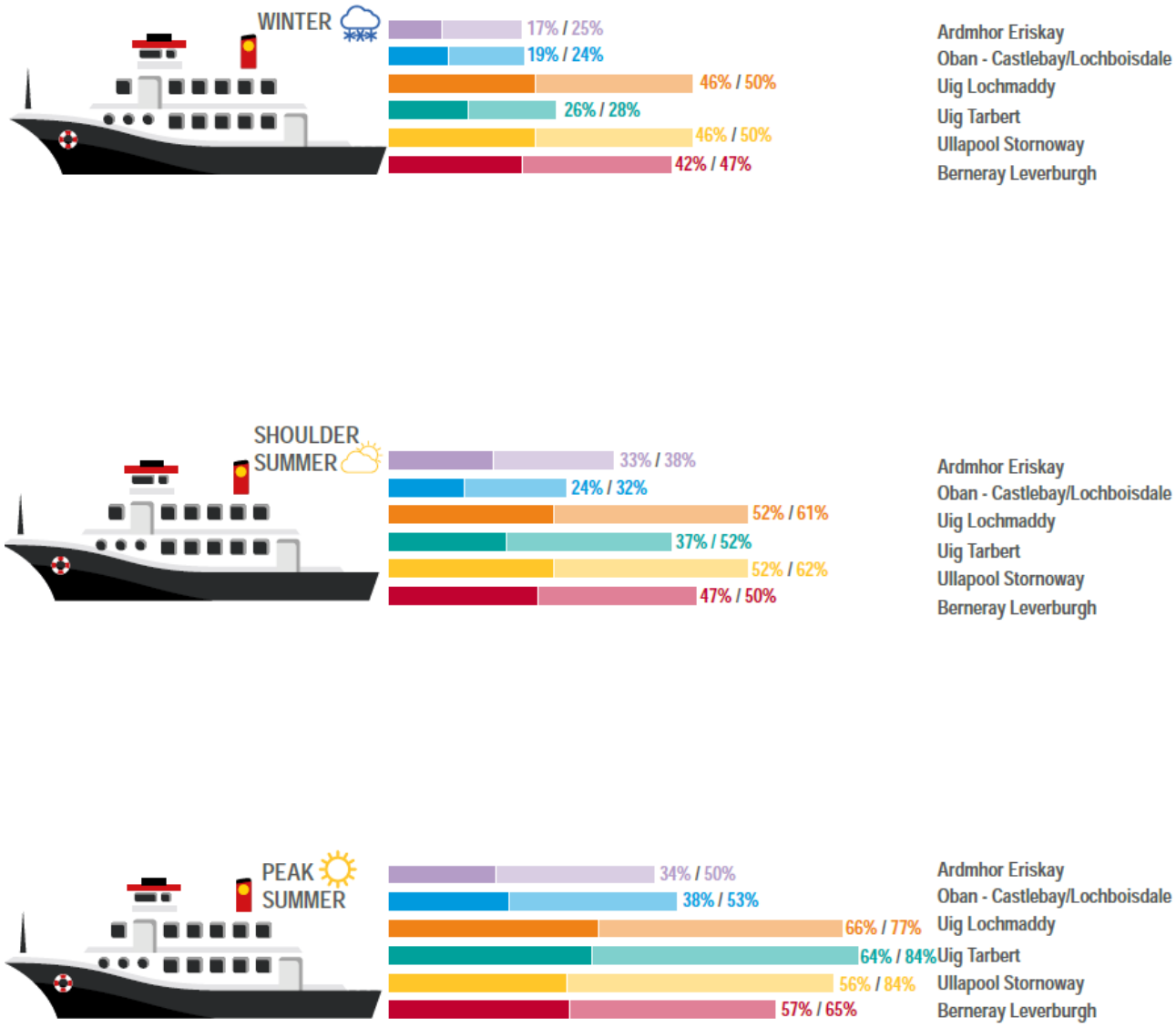


Figure 4.27: Outer Hebrides Routes – change in median load factor by season (RET year -1 versus RET Year (+1)

- Given the overall low travel volumes to and from the Outer Hebrides in the winter months, the increase in median load factors has been marginal.

- Median load factors increased much more strongly in the shoulder and peak summer months, particularly on the Uig Triangle and Stornoway – Ullapool routes, reflecting the strong and increasing visitor demand for Lewis and Harris.

Ardmhor – Eriskay box and whisker chart

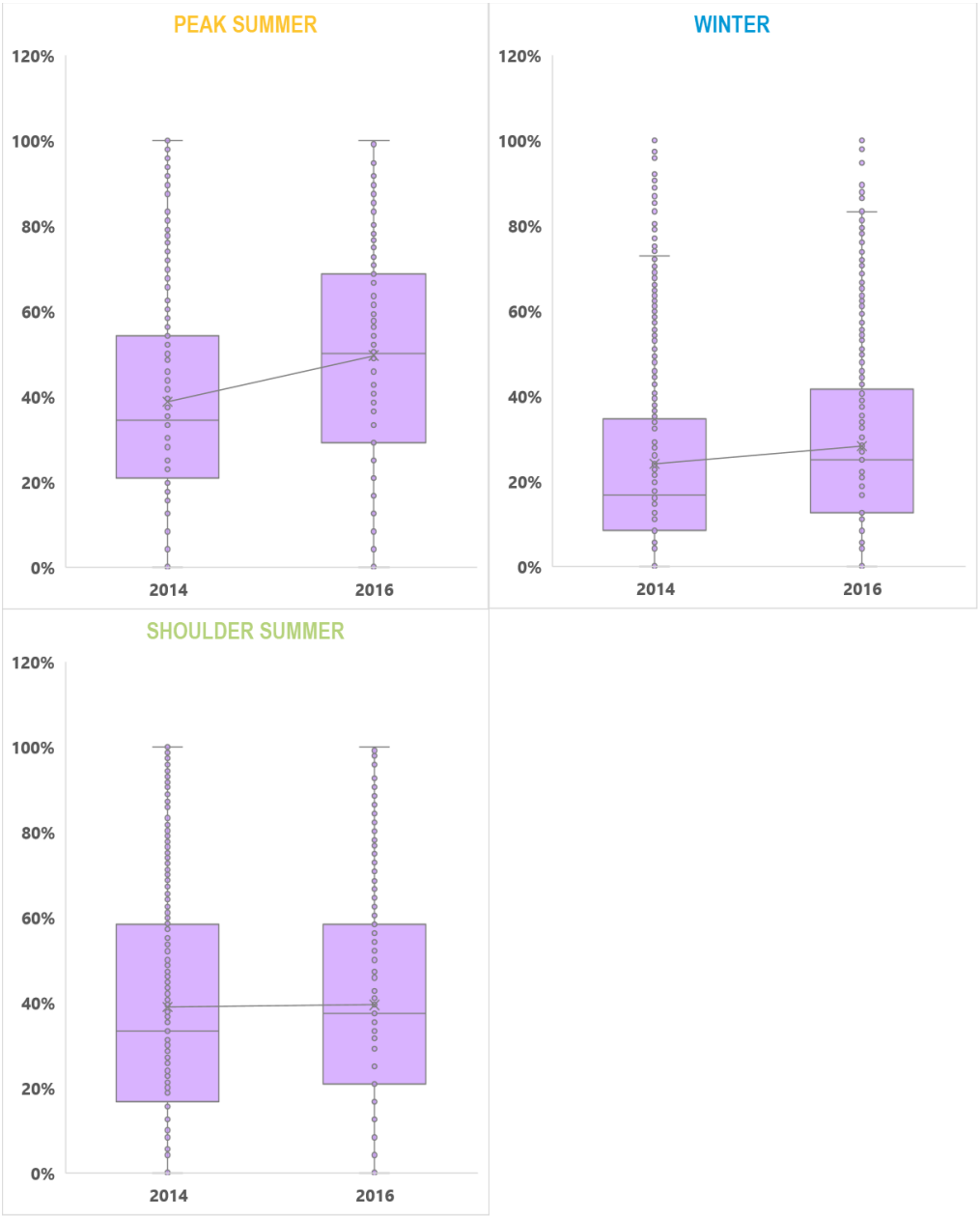


Figure 4.28: Ardmhor – Eriskay box and whisker chart

- Vehicle deck utilisation across all periods has increased on the Sound of Barra route, particularly in the peak summer period.

- The increase in CV movements across the Sound will be a contributing factor to higher vehicle deck utilisation.

- Whilst there has been strong growth on this route, there is generally sufficient capacity to accommodate demand, albeit some peak sailings will be full or near to full.

Oban – Castlebay/Lochboisdale box and whisker chart

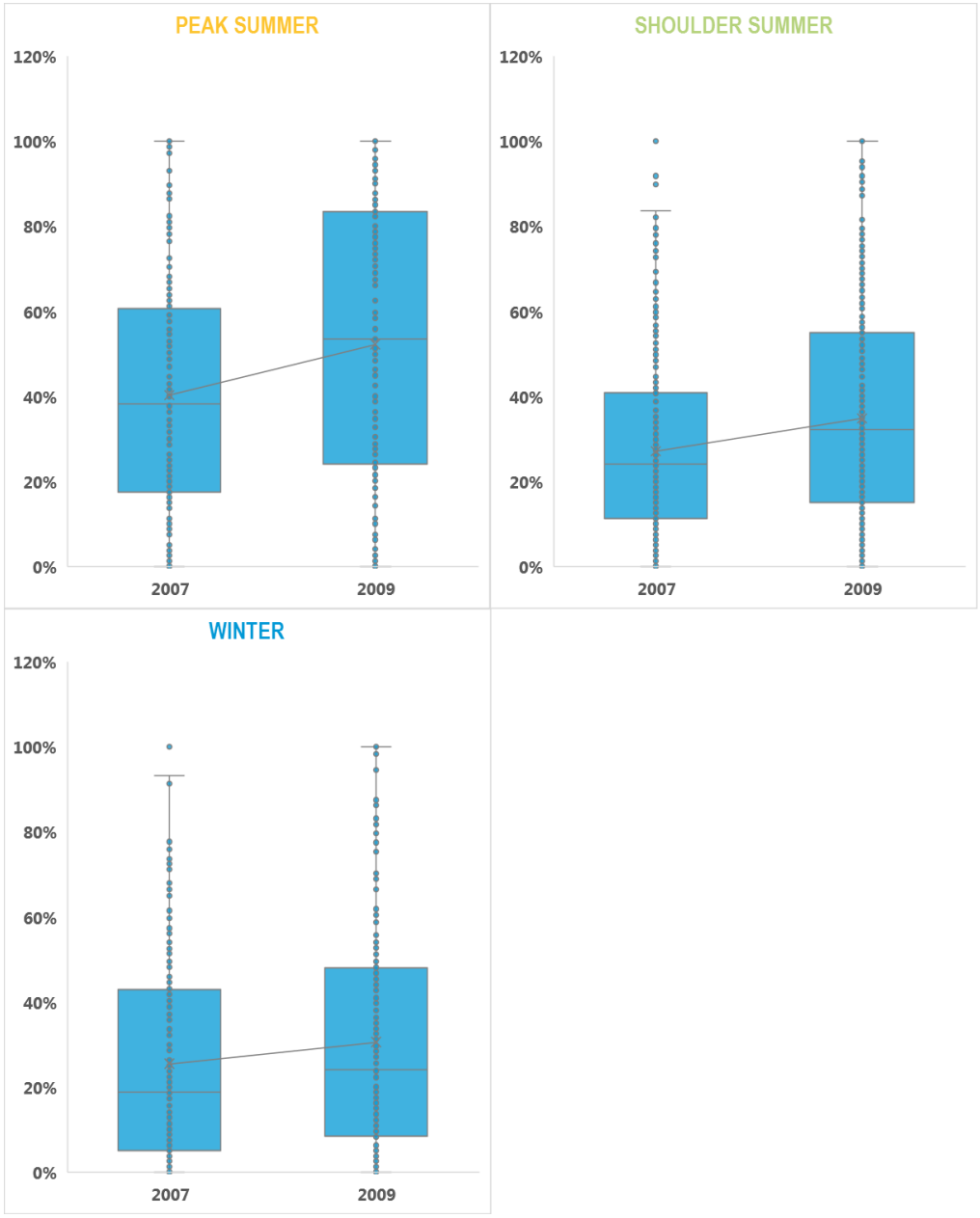


Figure 4.29: Oban - Castlebay/Lochboisdale box and whisker chart

- Vehicle deck utilisation grew strongly across all periods on the Oban – Castlebay / Lochboisdale route. The large reduction in fares together with the extension of RET to CVs supported this growth.

- Whilst utilisation issues may have emerged on this route, the splitting of the triangle in 2016 into Castlebay – Oban and Lochboisdale – Mallaig, the deployment of a larger vessel on the former route and the introduction of a near daily timetable means that capacity is rarely an issue at present.

Uig – Lochmaddy box and whisker chart

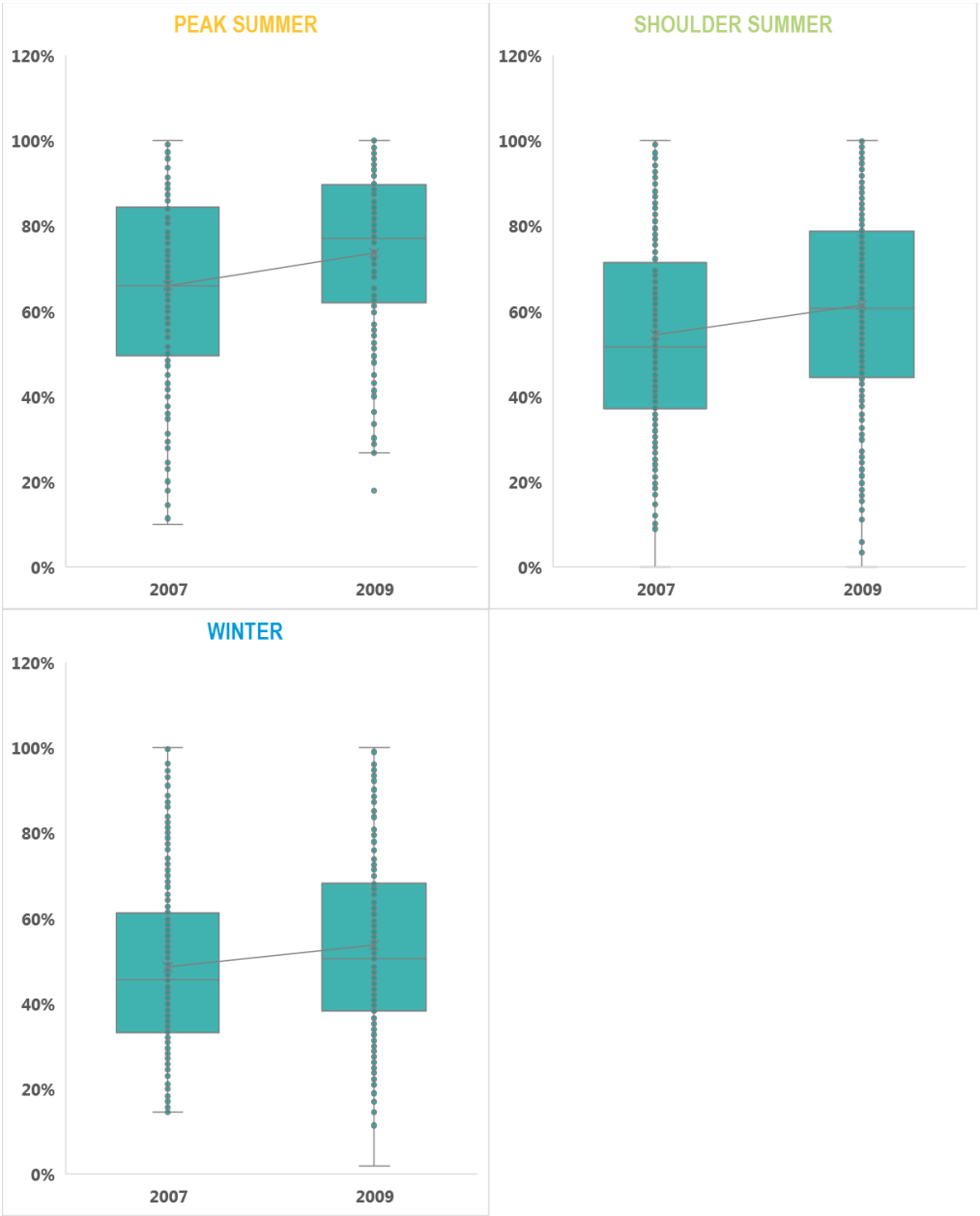


Figure 4.30: Uig – Lochmaddy box and whisker chart

- There was likewise an increase in vehicle deck utilisation across all seasons on the Uig – Lochmaddy route, again supported to some extent by RET being available to CVs.

- Summer capacity pressures in particular became more prevalent following the introduction of RET.

Ullapool – Stornoway box and whisker chart

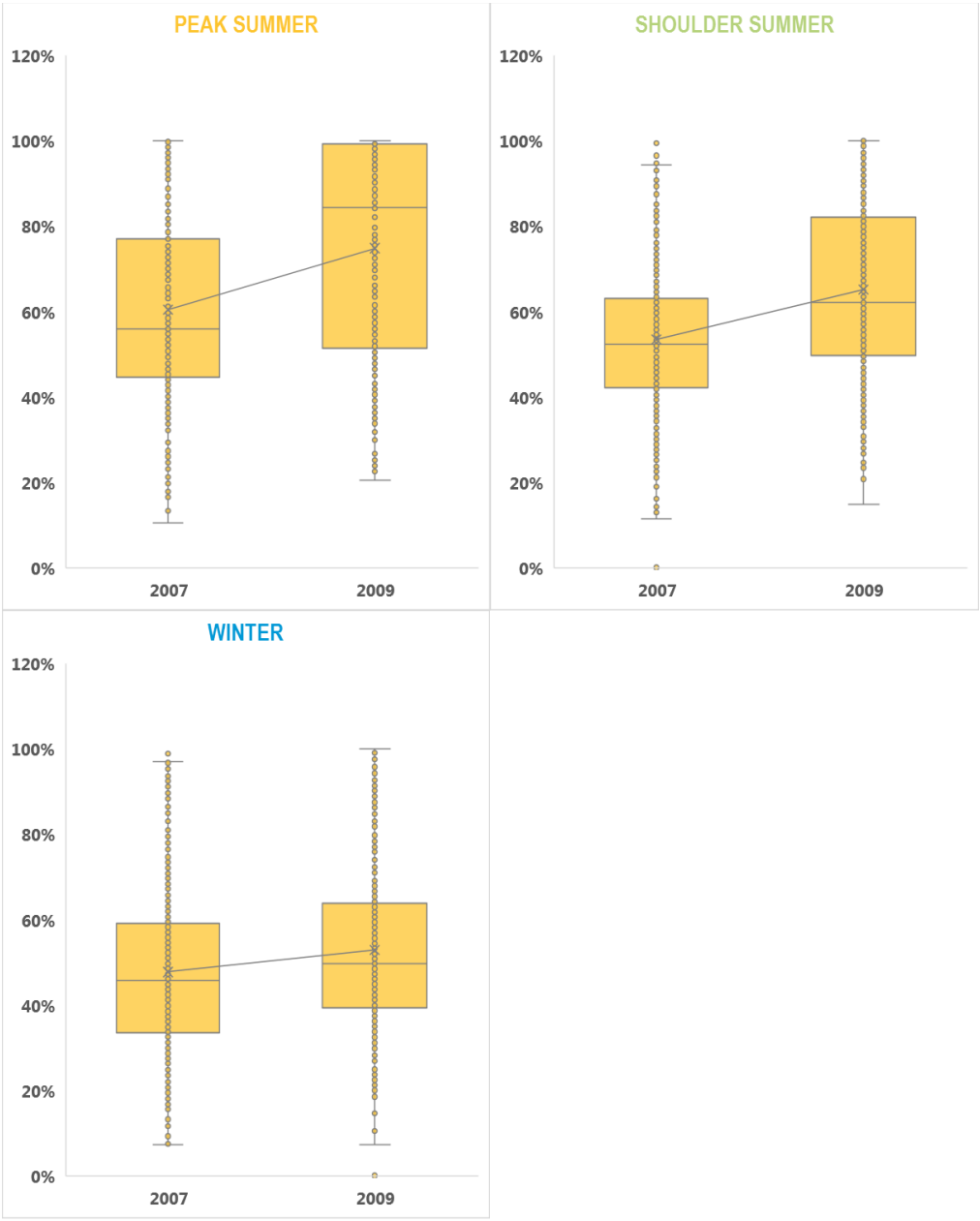


Figure 4.31: Ullapool – Stornoway box and whisker chart

- Utilisation also increased across all periods on Stornoway – Ullapool, with a significant increase in peak summer. Whilst some of this increase may be related to RET for CVs, the majority of commercial traffic moved on the

overnight freight vessel and thus the majority of the induced demand is car traffic.

- The capacity challenges on this route led to the introduction of the MV Loch Seaforth, which immediately alleviated the capacity challenges. However, the induced demand released by an enhancement of the supply-side (i.e. a new vessel) has re-applied and indeed increased this summer capacity pressure.

Uig – Tarbert box and whisker chart

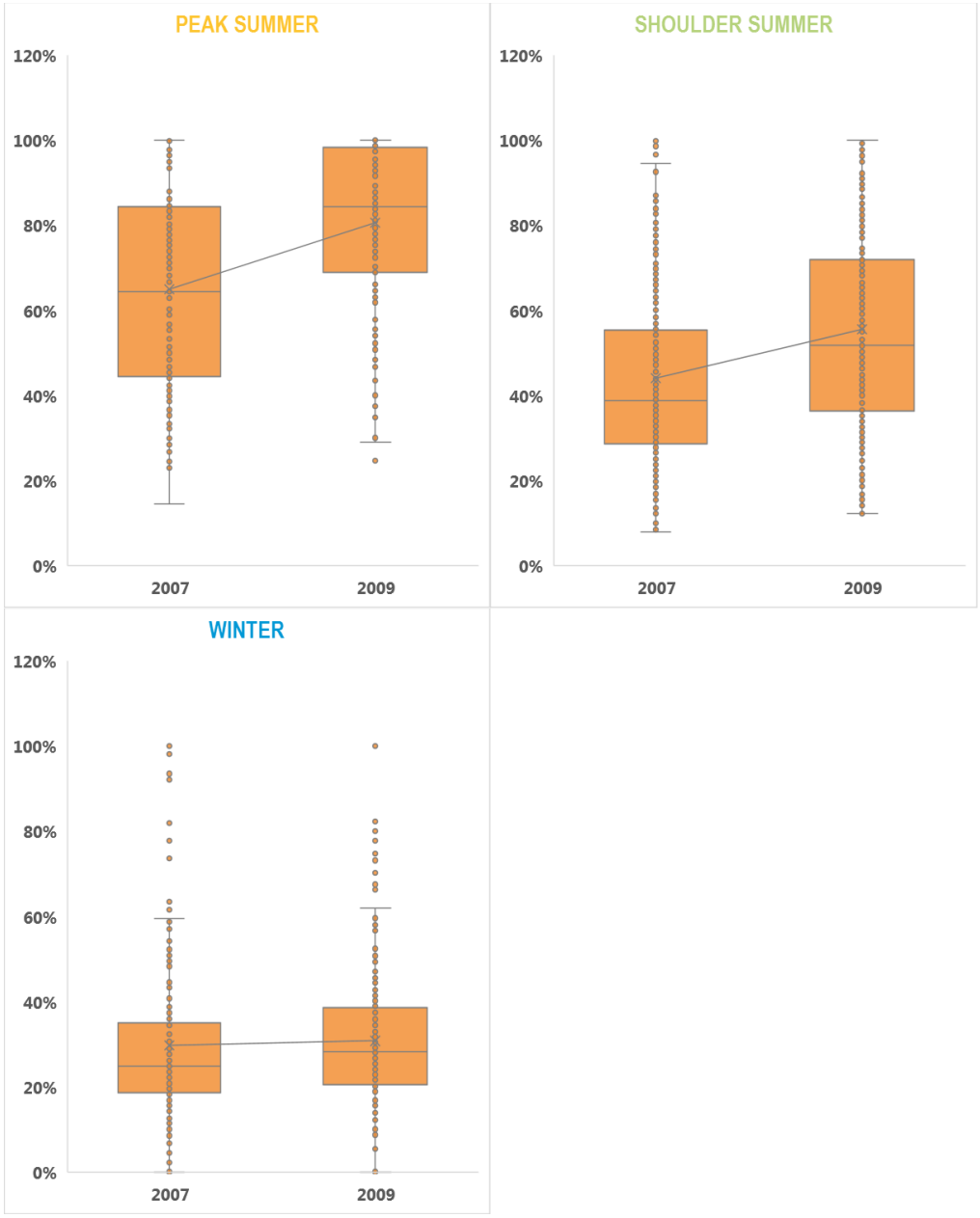


Figure 4.32: Uig – Tarbert box and whisker chart

- The Uig – Tarbert route is very lightly used in winter and, even with the introduction of RET, capacity utilisation changed very little.

- In contrast, shoulder and peak summer utilisation increased substantially. Indeed, the increase in peak summer demand meant that most sailings were very highly utilised, to the extent that they were full or nearly full.

- The Uig – Tarbert route carries very few CVs and this increase in demand is therefore almost wholly attributable to the increase in visitor numbers to Harris.

Berneray – Leverburgh box and whisker chart

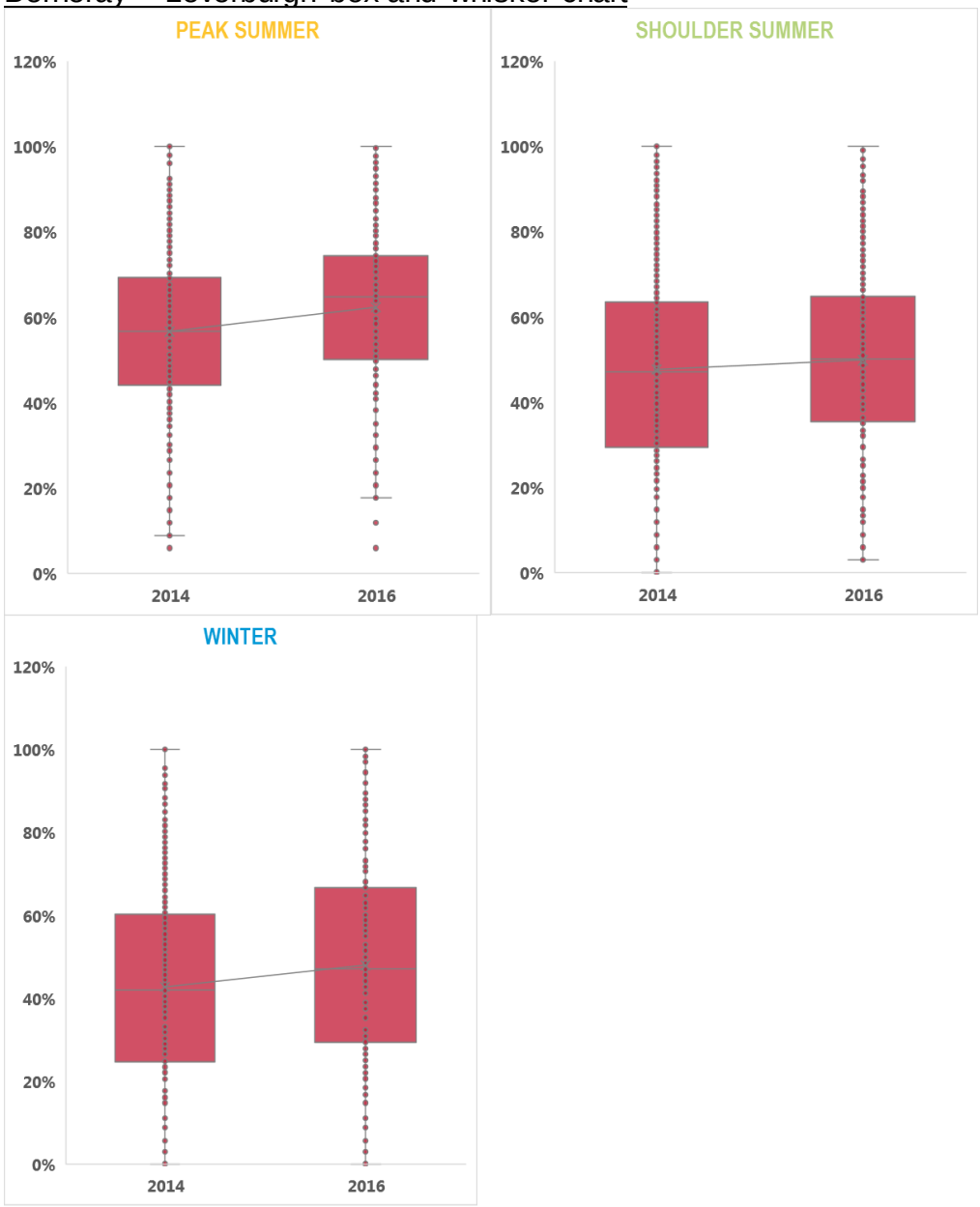


Figure 4.33: Berneray – Leverburgh box and whisker chart

- The introduction of RET on the Sound of Harris route has also increased utilisation across all periods.

- However, unlike the other routes, there was no dominant season in terms of growth. This is because the timetable is progressively scaled back in the shoulder summer and winter period to reflect the hours of daylight restrictions on the route. Whilst the absolute increase in demand was greatest during the peak summer, this is also when the service operates most frequently.

- Whilst there are some sailings which are near to or fully utilised, there is generally capacity available across the day.

Peak summer Saturday

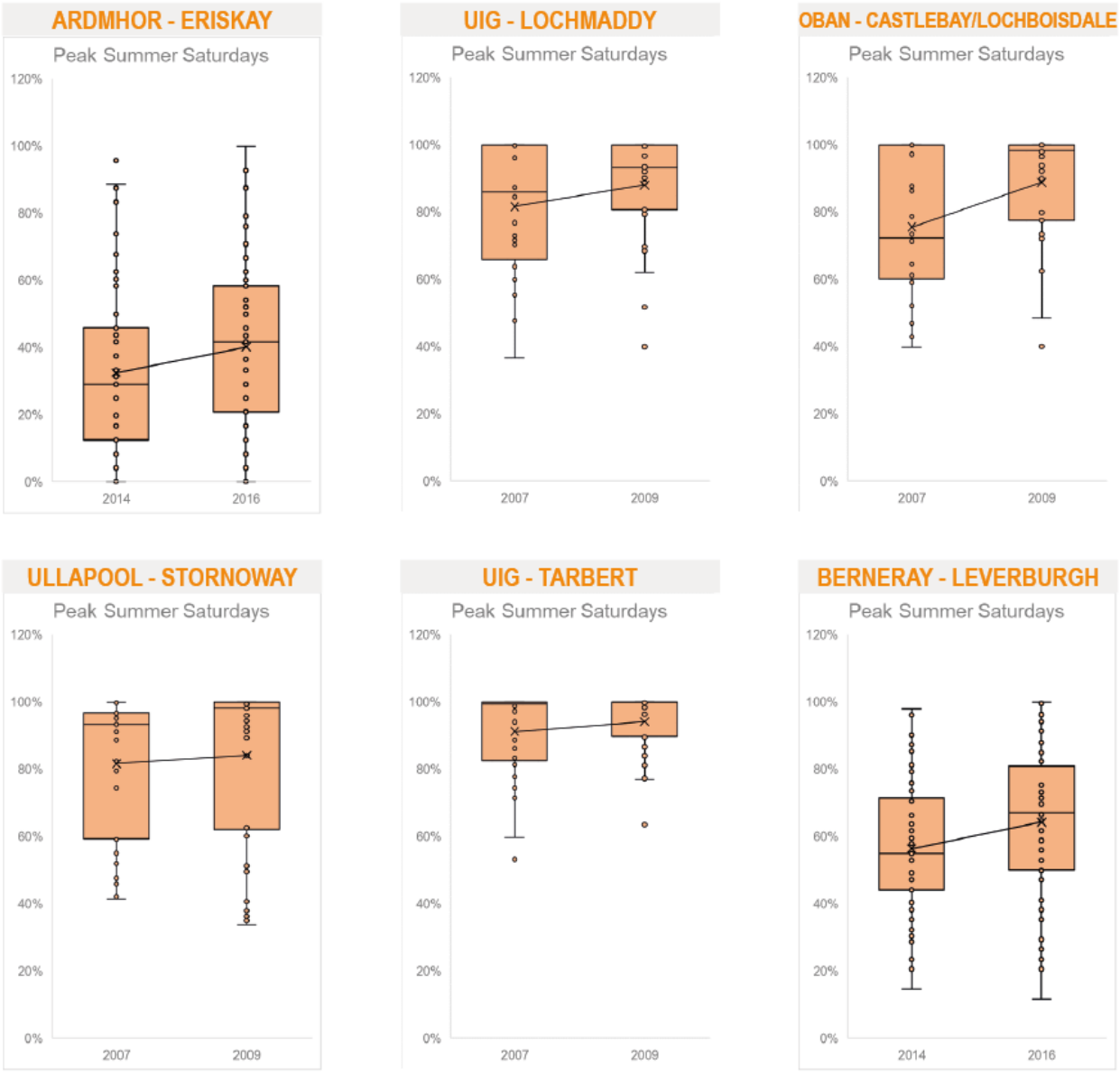


Figure 4.34: Peak Summer Saturday box and whisker chart

- On the Outer Hebrides network, Peak Summer Saturday sailings witnessed increases in median load factors across all routes.

- The Oban Castlebay/Lochboisdale route witnessed an increase in median load factor from 72% to 98%, whilst Berneray Leverburgh expressed an increase in load factor from 55% to 67%.

How might this have affected punctuality?

The table below presents all punctuality statistics for the CHFS network. It is not possible to solely and empirically attribute all of the changes in punctuality to RET, with other factors such as weather, vessel deployment etc also impacting. It should though be noted that, in most cases, the introduction of RET has been the one material change between the "RET Year-1" and RET Year+1" and thus at least a proportion of the punctuality change can be attributed to the policy. "Lateness" is defined as follows:

- "Level 1 Lateness" is defined as arriving between 5 and 10 minutes after the published arrival time on routes with a crossing time of up to 30 minutes or arriving between 10 and 20 minutes after the published arrival time on routes with a crossing time of between 31 and 90 minutes or arriving between 15 and 30 minutes after the published arrival time on routes with a crossing time of more than 90 minutes.

- "Level 2 Lateness" is defined as arriving in excess of 10 minutes after the published arrival time on routes with a crossing time of up to 30 minutes or arriving in excess of 20 minutes after the published arrival time on routes with a crossing time of between 31 and 90 minutes or arriving in excess of 30 minutes after the published arrival time on routes with a crossing time of more than 90 minutes.

The numbers in the table indicate the number of times the vessel was late and the distance is in statute miles.

		RET Year-1		RET Year+1		Year+1 – Year-1	
Route	**Distance**	**Level 1 Lateness**	**Level 2 Lateness**	**Level 1 Lateness**	**Level 2 Lateness**	**Level 1 Difference**	**Level 2 Difference**
Ardrossan - Brodick	11.8	116	54	280	164	164	110
Colintraive - Rhubodach	0.6	66	16	30	18	-36	2
Largs - Cumbrae	2.4	138	86	156	130	18	44
Claonaig - Lochranza	5	20	39	90	91	70	52
Tarbert LF - Portavadie	3.4	60	48	247	149	187	101
Wemyss Bay - Rothesay	6.8	129	66	334	133	205	67
Tayinloan - Gigha	2.5	25	42	28	26	3	-16
Kennacraig - Islay	32.3	78	49	111	52	33	3
Oban - Colonsay	37	16	19	20	13	4	-6
Tobermory - Kilchoan	3.7	7	1	7	7	0	6
Fionnphort - Iona	1.7	12	54	3	7	-9	-47
Oban - Coll - Tiree	59.7	17	2	20	10	3	8
Oban - Lismore	7.5	2	4	0	8	-2	4
Oban - Craignure	9.3	129	119	26	12	-103	-107
Fishnish - Lochaline	1.9	62	16	28	5	-34	-11
Armadale - Mallaig	5	143	86	18	15	-125	-71
Sconser - Raasay	1.9	2	6	1	2	-1	-4
Mallaig - Small Isles	16.6	28	9	15	8	-13	-1
Ardmhor - Eriskay	5.9	1	1	3	4	2	3
Oban - Castlebay - Lochboisdale	89.5	12	6	13	23	1	17
Uig - Tarbert	29.2	14	12	31	29	17	17
Uig - Lochmaddy	29.2	14	4	30	26	16	22
Ullapool - Stornoway	52.2	44	19	26	71	-18	52
Berneray - Leverburgh	9.5	27	75	34	96	7	21

Table 4.1: Change in level 1 and level 2 lateness, RET year+1 versus RET year-1

On the high-volume routes (particularly the major vessel routes), the significant increase in demand as a result of RET has in many cases extended turnaround times increasing overall "lateness".

Note: On the Oban - Craignure route, the introduction of a two vessel service from summer 2016 offset the RET related punctuality challenges. Note this is reflected in the reduction in the level 1 and level 2 lateness in the table above, but a review of 2017 and 2018 data suggests punctuality has since worsened.

How has RET affected facilities on the ferries – '2015 RET' routes?

Booking

The resident survey was aimed at the '2015 RET' routes. Whist the survey contained a number of questions about booking vehicles on board the ferry, the only 2015 routes where booking is available are:

- Oban-Craignure
- Mallaig - Armadale
- Sound of Harris (Berneray – Leverburgh)
- Sound of Barra (Ardmhor – Eriskay)

The following questions are based on responses from these areas only.

Do people think it is more difficult to book on the ferry?

87% of these respondents to the resident survey said that they had found it more difficult to book a vehicle on board the ferry since RET was introduced. This aligns with the load factor data on these routes – particularly Oban – Craignure – which has increased across the year, but particularly in the summer.

When do people experience difficulty booking on the ferry?

The 'heat map' below shows the days of the week / months of the year when people responding to the survey experienced the most difficulty making a booking for a vehicle onboard:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
January	6%	7%	4%	5%	15%	18%	9%
February	6%	6%	3%	4%	14%	16%	7%
March	12%	9%	6%	8%	26%	31%	14%
April	24%	20%	16%	20%	51%	57%	30%
May	38%	36%	32%	38%	66%	71%	44%
June	52%	48%	45%	50%	75%	81%	56%
July	63%	55%	53%	59%	80%	84%	63%
August	60%	55%	52%	57%	78%	83%	62%
September	37%	30%	27%	32%	58%	67%	41%
October	22%	18%	14%	21%	41%	47%	28%
November	7%	5%	3%	4%	15%	18%	10%
December	10%	8%	5%	7%	22%	24%	15%

Table 4.2: Bookings 'Heat Map' (source: residents survey n=343)

The above 'heat map' derived from the resident survey broadly correlates with the load factor analysis set out in the previous section. In summary:

- Summer Saturdays are reported as the most problematic for securing a booking (84% in July and 83% in August). The most frequently cited sailings with capacity issues were those which facilitated day-trips and around accommodation.

- The period of June to August on the whole reports a high incidence of frustrated bookings.

- Outside the above periods, shoulder-summer weekends are the only periods where securing a booking is identified as problematic.

Does this prevent people travelling when they wish?

Yes, 87% of resident survey responses on the three routes said that this affects their ability to travel when they wish.

What do people do when they cannot book on their preferred sailing?

The figure below highlights the course of action taken when residents cannot secure a booking on their preferred sailing:

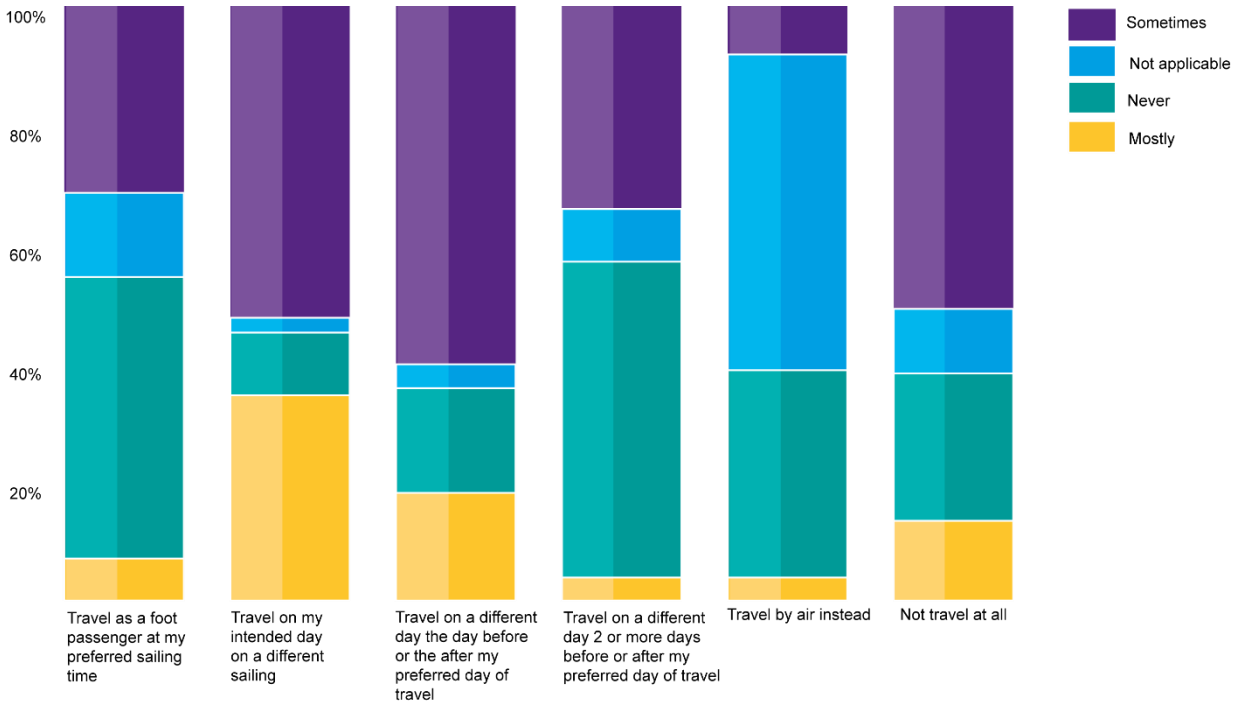


Figure 4.35: What do you do when you cannot get a booking on your preferred sailing? (Source: Resident survey, n=343)

People's main response on these routes is to travel on a different sailing on the same day. For longer, infrequent routes this would be a less readily available option. All of the above referenced courses of action are taken by a significant number of responses.

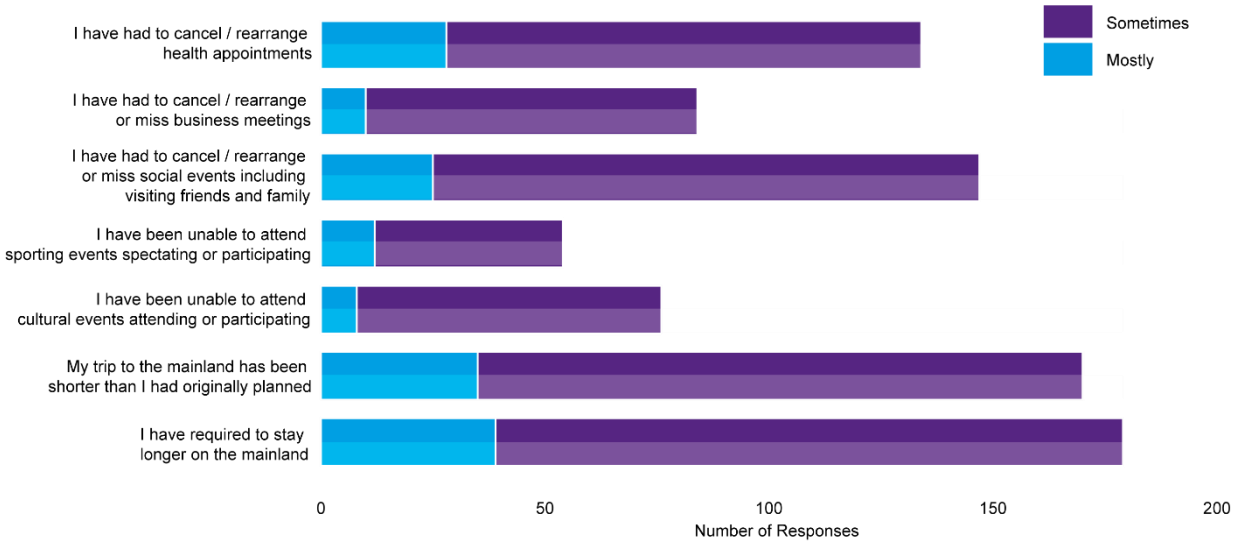


Figure 4.36: What are the consequences for people when they cannot book on their preferred sailing? (Source: Resident survey, n=343)

Mirroring the above, it can be seen that people incur a number of inconveniences as a result of not being able to travel when they wish. Trips are sometimes longer or shorter, and people have identified a range of appointments which are missed. This has a highly negative impact on island communities as it can create an impression of being 'cut-off' and or introduce a 'hassle-factor' when carrying out off-island activities by vehicle.

The issue around failed bookings came out strongly in the business depth interviews but has also been prominently expressed in other recent ferry-related studies which PBA has delivered, including the Outer Hebrides and Craignure STAG Appraisals.

Key point: Of the three bookable '2015 RET' routes, 87% of respondents to the resident survey are now finding it more difficult to make a booking, mainly in the summer period and on summer Saturdays in particular. This is having a negative impact on island communities, either adding a 'hassle-factor' to trips which are being made or preventing the trip from being made at all.

Do people now book their travel earlier?

People were asked about their booking habits before and after RET, the responses to which are summarised in the figure below:

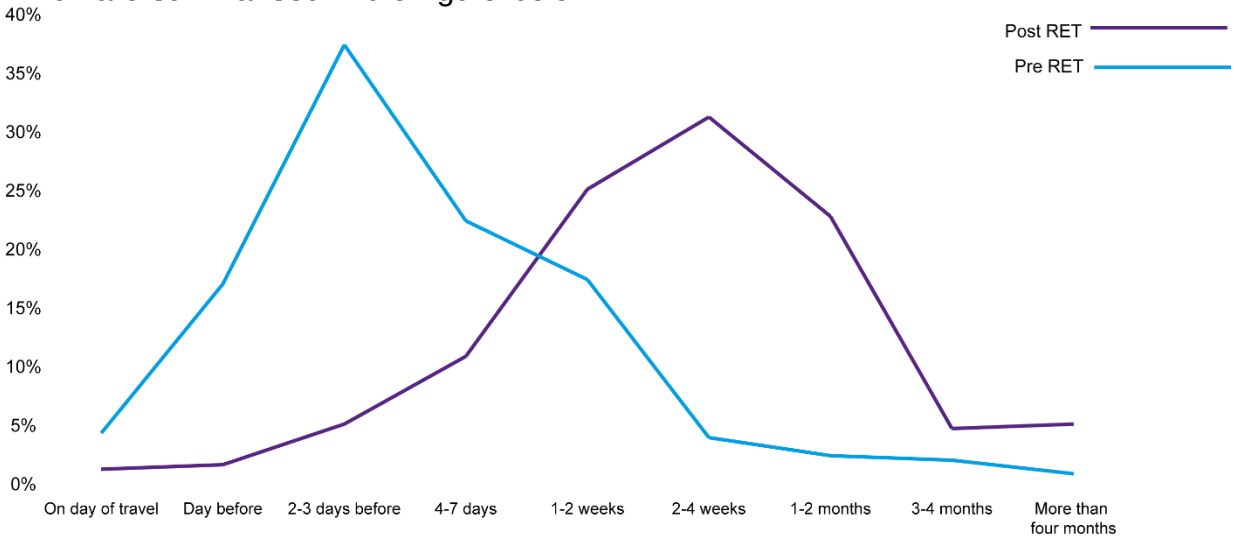


Figure 4.37: Do people now book travel earlier? (Source: Resident survey, n=260)

The figure above shows that the booking window on these routes has moved demonstrably according to the resident survey. The main booking period has moved from 2-3 days before to 2-4 weeks before. It is highly likely that this trend is repeated on high volume routes across the isles.

The issue of being unable to get a short notice vehicle booking has come up frequently on various recent studies around the islands.

What about non-bookable routes?

A number of respondents who live on islands with non-bookable routes made comments about queueing at peak times of year, noting that it makes journey planning difficult and leads to unreliable journey times. This problem has been particularly strongly expressed in Cumbrae, where responses to open questions in the survey highlighted the need to queue for long periods on peak summer days. CFL's response to the stakeholder consultation highlighted a similar issue at Largs on the other side of the crossing.

Key point: On the evidence of the resident survey, the booking window has demonstrably moved since RET was introduced – prior to RET, people tended to book 2-3 days in advance but now typically book 2-4 weeks in advance. On higher volume non-bookable routes, queues are reported at the ferry terminals on peak days.

<u>What are people's views on potential demand management measures?</u>

The issue of vehicle-deck capacity constraints at peak times, and the difficulties encountered by island residents in making urgent journeys at short notice, has been a recurring source of dissatisfaction identified in this and other recent ferry studies. To this end, the onboard survey explored attitudes towards a range of potential demand management measures on the 2015 RET routes. The figure below shows the net support (i.e. total agreeing minus total disagreeing) for each potential demand management measure.

Figure 4.38: Views on potential demand management measures (Source: onboard survey)

The key points of note from the above figure are as follows:

- residents and visitors provided similar answers, the key exception being that:
  - on balance, residents are not prepared to pay more at peak times
  - …but visitors are
- there is strong agreement that:
  - space should be reserved for residents at peak times, even amongst visitors
  - bookings should be released in phases
  - people would switch to quieter sailings with reduced fares
- whilst more people disagreed, around a quarter of island residents agreed that they would be interested in car-share or car-club schemes
- similarly, 37% of visitors expressed an interest in using an island-based car hire scheme

Key point: The onboard surveys suggest that island residents are not willing to pay more to travel at peak times, but visitors are.

Key point: There is strong agreement amongst visitors and residents that: vehicle-deck space should be reserved for residents at peak times; bookings should be released in phases; and that people would switch to quieter sailings with reduced fares. There was also minority interest (circa 25% of island residents) in car-share and car-club schemes, whilst 37% of visitors expressed an interest in an island-based car hire scheme.

Do people think that the level of service onboard the ferries has deteriorated with RET?

The carryings and survey data clearly highlight that the ferry services are now busier, particularly in the shoulder and peak summer periods. The resident and onboard surveys explored how this is impacting perceptions of service onboard the vessels, the first figure below being from the resident survey and setting out whether respondents think the level of onboard service has deteriorated:

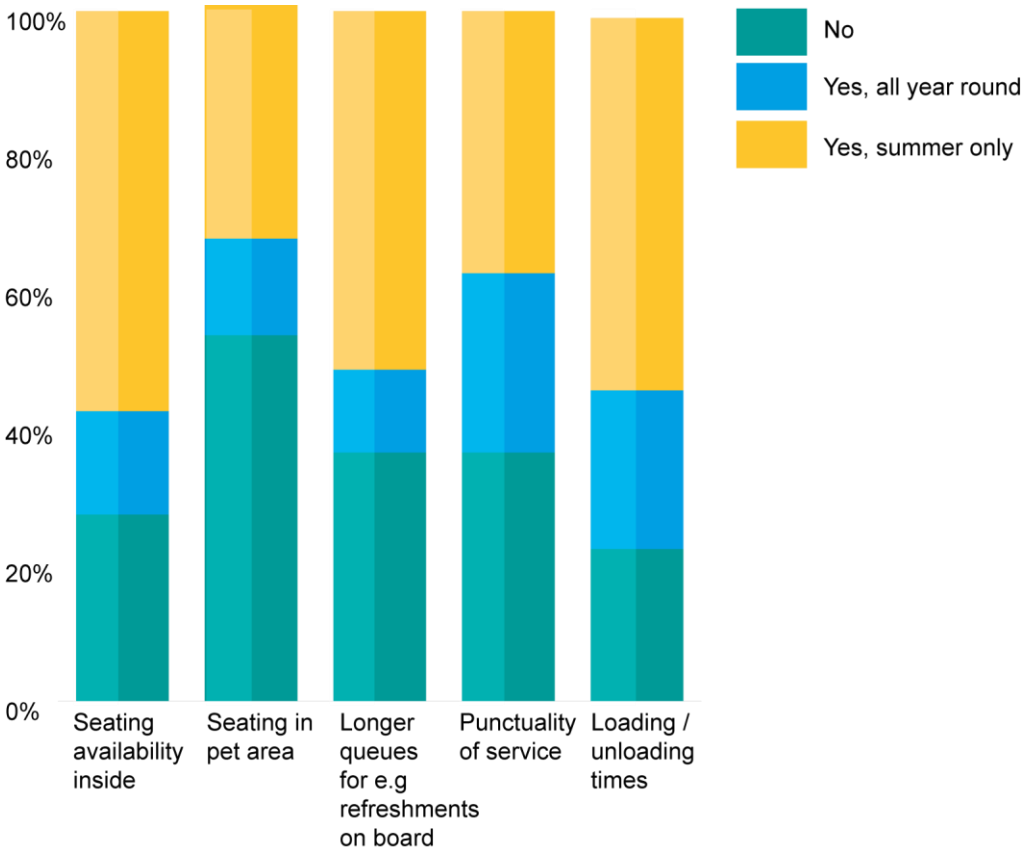


Figure 4.39: Perceptions of onboard service since RET was introduced (Source: Resident survey, n=437)

The above figure suggests that island residents think that the level of service onboard has reduced due to the additional trips being made as a result of RET. In particular, these people think that the related factors of punctuality and loading / unloading times have deteriorated, a point which is borne out by the data on several high volume '2015 RET' routes, including Oban – Craignure and Mallaig – Armadale (although the current vessel deployment is more of an issue on the latter route).

In the onboard survey, those who had experience of using the ferries before 2015 were asked if they had noticed any deterioration in the level of service onboard with respect to these same aspects of the ferry service.

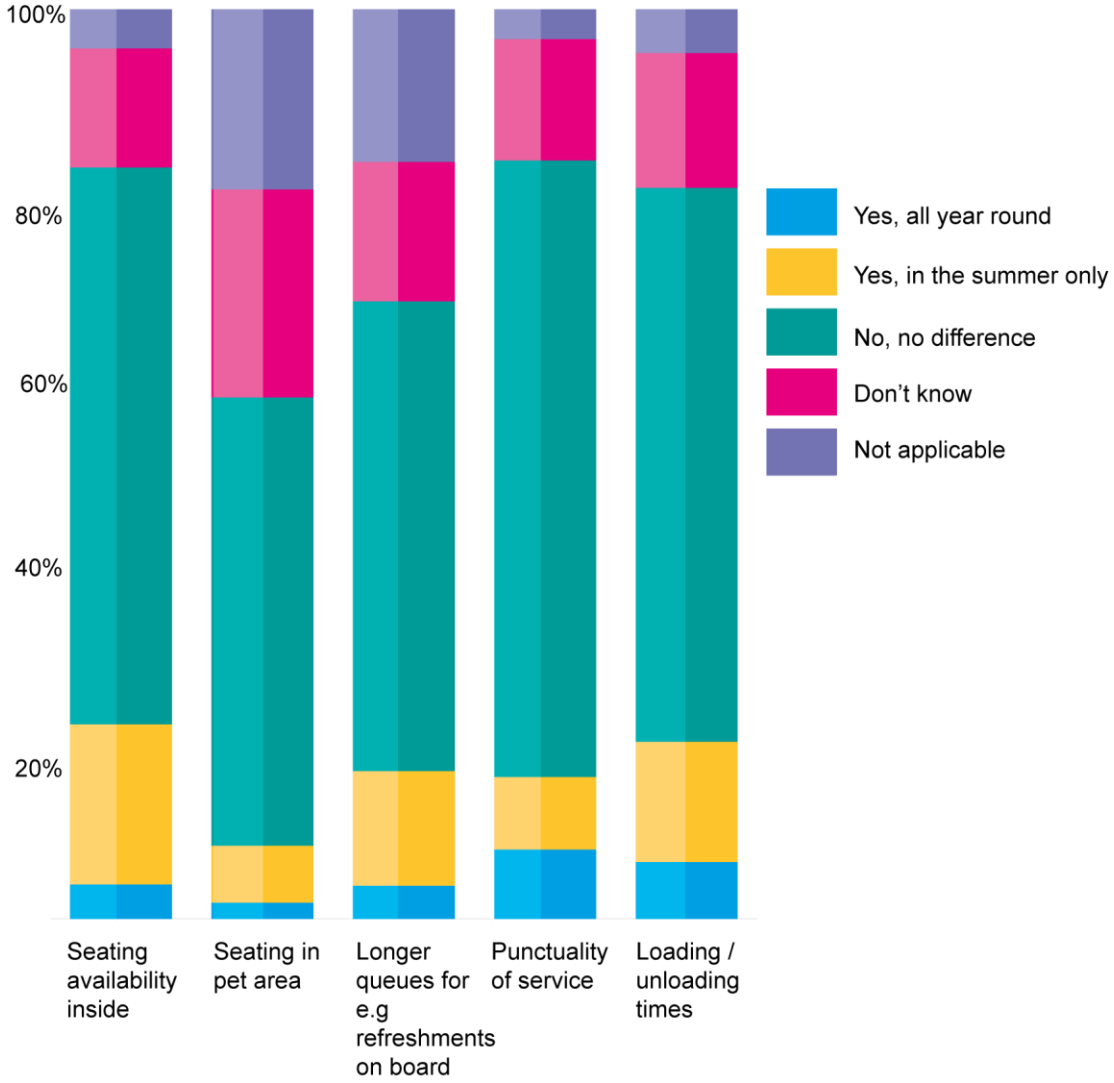


Figure 4.40: Perceptions of onboard service since RET was introduced (Source: Onboard survey, n=578)

The results from the onboard survey suggest that fewer people think that the level of service has declined compared to the resident survey. A higher proportion of residents

have reported a deterioration in the level of service than visitors however, which would narrow the gap between the two sets of results.

It should be noted that the operator has recruited circa 30-35 full-time equivalent (FTE) crew and 33 port staff to accommodate the increase in demand (this is explored in more detail later in the report). Without this positive response to the RET-induced demand, perceptions of the service may have been much worse.

Key point: Island residents and, to a lesser extent visitors, have noted some deterioration in the level of service since RET was introduced on the '2015 routes'. This is predominantly due to delays associated with slower turnaround times as a result of the increased volumes of vehicular traffic on most routes (a point borne out by operator performance data). CFL has proactively addressed this challenge by recruiting additional vessel and port staff to accommodate growing demand.

What are the consequences of these new journeys for the island economy – '2015 RET' islands?

The increase in demand for ferry travel implies that those making these additional trips derive a 'utility' – or benefit – from doing so. This section explores the consequences of these new journeys for the '2015 RET' island economies, both from a resident & visitor and business perspective.

Residents & Visitors

How have people benefitted from making these new trips?

The figure below sets out how residents of the '2015 RET' islands think they benefit from making additional ferry trips:

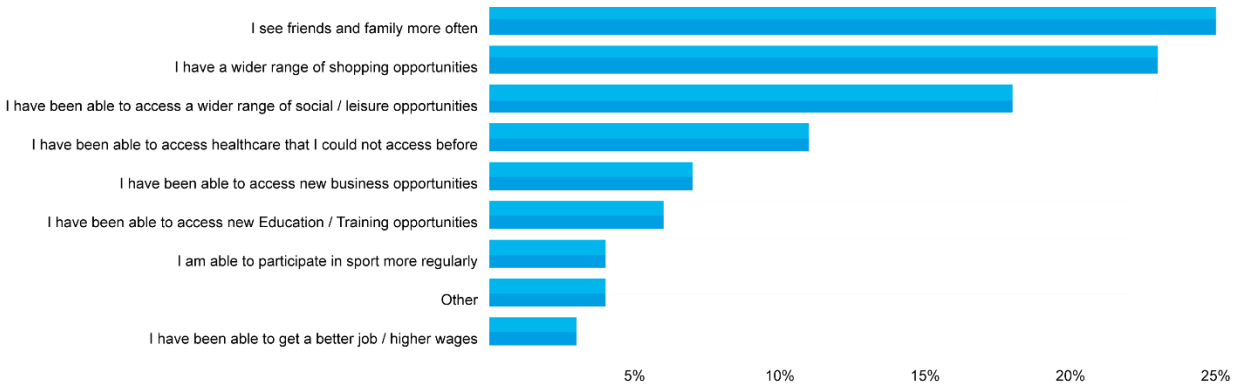


Figure 4.41: How do island residents benefit from making additional ferry trips? (Source: Resident survey, n=367, multiple response question)

The way in which people benefit from making these new trips is closely linked to the purpose. People benefit across a range of areas, including social, leisure, shopping and healthcare.

A small number of respondents said that they have been able to access a better job, new education / training opportunities and new business opportunities meaning that the benefits of these new trips are economic as well as social.

As well as making new trips, do people take the car more often?

Yes, around 80% of those who said that they made additional trips also make more trips by car.

Are people travelling to different places when they take a car on board?

Yes, 20% of respondents have changed where they travel to when they now travel by car.

How have people benefited from going to these new places?

People switching to car-based travel see a range of benefits from doing so, as set out in the figure below:

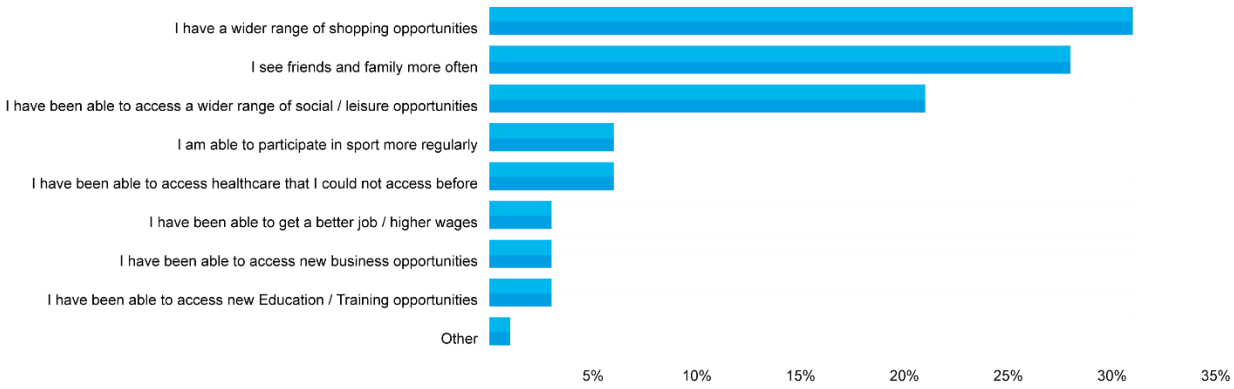


Figure 4.42: How have people benefitted from going to different destinations? (Source: Resident survey, n=71, multiple response question)

Travelling by car rather than as a foot passenger therefore allows people to:

- access shopping opportunities
- visit friends and family more often
- access a wider range of social / leisure opportunities

How have these people benefitted from travelling by car more often?

People were asked whether they enjoyed other benefits as a result of switching to car travel, the results of which are shown in the figure below:

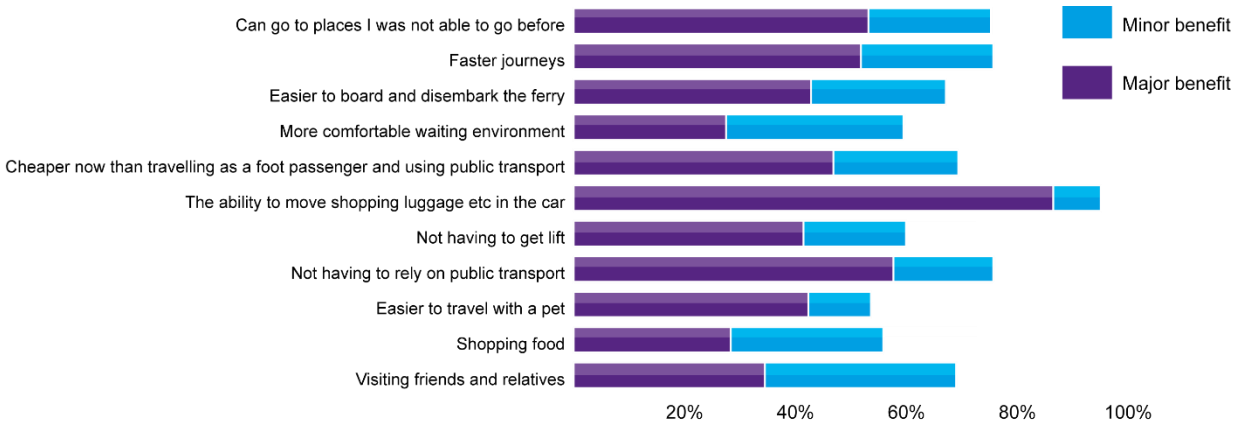


Figure 4.43: How have people benefitted from now taking a car on the ferry? (Source: Resident survey, n=133, multiple response question)

The major benefits which people perceive are:

- easier to move shopping / luggage etc
- not having to rely on public transport
- going to new places which were previously out of reach using public transport
- faster journeys

Key point: The benefits '2015 RET' residents have derived from making additional trips are closely related to their journey purpose (predominantly visiting friends & relatives more often, shopping and leisure opportunities). Around a quarter of respondents make the same number of trips as prior to RET but now take a car, which has allowed them to access different destinations and widen the range of activities in which they engage whilst on the mainland.

RET has also facilitated improved access to employment, training and business opportunities for a small number of island residents, generating economic benefits for the communities concerned, which are in addition to the social benefits outlined above.

Has this increased use of the car affected the number of cars being left on the mainland, or household car ownership?

It is common in many smaller islands for residents to maintain an old on-island car (or not have an island car) and keep their primary car on the mainland. This reduces the

need to pay a ferry car fare when making a journey. The survey therefore explored the extent of this effect - the evidence suggests that there has been a reduction in cars being left on the mainland:

- 11% still leave a car on the mainland
- 66% have never done this
- 23% no longer leave a car on the mainland

However, evidence from the resident survey did not suggest any significant change in car ownership levels since the introduction of RET. This suggests that residents of smaller island communities are taking advantage of lower fares to take their car back to the island more often, which aligns with the carryings figures.

Key point: The number of island cars parked on the mainland should have reduced, but no significant impact on car ownership levels was identified, which suggests that residents of the smaller island communities are taking advantage of lower fares to take their car back to the island more often.

Has this extra car use affected people's use of public transport?

Yes, around half of these people said they used public transport less as a result of making extra car trips. This ties in with the perceived benefits of taking a car onboard and the clear trend in the data for previous foot passengers now taking a car onboard the ferry.

Are people who make extra trips now spending more on fares overall?

Whilst RET has led to a reduction in fares, the resident survey found that:

- 47% of those who make more trips by car spend more on fares
- 71% of those who make more trips overall (many of which by car) said that they now spent more on fares overall

This implies that the perceived benefits of taking a car onboard the ferry outweigh the marginal fares cost and that pre-RET fares acted as a barrier to journeys which people were wanting to make.

Key point: Due to the switch from foot passenger to car travel, a significant proportion of residents surveyed now spend more on fares than they did prior to the introduction of RET. This suggests that the perceived benefits of taking a car onboard the ferry outweigh the marginal fares costs, and that the pre-RET fares were frustrating journeys which people were wanting to make.

Do people visit, or provide services to island residents more often?

The figure below shows the extent to which RET has improved service provision to island residents and / or increased the number of visits from friends and family:

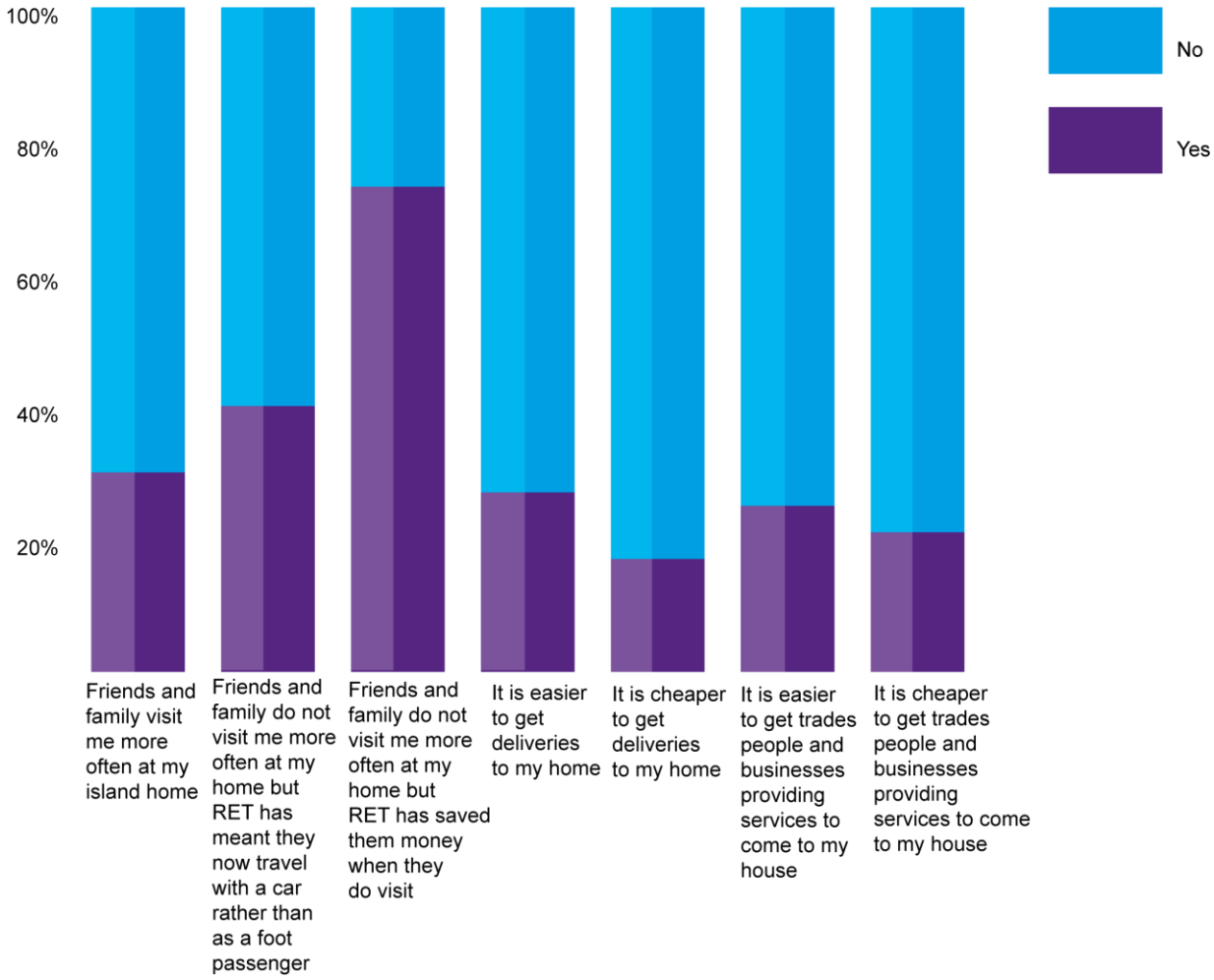


Figure 4.44: Do people visit, or provide services to island residents more often? (Source: Resident survey, n=477)

The figure suggests that around a quarter of residents in '2015 RET' islands now think it is easier / cheaper for mainland- based businesses to provide services to island residents. This is clearly beneficial to island residents as it offers:

- the ability to buy / procure goods and services which they could perhaps not before
- wider choice
- potentially lower prices for goods and services

- it may be negative from the perspective of the island economy if mainland businesses and suppliers can undercut their island counterparts (this issue is explored in more detail in the 'Business' section below)

30% said that cheaper fares has enabled friends and family to visit more often. This is essential in an island context where the Visiting Friends & Relatives (VFR) market includes children returning from higher education or work and the island diaspora returning, sometimes for longer-periods and on occasions to assist in a family business (e.g. lambing season, harvest etc).

Key point: RET has facilitated growth in the crucial 'visiting friends & relatives' market, whilst also making it easier for island residents to access mainland goods and services.

Do island residents spend more on the mainland as a result of RET?

Respondents were asked whether, as a result of RET, their level of spending on the mainland and on island had changed – the responses are summarised in the matrix below:

		Island Spend			
Mainland Spend		**Less**	**Same**	**More**	***Total***
	Less	2%	2%	1%	*5%*
	Same	1%	57%	6%	*65%*
	More	4%	15%	11%	*30%*
	Total	*7%*	*74%*	*18%*	*100%*

Table 4.3: Mainland / Island spend matrix (n=421)

The above matrix suggests that:

- for most people, 57%, there has been no change in their spending patterns
- 30% said that they now spend more on the mainland, but only 4% had increased spending on the mainland whilst reducing spending on island
- 18% had increased spending on island, whilst 7% had reduced island spending
- 37% said that the spending had increased in general, which presumably is the re-spending of money which would previously have been spent on ferry fares

This implies that the money saved on ferry fares has been recycled into both the island and mainland economies. On balance, more people have however increased spending on the mainland.

Key point: The evidence from the '2015 RET' islands resident survey suggests that the money saved on ferry fares has been recycled back into both the island and mainland

economies (and is in effect a transfer from government). 37% noted that spending has increased in general, albeit a larger proportion of this has been spent on the mainland than on the island. From the perspective of resident spending, RET has generated a net additional economic benefit for the islands concerned.

How much do visitors to the island spend?

As part of the onboard survey, people were asked how much did they spend / planned to spend on their trip with respect to accommodation and other spend. There is a clear distinction here between day-trip visitors and those spending at least one night in the island / peninsula. The results for island visitors are shown in the figure below:

Figure 4.45: Visitor spend (Source: Onboard survey)

Average spend per visitor travelling party[5] (assuming the mid points of these ranges):

- visitors 1+ night, accommodation: £446 (n=639)
- visitors 1+ night, other spend: £387 (n=707)
- day trippers: £114 (n=375)

This is reinforced by the household incomes people indicated in the survey. Whilst only 18% of permanent island residents said they had a household income of more than £50,000, the figure for second homeowners was 35%, whilst for visitors it was 43%. The survey responses suggest that a small number of visitors – including

[5] There was an average of 2.5 people per travelling party.

daytrippers – are spending significant sums of money on-island, perhaps on one or a small number of big purchases.

Key point: The visitor spend data collected through the onboard survey suggest that visitors are spending fairly substantial sums of money on the islands. The sample suggests that tourist to the islands are disproportionately drawn from higher income groups.

Business Views

Having established how the introduction of RET has influenced consumer behaviour, the study then explored how lower fares have impacted on island businesses through a combination of the business survey and depth interviews. Since RET has primarily affected the cost of moving people rather than goods, the direct impact has been focussed on the following sectors (note that changes to supply-chain arrangements are considered in Chapter 5):

- tourism – reflecting increased visitor numbers due to lower fares
- providers of goods and services to residents who may now travel to the mainland

The focus of the business survey and depth interviews was therefore very much on exploring impacts in these two sectors.

The list below provides a sectoral breakdown by NOMIS category of the 68 businesses in the '2015 RET islands' which responded to the business survey.

- agriculture, forestry & fishing = 6
- manufacturing = 9
- water supply, sewerage and waste management = 2
- construction = 3
- wholesale & retail trade and repair of vehicles = 7
- transportation & storage = 5
- accommodation & food service activities = 15
- real estate activities = 3
- professional, scientific and technical activities = 1
- administrative & support service activities = 2

- public administration & defence = 2
- education = 1
- human health & social work activities = 3
- arts, entertainment & recreation = 7
- other service activities = 2

Visitor numbers

The operator data clearly highlighted the network-wide growth in carryings, much of which was driven by an increase in visitor numbers to the islands. This is true also of the '2015 islands' where the introduction of RET led to reductions in fares to some of the most popular tourist destinations (e.g. Bute and Cumbrae) and others where fares may previously have acted as a deterrent to using the ferry (e.g. Mull).

Of the 48 businesses which were established in their respective island communities prior to 2015 and responded to the question on visitor numbers, there was consensus that visitor numbers had increased. Interestingly, all 48 businesses identified an increase in the number of day-trippers - whilst this was dominated by Cumbrae (13) and Mull & Iona (15), there was a spread of positive responses across all islands, including the Outer Hebrides, where RET on the Sound routes has encouraged increased visitor movements between the islands in the chain.

Around two thirds of businesses identified an increase in short-stay holidays (1-4 nights), a quarter of which were based in Mull, with a more even spread across the other islands. A further 21 noticed an increase in long-stay (4+ nights), with a reasonable spread of responses across the islands.

The findings of the business survey were largely borne out by the depth interviews, where there was a view from a range of islands including Cumbrae, Mull, Raasay and Skye that overall visitor numbers have increased. Key points of note / context emerging from the business interviews include:

- There was widespread support for the business survey finding that visitor numbers have grown on most islands. Unsurprisingly, this outcome is particularly pronounced in the islands which are closest to the mainland and where there is a well-defined tourism product. There was also a general consensus that the length of the visitor season has now extended to cover the whole summer timetable, a point borne out by the carryings data where there has been strong shoulder-summer growth.

- There was a general view amongst businesses that growth in the daytripper market has been stronger than in the short and long-stay market. This is

unsurprising given that, in volume terms, the '2015 RET' islands are dominated by Bute, Cumbrae and Mull which historically have a strong daytripper market (particularly Bute and Cumbrae)

- There was also a widely held view (supported by the carryings data) that the growth in car traffic has exceeded the overall growth in visitor numbers (the implications of this point are explored later in this section)

- The business interviews also identified a strong growth in 'secondary tourism', whereby islands are benefitting from discretionary and unplanned visits from neighbouring areas. This was particularly the case in Raasay which is to some extent benefitting from the Skye market and in the Outer Hebrides, where RET on the Sound routes has facilitated day- trips along the chain, and in particular between Harris & North Uist (and vice versa)

- Whilst RET has facilitated growth in visitor numbers and reduced the psychological barrier associated with high absolute fares, several stakeholders were at pains to point out that such growth cannot be solely attributed to RET. New attractions, promotion and marketing and the weakness of Sterling are all considered to have contributed to this growth

Key point: There was strong agreement across the '2015 islands' that RET has facilitated increased visitor numbers to the islands, particularly in the daytripper market.

Visitor expenditure

Whilst there was consensus that overall visitor numbers have grown in the '2015 islands', views were much more mixed in terms of the level of expenditure by visitors to the islands. Of 48 businesses established in the islands prior to 2015, only 20 responded that they had witnessed a growth in visitor spending, a finding that is slightly at odds with the onboard surveys.

Whilst a relatively small sample, the message from the survey suggests that, in islands where the increase was dominated by day-trippers, the increase in on-island spend was less noticeable, with expenditure largely concentrated in food-based retail. Indeed, it is notable that in Cumbrae and Mull, the number of businesses responding that expenditure had not increased was greater by a factor of two than those which had recorded an increase – this is despite those islands recording the highest recognition of the growth in overall visitor numbers.

The business survey findings were borne out by the stakeholder interviews. One further point made through the interviews is that, post-RET, the comparatively low cost of taking a car means that it is easier and cheaper to buy goods on the mainland and take them over on the car than to buy them on-island. This point applied both to daytrippers and longer-stay visitors.

Key point: A growth in visitor expenditure has been identified through the business survey and stakeholder interviews. However, this is by no means universal and has been largely focused in food- based retail. It was also suggested that the comparatively low cost of taking a car since RET was introduced has prompted visitors to buy goods on the mainland and take them over in the car rather than travelling as a foot passenger and buying on-island.

Competition & economic leakage

From the perspective of island-businesses, reductions in fares are of course a potential two-way street – whilst they make it easier for people to visit the isles, they also make it easier for island residents and businesses to make use of mainland retail opportunities and services. This trend was indeed identified through the resident survey.

The business survey asked whether businesses in the 2015 islands had experienced increased competition as a result of the introduction of RET. Of the 42 businesses which responded, just under a quarter noted that they have experienced additional competition, although around 70% noted that they had not. Two thirds of the businesses which noted that they did experience additional competition were located in Cumbrae and Mull.

Whilst a minority of businesses noted that they are now subject to more competition as a result of RET, half the businesses surveyed (n=21) responded that island residents are now spending more on the mainland, a finding which is consistent with the resident survey (albeit that survey also suggests that island-based spending has also increased). There is again a clear trend here of businesses on islands close to the mainland being the most heavily affected – 18 of the 21 businesses identified were located in Cumbrae (9), Mull (7) and Bute (2).

The position with regards to island residents sourcing more goods from the mainland was more ambiguous, with 13 of 42 businesses responding that they had noticed this effect. 12 businesses had noticed no difference, with 17 responding that they did not know (which is unsurprising given that this question only applies to service-related businesses). However, it was again apparent that the islands most affected by RET in this respect were those closest to the mainland, with 11 out of the 13 businesses located on Bute, Cumbrae or Mull.

Key point: Overall, the introduction of RET to the '2015 islands' has had a differential effect in terms of exposing the islands to increased competition and economic leakage from residents buying goods or services on the Scottish mainland. The business survey and accompanying interviews have highlighted that the islands closest to the Scottish mainland and with a reasonable scale of on-island retail and service provision have been most affected (i.e. Bute, Cumbrae and Mull). Other islands which are more distant (e.g. the Small Isles) or which have always had a dependence on the mainland for retail and service provision (i.e. Lismore) have been more insulated against this effect.

Reverting back to the original question, there is a wider debate as to whether increased competition, in its broadest sense, is a good thing for island economies. On the positive side:

- The cost of goods and services across the islands is often higher than for comparable areas on the mainland, which can in part be attributed to the cost imposed by needing to use a ferry and the captive on-island market. Reductions in the cost of ferry travel offer an opportunity to buy some goods at a lower cost on the mainland and may also facilitate market entry (particularly for services), reducing prices if the competitive effect is strong enough. This in turn would increase the disposable income of island residents and can thus be considered a benefit.

- Secondly, whilst island residents choosing to spend more money off-island may be considered a negative, they are making this choice because they derive a benefit from doing so. This again can be considered as a benefit in terms of increasing disposable income (financial benefit) and / or providing greater choice (utility / social welfare benefit).

On the negative side:

- Island residents choosing to spend more money on the mainland or on services supplied from the mainland represents 'leakage' from the island. A reduction in on-island spending will of course impact on the profitability and viability of island businesses, with 'multiplier effects' likely to be more significant in a smaller community because of the dependence on locally generated demand.

- Moreover, many island businesses have multiple roles – for example, the island shop may contain the local tourist information office or post office. If the viability of such businesses is compromised, the impacts will be more widespread than if say a shop or petrol station in an urban area closed down.

Business turnover and employee numbers

As a proxy for the impact of RET on business finances, respondents to the business survey were asked how their turnover had changed since fares were reduced in October 2015. Of the 46 businesses who were established in the '2015 RET islands' before the policy was introduced:

- 17 businesses noted that their turnover had increased - around one third of these businesses noted that RET was a contributing factor in the change to their turnover.

- However, the same number noted that their turnover was unchanged, with a further eight businesses responding that their turnover had declined.

Businesses which noted that their turnover had increased were fairly evenly spread across the '2015 RET' islands. However, it is very notable that over half of the businesses where turnover went down are located in Cumbrae, with three of the other four in islands proximate to the mainland (two in Mull, one in Bute). Whilst the sample is relatively small, the businesses which have identified a reduction in turnover predominantly provide goods and services to local residents and have a degree of exposure to external competition (an issue revisited later in this section).

Whilst turnover has on the whole increased, this has not generally fed through to increased employment. 43 businesses answered this question, with only six responding that employment had increased, of which only four identified RET as a factor in this expansion. This is likely to be in part due to the majority of respondents being small businesses, and in many cases, family businesses.

Key point: Whilst around 40% of businesses noted that turnover has increased since RET was introduced in 2015, competition has also eroded turnover for around a fifth of businesses surveyed, with these businesses concentrated on islands close to the mainland. The increase in turnover has not particularly fed through to a growth in employment.

What are the consequences of these new journeys for the Scottish economy – 'RET 2015' islands?

As part of this study, we explored whether it was possible to undertake an economic impact assessment (EIA), establishing a quantitative estimate of the impact of the policy on Gross Value Added (GVA) and employment – i.e. quantifying the benefits column of the 'RET ledger'. The survey and carryings data provide material which could feed into an EIA but, in our judgement, there are simply too many unknowns for a credible and robust estimate of the impact of the policy to be made. To this end, a largely qualitative description of the impact of RET at the Scotland level is set out below.

At its simplest level, the introduction of RET has had two impacts:

- For any ferry trip which would have taken place without the introduction of RET, the reduction in fares would be reflected in an increase in the disposable income of the user. Whilst this is simply a 'transfer' from government to user, if that disposable income is then spent, it will generate multiplier effects in terms of employment and economic output (typically defined as Gross Value Added, or GVA).

- Where RET has generated a new ferry trip, it may give rise to additional economic impacts associated with increased expenditure on the island or adjacent areas of the mainland, which would again feed through into an increase in local output and employment.

<u>Journeys which would have taken place with or without RET</u>

For journeys which would have taken place regardless of whether RET was introduced or otherwise (circa 94% of the onboard survey sample), the primary benefit of RET is an increase in disposable income afforded by the reduction in fares. These impacts would be manifested in the following way:

- A proportion of the savings made by both island residents and visitors will be reinvested on the island or adjacent mainland areas. Indeed, the resident survey suggests that 37% of respondents have increased spending, which is presumably re-spending the money saved on fares. As well as providing a transfer to what are in many cases economically fragile areas, the increased local spending will have employment and income 'multiplier effects', meaning that each £1 invested by the Scottish Government will in theory have a higher value return.

- The one caveat to the above point is that there will be an element of 'leakage' associated with:

    - island residents re-spending this money outwith Scotland (e.g. online)

    - Scottish visitors re-spending this money outwith Scotland

    - non-Scottish visitors saving a proportion of the money and returning to their home country with it

- There may also be an element of 'displacement', but this will principally be local in nature, reflecting a change in the balance of island / mainland spending. There is therefore likely to be little, if any, impact at the national level

- Average wages in Argyll & Bute, the Outer Hebrides and the Highlands lag the Scottish average, whilst the cost of most goods and services in island communities is typically higher than on the Scottish mainland. From a socio-economic perspective, the 'RET investment' assists in narrowing this differential, effectively providing an indirect transfer payment from government supporting island residents.

Key point: The introduction of RET has increased the disposable income of island residents and visitors. Whilst there will be a degree of economic leakage, the policy nonetheless represents an investment in island communities, supporting both GVA and employment growth.

<u>Journeys generated by RET</u>

The onboard survey suggests that around 6% of journeys were generated by RET, with a further 5% of trips now being made by car when they were previously foot passenger only. The 'generated trips' imply a direct economic benefit as people are

now making journeys which the level of fares previously stopped them from doing. There are a range of national economic impacts associated with this:

- The increase in visitors to the islands directly attributable to RET represents a net additional economic benefit at the Scotland-level, assuming these journeys are not simply displaced from elsewhere in Scotland.

- From a productivity perspective, the resident & business surveys and business interviews suggest that RET has facilitated increased business travel, business-to-business interaction, business formation and competition. These effects combine to improve the productivity of the islands and nearby mainland areas, and thus Scotland as a whole.

- From a labour market perspective, the resident survey suggests that RET has facilitated improved access to employment – i.e. better connecting the labour market to the jobs market. The additional employment-related journeys may be a combination of connecting those out of work to employment or facilitating a move to more productive employment. This will have the effect of expanding the size of the island / nearby mainland economy and thus the Scottish economy overall.

- From a social perspective, RET has facilitated a range of journeys which are socially desirable – e.g. it has expanded access to education, allowed for visiting friends & relatives more often (and vice versa) etc. Whilst such benefits are difficult to quantify, they are integral to the sustainability of island communities, a key policy objective of the Scottish Government.

Key point: The new journeys generated by RET have supported an increase in Scottish visitor numbers, national productivity and labour market flexibility. These effects combine to provide a net economic benefit at the national level.

Whilst RET has generated a range of benefits at the national level, it is though important to caveat that there is an opportunity cost attached to the policy in terms of where else that money could have been invested.

<u>What has been the long-term impact of RET on the islands?</u>

Outside conventional economic impact assessment approaches, there is a much wider question as to how the lower fares introduced by RET have translated into wider social and economic impacts in the isles in terms of e.g. productivity (i.e. Gross Value Added); employment; population; investment; land-use etc.

The ability to map and evidence the long-term impacts of RET is dependent on secondary data. However, as explained in the research approach chapter, the issues of spatial definition and time lag mean that identifying appropriate data with which to make a before and after assessment is highly challenging. A review of available socio-economic data was undertaken at the outset of this study. This review confirmed that

the data geography covering Scotland's islands, and in particular the smaller islands, makes it difficult to draw out meaningful evidence on how RET or indeed other investments have impacted on the islands.

The above said, it was considered that the Outer Hebrides would provide a useful case study of the impact of RET because:

- as a contiguous landmass, local authority area and Parliamentary Constituency (both Scottish and UK), the data geography of the islands lends itself to the analysis of wider social and economic outputs outlined above

- as RET was first introduced to the Outer Hebrides in 2008 (except the Sound routes), data lag is less of an issue (although a clearer picture will be available following the 2021 Census)

However, the key point emerging from this case study is that, even where RET is long established, the type and scale of data collected simply does not facilitate the isolation and rigorous evaluation of the impacts of a major policy of this nature. For example, consistent data on visitor numbers is not regularly and systematically recorded. This is a key issue, particularly in the context of the National Islands Plan and the commitment to 'island-proofing' and Island Impact Assessments. A key recommendation emerging from this study is therefore to commission the regular collection of datasets which would feed into planning and evaluation of policies. Representations should also be made to more appropriately define the islands in key national datasets.

Key point: The type, volume and spatial disaggregation of data covering Scotland's islands does not support the rigorous and robust evaluation of how RET (or indeed other major policies) has impacted on the society and economy of the isles. The absence of appropriate data is in itself an important finding and should be fed into the wider considerations around the National Islands Plan, particularly in the context of carrying out Island Impact Assessments.

How has RET impacted on the environment – '2015 RET' islands?

A consistent finding across all components of this study is that RET has led to an increase in the number of people taking the car on the ferry – some of these trips are newly generated, and some of them are as a result of people switching from travelling as a foot passenger and / or on public transport. There are three negative environmental consequences in this respect:

- an increase in global emissions associated with increased vehicle kilometres – as well as more cars on the ferry, the resident survey also found that people are travelling to new destinations

- potential air quality associated with stationary traffic at the busier terminals in urban / residential areas (e.g. Largs, Oban, Mallaig, Ullapool etc)

- it should be noted that there is no quantitative evidence to suggest that any air quality issues have emerged, as such data does not exist

- a further increase in global emissions associated with the operation of any additional ferry services to cope with demand

Key point: Whilst RET has offered social and economic benefits to the island communities and those who visit them, it has had a net environmental disbenefit. This is primarily as a result of increased vehicle kilometres, increased ferry sailings and, potentially, air quality impacts in ports around urban / residential areas.

Why do people feel they need to take a car on the ferry?

Whilst RET has generated negative environmental impacts, it is important to understand why people are choosing to take their car on the ferry more often, particularly when the evidence suggests it is costing them more in fares. Indeed, 55% of the onboard survey sample had taken a car onboard the ferry, citing the following as their reasons for doing so:

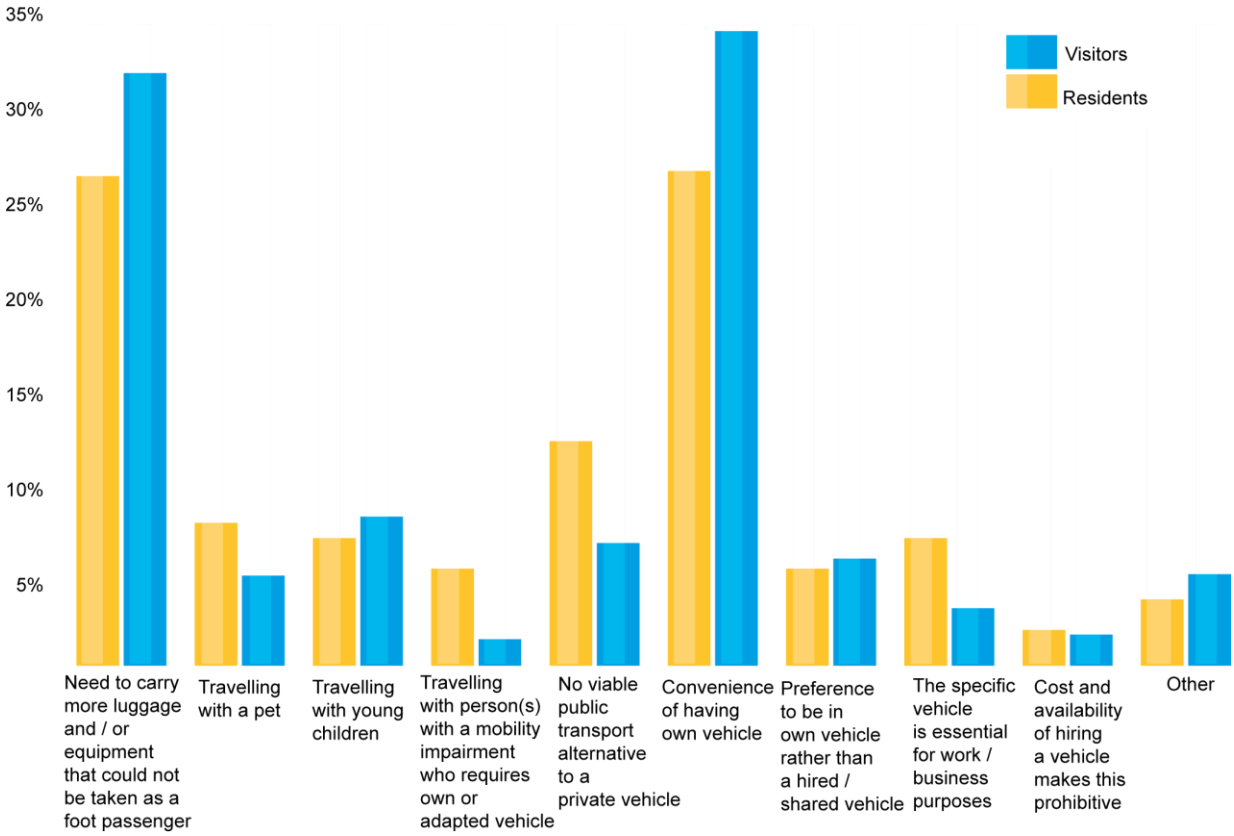


Figure 4.46: Why was a car taken on the ferry? (Source: Onboard survey, n=881)

Both visitors and residents cite similar reasons for needing to take a car onboard, these mainly being the need to carry luggage etc. and the convenience of using their

own vehicle. By inference, the benefit associated with being able to do this outweighs the additional cost in fares.

Could these people have used public transport instead?

Those taking a car onboard were asked if they could have used public transport for their mainland and island leg of their trip in turn. The answers were similar for both so are shown combined below.

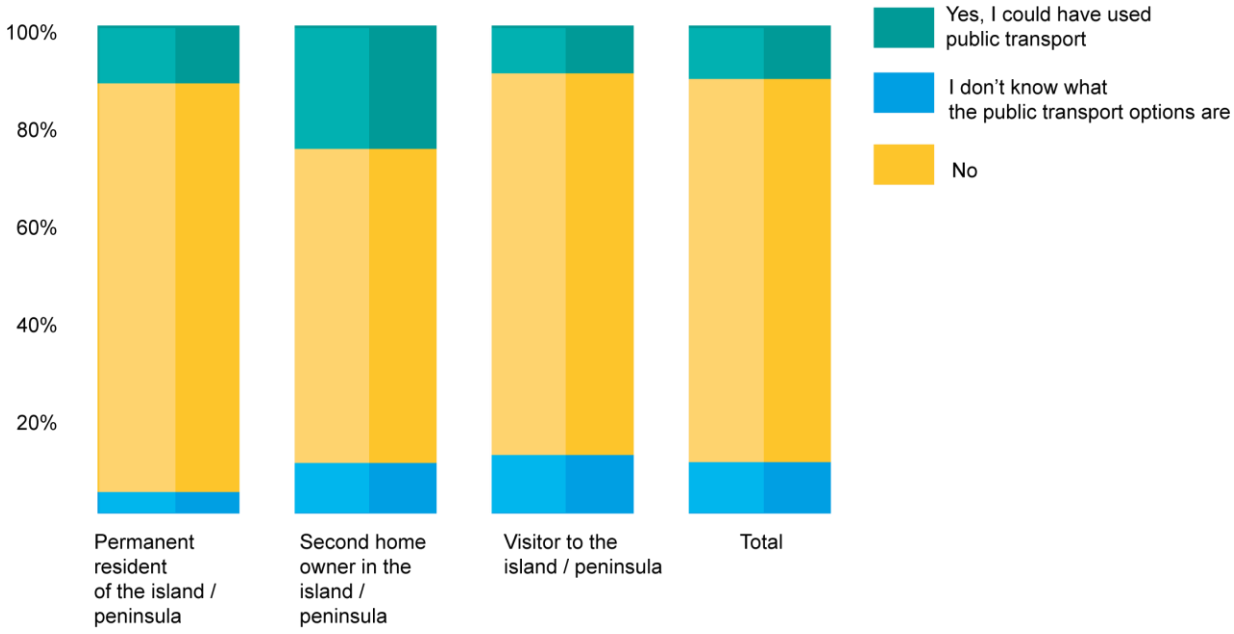


Figure 4.47: Could these people have used public transport instead? (Source: Onboard survey, n=881)

Around 10% of respondents to the onboard survey said that they could have used public transport, but nearly 80% said that public transport was not an option for them on the mainland or island. The limited public transport connections outwith the Firth of Clyde will always be a major deterrent for any ferry passenger making a journey beyond the immediate ferry landfall – this issue also came through strongly in the resident and onboard surveys undertaken in the Outer Hebrides STAG Appraisal.

Key point: Visitors and residents both highlighted their main reasons for taking a car on the ferry as needing to take luggage / equipment and the convenience of having their own vehicle. This suggests that the absolute level of fares prior to the introduction of RET acted as a deterrent to travel. 80% of car users noted that public transport was not an option for their onward journey, a particular issue outwith the Firth of Clyde where rail and bus services are infrequent and journey times long.

Why do people who could use public transport not use it?

Of the 10% or so of respondents who noted that they could have used public transport for their journey, they were asked why they did not do so. The responses to this question are set out in the figure below:

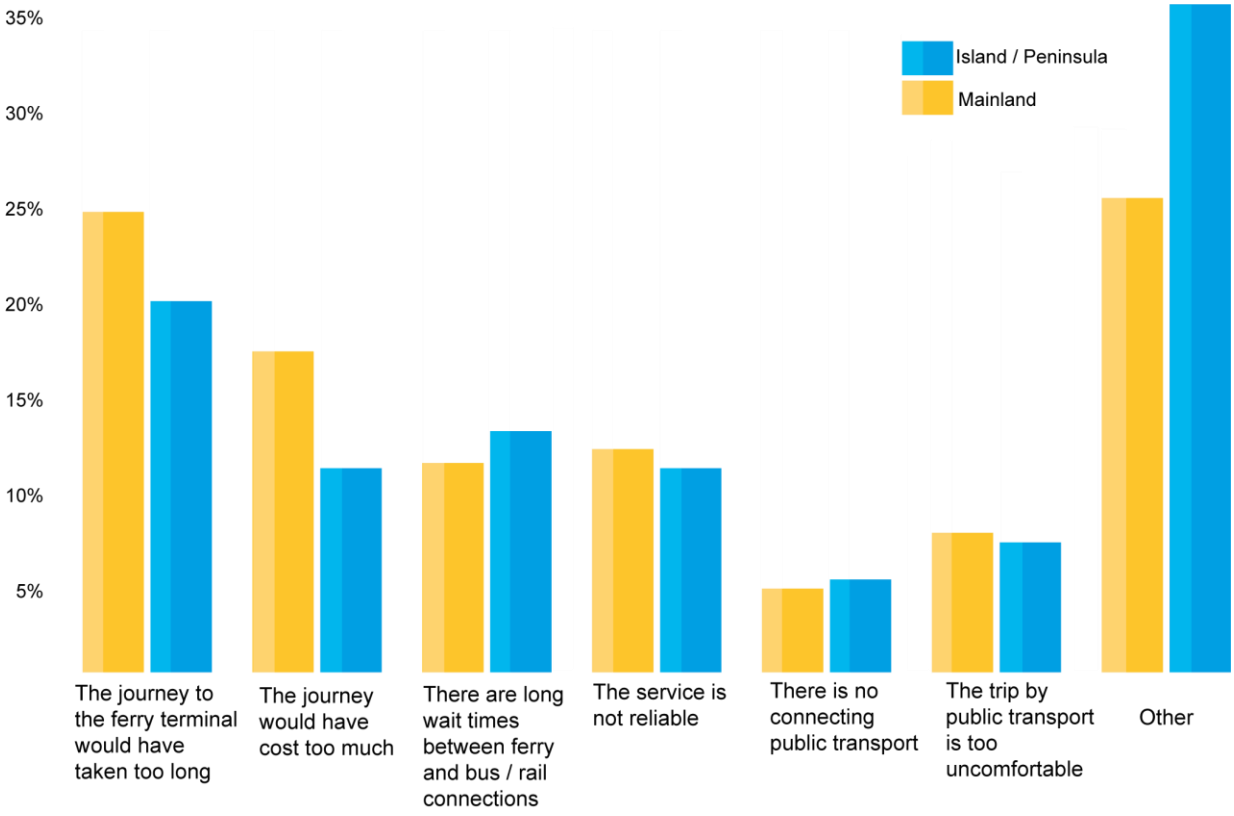


Figure 4.48: Why did the respondent not use public transport? (Onboard survey, n=76)

Key point: The reasons for not using public transport were similar for the mainland and island legs of the journey. The journey times, interchange times and cost of public transport are the main deterrents to its use for connecting with ferry services at either side of the crossing.

Key point: Whilst it can be argued that RET has had negative environmental implications, the journeys which are now being undertaken by car which were not before are of personal benefit to the individuals concerned, who are now making journeys which were previously frustrated by the cost of travel. The survey suggests that the scope for growing mode share in these two areas is limited given long onward journey times, limited public transport coverage etc.

5 What have the consequences been for island supply-chain?

Overview

When the Coll, Tiree and Outer Hebrides RET pilot was introduced in 2008, it included all classes of commercial vehicles, defined at that time as any vehicle over 5 metres in length. This led to a significant reduction in fares for hauliers in these islands, but at the same time led to the withdrawal of the Traders Rebate Scheme, a volume-based discount which typically benefitted the larger hauliers. When the RET scheme was made permanent for these islands in April 2012, the decision was taken to:

- withdraw RET for commercial vehicles, with a three-year transition back to pre-RET fare levels (note not all routes fully transitioned back to non-RET levels)
- with the exception of hay and live shellfish, volume and commodity-related discounts were not reintroduced
- the length at which a vehicle is defined as 'commercial' was recategorised from 5m to 6m (although height, weight and width restrictions may lead to such vehicles being defined as CVs, but this is the exception rather than the norm), meaning that many vans previously classified as 'commercial' were now categorised as cars

The above principles were retained for subsequent roll-outs of RET, albeit volume and commodity related discounts were not withdrawn on other routes.

Island supply-chains and haulage arrangements have evolved over many years, representing both local circumstances and the need to work around a ferry service. The change in the tariff structure associated with RET may have impacted haulage / supply-chains in terms of:

- increased volumes of goods being moved stemming from increased consumption on the island as a result of higher visitor numbers and / or
- the 6m rule and the associated switch from commercial vehicles to vans charged at the car rate. This chapter explores these potential effects in three parts – it will review the impact of RET on:
    - freight volumes
    - the structure of the freight market
    - vessel capacity

Individual operators had their own specific experiences to share but it was clear that in the time RET has existed, the haulage market has adjusted operations to accommodate new challenges. Each firm consulted had evolved the nature of their

businesses due to the continuously evolving nature of the underlying customer demand. Several operators noted that timetable changes had improved service levels available to them, enabling them to operate differently, thus making it more challenging to determine how much change is due to RET and how much is due to better connectivity or generally evolving customer demand and haulier operational response.

Freight volumes

Hauliers' reported that freight volumes had generally risen since RET has been introduced. Operators on the larger islands considered this to be the result of general economic growth and the continuation of general historical trends, and development of certain sectors - i.e., whisky distilling - rather than attributable to greater on-island consumption due to RET. No haulier indicated a strong causal-link between RET and increased freight volumes.

Where volume has grown, this has not automatically translated into additional freight vehicles moving, as hauliers noted that growth has typically been absorbed into trailer capacity that was not fully utilised (as is common in island communities).

Discrete exceptions were identified, suggesting that there may have been some RET driven growth, albeit unquantifiable. For example, hauliers serving islands with very small populations had observed increases in the movement of consumer goods as a result of additional visitor traffic. This increase may be more noticeable in smaller islands due to the proportion of overall freight volume that relates to retail consumption being greater as there is a lower background level of other freight traffic.

Specialist suppliers of LPG fuel also noted a small (but not very significant) increase in consumption volume over an extended summer period, which was attributed to greater tourism and increased cooking in rental accommodation. The business is seasonal though, with the majority use attributed to heating over winter.

Key point: With limited exceptions, the roll-out of RET has not stimulated a significant increase in freight volumes, at least amongst commercial freight providers.

Structure of the haulage market

Little evidence overall was found to suggest that RET had materially changed the freight supply market or increased outside competition to serve the islands. Increased competition had come from private vehicles carrying more domestic freight, and some businesses choosing to move their own demand, supplies from wholesalers for small retail businesses for example. The sections below explore this issue for route / island groupings.

<u>Short and mid-distance routes (e.g. Mull, Arran, Islay And North Uist)</u>

On the short and mid-distance routes, RET has impacted the haulage market by making the mainland cheaper to access, enabling island residents to increasingly take

their own vehicle on the ferry. Freight that would have previously been moved by commercial hauliers on large vehicles was noted as having shifted to the private car. Even larger, bulkier items like furniture and carpets are being moved privately and there were reported to be far more day trips by islanders to shop on the mainland. One operator noted a growth in 'private car with trailer' movements (potentially 5m car + 5m trailer able to be charged at the RET car rate, which is significantly less than an equivalent CV of 10m long). For example, taking a 10m commercial vehicle on the Oban - Craignure route would cost £141.60, whilst the equivalent cost for a car plus trailer would be £69.80.

This has diluted the mixed volume of freight available which allows hauliers to maximise the utilisation of their vehicles. Several operators appear to have evolved their business model to reduce their exposure to the high operating costs and asset costs of running a fleet mainly consisting of large HGVs that have become more poorly utilised, towards increasing their operations based around 6m vans. One operator noted that unless fully loaded, running an HGV to the islands is not financially viable and their use is being constrained to large, indivisible loads that cannot be broken down into smaller consignments.

One operator noted that under RET, it is more cost efficient to run four sub-6m vans in substitute to one conventional HGV, which also offers the additional benefit of greater frequency and flexibility to customers. This shift does have a material impact on ferry capacity as 24m of vehicle deck space is then required for freight previously moved on 16m of vehicle deck space. Some operators had attempted to improve their operational efficiency and reduce large HGV haulage rates for pallet-based freight but this had limited success such is the price differential between commercial and RET rates.

Mull and Arran have particularly seen this shift, although Islay does not appear to have seen the same changes. Islay however is dominated by the movement of spirit for the whisky distilleries, the volume of which is significantly influenced by investment and production on the island, not the island population or visitor numbers.

One operator noted that this shifting business model has driven the choice to open a mainland depot in replacement of an island based one. Now, bulk deliveries from mainland suppliers are delivered to the mainland depot and more frequent, lower volume consignment island deliveries are made, based on van movements, to customers. This has improved service levels to customers as previously the operator would have waited until there was sufficient volume to fill an HGV trailer before shipping to the island. This more 'just in time' approach has meant even heavy building materials are being shipped in vans in preference to standard HGVs.

Overall freight volume on these routes was considered to have increased in absolute terms but no operator attributed this specifically to increasing island demand as a result of RET. Organic growth in underlying volumes had been a longstanding trend as a result of improving ferry services and access to mainland suppliers via the internet. This overall growth in volume has to some extent mitigated the effect of volume abstraction by private vehicles.

Key point: On shorter, high volume routes, the '6m rule' has led to a reduction in goods moved on conventional commercial vehicles. Consultation suggested that island residents now more readily move goods in their own vehicles (sometimes using a trailer), whilst haulage firms have responded by substituting HGVs for vans less than 6m in length, such is the differential between the commercial and non-commercial tariff levels. It was noted in some cases that this has led to a better level of service for customers, but at the same time has reduced revenue for haulage firms and increased the amount of ferry vehicle deck space used by freight.

Smaller population islands (e.g. Coll And Colonsay)

The RET impact on smaller population islands has been more noticeable. Indeed, a tangible increase in island consumption was noted by hauliers, which is thought to come from increased visitor numbers. Due to the very low overall volume of freight, the proportion related to retail consumables, hotel and hospitality consumption is relatively high.

The overall low volume to these islands historically meant that the majority of their freight was moved in smaller vans, so the increase to 6m has allowed operators a greater fleet choice to absorb this growth. Where these operators are serving multiple islands, the ability to invest in a larger fleet of 6m vans has also given them the flexibility to extend the van services to other, larger islands where large HGV's were previously being used.

Key point: Smaller population islands have noticed a tangible increase in the volume of goods being moved, which is thought to come from increased visitor numbers, and is more noticeable because the volume of background freight is lower. As these islands have always typically been served by vans, the '6m rule' has actually extended fleet choice, to the benefit of the haulier and customer.

Longer-distance routes (e.g. Outer Hebrides)

For longer distance routes, RET has had a more limited influence on how freight is moved with a less marked switch from customers using commercial haulage to their own personal vehicles. This was thought to be due to the inability to make day- return journeys to the mainland.

Operators had not perceived a marked change in the volume of freight moving but did note that the nature of the market has influenced what is moved. For example, retailer consolidation means that Co-op is now the sole supplier to Uist's main grocery outlets, where there had previously been two or three retail wholesalers supplying different stores. This has meant greater consolation opportunities, with Co-op vehicles now arriving fuller than before. It could not be determined whether abstraction of general freight had altered the cost of delivery and by consequence driven consolidation efficiencies in the sector.

Key point: The introduction of RET has had little impact on the structure of the freight market on longer routes, primarily due to the inability to make a day-return journey to the Scottish mainland.

Vessel capacity

The haulage sector often works on tight deadlines which can be driven by customer delivery requirements of the perishable nature of the goods being carried. The ability to secure vehicle deck space is therefore essential – capacity and its management is therefore a key issue for the haulage sector.

Securing a booking

All hauliers interviewed observed that getting space on sailings is increasingly difficult with the general exception of the Stornoway - Ullapool route, where the overnight freight sailing is used by the majority of hauliers and was noted as being rarely full. Even without a block booking, one operator regularly had no problem with moving his trailers several nights per week on that service.

On other routes, the growth in passenger traffic following RET has reduced the degree of flexibility available to hauliers. A system of block bookings is used by the ferry operator for larger hauliers, but not for smaller ones. This process allows hauliers to pre-book an agreed amount of capacity on individual sailings, typically over a 3-12 month period to allow hauliers to offer their customers an assurance of capacity.

For relatively stable commodities like LPG, capacity is booked a year in advance. Delivery patterns are consistent, with operators only noting impact where their vehicles are very occasionally 'bumped' despite being booked, to accommodate high passenger vehicle demand. Where demand dictates an additional delivery is needed outside of the booked slots, this is booked on a spot basis and it was commented that securing this shorter-notice space is more difficult than it has historically been.

For general hauliers, pre-booked fixed capacity allows them to manage their customers' fluctuating demand, often at relatively short notice. Where this fluctuating demand could be accommodated within the booked capacity, there were few issues and a degree of cooperation / collaboration between competing hauliers was identified such that if one haulier did not have the booked capacity to move his customer's volume, the loads are outsourced to a competitor haulier who had space available.

On some routes, higher volume hauliers have the capacity to use stand-by space by placing loads (or empty trailers) at the quayside to take advantage of capacity that can be released as short as 30 minutes before sailing. This capacity becomes available due to either booked passenger vehicles not turning up, or more typically, if the deckspace used for booked passenger cars is less than that the space nominally allocated to those vehicles in the booking and capacity planning system of the operator.

This capability to utilise standby favours the larger operators with more vehicles but operating within a standby 'buffer' means an inherent uncertainty of getting on the service and is an additional cost on the business to overcome the risk of stranded trailers.

All hauliers mentioned that block bookings are more tightly managed by the ferry operator today than they have been in the past. Where hauliers' customer demand is beyond the block booked capacity of the haulier themselves, frustration was noted at the difficulty of getting additional space on the ferry at short notice to satisfy this demand (with the exception of Stornoway - Ullapool). Overall operational flexibility and responsiveness has reduced since the introduction of RET as the ferries are fuller.

Hauliers commented on the nature of additional passenger demand, particularly that RET had increased the propensity for islanders and visitors, especially on shorter crossings, to make day trips, thus on any day utilising capacity on two sailings.

Where this capacity was being used by visitors in large motorhomes or island residents with larger vans or trailers, vessel vehicle deck capacity was being considerably compromised for a perceived limited real value to the island economy and at the expense of freight needing to move to support the on-island economy.

While the network is operating as timetabled, hauliers have organised their business around the constraints, but they have found that the overall greater level of demand on the service has impacted the ability for the service to recover from delay and disruption. One haulier who moves significant freight volume – up to 120 vehicles per week – cited two examples in spring 2019 where it took six days to recover from disruption and return back to his and his customers' operational schedule. As a business, he has to price in this risk to service resiliency into what he charges his customer.

Hauliers seek to mitigate these risks. One approach identified was to book on the core sailings and avoid block booking on first / last sailings of the day (where multiple crossings are available). They have learned that first / last sailing tend to be the ones that are most likely to be affected by disruption and cancellation first. Core sailings are also in highest demand from non-freight traffic.

Two hauliers said that the uncertainty of getting on sailings and supply-chain risks attached to recovering from disruption has become a barrier to on-island investment by their customers, for example to increase production activity. In effect, growing RET derived passenger vehicle demand and significant challenges to increasing ferry service capacity, resiliency and flexibility is choking off potential for growing on-island business. Hauliers noted that, in several cases, these are large organisations with the choice to place investment in alternative locations or facilities.

Key point: The increase in demand for vehicle-deck space is proving to be a significant challenge for the haulage industry. Whilst block-booking affords a degree of protection, securing space over and above this can be challenging on peak sailings on the busiest routes. Moreover, recovering from disruption and delay has become very

challenging. A strong perception emerged through the haulier interviews that vehicle-related capacity constraints on the ferry are choking off growth and productive investment in the islands.

Capacity management

The capacity challenges of the network were recognised by hauliers and there was mixed opinion on the merits of demand / capacity management. It was noted that this is something that is now increasingly discussed where before it was not; a reflection of the challenges faced.

Each freight operator and route was found to have individual needs and perspectives. A common theme was that any demand management should seek to achieve fairness and recognise the value of traffic to the island economy, the lifeline requirement and the source of capacity challenges. Capacity management solutions were offered but were universally thought to need to address the management of passenger demand as much as freight. Examples given included:

- Addressing a perceived unfairness in the pricing for large motorhomes which can take as much space as vehicles moving critical supplies like fuel oil. Hauliers perceived that critical freight will receive a lower priority.

- Addressing the perceived unfairness of RET being applied to less price sensitive visitors. Several hauliers identified that many islands are not cheap destinations to visit with hotel rooms at £200+ per night in season and are not a 'fish and chips for a fiver' market. It was noted that the ferry fare for many is an incidental expense, yet heavily subsidised by the Scottish Government.

- It was noted that there should be differentiation between island residents who should benefit from RET and often have short-term travel needs and visitors who are perceived as adding little real economic value and much social disadvantage – especially the growing day-trip market on shorter routes. It is considered that island residents and freight are being frustrated and disadvantaged in their ability to use the ferry services at short notice at the expense of many visitors who are booking vehicle capacity months ahead.

- Introducing further overnight freight services on busy routes would be welcomed, but hauliers were clear that this needed to be an all-year-round solution to allow them and their customers to reconfigure extended supply-chains to benefit. Inconsistent and intermittent timetable capacity is not something the industry can properly plan and resource around.

- It was further noted that capacity needs to be managed on weight and vehicle deck space as well as length. Several older vessels are limited by their weight carrying capacity. Large motorhomes can weigh 3.5 tonnes, and more if the driver's license covers the C1 category and allows him or her to drive a leisure vehicle up to 7.5 tonnes. Similarly, larger modern cars are growing in size and

weight. Growth in this passenger traffic can limit the ability to carry a freight vehicle before the vehicle deck is full.

- It was argued that, when recovering from disruption or delay, there should be a published prioritisation matrix to allow everyone to understand who should be prioritised onto the next available sailing, and why. Hauliers felt that priority should be given to essential supplies, so that these are not left on the quayside in preference for discretionary leisure travellers.

Summary

The haulier depth-interviews identified that freight and haulage companies have been successful at evolving their businesses to adapt to the post RET environment. It has brought opportunity and new challenges, particularly the increased competition from 'freight' being conveyed in personal vehicles.

Very little correlation was identified between the introduction of RET and an increase in freight carried by hauliers, although in smaller markets it was evident that there has been some effect; logically, this must also be the case for all islands even if not at a significant or identifiable level.

RET has continued to impact on vehicle-deck capacity, and thus the ability of freight operators to provide high service levels for their customers which, in some cases, is holding back investment opportunities on the islands.

6 What has been the impact on the communities affected by RET?

Overview

The previous two chapters have established the consequences in the changes in travel behaviour influenced by RET. This chapter, which is focused on the '2015 RET' routes only, establishes the impact of the policy on the communities concerned.

The analysis is again split by residents and businesses.

Residents

<u>How has RET affected how people view the island / peninsular communities in which they live?</u>

Respondents to the resident surveys were asked if they agreed or disagreed with a series of statements with respect to how their community may have been affected by RET – the chart below shows the net results (total agreeing minus total disagreeing) – it should be noted that:

- responses for each island / island group are shown down the columns, with the strength of agreement to disagreement shown in a shaded colour coding from green to red;

- the final column shows the net results overall.

	Clyde	Lismore	Mainland Peninsula	Mull & Iona	Non 2015	Outer Hebs	Skye & Raasay	Small Isles	Total
There are improved employment opportunities in my island / peninsula	-46	2	6	-21	-3	6	-3	3	-56
There are improved shopping opportunities in my island / peninsula	-51	4	7	-65	-3	4	-9	3	-110
There are improved leisure opportunities in my island / peninsula	-57	2	7	-85	-3	6	-6	1	-135
There are improved cultural opportunities in my island / peninsula	-41	1	6	-69	-4	12	-5	4	-96
There are improved eating and drinking opportunities in my island / peninsula	-54	0	6	-79	-5	0	-5	-1	-138
The local economy in my island / peninsula is better / stronger	-18	8	8	28	-2	18	-3	6	45
New businesses have opened in my island / peninsula	-37	1	5	6	-4	7	2	1	-19
Bars / restaurants and cafes in my island / peninsula are noticeably busier now	7	6	9	119	4	28	5	2	180
My community has become too busy / crowded at times	49	1	2	133	3	34	8	1	231
The roads in my island / peninsula have become too busy / congested in summer	68	2	8	173	4	48	11	3	317
The roads in my island / peninsula have become too busy congested in winter	-37	-6	-1	-40	3	-29	-5	-10	-125
Parking in my island / peninsula has become more difficult in summer	78	3	5	181	5	35	13	2	322
Parking in my island / peninsula has become more difficult in winter	-37	-3	-3	-41	0	-27	-4	-8	-123
RET has had a negative environmental impact in my island / peninsula	44	-5	-3	92	4	-6	4	-5	125
There has been an increase in tourism in my island / peninsula: people staying overnight	25	12	10	136	3	57	9	9	261
There has been an increase in day trip visitor numbers in my island / peninsula	82	15	9	183	3	37	12	3	344
The new visitors to my island / peninsula spend less money on the island than previous visitors	40	5	-1	74	2	18	6	-2	142
Quality of life in my island / peninsula has improved	-48	5	2	-89	-4	-6	-6	2	-144
There are now more opportunities to do new different things on the mainland	-44	5	7	2	-4	5	-2	4	-27
New employment opportunities on the mainland can now be accessed	-41	5	6	-35	-2	6	-6	-3	-70
It is much easier to go shopping on the mainland	-26	9	6	55	-1	6	-3	2	48
More competition from the mainland has hurt local businesses	14	-6	-1	-9	2	-14	-3	-3	-20

Figure 6.1: Views on the impact of RET on communities (Source: Residents survey)

Overall:

- the statements which were most agreed with were
    - there has been an increase in day trip visitor numbers in my island / peninsula
    - parking in my island / peninsula has become more difficult in summer

- the roads in my island / peninsula have become too busy / congested in summer

- the statements which were most disagreed with were
  - quality of life in my island / peninsula has improved
  - there are improved eating and drinking opportunities in my island / peninsula
  - there are improved leisure opportunities in my island / peninsula
  - the roads in my island / peninsula have become too busy / congested in winter

Key point: There is widespread agreement that RET has increased day-trip visitor numbers to the '2015 RET' communities, but concern that this has led to pressures on local infrastructure, particularly roads and parking. It should be noted though that the sample is dominated by Mull and Cumbrae, where these issues are most acute.

Do people feel they have personally benefitted from RET?

Outwith wider community impacts, respondents to the resident survey were asked if they had benefitted personally from the introduction of RET – the results are summarised in the figure below:

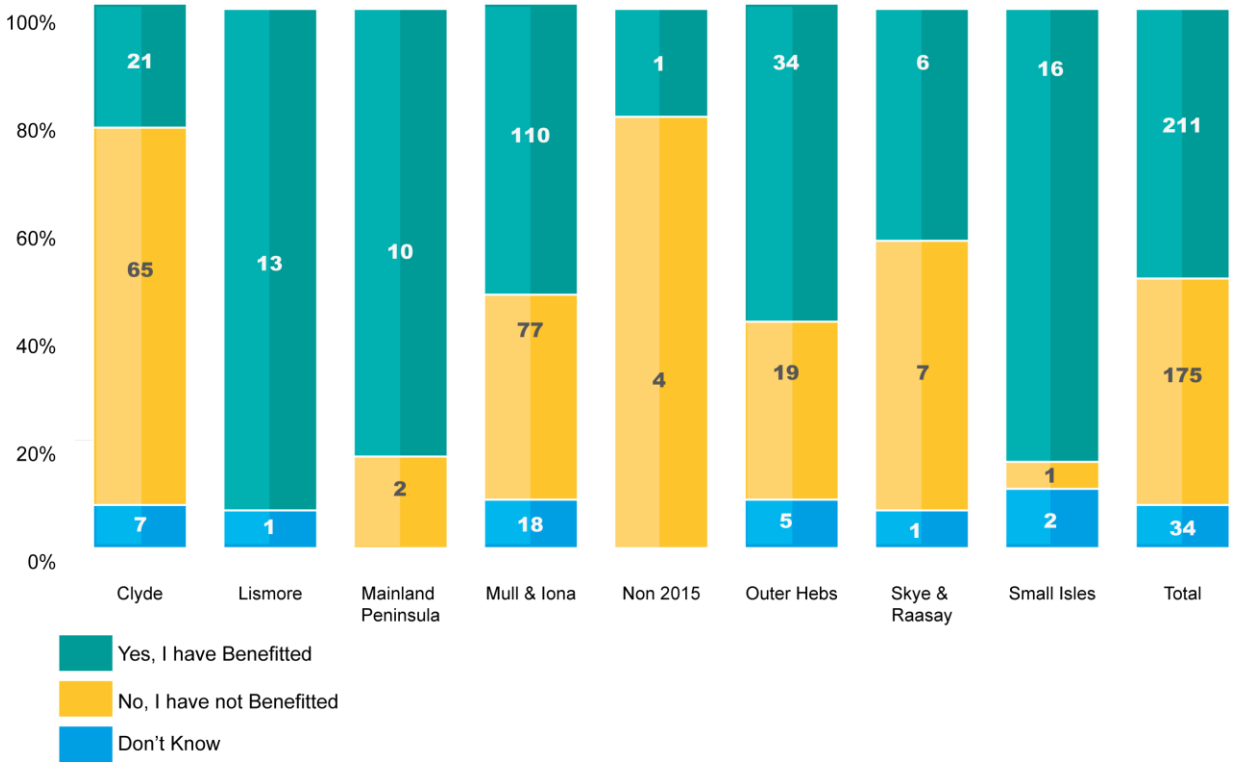


Figure 6.2: Have you benefitted personally from RET? (Source: Resident survey)

The figure shows that, overall, people think that they have personally benefitted from RET, even in Mull & Iona where there is a strong perception of wider disbenefits attached to the policy. The main reasons for this are likely to be an increase in disposable income and / or the ability to make journeys which were previously prohibitive due to the fare levels.

The key exception to the above is the Firth of Clyde communities included in the 2015 roll-out, with a significant majority identifying no personal benefit. This is likely to be strongly linked to the minimal reductions in fares experienced by most residents on these islands.

Key point: The majority of residents in the '2015 RET' islands feel that they have personally benefitted from RET, even where wider perceptions of how the policy has impacted on their community is less positive. This is predominantly a result of increased disposable income and the ability to make journeys which were previously stymied by fare levels. The key exception is the '2015 RET' islands in the Firth of Clyde, largely due to the minimal reductions in fares for residents on these islands.

Overall, do people think their community has benefitted from the RET policy?

The figure below shows how respondents to the resident survey view the impact of the '2015 RET' roll-out on their communities:

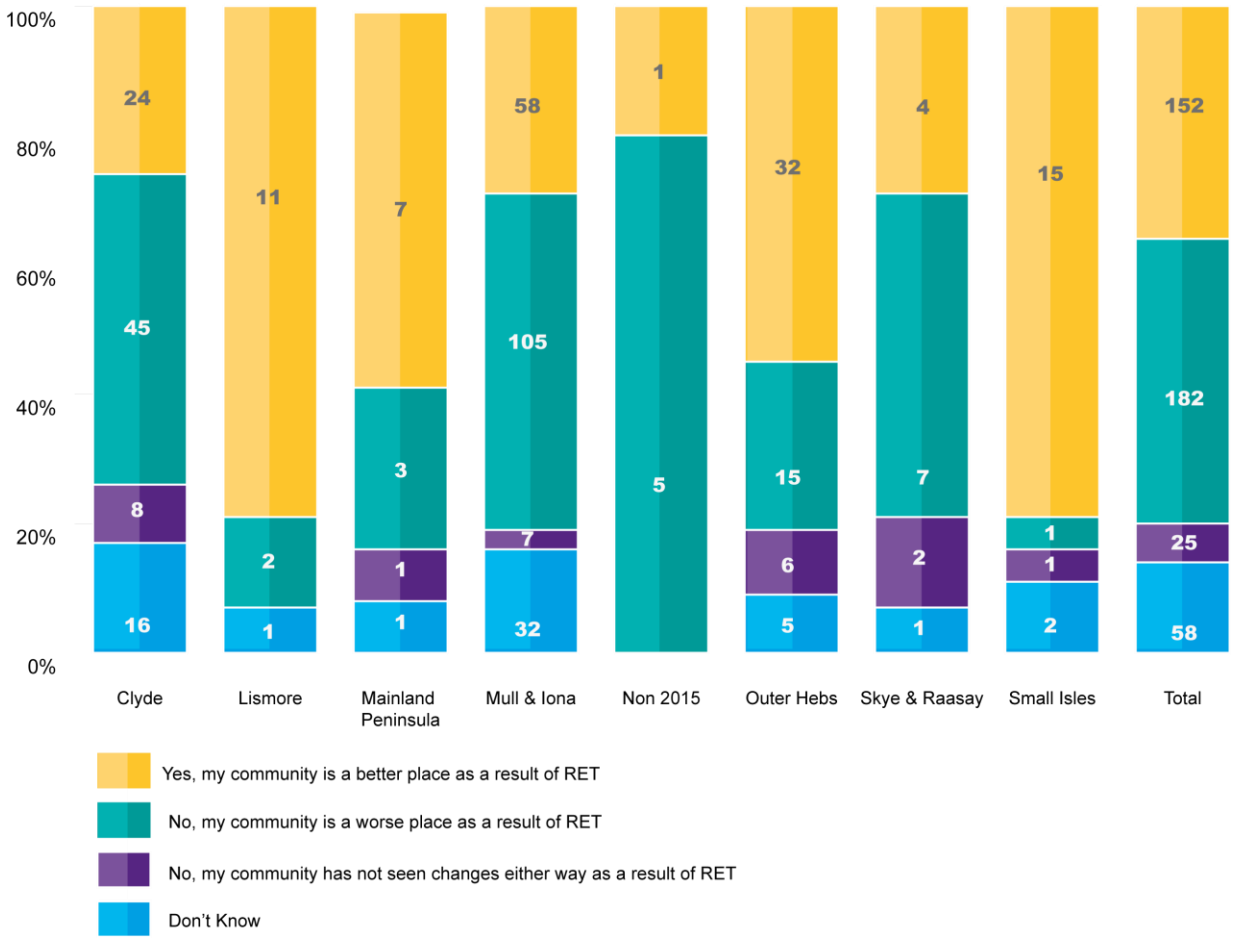


Figure 6.3: Do you think your community is a better place to live as a result of RET? (Source: Resident survey)

Whilst the evidence suggests that people feel better off as a result of RET being introduced, more people overall in the '2015 RET' islands now think their community is a worse place than prior to RET. These figures are however dominated by the islands in the Firth of Clyde (Bute and Cumbrae) and Mull & Iona).

Although samples are small, more residents of Lismore, mainland peninsulas, the Outer Hebrides, and the Small Isles think that their communities have benefitted from RET.

Key point: In the '2015 RET' islands, more people overall think that their community is worse off as a result of RET, but this finding is strongly driven Bute, Cumbrae, Mull & Iona, where concerns over ferry and infrastructure capacity have been widely noted. In all other island groupings, RET has been considered to be positive for communities.

Overall, do people think that RET has made their community a more attractive place to live?

The final question in this part of the resident survey asked people whether they considered that the introduction of RET has made their community a more attractive place to live. The results are summarised in the figure below.

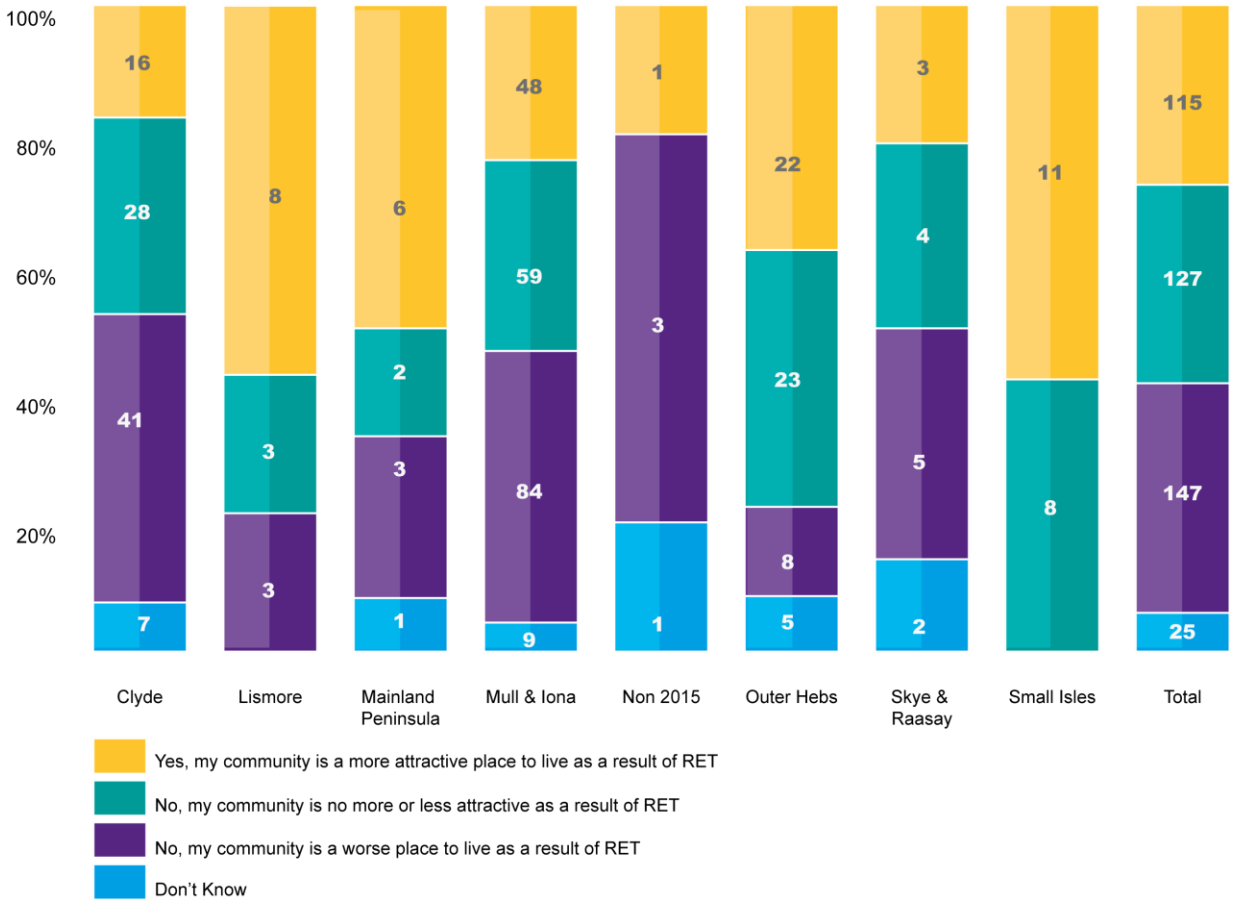


Figure 6.4: Has RET made your community a more attractive place to live? (Source: Resident survey)

Key point: Reflecting the previous question, more people think RET has made their community a less attractive place to live, but this is again driven by the Firth of Clyde islands and Mull & Iona.

Has RET encouraged more people to live on the islands?

Those who had moved to their community after RET had been introduced (n=83) were asked a series of questions regarding their decision to move there. The main findings are as follows:

- 72% were aware of RET when deciding to move
- of those who were not aware
    - around half would have moved to the island anyway
    - the other half would have thought twice about it if fares were higher
- of those who were aware
    - 15% say they would not have moved to the island without RET
    - so, 11% (i.e. 15% of 72%) of those who have moved to RET islands would not have moved there in the absence of the fares reduction

Key point: The evidences suggest that RET has contributed to in-migration to the '2015 RET' islands, boosting in-migration by around 10%.

Business views

The business survey and interviews also gathered evidence on the extent to which RET has impacted on the island and peninsular communities in receipt of RET in 2015.

Has RET been good for island businesses?

Overall, there was a narrow majority view amongst businesses that RET has been a good thing for their firm. Of the 55 businesses which responded to this question, 29 noted that it has been beneficial, with 21 of the contrary view (5 businesses did not know).

Where RET was identified as a positive change, the business survey and stakeholder interviews almost universally identified increased custom linked to higher visitor numbers as the reason for this. For example, businesses on either side of the Sound of Harris crossing had identified an increase in day-trip and multi-centre holidays which in turn has grown customer numbers and turnover.

The more interesting issue here is perhaps the reasons why 21 businesses (almost 40% of the sample) noted that RET has had negative impacts. This is particularly the case in Cumbrae and Mull, where there was a net dissatisfaction of -2 and -3 respectively. The reasons for this were complex and numerous.

- One of the main factors contributing to dissatisfaction amongst island businesses is the impact of RET on available vehicle deck capacity on the ferry. 34 out of 56 businesses which answered the corresponding survey question noted that their business has been negatively affected by a lack of vehicle space. One third of these businesses are based in Mull & Iona, with a further 7 in Cumbrae (where the ferry is not bookable and long queues at peak times are reported in the resident survey).

- The capacity issue was also identified by one stakeholder as a deterrent to their business reliably serving customers on the mainland.

- It is reported that the ease and comparatively low cost of taking a car on the ferry is:

    - increasing the number of residents travelling to the mainland for goods or buying mainland services

    - encouraging visitors to buy goods on the mainland and take them to the island in their car, rather than travelling as a foot passenger and buying on-island

- Congestion and traffic management issues on several islands are also seen to make on-island work more difficult, particularly for tradespeople travelling between jobs and public transport operators. This was deemed to be a particular issue in Mull.

Key point: Whilst on balance RET is considered a beneficial policy for island businesses, this view is by no means universally held, particularly on islands close to the mainland which have been impacted by competition and visitor number levels which local infrastructure is incapable of accommodating. The impact of RET on ferry capacity is a key issue for island businesses, particularly in Mull.

<u>Has RET been good for the community?</u>

Whilst only a narrow majority of respondents feel that RET has been good for their business, a much larger majority think it has been good for the community overall. 32 of 55 responses noted that RET has been a good thing for their local community, with 16 businesses responding to the contrary (7 responded that they did not know).

The one exception to the above is Cumbrae, where 9 business considered RET to be detrimental to their community, compared to six which thought it was a good thing. Mull businesses were also only marginally in favour.

Of those which believe that RET has been positive, the reasons cited generally related to residents benefitting from increased disposable income associated with lower fares

and the positive economic impacts associated with higher visitor numbers. Two area specific benefits were also cited through the stakeholder interviews:

- The introduction of RET on the Sounds of Barra and Harris was noted to have improved the economic connectivity of the Outer Hebrides. As well as facilitating tourism routes such as the Hebridean Way, it has also provided residents with more affordable access to other ferry services to the mainland as well as facilities on other islands.

- RET has reduced the cost of travel for children travelling from Ardnamurchan to Tobermory for school. In Morvern, RET has enhanced access to education / choice within the sector - there are now seven children from Morvern travelling to high school in Tobermory – this is considered a critical link and RET has helped to reduce the fares and made it sustainable.

The primary sources of dissatisfaction with RET were again related to ferry capacity and local infrastructure being unable to accommodate the increased visitor numbers imposed on it.

Key point: The consensus view amongst businesses is that RET has been a good thing for communities. Again, however, there are lower levels of satisfaction (and in one case dissatisfaction) with the policy in a subset of islands, predominantly as a result of ferry-related capacity issues and the inability of local infrastructure to accommodate the increased visitor numbers in the islands.

Has RET encouraged new businesses or business investment in the islands?

There two components to this question – has RET:

- encouraged new business formation in the islands

- prompted investment by existing businesses on the islands

It is important to reiterate that RET was only introduced to the subset of islands being considered here in October 2015. As has been seen in previous RET evaluation studies (e.g. the equivalent evaluation for Arran), investment decisions tend to lag the introduction of the policy by several years as businesses assess the effect of the policy on e.g. visitor numbers, yields, competition etc. The commentary presented below should therefore be read with the caveat that businesses may only now be beginning to make (or consider making) investments on the basis of RET.

New business formation

The business survey captured 15 businesses in the '2015 islands' which were formed following the introduction of RET, of which:

- noted that RET was a factor in starting the business (4 identified it as a major factor and 3 as a minor factor). Most of these businesses were in the tourism and retail sectors

- noted it was not a factor.

Investment by existing businesses

The business survey also secured responses from 43 businesses which were established in the islands prior to the introduction of RET. Of these businesses:

- 22 had made an investment since RET was introduced and 21 had not

- of the 22 which have made an investment, RET was a contributing factor for one third of these businesses, although in most cases it was only generally considered a 'minor' influence.

Several cases of new investment were identified through the stakeholder interviews and there is a general finding from across the business survey and stakeholder interviews that RET has in most cases increased business confidence across the isles. This is particularly true for businesses in the tourism sector such as accommodation providers, tour companies, gift shops and visitor centres etc. A combination of higher visitor numbers and, in most cases, an extended season are the main contributing factors to this.

Key point: The business survey and stakeholder interviews found that RET has prompted business investment in a small number of businesses across several islands. These investments have typically been focused on businesses in the tourism sector, which are responding to increased visitor numbers and the extension of the season.

It is important to note that, as RET was only introduced to this subset of islands in 2015, the 'investment impacts' have not fully materialised. A number of businesses interviewed identified RET-related investments which were in the pipeline but had not yet been delivered.

7 How much has RET cost the Government?

Overview

Whilst RET has generated new passenger and vehicle trips across the network, the fare revenue generated has been less than the revenue foregone from reducing fares. This has resulted in an increase in the subsidy required to deliver the CHFS contract. This chapter therefore quantifies the net additional subsidy and the consequential costs of RET to the public sector in terms of investment required in supporting infrastructure. This chapter concludes with an estimate of the wider impact of RET.

How much has RET cost the Scottish Government in revenue foregone?

As has been highlighted by the elasticity data, the reduction in fares revenue associated with RET has not been offset by the additional journeys generated, meaning that the policy has required additional government funding, which is reflected in an increase in the subsidy for the CHFS network. An estimate of the revenue foregone as a consequence of RET is set out below.

What Is the annual cost of RET?

The figure below shows the annual net cost of RET, split by carrying type. It should be noted that:

- the net impact is based on a comparison of the outturn against the 'counterfactual' (i.e. what fares revenue would have been in the absence of RET)

- the comparison is based on ticket sales only and takes no account of retail revenue, which is likely to have increased as a result of the increased numbers of passengers

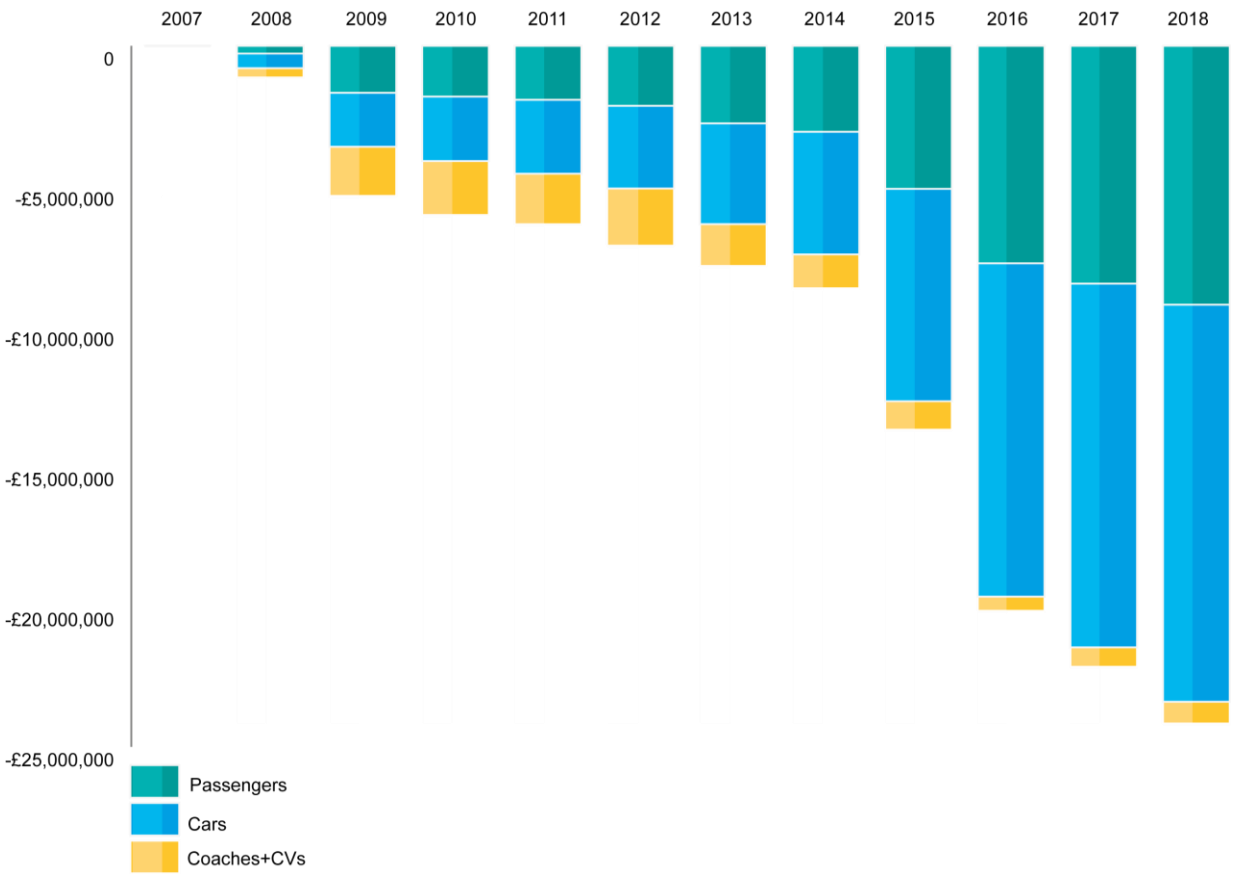


Figure 7.1: Annual net cost of RET (Source: Operator data)

- RET is now costing the Scottish Government around £25m per annum in revenue support, around two thirds of which is supporting reductions in car fares.

- The various phases of the RET roll-out are readily identifiable from the figure. The most notable increase was the 2015 expansion, which has more than doubled the level of funding required. This is predominantly a result of RET being introduced on the more frequent and high volume routes, particularly Largs-Cumbrae, Wemyss Bay-Rothesay, Oban- Craignure and Mallaig-Armadale.

- Between 2008 and 2012, RET for CVs was costing almost as much as the car-based equivalent.

Key point: RET is costing the Scottish Government around £25m per annum in revenue support, of which around two thirds is attributable to RET for vehicles less than 6m in length. The 2015 roll-out more than doubled the level of revenue support required.

What Is the overall cost of RET?

The overall impact of RET on revenue comprises two elements:

- revenue 'lost' by existing ferry users paying less

- additional revenue from RET-induced ferry users, i.e. those making new trips (or switching from travelling as a foot passenger to a car-based passenger)

The figure below adds all RET Year-1 revenue and all RET Year +1 revenue across the four batches of RET to provide an indication of the relative proportions of these two effects.

Figure 7.2: Overall Cost of RET (Source: Operator Data)

Key point: Overall, RET led to a drop in revenue of around £20.7m from current ferry users on this basis. Partly compensating this, new, or induced ferry use generated £4.7m, recovering around a quarter of the lost revenue.

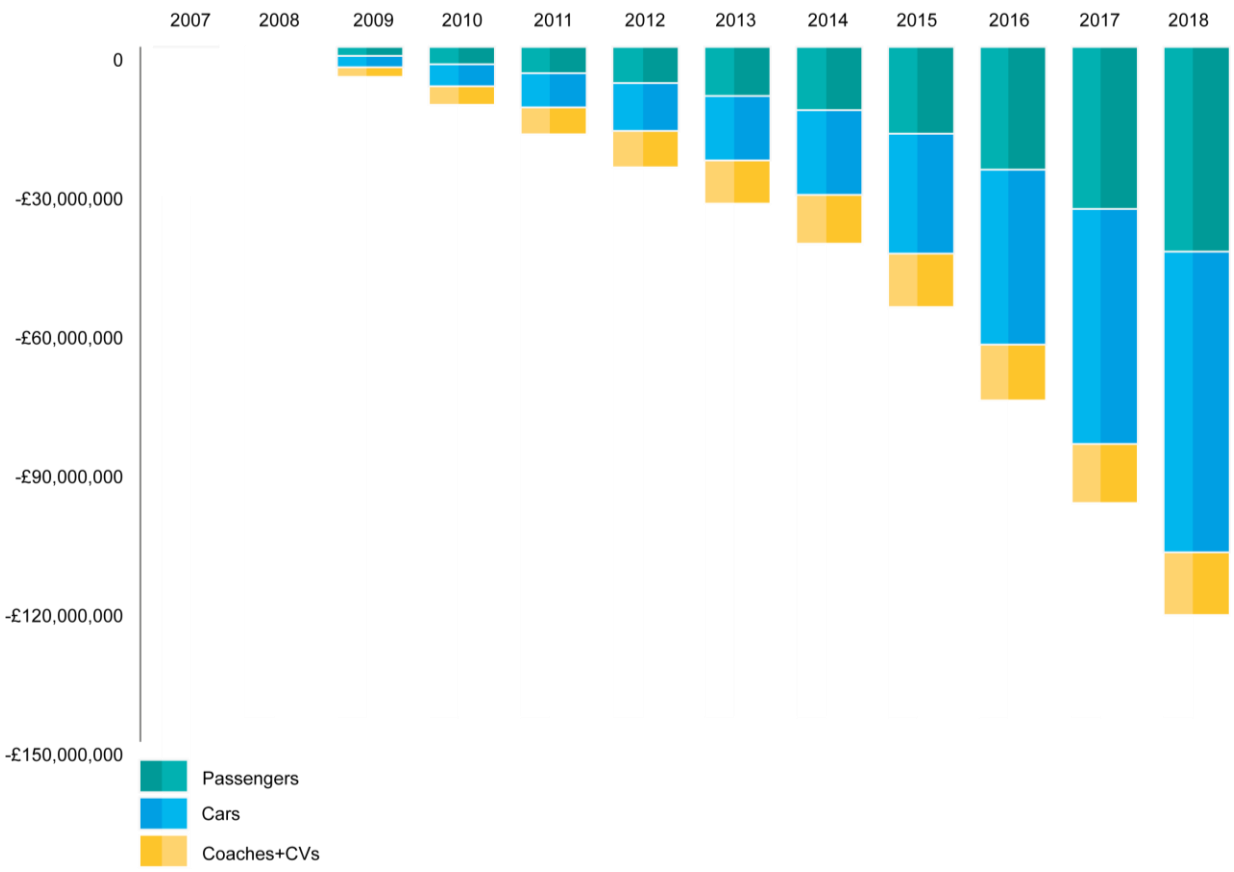


Figure 7.3: Cumulative net cost of RET (Source: Operator Data)

Key point: Since RET was first introduced in 2008, it has cost the Scottish Government a cumulative £120m. As previously noted, the expansion of RET to the 2015 islands has significantly ramped-up the annual funding requirement, such that around £100m of revenue support will be required every four years to maintain RET fares at their current level.

Have there been wider public sector costs of RET?

The direct and quantifiable cost of RET is the net increase in subsidy set out above. However, as has been evidenced throughout this report, RET has increased load factors on the ferries and has increased visitor numbers across the islands. This has led to consequential costs for other parts of the public sector, including Transport Scotland / CMAL, CFL and local authorities. These additional costs were explored through the business interview process and the key points made by each organisation are set out below:

Caledonian Maritime Assets Ltd

CMAL noted that, historically, prior to the creation of CMAL and the introduction of RET, the harbour infrastructure did not generally benefit from significant investment when new tonnage (with larger capacity) was introduced on routes. The infrastructure installed in the Ro-Ro conversions of the 1980s and 1990s remained, resulting in undersized marshalling areas and inadequate terminal facilities for the operator, staff and the public; with the pier fittings and fendering systems working to full capacity on a regular basis to accommodate larger vessels introduced on routes over the years. The introduction of RET has increased the volume of vehicles and foot passengers at most terminals, and extensions in timetables and new routes, introduced to meet the increased volumes & stakeholder expectations, has placed further demand on the port infrastructure in general.

CMAL has received more harbour dues income from RET-induced traffic, although the harbour dues model is balanced to reflect Transport Scotland funding arrangements and CMAL's planned works, rather than making a profit from increased traffic and associated dues. CMAL plan expenditure and apply for Grant-in-Aid contributions from Transport Scotland at 75%, with CMAL providing match funding of 25%. Therefore, the charges applied annually for port usage can change depending upon the financial demands of the business.

CMAL explained that increased usage of harbour infrastructure increases wear of the assets and impacts on residual life in addition to increasing the general number of defects requiring repair around the network. The repair and maintenance obligation rests solely with CMAL and again this is accounted for within the financial model and if the increased volume of traffic (which is reflected in increased revenue) is insufficient, the harbour charging mechanism can be varied.

CMAL has developed 10-year and 30-year infrastructure plans, which reflect requirements to renew and rebuild existing infrastructure, but also upgrade facilities to match capacities of the vessels on the route, or in planning, taking account of the Vessel Replacement and Deployment Plan and CFL's vessel deployment plans. The impact of RET on this planning process is therefore in the prioritisation of projects – i.e. addressing pinch points, replacement of time expired infrastructure or upgrades in advance of new tonnage deployment.

It was also noted that, as a result of RET, the summer peak has extended into times that historically would have been considered as the 'shoulder seasons'. On a practical level, due to the increase in ferry usage and busier shoulder and winter periods, CMALs' team, consultants and contractors often find it difficult to get onto ferries and to get accommodation. This subsequently either delays work or leads to higher costs, often both. In addition, there is less 'quiet' time to progress works around the network.

Finally, it was noted that the public areas on-board all of the vessels are being utilised by a higher volume of passengers and the peak period has also extended into the 'shoulder season'. The public areas have always been upgraded as an integral part of

the drydock period. However, more recently, the investment has increased because the overall wear and tear has increased due to the uplift in passengers carried.

CalMac Ferries Ltd

CFL noted that there has been an increase in demand across the network since the introduction of RET, although there are many other factors contributing to this rather than RET alone – this point should be borne in mind when reviewing the key points from their response set out below.

CFL explained that additional crew and shoreside staff members have been recruited to respond to the increase in demand experienced across the network, in addition to amending timetables where possible and increasing port turnaround time. This has been recorded in various contract variation agreements with Transport Scotland. Key highlights include.

33 additional full-time equivalent (FTE) port staff have been recruited. Whilst there has been an increase across most ports, the largest increases have been at ports on the high volume routes and where demand has increased most significantly (e.g. Mallaig (5.99 FTE); Ardrossan (5.65); Brodick (3.97); Ullapool (3.42); Oban (3.32); Craignure (3.24) etc.

33.67 FTE winter and 30.50 FTE summer crew posts have been created. These jobs are again concentrated on the volume routes including Ardrossan – Brodick, Oban – Craignure and Mallaig – Armadale).

CFL noted that whilst there has been an increase in employment opportunities for island residents, it is difficult to attribute specific numbers to this as some of these new jobs will be a result of natural attrition and seasonal variations rather than RET alone.

CFL explained that RET has created several operational challenges associated with accommodating the growth on the network. The extent of these challenges varies depending on the route, vessel and port, but issues experienced include:

- customers unable to travel on their sailing of choice
- island residents unable to travel at short notice, which is a source of numerous complaints
- reductions in available seating (both in the ports and on the vessels)
- congestion in and around the passenger accommodation areas
- congestion of vehicles in and around the marshalling areas and port hinterland
- delays to turnaround times due to increased volumes of traffic, resulting in changes to timetables

- challenges in ensuring the safety of port and vessel operations due to the volume of traffic / passenger demands

- Other operational challenges arising from increased demand have included:

    - Difficulties in sourcing accommodation for the increased numbers of crew, particularly where onboard accommodation is limited or full. This has also reduced operational flexibility as it has been more difficult to redeploy vessels during disruptions.

    - Difficulties in recruiting the additional numbers of certified crew required to deliver the operation. As noted above, due to the onboard accommodation being more limited, this can result in delays to inductions for new crew members or additional shore accommodation being required to facilitate induction.

    - Increases to vessel running hours which is contributing to an increase in the maintenance required, maintenance costs and breakdowns. From a crewing perspective, this could require additional maintenance to be carried out at night after the timetabled day finishes and on the 'Small Ferries' fleet in particular, incurring additional costs to cover and comply with hours of rest.

    - Port infrastructure is being used more frequently than originally intended, including fenders, Passenger Access Systems, linkspans and slipways, which means that it is being subjected to more wear and tear. This again increases the maintenance time, the risk of defects, and time out of service for rectification.

    - When technical breakdowns (port or vessels) or other disruptions are experienced, there is more traffic to be accommodated but less spare capacity to absorb any disruptions. Whilst cancellations can have a significant impact in this regard, delays from disruptions also present significant challenges due to the increased volume of traffic to be marshalled in an already constrained space.

    - All major vessels are all now fully utilised which means that there is no spare capacity to provide relief during technical breakdowns. This often results in vessels being redeployed to provide relief elsewhere in the network, with vessels being cascaded to other routes and increases in the likelihood of disruption.

CFL has benefitted from RET through:

- increased brand visibility

- increased customer satisfaction due to reduced fares

- it should though be noted that these benefits have to some degree been offset by the issues outlined above, compounded by difficulties now facing island residents when accessing lifeline ferry services

Argyll & Bute Council

Argyll & Bute Council (A&BC) noted that RET has contributed in bringing more tourists to the islands, which is seen as a positive. However, feedback from communities is that their actual fares reduction was in some cases minimal and they are experiencing a range of negative impacts in terms of ferry capacity and the ability of on-island infrastructure to cope with induced tourist demand.

A&BC pointed out that local residents which previously travelled as foot passengers are now taking a vehicle onboard the ferry. Whilst this suggests that they are deriving a benefit / utility from doing so, it has negative environmental consequences associated with induced road traffic.

Accommodating vehicle demand at the marshalling areas in Council-run ports is also proving to be challenging, with queuing traffic spilling out onto the local road network at various ports. This is particularly the case at Craignure where the Council is proposing to extend the current marshalling area to accommodate increased demand. It is also considered that this issue will worsen if proposed vessel deployments go ahead, e.g. the deployment of the larger MV Hebrides to the Oban – Craignure route.

Parking, traffic and pedestrian management are major issues at Craignure. Anecdotally, it is understood that there has been a wider increase in the demand for parking across both Islay and Mull as a result of induced tourist demand.

The Council noted that it is difficult to attach an increase in roads maintenance spend directly to RET as the island road networks are not always in the best of condition to start with. However, on Mull, the Council noted that there has been an increase in verge damage due to motorhomes and other larger vehicles using narrow single track roads, often with poor passing place provision. The Council points out that this is probably replicated across all of the islands but there is little in the way of recorded evidence to support this point.

A study reviewing and consulting on the Council tendered air services found that, since the PSO was last tendered, the average subsidy per passenger has risen. Passenger numbers have fallen since peaking in 2016, prior to which the use of the air service had risen year-on-year. Whilst the reduction in ferry fares may have increased competition, the four islands served by the internal A&BC services (Colonsay, Coll, Islay and Tiree) were all in receipt of RET by 2013 at the latest, so it is not possible to make a direct causal link between RET and the reduction in use of the air service.

Comhairle Nan Eilean Siar

CnES explained that RET has been one of a number of factors, alongside new tonnage, routes and improved flights, which has grown visitor numbers to the Outer Hebrides, bringing positive tourism benefits and spin-off investment for the isles. It is noted that tourist growth has predominantly been focused on Lewis, Harris, and Barra. There has been growth in Uist, but to a lesser degree. There is however a strongly-held view that issues associated with a lack of capacity and resilience are dampening down the positive benefits of RET.

The Comhairle explained that the roll-out of RET on the Sound routes in 2015 has also supported inter-island travel for social and business reasons, facilitating closer integration between the islands / land masses in the Outer Hebrides.

However, there are significant ferry vehicle-deck capacity issues during peak periods which are considered to be constraining socio-economic development, the impact of which was explored by the Comhairle through an independent report submitted to government. These capacity issues have been reported by travellers, the local tourism sector and hauliers. The Comhairle is particularly concerned about the impact that a constrained ferry service is having, and will continue to have, on the socio-economic development of the islands. It was explained that tourism interests have long made the case that visitor spend in the islands is being constrained by an inadequate ferry service while hauliers have pointed out that summer ferries are running at capacity during a time of relatively slow economic activity.

The Comhairle also noted that local infrastructure is struggling to cope with the increased tourist demand, specifically accommodation and staff to service accommodation. This is a particular problem in Harris (a point which was also recorded by the PBA team during the Outer Hebrides STAG Appraisal). There is considered to be a particular issue with providing accommodation for seasonal workers in the tourism and construction sectors – indeed a business interview with an island hotelier found that they are using converted storage containers (i.e. with plumbing, heating etc) as accommodation for seasonal workers. Much of this is considered to stem from the fact that many traditional rental properties are being converted to short-term tourist lets, responding in part to RET-induced demand.

The original introduction of RET on the mainland routes impacted the inter-island routes due to increased traffic coming in at one end of the island chain and leaving at the other end. Whilst the impact at the ports was minimal, the introduction of RET to the Sound routes in 2015 saw a marked increase in traffic through CnES ports, with the resultant issues in the following areas identified by the Comhairle:

- Footfall through waiting rooms has increased and has resulted in additional wear and tear, with increased complaints in summer 2019 on the cleanliness of facilities. This has never been noted as an issue in the past and may require the Comhairle to consider alternative / increased cleaning arrangements.

- There has been an increase in waste disposal requirements (this is not only at the ferry ports but also at other harbours as motorhomes and tourists look for facilities to dispose of their waste). The Comhairle has increased the number of bins at ferry ports over the last few years and with changes in legislation forthcoming, there will be a need for further thought on how demand is met. It is noted that this should be considered against a background of the ports not creating the waste but being impacted by the cost of its removal.

- Chemical waste disposal points at Comhairle ferry ports had historically been adequate for the volume of usage but, in the last couple of years, the level of complaints has increased with them increasingly not being able to cope with demand. The facility at Leverburgh was eventually removed as it was constantly overflowing or blocking either through misuse or overuse.

- The marshalling area at Leverburgh has to be widened due to increased demand from wider commercial / motorhome vehicles backing up onto the main road. The Comhairle explained that all of the other inter island ports are standalone ferry ports, but Leverburgh is a fishing / commercial port with other businesses being affected by traffic volumes. Further consideration is being given at present to improving traffic management arrangements.

The introduction of RET reduced fares for cars but the Comhairle notes that it has had minimal effect on the bus patronage to and from the main ferry ports.

The Comhairle noted that the increased number of tourists has led to pressure on infrastructure and additional investment is required. This is particularly the case with respect to the island road network, particularly on the many single track sections, where increased traffic levels have impacted on local road safety, increasing the number of road traffic collisions and putting more pressure on emergency response services and healthcare. Moreover, there is more wear and tear on the roads themselves, the majority of which are poorly founded on peat.

The increased maintenance burden and requirement for infrastructure investment has corresponded with a significant reduction in Comhairle budgets in recent years, affecting the amount that can be invested in roads and other infrastructure. The Comhairle has recently been allocated £300k from the Rural Tourism Infrastructure Fund (RTIF) and will be providing match funding towards this grant that will be spent on motorhome facilities; car / bus parking & laybys; recycling banks; and improved signage. However, the fund was vastly oversubscribed with about five times as many local projects applying as receiving an allocation.

<u>North Ayrshire Council</u>

North Ayrshire Council (NAC) noted that, in general, RET has had many positive implications for Arran and Cumbrae, the two islands within the local authority area. In particular, the policy has supported the economy of both islands, generating new employment opportunities and increasing both tourist numbers and the length of the

season. It also allows people to travel further around the islands (through taking a car), which can widen the benefits of tourism overall and relieve pressure on honeypot locations.

The Council did however explain that, whilst RET has had its positives, it has also not been without its challenges. These have included:

- It has attracted a larger number of cars / vehicles to visit the islands, and an increased number of motorhomes. This increased vehicular traffic has put additional pressure on island road networks and has reduced public transport use both to the ferry terminals and on the islands themselves. This in turn impacts on the commercial viability of public transport services, and increases the subsidy required on publicly supported services on Arran – this is something of a vicious circle.

- The increased number of cars has also impacted negatively on the cycle-friendly nature of Cumbrae (for which the island is famed), for example by reducing its attractiveness to less confident cyclists. It has also given rise to more general road safety concerns on both Arran and Cumbrae due to their rural nature and the width of the roads.

- The increased load factors on the ferries impacts on service delivery on the islands, including getting materials to the islands and impacts on bus services.

RET has also given rise to traffic management issues at Brodick, Largs and Cumbrae Slip, as follows:

- Traffic management in Brodick is only occasionally a problem due to queuing issues. These instances are generally related to 'blocking-back' as a result of ferry disruption and are typically relatively short-term in nature. There are however wider complaints of increased demand for vehicle parking across the island associated with the increase in overall vehicle numbers.

- There are substantial challenges with parking, queuing and marshalling on Cumbrae and at Largs. Queuing and marshalling interacts with the public road at both slipways. This is exacerbated by passengers at Largs being required to go to the ticket office. There are also wider complaints of increased demand for vehicle parking across Cumbrae.

- NAC has secured funding for a study and initial works to address these issues at both Largs and Cumbrae from Strathclyde Partnership for Transport's Capital Programme. The outcome of this will be known in early 2020.

- The Council does not currently manage parking but is investigating the potential to introduce Decriminalised Parking Enforcement (DPE).

- The Council noted that bus patronage has not increased proportionately with the increase in the number of ferry passengers. This would suggest these individuals are travelling in a car, which is supported by the wider evidence presented in this study. It is noted that the demand for bus travel may have reduced due to factors including low cost of car travel; lack of connection between bus and all ferry services (e.g. additional summer sailings); and wait times for rail connections at Ardrossan for certain sailings.

The increase in vehicular demand has had an impact on the programming of roadworks, which now generally take longer and cost more due to limitations on ferry vehicle-deck capacity. This causes increased inconvenience to island communities. Works are currently programmed outwith holiday periods to reduce disruption to communities and visitors, but there remain challenges in relation to obtaining vehicle-deck space.

NAC explained that there is also a need for more frequent roadworks due to the more substantial deterioration of the road condition. The need for additional investment is recognised however there are no additional resources available.

- RET has had an impact on the total waste arisings on Arran, and the Council manages more waste coming off the island since it was introduced, from 3,985 tonnes in 2013 to a maximum of 4,867 tonnes in 2018.

- NAC extended the Brodick household waste recycling centre in June 2017 to be able to separate more waste for recycling, which was partially funded through Zero Waste Scotland.

The Council noted that there has also been an increased demand from visitors to Arran at both the GP practice and community hospital Accident and Emergency (A+E) department, which has been one of the factors influencing service redesign. In response to the ferry capacity issues, a clinical priority boarding pass has been introduced to facilitate a vehicle booking in urgent case.

The Council noted that developing rotas for health and social care services has become more challenging. This is due to increased traffic on the island in the peak period extending typical journey times between settlements.

NAC further explained that the growth in tourism has had a significant impact on the availability of affordable housing on Arran, as holiday lets and homes are in high demand. This has exacerbated a problem in health and social care finding accommodation which is a major factor in recruitment and retention difficulties in some posts. NAC explained that it is likely that continued growth will be increasingly problematic, despite recent and programmed social housing projects.

The Highland Council

In their response to the study, The Highland Council (THC) identified a range of parking and traffic management challenges in villages hosting CFL ferry services, as follows:

- It was noted that Mallaig is facing several challenges in this respect, driven both by organic and RET-related growth on the Mallaig – Armadale route and the introduction of the Mallaig – Lochboisdale route. The main issue is a lack of car, bus and coach parking in the village. Traffic and pedestrian management within the village centre can also be a challenge during peak season.

- There is also very limited parking at Lochaline, which can be problematic during peak season or when there is disruption on the Lochaline – Fishnish route (or indeed when the Oban – Craignure route is disrupted and traffic routes via Morvern and the Corran ferry).

- Significant traffic management issues have also emerged at Armadale and Sconser at peak times.

THC notes that RET has contributed in growing visitor numbers across the West Highlands. Whilst many trips may ultimately be bound for the isles, there are passing trade benefits for communities en-route.

Despite a reduction in the use of the Lochaline – Fishnish route, usage of the Corran Ferry has continued to increase.

Summary

The introduction of RET is generally considered to have generated a range of benefits on the islands and peninsular communities on the west coast of Scotland. Island residents have been able to travel more frequently, accessing a wider range of employment, business and leisure opportunities. There has also been an increase in visitors to island and peninsular communities, which has generated employment and additional economic activity.

However, the additional demand released by RET has led to a wide range of cost and other pressures which in many cases organisations are struggling to address or are diverting money from other sources to mitigate RET impacts. These have included:

- The increase in visitors to the islands and the increased propensity for both residents and visitors to take their car on the ferry has caused capacity challenges on several routes across the network. This has created challenges for the operator in terms of managing demand, maintaining punctuality and, at various ports, safely and efficiently managing traffic. Increased use of the vessels has also increased the maintenance burden and costs on the vessels and infrastructure.

- A secondary impact of the increase in vehicle movements is pressure on local road networks. This is particularly pertinent in 'honeypot' islands such as Mull and Harris, which are dominated by single track roads. The maintenance burden has increased, particularly in relation to verge damage associated with e.g. motorhomes, whilst there have been public complaints associated with congestion and tourists being unaware of how to drive on single track roads. Traffic management and parking in and around ferry terminals is also proving to be a challenging at various locations.

- There is a consistent story emerging across the local authorities about island infrastructure being insufficient to meet the increased demands placed on it. As well as roads, this includes public toilet provision (cited as major issue on Iona), general and chemical waste facilities, accommodation and campsite provision.

- There is anecdotal evidence to suggest that patronage on local authority subsidised bus services has declined as a result of more residents and visitors taking their car on the ferry. However, no quantitative evidence has been provided to support this point.

- There is little evidence to date of local authorities changing the way in which they deliver services (e.g. waste management, social care, health, education provision etc) in the islands as a result of RET.

8 Conclusion: How has RET contributed to Government policy?

Overview

RET was ultimately introduced to contribute towards the transport and wider social and economic policies of the Scottish Government. In this respect, its success can be measured in terms of how it has contributed towards its original investment objectives, which were to:

- increase demand for ferry services by making ferry travel more affordable and accessible

- increase tourism and supporting existing tourism markets

- enhance local economies and the wider national economy

The wider government policy context is also evolving at present, with a range of new strategy documents emerging to guide transport, economic and islands development in the medium-term. Whilst RET cannot be evaluated against these new strategies as it predates them, there is benefit in 'stress-testing' the policy outcomes against the emerging policy context – this has been done through:

- assessing how RET has contributed towards the headline government policies for
- transport, as expressed through the National Transport Strategy
- the economy, as expressed through Scotland's Economic Strategy
- islands, as expressed through the National Islands Plan
- Scotland as a whole, as expressed through the National Performance Framework, which records how all areas of government are contributing towards the Government's Purpose of, 'creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth'

In keeping with the summary nature of this report, the policy assessment is relatively high level, adopting a seven-point scale with supporting commentary to assess how RET has contributed to each policy component. The seven-point scale is as follows:

- ✔ ✔ ✔ - highly positive contribution
- ✔ ✔ - moderate positive contribution
- ✔ - slightly positive contribution
- O – no impact
- ✕ - slightly negative contribution
- ✕✕ - moderate negative contribution
- ✕✕✕ - highly negative contribution

How has RET performed against its original objectives?

In devising the RET fares policy, the Scottish Government set three objectives which they expected the policy to deliver – the extent to which this has been the case is set out in the table over the page:

RET objective	Assessment	Comment
Increase demand for ferry services by making ferry travel more affordable and more accessible.	✔ ✔ ✔	Demand has increased across almost all routes on the network, with a significantly larger number of island residents and visitors using the CHFS ferries than prior to the introduction of RET.
Increase tourism and supporting existing tourism markets.	✔ ✔	The observed increase in ferry carryings and survey programmes undertaken in this and previous RET evaluations clearly highlight the growth in the tourism market. There is also clear evidence of an extension of the tourist season. Note however that definitive, island level tourism statistics are not available, and this means that accurate quantification of this impact is not possible.
Enhance local economies and the wider national economy.	✔ ✔	RET has made a positive overall contribution to local economies and the wider economy – it has facilitated: • improved access to employment, training and business opportunities • additional leisure travel (providing social benefits) • increased expenditure – 37% in resident survey noted that spending had increased in general since RET was introduced • Growth in visitor numbers, expenditure and the length of the season It is though important to note that these benefits are set against an annual spend of £25m on the policy, and satisfaction is not universal. Again, the lack of island-level statistics means we cannot accurately quantify this impact.

Table 8.1: How has RET performed against its original objectives?

How may RET contribute to the National Transport Strategy 2

The National Transport Strategy 2 (NTS2) sets as its Vision:

We will have a sustainable, inclusive and accessible transport system, helping to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

/	Assessment	Comment
NTS2 Priority: Promotes equality		
Will provide fair access to the services we need	✔ ✔ ✔	RET has reduced the cost of travel to most island residents. The surveys suggest that island residents are now making journeys they previously did not make and, when taking a car, are travelling to destinations which they did not previously go to. They are therefore benefitting from opportunities previously unavailable to them.
Will be easy to use for all	✘	There is widespread concern across the islands and in the haulage sector about vehicle deck capacity acting as a constraining factor on peoples' ability to travel at the time when they need to / wish to, particularly at short notice. This is borne out by the load factor analysis in this report, particularly on the high volume routes. In the '2015 RET' islands, 87% of respondents to the resident survey are now finding it more difficult to make a booking, with concerns also expressed about queue lengths on non-bookable routes impacting on residents' ability to travel. The booking window has also demonstrably moved – prior to RET, people tended to book 2-3 days in advance, but now typically book 2-4 weeks in advance.
Will be affordable for all	✔ ✔	RET has reduced the cost of fares on all routes, with carryings and survey data suggesting that pre-RET vehicle fares were in many cases frustrating journeys which people wanted to make. It should however be noted that not all island residents experienced a large reduction in fares compared to previous multi-journey books. This is particularly the case in the Firth of Clyde islands where the use of multi-journey tickets was widespread.

Table 8.2: How may RET contribute to the NTS2 'promotes equality' outcome?

RET and NTS2 outcomes	Assessment	Comment
NTS2 Priority: Takes climate action		
Will adapt to the effects of climate change	✗ ✗	RET has prompted increased vehicular travel, contributing negatively to the net zero target and potentially local air quality. Additional sailings are also being operated to cope with RET related demand, generating additional CO2 and other emissions.
Will help deliver our net zero target	✗ ✗	The market has responded to it now being cheaper to take a car on most routes. However, it is important to note that these additional car journeys generate economic and / or social welfare benefits for those making them and thus this presents an important trade-off in the policy
Will promote greener, cleaner choices	✗ ✗	

Table 8.3: How may RET contribute to the NTS2 'takes climate action' Outcome?

RET and NTS2 outcomes	Assessment	Comment
NTS2 Priority: Helps our economy prosper		
Will get us where we need to go	✔	The reduction in ferry fares has facilitated additional journeys and opened-up a wider range of destinations for those making them (usually by car).
Will be reliable, efficient and high quality	✗	Operator performance data (and indeed feedback from the operator) suggests that high demand in peak periods is slowing down turnaround times, impacting on punctuality to timetable and also the ability to recover in the event of disruption. Feedback from CMAL and CFL also noted that assets are being worked harder and longer across the network, giving rise to potential reliability and resilience issues.
Will use beneficial innovation	O	RET has had no impact on this area.

Table 8.4: How may RET contribute to the NTS2 'Helps our economy prosper' outcome?

RET and NTS2 outcomes	Assessment	Comment
NTS2 Priority: Improves our health & wellbeing		
Will be safe and secure for all	✗	The generated vehicle kilometres will have contributed towards an increase in accidents. Concerns were also expressed in several communities about the impact of additional traffic on local road safety, particularly on single track roads, and in and around ferry marshalling areas. Particular concerns were raised at Craignure and Armadale.
Will enable us to make healthy travel choices	O	RET has had no impact on this area.
Will help to make our communities great places to live	✔	The research undertaken in this and previous studies suggests that RET has contributed towards the improvement of communities, although it should be noted that this is not a universally held view, with residents of e.g. Cumbrae and Mull & Iona noting that RET has made their communities worse places to live. This issue may benefit from further research to reach a definitive position.

Table 8.5: How may RET contribute to the NTS2 'improves our health and wellbeing' outcome?

How may RET contribute to the National Islands Plan?

The Scottish Government published the National Islands Plan in December 2019. The Plan details 13 Strategic Objectives for Scotland's island communities. The table below sets out the extent to which RET is contributing to these strategic objectives for islands served by the CHFS network:

Strategic objective	Assessment	Comment
To address population decline and ensure a healthy, balanced population profile.	✔	Population estimates suggest that long-term population declines in several islands have now been slowed, checked or reversed. The extent to which RET has contributed to this is though unclear. However, the resident survey did find that RET has contributed to in-migration to the '2015 RET' islands, boosting in-migration by around 10%.

Strategic objective	Assessment	Comment
To improve and promote sustainable economic development.	✔	As previously noted, RET has reduced travel costs for many island residents resulting in increased spending locally, improved accessibility to employment, education and business opportunities, whilst also increasing visitor numbers in the isles.
To improve transport services.	✔	RET has reduced the cost of travel, improving accessibility for island residents. It should be noted however that issues around ferry capacity and a decline in bus patronage have weakened the benefits of RET in this respect.
To improve housing	O	RET has had no impact on this area.
To reduce levels of fuel poverty	✔	As a general point, RET has for the most part increased the disposable income of island residents. Whilst RET does not apply to commercial vehicles, it has in certain islands improved access to mainland vehicle fuel suppliers. This is contributing to a reduction in fuel poverty, albeit it can also lead to economic leakage from the island (both in terms of fuel and ancillary purchases).
To improve digital connectivity	O	RET has had no impact on this area.
To improve and promote health, social care and wellbeing	✔	RET has improved access to mainland based health facilities as well as to leisure opportunities and family & friends, likely improving health outcomes and wellbeing. On the other hand, full vessels , in terms of vehicle capacity, have meant missed health appointments for some.
To improve and promote environmental wellbeing and deal with biosecurity	✘	As previously noted, RET makes a negative environmental impact in terms of increased vehicle & ferry emissions and, anecdotally, air quality in certain port towns.
To contribute to climate change mitigation and adaptation and promote clean, affordable and secure energy	✘	See above.

Strategic objective	Assessment	Comment
To empower diverse communities and different places	✔	RET has provided communities with improved accessibility to a wide range of services, whilst also increasing visitation to the islands.
To support arts, culture and language	✔	The increased number of visitors to the islands is supporting an expanding arts and cultural sector, providing opportunities for new business formation and expansion. Increased second home ownership may present a threat to the language, but there is no evidence to support this either way.
To promote and improve education for all throughout life	✔	RET has improved access to, choice and the affordability of education in certain communities (e.g. Morvern and Ardnamurchan). It has also made it less expensive for students from the islands to travel home more regularly (and less expensive for their families to visit them).
To support effective implementation of the National Islands Plan	O	RET has had no impact on this area, as this relates to the delivery of the plan.

Table 8.6: How may RET contribute to the National Islands Plan

How may RET contribute to Scotland's Economic Strategy?

Through the definition of four 'priorities, Scotland's Economic Strategy establishes the means by which the Scottish Government's Purpose will be delivered:

SES priorities	Assessment	Comment
Investing in our people and our infrastructure in a sustainable way	✔	The evidence from this and previous RET studies suggests that lower ferry fares are contributing directly to new investment, whilst also supporting a generally more positive economic environment.
Fostering a culture of innovation and research and development	O	RET has had no impact on this area.
Promoting inclusive growth and creating opportunity through a fair and inclusive jobs market and regional cohesion	✔ ✔	As has been evidenced, RET has improved access to employment, education and business opportunities for most islands. Moreover, the reduction in fares for some of Scotland's most fragile

SES priorities	Assessment	Comment
		communities is contributing strongly to regional cohesion.
Promoting Scotland on the international stage to boost our trade and investment, influence and networks	✔	RET has been part of a package of measures which have made the islands more popular for foreign tourists. As well as the direct benefits of their visit, it also exposes them to key Scottish products such as whisky, Harris tweed etc

Table 8.7: How may RET contribute to Scotland's Economic Strategy?

How may RET contribute to the Scottish Government's Purpose?

In defining how all elements of Scottish society are contributing towards the Scottish Government's Purpose, a National Performance Framework has been developed to establish desired outcomes and track progress towards these outcomes. The table below summarises the National Outcomes and the contribution RET has made towards delivering them (and hence its contribution to the Government's Purpose).

National Outcome	Assessment	Comment
Children and young people: we grow-up loved, safe and respected so that we realise our full potential.	✔	RET has improved access to, choice and the affordability of education in certain communities (e.g. Morvern and Ardnamurchan). It has also made it less expensive for students from the islands to travel home more regularly (and less expensive for their families to visit them).
Communities: We live in communities that are inclusive, empowered, resilient and safe	✔	RET has provided communities with improved accessibility to a wide range of services, whilst also increasing visitation to the islands.
Culture: We are creative and our vibrant and diverse cultures are expressed and enjoyed widely.	✔	The increased number of visitors to the islands is supporting an expanding arts and cultural sector.
Economy: We have a globally competitive, entrepreneurial, inclusive and sustainable economy.	✔	See Table 8.4, which summarises how RET contributes to the Government Economic Strategy.
Education: We are well educated, skilled and	✔	See 'Children & Young People' above.

National Outcome	Assessment	Comment
able to contribute to society.		
Environment: We value, enjoy, protect and enhance our environment.	✗	As previously noted, RET makes a negative environmental impact in terms of increased vehicle & ferry emissions and, anecdotally, air quality in certain port towns.
Fair Work and Business: We have thriving and innovative businesses, with quality jobs and fair work for everyone.	✔	RET has created new training, employment and business opportunities in the islands.
Health: We are healthy and active.	✔	RET has improved access to mainland based health facilities as well as to leisure opportunities and family & friends, likely improving health outcomes and wellbeing. On the other hand, full vessels, in terms of vehicle capacity, have meant missed health appointments for some.
Human Rights: We respect, protect and fulfil human rights and live free from discrimination.	O	RET has had no impact on this area.
International: We are open, connected and make a positive contribution internationally.	✔	See Table 8.4, which summarises how RET contributes to the Government Economic Strategy.
Poverty: We tackle poverty by sharing opportunities, wealth and power more equally.	✔ ✔	RET has increased the disposable income of island residents, whilst also providing lower cost access to a wide range of employment, education, business and leisure opportunities. In certain communities, it also contributes towards a reduction in fuel poverty

Table 8.8: How may RET contribute to Scottish Government's purpose?

Summary

The introduction of RET across the CHFS network has broadly delivered its initial objectives and contributed to the headline government policy documents. The reduction in fares has increased the disposable income of island residents; extended

access to employment, education, business and leisure opportunities and brought more visitors to the islands.

Whilst there are elements of dissatisfaction with the policy – most notably ferry capacity & reliability and the impact on island infrastructure – there is broad consensus that RET has been a good thing for the islands. It is though only fair to note that this sentiment is not universal and there are particular islands where there is significant dissatisfaction with elements of the policy.

In any future review of the RET policy, the research suggests that the following issues should be considered:

- Two key issues have emerged from this evaluation from the perspective of island residents:
    - They cannot always travel when they want to travel: the research suggested an appetite for a range of demand management related measures which should be further explored.
    - Island infrastructure / communities are being overwhelmed: There are perhaps two approaches to addressing this issue – (1) implementing measures to reduce visitor numbers / car-based visitor numbers; or (2) investing in tourism infrastructure (e.g. roads, parking, visitor amenities) and 'greening' it where possible. As businesses have made investments to the benefit of the islands' economy in response to the increased visitor numbers, the first option would be challenging and therefore a better question could be over how infrastructure improvements could best be delivered in the affected communities.
- From the perspective of the Scottish Government, RET has induced a circa 20% growth in car travel by ferry on the CHFS network, although it should be noted ferry-related car traffic makes up a very small proportion of national car traffic, so any such outcome should be viewed in this context. As well as putting cost and resilience pressure on the assets, it is leading to network-wide demands for investment in additional services, tonnage and infrastructure. Unless there is a policy decision to reverse at least some of the fares reductions introduced since 2008, there is a strategic choice between 'predict and provide' - which would be contrary to the National Transport Strategy and present substantial capital and ongoing operating costs - or implementing a more balanced approach of additional capacity and demand management measures (of which fares could be a part), which would represent a departure from the current RET policy.

In order to aid transparency and understanding, the objectives of any fares review should reflect the findings of this, and previous RET evaluations, which could be captured in revised / new Transport Planning Objectives, reflecting the greater understanding of the scope and scale of impacts of the current fares policy.

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