

Socio-Economic Case For Retention of Highlands and Islands APD Exemption

Final Report

to



by



September 2018

CONTENTS

Executive Summary	i
1 Introduction	1
2 Inverness Airport: Catchment Profile	2
3 The Role of Inverness Airport	14
4 Inverness Airport: Potential Impacts of Loss of APD Exemption	33
5 Other Highlands and Islands Airports	39

EXECUTIVE SUMMARY

Introduction

This research sets out the socio-economic case for retention of the Highlands and Islands APD (Air Passenger Duty) exemption as and when Scottish Government's ADT (Air Departure Tax) is rolled out. Desk based research was used to assess the:

- Economic and social roles of the relevant flights.
- Specific role of the current exemption in lowering fares and increasing/sustaining service frequencies and sustainability.

Inverness Airport: Catchment Profile

There is a considerable variation in circumstances across the Airport's catchment area. However, as a whole it faces some key challenges:

- Remote by surface transport from the rest of the UK, and even more so from mainland Europe.
- A small population-less than less than 350,000 people, accounting for just 6% of all Scottish residents.
- An overrepresentation of lower value added sectors. This results in relatively low GVA/productivity and wages.
- A relatively low proportion of residents aged 15-44. This group is particularly likely to include economically active individuals with families.

In response to these challenges there is a need to recognise the economic specialisms/advantages of the catchment area and its sub-areas. Many of these sectors are heavily reliant on customers, suppliers and advisers from outside the Highlands and Islands and Scotland. As a result, these sectors tend to be intensive users of air services- e.g. tourism, life sciences, manufacturing, primary production/processing, nuclear industry.

The Role of Inverness Airport

Passenger numbers at Inverness have grown in response to both new routes and increased frequencies on existing ones. Yet, they remain far below volumes at the three larger Scottish airports.

Inverness' route network is largely unchanged since 2008/2009. It is limited in the following respects:

- Frequency on many routes is no more than one per day all year round.
- Only a small number of UK regional airports served.
- Limited frequency to London, which severely limits day trip opportunities.
- Flights to only two non-UK airports.

Inverness' network is much more limited than those at Aberdeen, Edinburgh and Glasgow. Thus, any reduction in frequencies or in destinations served would have a significant impact on Inverness. In addition, overall passenger volumes are highly dependent on a small number of routes and airlines.

Given the size of Inverness' catchment area, some of its residents and visitors have a more than two hour drive to the airport. If existing Inverness passengers were to switch to another of the main Scottish airports-due to changes in fares, frequency or destinations at Inverness-then a drive of more than three hours would be the norm, with a trip of over four hours from many settlements. Many of the drive times from the catchment area to Glasgow Airport are longer than the equivalent road journey between Glasgow and Manchester.

Inverness' route network supports the catchment area economy through, in particular: a significant proportion of passengers travelling on business; attracting high spending international visitors who account for 25% of all inbound passengers.

Inverness' air services to the islands support those communities in a number of ways. That includes facilitating trips for health, education, less than daily commuting to work, and VFR, plus a strong business passenger component.

It is the whole range of Inverness' routes that contribute to the mix of passenger traffic and thus to the airport's benefits-notably the £89 million annual inbound visitor spend. Clearly, a reduction in the range of routes operating out of Inverness-or reducing their effectiveness by raising fares and/or reducing frequency-would adversely affect the airport's impacts.

The Inner Moray Firth area accounts for a majority of the Airport's passengers and economic impacts. However, Inverness Airport very clearly serves the north west mainland of Scotland as a whole. It has more than 300,000 passengers with a surface origin or destination outside Inner Moray Firth. Some 145,000 are to/from Caithness and Sutherland or Lochaber, Skye and Wester Ross. These two areas generate 25% of the total inbound visitor spend in the catchment area.

Inverness Airport: Potential Impacts of Loss of APD Exemption

If APD was introduced on Inverness' outbound flights the airlines could pass on the charge in full to their passengers. Alternatively they could pass on *some* of the charge and treat the rest as a cost that their business would bear.

Previous research suggests that, even with the current APD exemption, the lowest fares at Inverness tend to be more expensive than at Edinburgh, Glasgow and Aberdeen. Further, if the APD exemption was removed and the charge passed on in full:

- Nearly half of Inverness' average fares would increase by 20% or more; and
- A significant proportion would increase by over 30%.

The previous research also found that:

- Passengers making holiday trips are likely to be the most price sensitive.
- Business passengers would be more sensitive to reduced frequency/less business-friendly flight times.

This is in a context where airlines already face a challenge in developing/sustaining certain types of route at Inverness. That is due to the catchment area's small population and business base.

The main potential impacts of introducing APD on outbound flights from Inverness are:

- Airlines increasing their fares.
- Reduced passenger numbers.
- Lower route profitability.
- Reduced frequencies.
- Fewer route enhancements than might otherwise have taken place and potential reversal of previous ones.

Some passengers would choose to use a Scottish airport instead of Inverness. Thus, they would incur additional travel time and costs (possibly including overnight accommodation). As a result inbound leisure passengers may spend less time and money in the Inverness catchment area, reducing total visitor spend.

Inbound business passengers using another Scottish airport may get less value from their trip-e.g. having fewer meetings in Inverness' catchment area because of the additional travel time to get there.

A reduction in inbound holiday visitors at Inverness Airport would particularly affect Lochaber, Skye and Wester Ross and also Caithness and Sutherland-i.e. the two most fragile parts of the catchment area.

The routes with the potential to be most affected by the removal of the APD exemption could be Luton, Amsterdam, Birmingham, Bristol and Gatwick.

Removing the APD exemption could also act against the Inverness City Region Deal commitments made by UK and Scottish Governments-most notably:

- Ensuring continued air access for the economic development of the region.
- Maintaining and improving air access to London.
- Facilitation of tourist visits from an increasing range of countries and regions.
- Confidence that routes will be maintained.

Other Highlands and Islands Airports

A further six Highlands and Islands airports would be affected by the removal of the APD exemption. These are Benbecula, Stornoway, Islay, Kirkwall, Sumburgh and Wick John O'Groats.

These airports' catchment areas face similar challenges to those of Inverness-but to a more acute degree. They are:

- Remoteness from the main commercial and service centres of Scotland, and even more so from the rest of the UK.
- Very low population densities, constraining economic development.
- Small business bases, leading to a need to travel elsewhere to access personal services (e.g. health) and for companies to access markets/business partners.
- A relatively low proportion of residents aged 15-44. This reduces the pool of workers, businesses and families required for sustainable economic growth.
- An overrepresentation of sectors with relatively low GVA and wages.

These challenges-and the vital importance of air transport-are evidenced by Scottish Government's Air Discount Scheme (ADS) that is available to local residents in the six catchment areas.

In response to these challenges there is a need to recognise the economic specialisms/advantages of the six catchment areas. These include manufacturing, nuclear industry, fishing and aquaculture, scientific research and development, and media. These sectors are largely intensive users of air services and/or heavily reliant on external markets and investment.

Most of the airports' routes are thin or ultra thin. Each airport has a limited number of destinations and low frequencies on most routes. Thus, any reduction in frequencies or destinations served would have a significant impact on each route network. The overall fragility is increased by four airports being served by just one airline, while Stornoway and Wick John O' Groats are served by only two.

The air services facilitate trips for: health, education and VFR; inbound tourism; less than daily commuting to work (e.g. offshore); and general business travel. Surface travel alternatives are long. In most cases they include slow and infrequent ferry crossings. Air effectively shrinks these distances allowing day trips and urgent trips to be made.

The main potential impacts of introducing APD on outbound flights from the six airports are:

- Airlines increasing their fares.
- Reduced passenger numbers.
- Lower route profitability.
- Reduced frequencies.

These potential impacts are in a context where:

- Residents' generally face both low wages and a high general cost of living.
- Fares on many routes are already very high. Previous research showed business travellers facing return air fares of between £106 and £515, and between £70 and £274 return if the passenger was eligible for ADS.
- Most routes have limited profitability.
- Reduced frequency would have a disproportionate effect given the low number of flights on many routes.
- Switching to surface transport would result in much longer journey times and fewer day trip opportunities.

The routes with the potential to be most affected by the removal of the APD exemption could be: Benbecula: Glasgow and Inverness; Islay-Glasgow; Stornoway-Aberdeen; Sumburgh: Edinburgh and Glasgow; Wick-Aberdeen.

1 INTRODUCTION

This is the final report of an assessment of the socio-economic case for retention of the Highlands and Islands APD (Air Passenger Duty) exemption. The research was undertaken on behalf of HITRANS between July and September 2018.

1.1 RESEARCH OBJECTIVES

The overall objective was to set out the socio-economic case for retention of the Highlands and Islands APD exemption as and when Scottish Government's ADT (Air Departure Tax) is rolled out. The detailed objectives were to analyse the:

- Economic role of the relevant flights.
- Social role (personal travel, VFR, health, etc.) of these flights.
- Specific role of the current exemption in lowering fares and increasing/sustaining service frequencies and sustainability.

The work was based on reasonably readily available information. Most of the research effort was in examining the case for retaining the exemption on flights from Inverness Airport.

1.2 REPORT STRUCTURE

Chapter 2 Provides a socio-economic profile of Inverness airport's catchment area.
Chapter 3 Analyses the role played by Inverness' scheduled passenger services.
Chapter 4 Considers the potential impacts of loss of APD exemption at Inverness.
Chapter 5 Replicates the Inverness analysis for other affected Highlands and Islands airports.

2 INVERNESS AIRPORT: CATCHMENT PROFILE

2.1 INTRODUCTION

This Chapter profiles Inverness Airport's catchment area. (This is taken as being the two local authority areas of Highland and Moray). It also includes analysis of the four constituent parts of the catchment area: Inner Moray Firth; Moray; Caithness and Sutherland; Lochaber, Skye and Wester Ross.

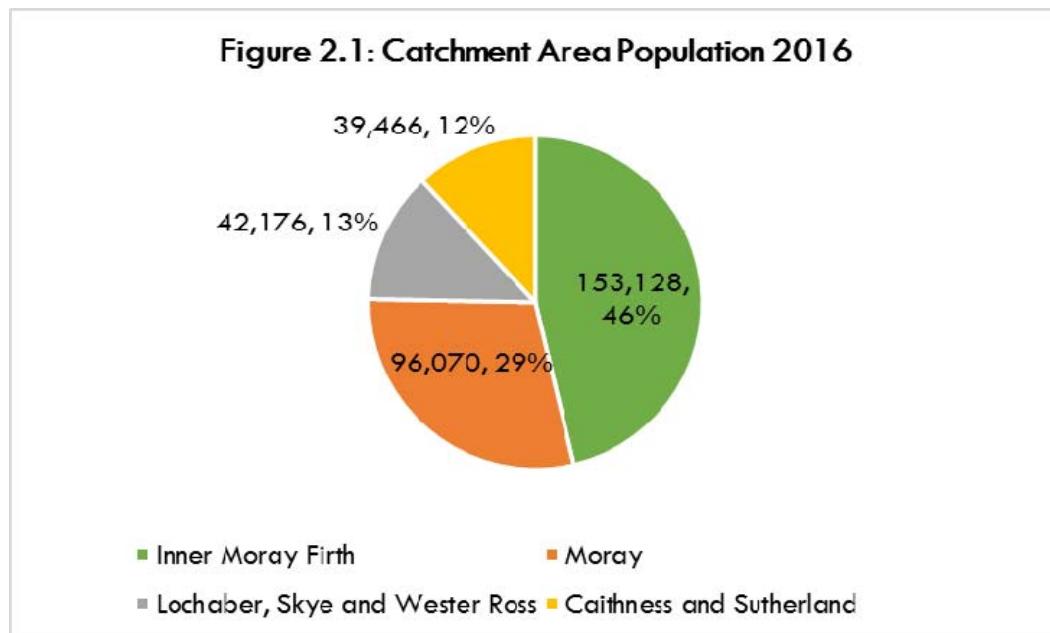
The profile covers:

- Population.
- Fragile areas.
- Gross Value Added (GVA).
- Wage levels.
- Employment structure.

2.2 POPULATION

2.2.1 Total Population

In 2016 Inverness Airport's catchment had a population of around 331,000 people¹. Figure 2.1 shows the estimated distribution between its four sub-areas.



Source: National Records of Scotland 2016 mid-year estimates-information taken from Highland Council website

¹ Based on National Records of Scotland mid-year estimates

Inner Moray Firth accounts for most of the population in the catchment area. However, its share (46%) is less than half of the total, with a further 29% in Moray. That leaves 25% of the catchment area population spread quite evenly between Lochaber, Skye and Wester Ross and Caithness and Sutherland.

2.2.2 Population Density

Based on 2017 mid-year population estimates² the catchment area has a population density of 19 persons per square kilometre. That is significantly lower than the figure of 65 for Scotland.

Only four Scottish local authority areas (Eilean Siar, Highland, Argyll and Bute and Shetland) have a lower population density than the catchment area. Within both Caithness and Sutherland and Lochaber, Skye and Wester Ross density is less than 6 persons per square kilometre-lower than in any Scottish local authority area.

Low population densities present a number of challenges to economic and social development. They produce a settlement pattern of small communities, often distant from each other, key markets and services. This results in additional costs in the provision of goods and services due to a lack of economies of scale and a corresponding enterprise base.

Companies in low density areas have few chances to do business with and communicate with local firms due to the small number spread across relatively large geographical areas. This constrains business development and economic growth.

2.2.3 Forecasts

National Records of Scotland forecasts that the Scottish population as a whole will grow by 3% in the ten years to 2026. The same percentage growth is forecast for the Airport catchment area. However, there are significant variations across the catchment with the projections as follows:

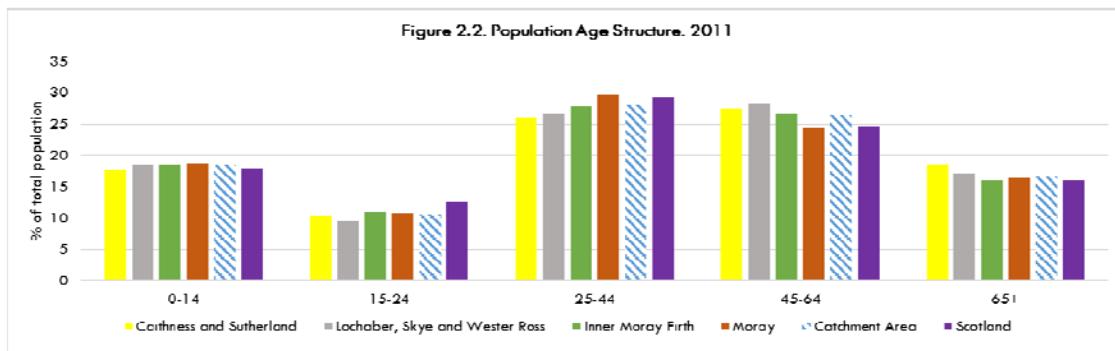
- Moray: +6%.
- Inner Moray Firth: +3%.
- Lochaber, Skye and Wester Ross: +2%.
- Caithness and Sutherland: -6%.

2.2.4 Age Structure

Figure 2.2, over, shows that the age structure of the population in the catchment area differs from that for Scotland as a whole-i.e. it has an older age profile.

Some 39% of the population is aged between 15 and 44, compared to 42% in Scotland. The catchment area also has a higher proportion of residents aged 45 and over (43%) than Scotland (40%).

² Produced by National Records of Scotland



Source: 2011 Census

Therefore, the catchment area faces challenges in retaining younger adults and particularly those in the 15-24 age group. It is adults up to the age of 44 who are most likely to be economically active and also to have families. This age group makes a very significant contribution to areas' economic vitality and future community sustainability.

The picture varies across the catchment area. In both Caithness and Sutherland and Lochaber, Skye and Wester Ross the share of population aged 45+ is around some nine percentage points greater than the 15-44 age group. This compares to a difference of only four percentage points for the catchment area as a whole.

2.3 FRAGILE AREAS

As part of its remit to sustain and develop communities Highlands and Islands Enterprise (HIE) supports projects in what are termed "fragile areas". HIE's impact measures include a specific target for the number of jobs its support will create/retain in fragile areas.

HIE's fragile areas include, first, all islands with a population of 300 or less, all islands off other islands, and peninsulas with island characteristics. Second, other areas are deemed fragile where they face particular challenges in terms of:

- Population trends.
- Drive time to the nearest service centre with a secondary school, NHS hospital and a large chain supermarket.
- Household income.
- Unemployment rate.

The Inverness Airport catchment area contains around half (40) of the 79 Highlands and Islands fragile areas. They fall within two of the catchment area's sub-areas. Some 38% of the Lochaber, Skye and Wester Ross population³ live in a Fragile Area, as do 19% of Caithness and Sutherland residents.

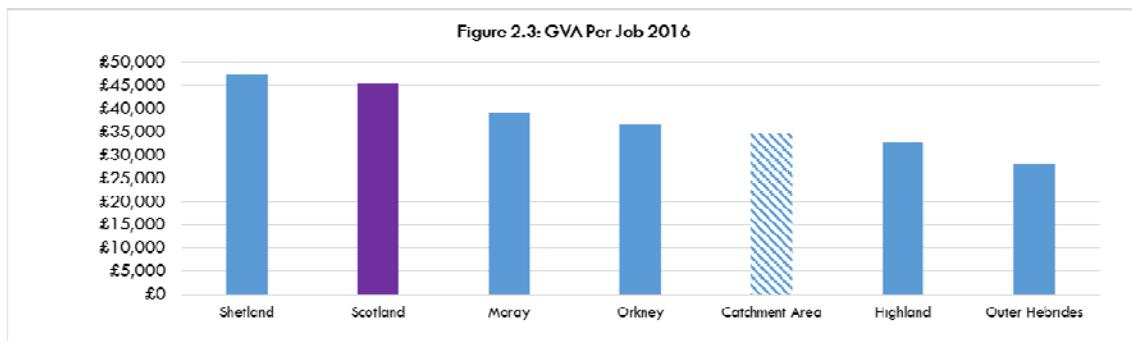
³ Based on 2011 population levels

2.4 GROSS VALUE ADDED

2.4.1 GVA Per Job

GVA is a measure of the value of goods and services produced in an area. It is viewed as a measure of productivity, with higher productivity generally associated with an ability to pay higher wages.

Figure 2.3 shows that average GVA per job in the catchment area is lower than that for Scotland and in a number of other Highlands and Islands local authority areas.



Source: Scottish Annual Business Survey 2016. Note: This dataset does not include the self-employed. It also excludes the financial sector, parts of agriculture and the public sector

The figure for the catchment area is around £34,000 GVA per job. This is significantly below the level in Shetland, Scotland and Moray, and slightly less than in Orkney.

It should be noted that the figure for Moray is strongly influenced by whisky production. If Manufacture of Food and Beverages products is excluded then Moray's GVA falls from around £39,000 to c£32,000 per job. This highlights the relatively low GVA in the Moray economy outside the food and drink sector (and specifically whisky production).

2.5 WAGE LEVELS

Average (mean) gross annual pay per job in the catchment area is £24,635: that is, 90% of the Scottish average. However, **Figure 2.4**, over, shows considerable variation in wage levels (although some caution should be attached to the data which are based on quite small sample sizes).

The average wage for the Thurso TTWA (Travel to Work Area) is over £31,000 per annum. That will reflect well paid jobs associated with the Dounreay nuclear facility. The Thurso figure is clearly above the Scottish average, while that for the Inverness TTWA is slightly below it.



Source: ONS Annual Survey of Hours and Earnings 2017. Note: No data available for either Broadford and Kyle of Lochalsh or Wick TTWAs

In contrast, the figures in the seven other TTWAs are below the catchment area average. These TTWAs are spread across all four sub-areas of the Airport catchment. The lowest wages are in Fort William (Lochaber), Alness and Invergordon (Inner Moray Firth) and Ullapool (Wester Ross) TTWAs. They range between:

- 69%-83% of the catchment area average.
- 62%-75% of the Scottish average.

This is in a context where the cost of living is higher in many parts of the catchment area than it is in other parts of the UK. Research undertaken for HIE⁴ has shown that the budget required by households to achieve a minimum acceptable standard of living in remote rural Scotland is markedly higher than elsewhere. For example, in the Highlands the required budget for a single person (excluding rent) is between 26% and 32% higher than in urban parts of the UK.

2.6 EMPLOYMENT STRUCTURE

2.6.1 Employment Levels

Based on BRES data⁵ employment in the catchment area in 2016 was c152,000 jobs. It was split across the catchment area as follows:

- Inner Moray Firth: 80,500 jobs (53% of catchment area employment).
- Moray: 36,500 (24%).
- Lochaber, Skye and Wester Ross: 18,500 (12%).
- Caithness and Sutherland: 16,500 (11%).

⁴ *A Minimum Income Standard For Remote Rural Scotland: A Policy Update*, for Highlands and Islands Enterprise, 2016

⁵ Data exclude self-employed, armed forces personnel and farm agriculture

2.6.2 Structure

Catchment Area

Table 2.1 compares the sectoral distribution of employment in the catchment area to Scotland as a whole.

TABLE 2.1: EMPLOYMENT BY STANDARD INDUSTRIAL CLASSIFICATION: 2016		Share of Total Employment	
Industry		Catchment Area	Scotland
Agriculture, forestry and fishing	2%	3%	
Mining and quarrying	0%	1%	
Manufacturing	8%	7%	
Electricity, gas, steam and air conditioning supply	1%	1%	
Water supply, sewerage, waste management and remediation activities	1%	1%	
Construction	7%	5%	
Wholesale and retail trade, etc.	16%	14%	
Transport and storage	5%	4%	
Accommodation and food service activities	10%	7%	
Information and communication	2%	3%	
Financial and insurance activities	1%	3%	
Real estate activities	1%	1%	
Professional, scientific and technical activities	5%	7%	
Administrative and support service activities	4%	7%	
Public administration and defence; compulsory social security	5%	6%	
Education	7%	7%	
Human health and social work activities	18%	16%	
Arts, entertainment and recreation	4%	3%	
Other service activities	2%	2%	
Total	100%	100%	

Source: BRES. Data exclude self-employed, armed forces personnel and farm agriculture. Row data do not sum to 100% due to rounding

The key differences between the two geographies are highlighted in the Table. The data shaded in *yellow* are for industries with a share of total employment that is at least two percentage points greater than the corresponding share of Scottish employment. For example, Construction accounts for 7% of employment in the catchment area but only 5% in Scotland as a whole.

In the catchment area the public sector is an important source of employment. It accounts for 29% of all jobs, with Human health and social work activities alone accounting for 18%. Other significant sectors are Wholesale and retail trade, etc. (16% of jobs); and Accommodation and food service activities (10%)-which can be taken as a proxy for the importance of the tourism sector. Manufacturing accounts for 8% of employment and Construction for 7%.

In contrast, a number of service sectors (shaded in *blue*) are underrepresented in the catchment area: Administrative and support service activities, Professional, scientific and technical activities, and Financial and insurance activities.

In general, employment in the catchment area is underrepresented in sectors which offer well paid full time jobs. This helps to explain the lower wages in the catchment area compared to Scotland, as shown earlier. Those sectors which are strongest in the catchment area in employment terms-e.g. retail, tourism and parts of manufacturing-tend to pay relatively low wages alongside low GVA.

Sub-Areas

Table 2.2 shows sectors of the sub-areas' economies which are either over or underrepresented compared to the catchment as a whole. Again, sectors that are relatively significant for employment are shaded in yellow and those that are less significant are in blue.

**TABLE 2.2: EMPLOYMENT BY STANDARD INDUSTRIAL CLASSIFICATION: 2016:
INDUSTRIES OVER OR UNDERREPRESENTED IN THE SUB AREAS**

Industry	Share of Total Employment				
	Moray	Caithness & Sutherland	Inner Moray Firth	Lochaber, Skye & Wester Ross	Catchment Area
Agriculture, forestry and fishing	1%	3%	1%	4%	2%
Manufacturing	17%	3%	6%	6%	8%
Water supply, sewerage, waste management and remediation activities	1%	9%	1%	0%	1%
Accommodation and food service activities	8%	12%	9%	20%	10%
Professional, scientific and technical activities	4%	7%	6%	4%	5%
Administrative and support service activities	4%	3%	5%	2%	4%
Education	8%	8%	6%	9%	7%
Human health and social work activities	15%	18%	21%	13%	18%
Arts, entertainment and recreation	3%	3%	4%	6%	4%

Source: BRES. Data exclude self-employed, armed forces personnel and farm agriculture

In *Moray* manufacturing is highly significant. It accounts for over one in six jobs. In contrast, Accommodation and food service activities account for only 8% of employment. This implies that tourism is a less important sector than elsewhere in the catchment area. Human health and social work activities are also an important source of jobs. However, their share (15%) is below that in the catchment as a whole (18%).

In *Caithness and Sutherland*, Water supply, etc. has a much greater share of employment (9%) than within the catchment area. The share of employment (12%) for Accommodation and food service activities is also relatively significant as is the 7% for Professional, scientific and technical activities. In contrast manufacturing (3%) is relatively unimportant.

The *Inner Moray Firth* employment structure is quite similar to that of the catchment area as a whole. That will, in part, reflect that it has the largest economy of the four sub-areas. However, it is notable than one third (33%) of employment is across the three public sector categories. That includes more than 20% in Human health and social work activities. In part, that will be due to the presence of Raigmore Hospital in Inverness. A major employer, it serves patients across Highland, and from further afield (e.g. Outer Hebrides) through provision of a number of specialisms.

A large proportion (20%) of jobs in *Lochaber, Skye and Wester Ross* are in Accommodation and food service activities-twice the share for the catchment area. This points to the significance of the tourism sector in that area.

Education generates 9% of employment, reflecting, in part, the presence of West Highland College in Fort William and Sabhal Mor Ostaig (Gaelic College) on Skye. Arts, entertainment and recreation is relatively important (6% of jobs). In contrast Human health and social work activities are a less important source of work than elsewhere in the catchment area.

Specialisations Within The Catchment Area Economy

Location Quotients (LQs) are a means of quantifying how concentrated a particular industry is in an area compared to its concentration within Scotland as a whole. Thus, they can reveal what makes a particular area “unique” in comparison to the national average. It can also be the case that those with a high LQ are particularly important to the local economy.

LQs were calculated for each industry by dividing its *local* area share of employment by its *Scottish level* share of employment. Thus, a LQ of more than 1 shows that an industry is more important (in employment terms) locally than it is nationally-and the higher the LQ score the more significant an industry is.

Table 2.3 provides LQ figures for the *catchment area* economy. It lists those industries with an LQ of 1.2 or more-i.e. a 20% higher share of employment than is found in the Scottish economy.

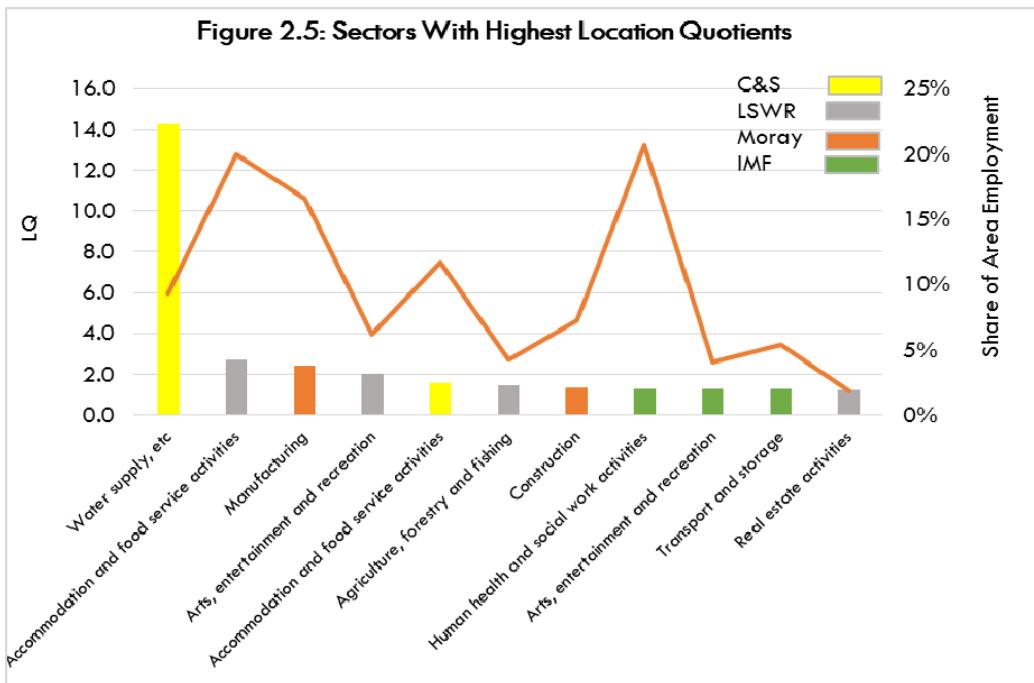
TABLE 2.3: CATCHMENT AREA: LOCATION QUOTIENT AND SHARE OF EMPLOYMENT		
Industry	LQ	Share of Employment
Water supply, sewerage, waste management and remediation activities	2.2	1%
Accommodation and food service activities	1.4	10%
Arts, entertainment and recreation	1.3	4%
Manufacturing	1.2	8%
Construction	1.2	7%

Source: Based on analysis of BRES 2016 employment data

Clearly, Water supply, sewerage, waste management and remediation activities is the industry in which the catchment area has the greatest degree of specialism, with an LQ of 2.2.

This is followed by Accommodation and food service activities, which can be taken as a proxy for the significance of the tourism sector. Not only is it a particular specialism of the catchment area economy it is also (unlike Water supply, sewerage, waste management and remediation activities) a significant employer (accounting for 10% of catchment area employment). The same holds for Manufacturing and Construction given that they account for 8% and 7% of employment, respectively.

Figure 2.5 shows the sectors in the four *sub-areas* with the highest LQs (in relation to the Scottish economy) and their share of employment in their local area.



Source: Based on analysis of BRES 2016 employment data

The Water Supply, etc. sector in Caithness and Sutherland has by far the highest LQ-of around 14. That is due to the presence of the Dounreay nuclear facility. The sector is also a significant local employer accounting for 9% of jobs, with a considerable number more within the supply chain.

The LQs of the other sectors range between 1.3 and 2.7. Those with the most significant shares of local employment are:

- Inner Moray Firth-Human health and social work activities: 21% of employment.
- Lochaber, Skye and Wester Ross-Accommodation and food service activities: 20%.
- Moray-Manufacturing: 17%.
- Caithness and Sutherland-Accommodation and food service activities: 12%.

Finally, **Table 2.4**, over, sets out the *sub-sectors* with the highest LQs (i.e. above 5.0) and their employment levels.

It shows a range of specialisms in each of the four areas:

- *Moray's* are in a range of manufacturing activities-notably whisky and foodstuffs. There is also very significant employment at Moray's two military bases (of the order of more than 4,000 military personnel alone) which is not included in **Table 2.4** as BRES does not include that sector.

TABLE 2.4: SUB-SECTORS WITH HIGHEST LOCATION QUOTIENTS

Sub-Area	Sub-Sector	Total Employment	Key Employers
Caithness & Sutherland	Waste collection, treatment and disposal activities; materials recovery	1,500	Dounreay nuclear site
Lochaber, Skye and Wester Ross	Fishing and aquaculture	600	Marine Harvest
Lochaber, Skye and Wester Ross	Water transport	200	Various
Caithness & Sutherland	Fishing and aquaculture	300	Various
Inner Moray Firth	Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,000	Lifescan (Inverness)
Moray	Manufacture of beverages	1,100	Whisky distilleries-Diageo, Chivas Regal
Moray	Manufacture of textiles	700	Johnstons of Elgin
Lochaber, Skye and Wester Ross	Accommodation	2,500	Various
Lochaber, Skye and Wester Ross	Manufacture of basic metals	*	Liberty (Fort William)
Moray	Manufacture of food products	2,500	Walkers Shortbread (Aberlour and Elgin) Baxters (Mosstodloch)
Lochaber, Skye and Wester Ross	Manufacture of wood and of products of wood and cork	400	BSW (Kilmallie)

Source: BRES 2016. Data exclude self-employed and farm agriculture Employment figures rounded to nearest 100. *No accurate figure available

- *Caithness and Sutherland's* specialisms are in the Dounreay nuclear site and fishing and aquaculture.
- The key specialism in *Inner Moray Firth* is in life sciences, while there is a range in *Lochaber, Skye and Wester Ross* encompassing various manufacturing activities, fishing and aquaculture (notably salmon), water transport and visitor accommodation.

Table 2.4 also shows that many of these sub-sectors are significant employers in their area. Half of them are responsible for at least 1,000 direct jobs, with significant additional employment in their supply chains.

2.7 CONCLUSIONS

There is a considerable variation in circumstances across the Airport's catchment area. This partly reflects the large land mass that it covers. However, the catchment area as a whole faces a number of challenges.

1

It is *remote by surface transport* from the rest of the UK, and even more so from mainland European markets. For example, a car journey from Inverness Airport to Heathrow Airport takes more than nine hours. By train it is between 8 and 11 hours, with only two direct services per day. Clearly these journey times are not viable for many trips to/from London. That is particularly the case for business passengers.

Air effectively shrinks these distances allowing day trips and urgent trips to be made, and allowing connections with onward flights to another airport.

2

A *small population* of less than less than 350,000 people, accounting for just 6% of Scotland's population and 6% of Scotland's jobs. This results in a very low population density. The consequence of this are *additional costs* in the provision of goods and services, *limited local labour markets* and *businesses having few chances to interact with other firms*. These issues are most acute in Caithness and Sutherland and Lochaber, Skye and Wester Ross where population densities are exceptionally low.

One outcome of the very low population density is that *the catchment area contains more than half of the Highlands and Islands' fragile areas*. Some 38% of Lochaber, Skye and Wester Ross and 19% of Caithness and Sutherland residents live in a fragile area. Another is the much higher living costs faced by residents in the remote rural parts of the catchment area.

3

An overrepresentation of lower value added sectors some of which are high *volume* employers-e.g. retail, accommodation and food services-and underrepresentation of higher *value* sectors (e.g. Professional, scientific and technical activities). This results in *relatively low GVA/productivity*. This in turn leads to *wages below the Scottish average*. This is markedly so in certain parts of the catchment area-including some locations in the Inner Moray Firth area.

4

A relatively low proportion of residents aged 15-44. This group is particularly likely to include economically active individuals with families. This issue is most pronounced in Caithness and Sutherland and Lochaber, Skye and Wester Ross. It *reduces the pool of workers, businesses and families required to generate sufficient levels of sustainable growth*. The catchment area population is forecast to grow at the same rate as Scotland. However, the growth is projected to be less than this in some sub-areas.

In response to these challenges there is a need to recognise the economic specialisms/advantages of the catchment area and sub-areas. These include *higher volume* employers in *lower value* activities, and *lower volume* employers in *higher value* activities.

Both groups are locally significant sources of employment in individual sub-areas and thus contribute to Scottish Government's strategic objective of inclusive growth across Scotland.

HITRANS recently commissioned independent research into the value of transport⁶. This concluded that there is good evidence of the economic benefits of smaller and regional airports:

“...there seems a consensus in the literature that employment and population growth seems most prevalent for airports in rural or remote regions...that increasing air services leads to economic growth in peripheral regions in the US and remote, rural or regional airports in Australia. Small airports also have a positive impact on both economic activity in their locality and on regional per capita income (productivity)”

Many of the catchment area's most important sectors are *heavily reliant on customers from outside the Highlands and Islands and Scotland*. They also tend to be in *air transport intensive* activities because of the need to access external markets, funders and partners- e.g. tourism, life sciences, various types of manufacturing, primary production and processing, the nuclear industry.

There is also a need for an appropriate air service network to:

- Allow businesses to *access external expertise* that is not available in the catchment area.
- *Attract/retain younger people who are economically active.* Good, affordable transport is part of making the catchment area an attractive place to live as well as to visit, invest and do business.

⁶ The Value of Transport (Peak Economics)

3 THE ROLE OF INVERNESS AIRPORT

3.1 INTRODUCTION

This Chapter analyses the role that Inverness Airport plays through its network of scheduled passenger services. It covers:

- Inverness' air route network.
- Drive times to Inverness and other Scottish airports.
- Passenger volumes.
- Profile of passengers.
- The role of individual routes.
- Expenditures by inbound visitors using Inverness Airport.

The analysis is based on a range of information sources: in particular the 2018 study of the economic and social impacts of Inverness Airport⁷, and CAA airport statistics and Passenger Survey data.

3.2 SCHEDULED PASSENGER ROUTE NETWORK

3.2.1 Inverness Route Network at March 2018

Table 3.1 describes Inverness' route network at March 2018.

TABLE 3.1: INVERNESS ROUTE NETWORK AT MARCH 2018

Destination	Days Per Week	Frequency Per Day (Most Days)
Amsterdam	7	1
Belfast	4	1
Benbecula	5	1
Birmingham	7	1
Bristol	4	1
Dublin	3	1
Kirkwall	6	2
Gatwick	7	2
Heathrow	7	1
Luton	7	1
Manchester	7	3
Sumburgh	6	2
Stornoway	7	3

Source: OAG

Most routes operate at a frequency of one per day all year round-with some others being less than daily in winter (e.g. Bristol, Dublin).

⁷ Economic and Social Impact of Inverness Airport (ekosgen and Reference Economic Consultants)

The exceptions are Gatwick, Stornoway, Kirkwall/Sumburgh and Manchester. They operate more than one flight per day on all or most days of the week all year round. There are also additional frequencies in the summer on the Amsterdam, Heathrow and Luton routes.

Inverness' network is limited in terms of the number of destinations outside Scotland-both in the UK and internationally. In the former case, however, the flights are to significant commercial centres.

One strength of Inverness' network is its serving three London airports. That is particularly so given they include the major ones of Heathrow and Gatwick-with the former particularly important for connecting traffic. However, only one of Inverness' London routes has more than a single daily flight all year round. The result is that it is not possible to make a day trip to/from any London airport apart from one to Gatwick.

Two non-UK airports are served including the major hub of Amsterdam-although neither service offer a day trip opportunity.

As shown at 3.4 Inverness saw significant growth in passenger numbers between 2008 and 2017. However, its current all year round route network is largely unchanged over that timeframe. The key developments have been the introduction of the Amsterdam service and the reinstatement of flights to Heathrow. The other routes are largely what was in place in 2008 and 2009 in terms of destinations served and frequency of service.

3.2.2 Comparison With Other Airports

Qualitative Assessment

Table 3.2 compares Inverness' route network at March 2018 with a number of other UK airports.

TABLE 3.2: COMPARISON OF INVERNESS' ROUTE NETWORK AT MARCH 2018	
Airport	Comparison To Inverness
Newquay	Much fewer destinations (4) Gatwick is the key route with three flights per day every day Other flights are single rotation and only in one case (Edinburgh) are they every day of the week Frequency of Dublin service on a par with that from Inverness
Exeter	Slightly higher number (16) destinations More regional UK destinations with more days operation and higher frequency-though no services to Bristol or Birmingham Poorer London connections-only London City served and with only one flight per day (This will, in part, reflect that all London airports are c3-4 hours car drive time from Exeter*) Higher number (seven) of European services but most are to outbound leisure destinations. One flight per day to both Amsterdam and Paris (in a context of no Heathrow service)

Aberdeen	More than twice the number (32) the number of Inverness destinations Higher frequencies to Orkney and Shetland More routes to UK regional airports including Leeds-Bradford, Cardiff and Southampton-and at higher frequencies Very much higher frequency to Heathrow (10 return flights most days) 13 international destinations-including Stavanger and Paris, plus a much higher frequency to Amsterdam
Edinburgh	Vastly more destinations (91) Many more UK regional destinations-with higher frequency and more days of operation-including Cardiff and Southampton London-five airports served including Heathrow, Gatwick and London City-much higher frequency especially on Heathrow and London City Europe-65 destinations, although many are leisure destinations and served on less than three days per week Daily services and higher frequencies to hubs and other key business destinations such as Amsterdam, Paris, Barcelona, Brussels, Frankfurt, Madrid, Milan Intercontinental services to Doha and New York
Glasgow	Vastly more destinations (66) Many more UK regional destinations-with higher frequency and more days of operation-including Cardiff and Southampton Europe-38 destinations, although many are leisure destinations and served by up to two flights per week Daily services and higher frequencies to hubs and other key business destinations such as Amsterdam, Paris, Barcelona, Brussels, Frankfurt, Madrid, Milan Intercontinental services to Doha and New York to Dubai

Source: Based on OAG data. *Source: RAC Route Planner

Newquay and Exeter were included as comparators because they share some similarities with Inverness. That is, they are smaller, regional airports which are relatively distant from major economic centres.

Table 3.2 shows that Inverness' network is *superior* to that at Newquay in terms of number and range of destinations. It is also broadly *on a par* with Exeter. While having fewer UK regional connections Inverness has a much better range of services to London. The two airports are also on a par in terms of major hubs served: Heathrow and Amsterdam from Inverness, Paris and Amsterdam from Exeter. The lack of flights from Exeter to Heathrow will reflect that it is less than three hours drive between the two airports. In contrast, Inverness to Heathrow takes more than nine hours.

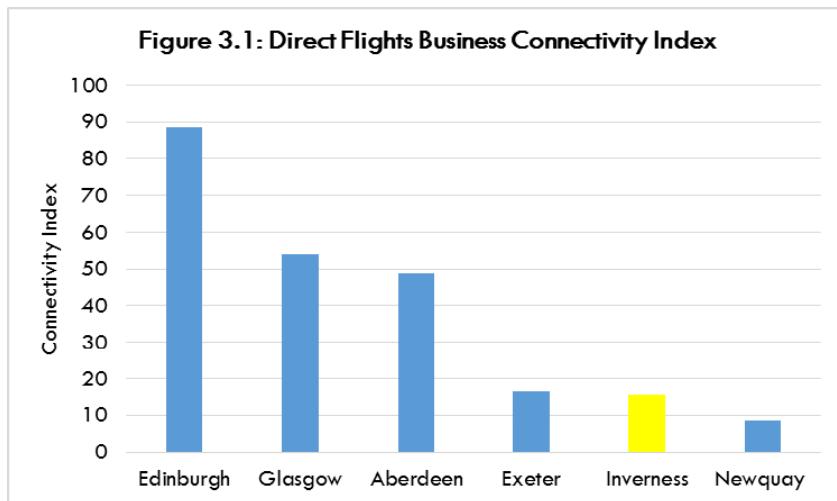
However, Inverness' network is *much less developed* than those of the other three Scottish airports. It has a much more limited:

- Number of UK regional destinations and frequency of flights to them.
- Frequency of flights to London-including to Gatwick and Heathrow.
- International connections-in terms of number of destinations and frequency of service.

Quantified Assessment of Connectivity

The Inverness Airport impact study included a quantified assessment of business travel connectivity provided by Inverness and other selected airports. This was done by, first, producing a composite score for each *direct route* based on its frequency of service and the economic importance of the destination served (London, Amsterdam, Manchester, etc.).

These scores were then summed to give a total for Inverness' direct routes and those of the other ones. The results are set out at **Figure 3.1**.



Direct services at Inverness Airport have a business connectivity index of 15.5. That is greatly below Edinburgh (88.5), Glasgow (54.0) and Aberdeen (49.0).

Thus, in simple terms business connectivity at Edinburgh is more than five times that at Inverness, while that at Aberdeen is three times greater. This reflects the greater range of services and higher frequencies (and to economically important destinations in particular) at the three other airports compared to Inverness.

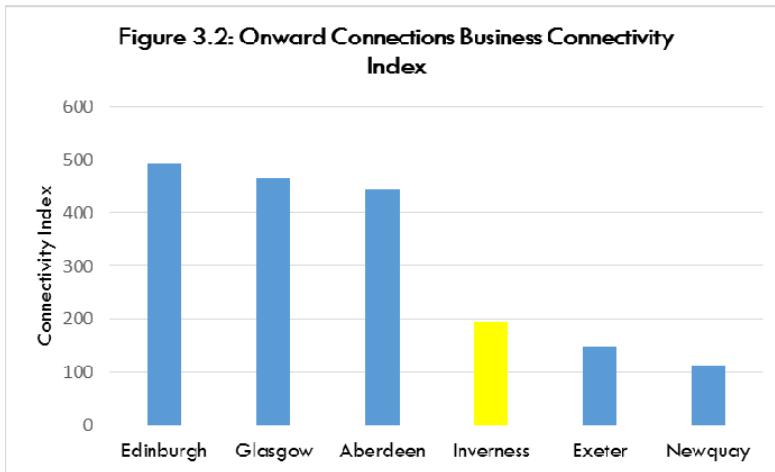
However, Inverness' business connectivity is comparable to Exeter (16.5) and above that at Newquay (8.5).

Second, connectivity was measured for the *onward international connections* available from these direct services within a defined time window after arriving at the airport. As in the analysis of direct services, the score for each connection (e.g. Inverness-Heathrow-New York) was weighted by the economic importance of each city for which an onward connection is available.

The scores are shown at **Figure 3.2**, over. Inverness has an onward connectivity business rating of 196. This is lower than at Edinburgh (496), Glasgow (464) and Aberdeen (445).

In simple terms the usefulness of onward connections to business passengers using the Edinburgh, Glasgow and Aberdeen services is more than twice that of the onward connections available from Inverness.

However, Inverness performs better than Exeter and Newquay, which have ratings of 149 and 114, respectively. This reflects, in particular that the onward connections from Inverness' flights are to more economically significant cities than those available via the services at Exeter and Newquay.



3.3 USE OF OTHER SCOTTISH AIRPORTS

3.3.1 Leakage from Inverness Airport Catchment Area

The small population and economy of its catchment area means Inverness finds it much harder than the other main Scottish airports to build up a cross border route network that meets the needs of its economy and residents. That is despite Edinburgh and Glasgow in particular having much shorter surface journey times to English destinations, while all three other airports have much more frequent direct rail services to major English centres.

As a result, many air trips that start or end in Inverness Airport's catchment area use a Scottish airport other than Inverness. Based on CAA data around 500,000 passengers "leaked" from Highland and Moray to other Scottish airports in 2013. This means additional travel time and associated costs for those who use these other Scottish airports, given the sometimes lengthy journeys shown earlier.

Most of this leakage was leisure traffic and, in total, there was more leakage of trips by catchment area residents than those living elsewhere as follows:

- Outbound Business: 79,000 passengers (16%).
- Inbound Business: 40,000 (8%).
- Outbound Leisure: 224,000 (45%).
- Inbound Leisure: 150,000 (31%).

3.3.2 Drive Times

Analysis

Table 3.3, over, sets out car drive times between a range of settlements in Inverness Airport's catchment area and Scotland's four main airports.

One third (five) of the settlements have a drive time of more than two hours to *Inverness Airport*. The longest (2 hours and 52 minutes) is from Mallaig. The settlements with the longest drive times are in the most westerly and northern parts of the catchment area.

TABLE 3.3: CAR DRIVE TIMES (HOURS AND MINUTES) TO MAJOR SCOTTISH AIRPORTS				
Settlement/Airport	Inverness	Aberdeen	Edinburgh	Glasgow
Elgin	0-47	1-22	3-23	3-45
Keith	1-12	0-55	3-20	3-43
Inverness	0-20	2-21	2-52	3-14
Invergordon	0-43	2-44	3-16	3-37
Aviemore	0-47	2-01	2-18	2-40
Dalwhinnie	1-13	2-27	1-49	2-10
Golspie	1-15	3-16	3-48	4-09
Fort William	1-58	3-24	2-53	2-22
Mallaig	2-52	4-18	3-49	3-24
Kyle of Lochalsh	1-58	3-58	4-09	4-05
Portree	2-49	4-50	5-01	4-57
Thurso	2-33	4-34	5-06	5-28
Ullapool	1-25	3-26	4-04	4-35
Kinlochbervie	2-29	4-30	5-02	5-23
Tongue	2-18	4-19	4-51	5-12
Key	2-00 to 2-59	3-00 to 3-59	4-00 to 4-59	5-00 and above

Source: RAC Route Planner website-data extracted on July 26. Times shown assume no stops en route

If *Aberdeen Airport* is being used then:

- Drive times are *in excess of two hours* for almost all (13) of the settlements. The two exceptions are Elgin and Keith.
- Most (nine) settlements have a drive time of *three hours or more*.
- Travel from five settlements requires a journey of *four or more hours*.

When *Edinburgh Airport* is being accessed then:

- All bar one settlement (Dalwhinnie) have a drive time of *more than two hours*.
- Eleven settlements are *three or more hours* from Edinburgh airport.
- Three (Portree, Thurso and Kinlochbervie) have drive times of *more than five hours*.

Finally, all 15 settlements are *more than two hours* drive from *Glasgow Airport* with:

- Around half (7) of them having a drive of *more than four hours*; and
- In three cases this is *more than five hours long*.

Overall, the longest drive times are to/from Caithness, Sutherland (and its north west in particular), Wester Ross and Skye.

Wider Comparison

RAC Route Planner shows the following drive times from Glasgow city to:

- Manchester: 3 hours and 33 minutes.
- Birmingham: 4 hours and 47 minutes

Thus, a majority (11) of the settlements shown at **Table 3.3** have a drive time to Glasgow Airport that is *longer than the drive from Glasgow to Manchester*. For four of these settlements-Portree, Thurso, Kinlochbervie and Tongue-the drive to Glasgow Airport is also *longer than that between Glasgow and Birmingham*.

It is of note that there are scheduled air services between Glasgow Airport and both Manchester and Birmingham. This reflects the surface distances and journey times involved.

The drive time from *Edinburgh city to Leeds* is 4 hours and 7 minutes. That is, shorter than the drive to Edinburgh Airport from five of the settlements shown at **Table 3.3**.

Travellers to/from other parts of Scotland will use Edinburgh or Glasgow airport. **Table 3.4** shows drive times from two settlements-one in the north east and one in the south west.

TABLE 3.4: CAR DRIVE TIMES (HOURS AND MINUTES) TO EDINBURGH AND GLASGOW AIRPORTS		
Settlement/Airport	Edinburgh	Glasgow
Aberdeen	2-25	2-48
Stranraer	2-37	2-02

Source: RAC Route Planner website-data extracted on July 26. Times shown assume no stops en route

This shows that the drive times from Aberdeen and Stranraer to Glasgow or Edinburgh airport are less than from almost all of the settlements in the Inverness catchment area. In many cases they are considerably less. This reflects that Aberdeen and Stranraer are less than three hours drive from both central belt airports.

3.3.3 Public Transport Journey Times

Table 3.5, over, sets out the *shortest* public transport journey times between the same settlements in Inverness Airport's catchment area and Scotland's four main airports.

There are a number of points to note:

- In many cases journey times are more than one hour longer than the fastest times shown at **Table 3.5**.
- The shortest journey time may not fit well with flight arrival and departure times.
- In all cases at least one change of transport is required-and many journeys require two or more changes. This need to change added to long journey times makes public transport more onerous to use.
- The analysis is based on summer timetables. Some bus routes are less frequent in winter which can lead to longer journey times.

TABLE 3.5: SHORTEST PUBLIC TRANSPORT JOURNEY TIMES (HOURS AND MINUTES) TO MAJOR SCOTTISH AIRPORTS				
Settlement/Airport	Inverness	Aberdeen	Edinburgh	Glasgow
Elgin	1-00	1-51	4-26	4-55
Keith	1-41	1-30	4-05	4-39
Inverness	0-25	2-38	3-17	3-55
Invergordon	1-15	3-52	4-47	4-55
Aviemore	1-15	3-40	2-42	3-11
Dalwhinnie	1-36	4-04	2-36	2-57
Golspie	2-17	5-00	5-53	6-04
Fort William	2-42	5-54	4-42	2-51
Mallaig	4-07	7-38	5-56	4-39
Kyle of Lochalsh	2-48	5-19	6-24	5-16
Portree	3-53	6-24	7-29	6-21
Thurso	3-58	6-49	7-34	8-00
Ullapool	2-03	4-44	5-29	5-40
Kinlochbervie	4-25	6-29	7-34	8-05
Tongue	7-45	9-43	11-13	11-09
Key	2-00 to 2-59	3-00 to 3-59	4-00 to 4-59	5-00 and above

Source: Traveline Scotland website-data extracted on August 29.

The shortest public transport journey times are all longer than those by car. From the more remote settlements public transport tends to take *at least one hour longer* than the car. This is most pronounced for trips to Edinburgh Airport.

Inverness Airport journey times are generally quite long. Most are *more than two hours*, with three settlements having journey times of *more than four hours*.

However, the picture is starker for the other three airports. For Aberdeen, the vast majority of journey times are *more than two hours*, while more than half the journeys are *greater than five hours*.

For both Edinburgh and Glasgow all journeys are *longer than two hours*. In fact, the vast majority are *four hours plus*, with many lasting *more than five hours*.

3.4 TRENDS IN PASSENGER VOLUMES

Table 3.6 shows the change in terminal passenger volumes between 2008 and 2017.

TABLE 3.6: TERMINAL PASSENGERS (000): 2008 AND 2017				
Year	Aberdeen	Edinburgh	Glasgow	Inverness
2008	3,290	8,992	8,135	671
2017	3,090	13,409	9,895	874
<i>Change</i>	<i>-200</i>	<i>+4,417</i>	<i>+1,760</i>	<i>+203</i>
	<i>-6%</i>	<i>+49%</i>	<i>+22%</i>	<i>+30%</i>

Source: CAA

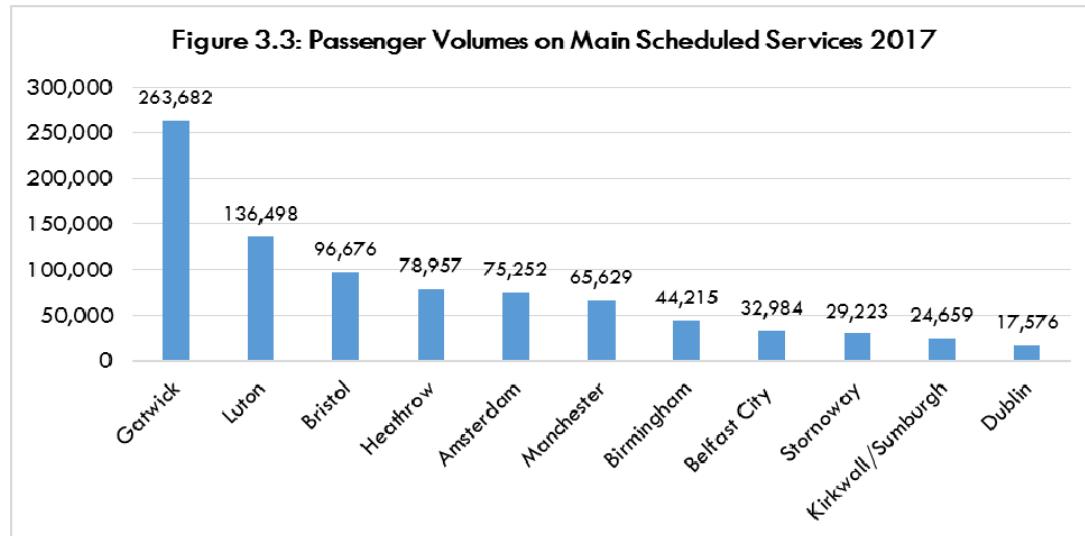
Inverness passenger numbers grew by 30% during this period. However, this growth has been concentrated in the last two years as it was not until 2016 that passenger volumes exceeded those seen in 2008. Yet this demonstrates that demand at Inverness has been responsive to both the new services (i.e. Heathrow) and increased frequencies (Gatwick, Luton and Amsterdam) introduced from 2015 onwards.

Inverness' growth rate was bettered only by the 49% increase at Edinburgh. Glasgow grew less strongly than Inverness while there was a fall at Aberdeen.

However, in *absolute* terms the growth at Inverness was slight-around 200,000 additional passengers compared to a rise of over 1.7 million at Glasgow. In 2017, Inverness accounted for just 3% of the total passenger numbers at the four airports. Passenger numbers at Edinburgh were 15 more than times those at Inverness, with Aberdeen's around 3½ times greater.

3.5 2017 PASSENGER VOLUMES

Figure 3.3 shows passenger volumes on Inverness' main scheduled services. These 11 routes account for almost all of the airport's scheduled passengers.



Gatwick is clearly the largest service by volume. It carried over a quarter of a million passengers (30% of the total). Together Gatwick, Luton and Bristol account for more than half (57%) of all passengers. However, it is still the case most of the routes carry over 40,000 passengers.

The three London services account for more than half (55%) of total passengers, followed by:

- 28% using the four regional UK services.
- 11% of passengers on the two routes to non-UK airports.
- The island routes carrying the remaining 6%.

Just five airlines provide these scheduled services. easyJet operates three of them (Gatwick, Luton and Bristol) carrying approaching 500,000 passengers-more than half (57%) of the total. Loganair operates four routes (Manchester, Stornoway, Kirkwall/Sumburgh and Dublin), accounting for 16% of all passengers. Thus, just two airlines are responsible for around three quarters of Inverness' scheduled passengers.

As shown earlier recent traffic growth has been strong. However, passenger numbers and routes remain potentially fragile given that over 50% of passengers are carried on just:

- The three highest volume services.
- London services.
- Two airlines.

3.6 PASSENGER PROFILE

Table 3.7 profiles passengers by trip purpose and place of residence.

TABLE 3.7: PASSENGER PROFILE: MARKET SEGMENTS				
Trip Purpose/Place of Residence	Overseas	Rest of UK	Inverness Catchment and Adjacent Areas	Total
Business	2%	7%	25%	33%
Leisure	12%	34%	20%	67%
Total	14%	41%	45%	100%

Source: CAA Passenger Survey

This shows a number of distinctive features of scheduled passenger traffic at Inverness. Unlike many UK airports, a majority (55%) are travelling inbound to the catchment area-from both elsewhere in the UK and overseas. In particular, there are more than twice as many inbound leisure passengers than outbound leisure passengers.

Inverness Airport also clearly plays a key role in supporting business travel. One in three passengers are travelling on business. The airport facilitates international business travel by passengers who live in the Inverness airport catchment and adjacent areas of Scotland. Some 13% of these outbound business passengers are travelling internationally-with over 30% of that group travelling outside the EU.

Inverness' routes also clearly contribute to international business activity and tourism in Scotland. Despite Inverness having only two routes to airports outside the UK international services (Amsterdam, Dublin) one in seven of all passengers, and one in four of all *inbound* passengers, are from outside the UK. This reflect international connections via the Heathrow service in particular.

They includes overseas visitors from outside Europe. More than 25% of international business passengers and over more than 40% of international leisure passengers are travelling long haul.

Inverness Airport also plays a social role by facilitating travel for VFR (Visiting Friends and Relatives) purposes. Some 41% of leisure travellers-and thus 27% of *all* passengers-are on VFR trips.

3.7 ROLE OF INDIVIDUAL ROUTES

The following Tables highlight the individual routes that make the most significant contribution to passenger volumes. They show the three highest volume routes for various types of passenger, based on CAA Passenger Survey results.

The first Table shows that of all Inverness' scheduled routes Gatwick has the highest number of business passengers and the highest number of leisure passengers.

All Passengers	Gatwick	Manchester	Luton	Bristol
Business	Highest Volume	Second Highest Volume	Third Highest Volume	
Leisure				
Key	Highest Volume	Second Highest Volume	Third Highest Volume	

Manchester has the second highest number of *business* passengers and Bristol the third highest. Luton has the second highest number of *leisure* passengers and Bristol has the third highest.

The same classifications are used in the two following Tables.

Business	Gatwick	Manchester	Luton	Bristol	Amsterdam	Heathrow
Inbound international			Third Highest Volume		Highest Volume	
Inbound from rest of UK	Highest Volume		Third Highest Volume			
Outbound						
Key	Highest Volume	Second Highest Volume	Third Highest Volume			

Leisure	Gatwick	Luton	Bristol	Amsterdam	Heathrow
Inbound international	Third Highest Volume			Highest Volume	
Inbound from rest of UK	Highest Volume		Third Highest Volume		
Outbound					
Key	Highest Volume	Second Highest Volume	Third Highest Volume		

They show that:

- Gatwick makes the most significant overall contribution-and particularly for rest of UK residents' business and leisure travel.
- Luton contributes to most types of travel-and especially inbound passengers from the rest of UK.
- Bristol's strongest contribution is to inbound UK business travel, as well as contributing to outbound business and inbound rest of UK leisure volumes.
- Amsterdam makes the largest contribution to inbound international passenger volumes, followed by Heathrow.
- Manchester contributes to outbound business travel in particular.

Thus, a total of six routes play a significant and complementary role in facilitating air travel to/from Inverness's catchment area.

3.8 ROLE OF ISLANDS ROUTES

The preceding analysis has tended to concentrate on Inverness' higher volume routes. However, a distinctive feature of Inverness Airport is the provision of flights to the islands-Outer Hebrides, Orkney and Shetland.

Both island routes have *significant business use*. Business travel accounts for more than half (54%) of passengers on the Stornoway service and slightly less (46%) on the Kirkwall/Sumburgh flights.

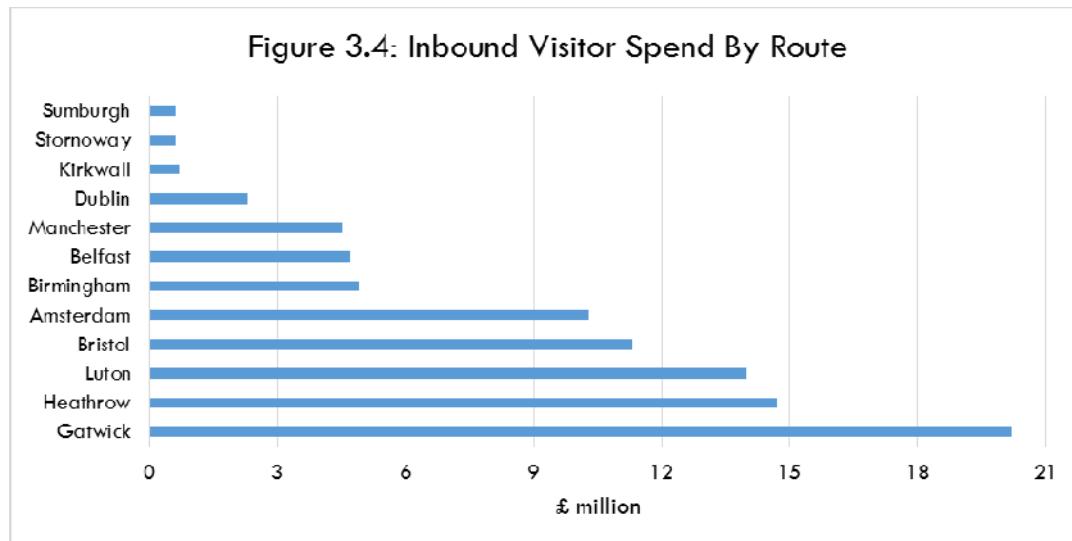
Most business travel is outbound from the mainland and particularly so on the Northern Isles routes. In contrast leisure travel is mostly inbound from the islands. Overall, most leisure travel is VFR.

A distinctive feature of the Stornoway route is that *more than one third of island residents travelling for leisure purposes do so in relation to their studies*. This implies that they are travelling to Inverness or beyond to undertake educational courses.

The routes also see significant use for two types of trips which are not easily identifiable in the CAA Passenger Survey. First for *health-related* purposes-notably patients travelling to Raigmore Hospital in Inverness. Second, by island residents who *work away from home*-e.g. offshore, merchant navy.

3.9 INBOUND VISITOR EXPENDITURES

As shown earlier inbound passengers account for more than half of all those using Inverness Airport. The Inverness Airport impact study estimated a total of around £89 million spend in the catchment area by inbound visitors, supporting over 1,800 Full-Time Equivalent jobs. The estimates of visitor spend by route are shown at **Figure 3.4**.



The four largest contributors (Gatwick, Heathrow, Luton, Bristol) account for around £60 million-slightly more than two thirds of the total.

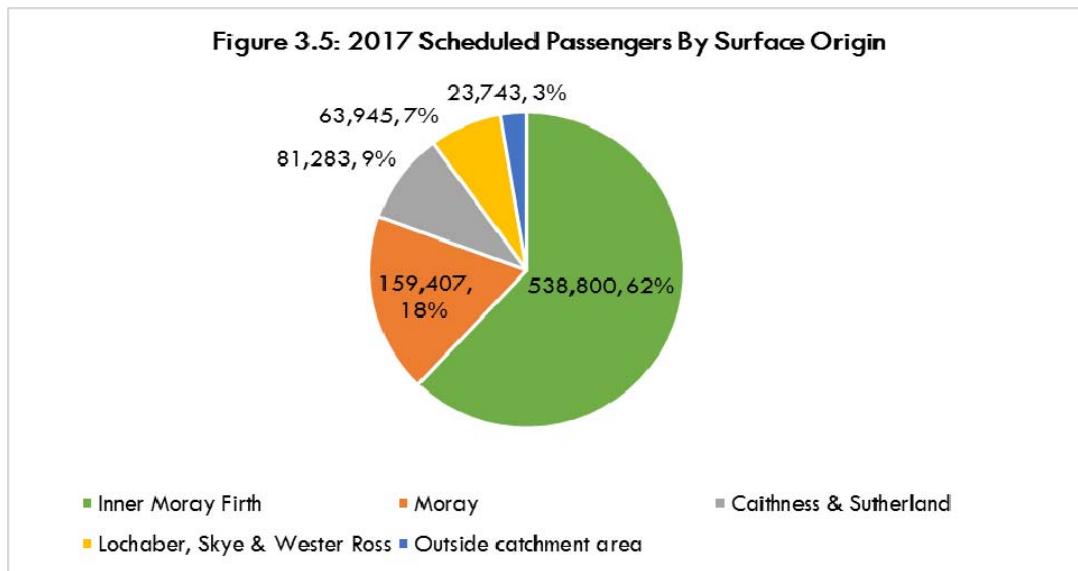
However, many of the other routes make a good contribution. For example, Birmingham, Belfast and Manchester each generate more than £4 million of visitor spend.

It is notable that the share of total *spend* generated by the Heathrow and Amsterdam routes is clearly higher than their share of inbound *passengers*. This reflects these routes' role in bringing in higher spending overseas visitors to the catchment area.

3.10 PASSENGER PROFILE BY SUB-AREA

3.10.1 Total Volumes

Figure 3.5 breaks down 2017 scheduled passenger traffic by surface origin in the catchment's sub-areas. This is based on CAA Passenger Survey results.



Inner Moray Firth has the highest passenger volumes, accounting for slightly over 60% of the total. This reflects that it has the largest population and business base of the four sub-areas.

However, Inverness clearly serves the north west mainland of Scotland as a whole. Some 35% (c305,000) passengers are travelling to/from parts of the catchment area outside the Inner Moray Firth area. This is a significant number and share of passengers.

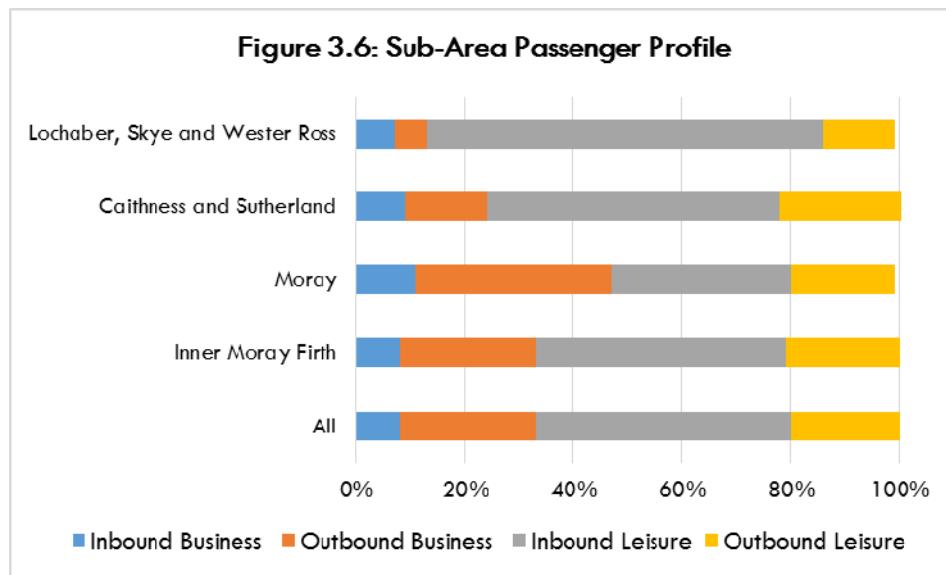
Most (159,000) are to/from Moray. There is a further 81,000 Caithness and Sutherland travellers and 64,000 Lochaber, Skye and Wester Ross passengers. In total, one in six (145,000) Inverness passengers have a surface origin in one of these two areas.

Inverness is very clearly the main north of Scotland airport for those using air to travel to/from Caithness and Sutherland. In 2017, around 81,000 used Inverness with a further 18,000 flying on Wick Airport's scheduled services. That is not to say that the two Wick routes are unimportant: not least because they are to Aberdeen and Edinburgh- neither of which are served from Inverness.

3.10.2 Passenger Profile

Moray is relatively strong in terms of business travel. It accounts for slightly more than 25% of all business passengers at Inverness. In contrast, Caithness and Sutherland and Lochaber, Skye and Wester Ross are stronger for inbound leisure. They account for 12% and 11%, respectively, of these passengers. Thus, approaching one in four of all inbound leisure passengers at Inverness Airport are visiting one of those two areas.

Figure 3.6 provides further detail on passenger profile based on CAA Passenger Survey results.



The profile for *Inner Moray Firth* is very similar to that of all traffic. This reflects that area accounting for a majority of Inverness passengers.

Inverness airport clearly contributes to business activity in *Moray* given that approaching half (47%) of its passengers are travelling on business, with *outbound* business passengers alone accounting for more than one third (36%) of Moray passengers.

In contrast, the traffic for both *Caithness and Sutherland* and *Lochaber, Skye and Wester Ross* is heavily inbound leisure. This accounts for 54% of the former's passengers and 73% for the latter. Thus, Inverness airport is contributing in particular to attracting leisure visitors to these two areas (Although it is also the case that around one quarter of all Caithness and Sutherland passengers are travelling on business).

3.10.3 Significance of Individual Routes

Inner Moray Firth

The Table below uses CAA Passenger Survey results to highlight the routes with the highest volumes for passengers travelling to/from the Inner Moray Firth area. It does this for all passengers and then for four types of passenger.

The numbering used reflects the order of the three top routes in terms of passenger numbers: “1” indicates the highest volume route, “2” the second highest and “3” the third highest.

Inner Moray Firth	Gatwick	Luton	Bristol	Manchester	Heathrow
All	1	2	3		
Inbound Business	1		2	3	
Outbound Business	1		3	2	
Inbound Leisure	1	2	3		
Outbound Leisure	1	2			3

Gatwick has the largest passenger volumes for each category. However, the results also highlight the contribution of:

- The Bristol and Manchester services to business travel.
- Luton to leisure travel.
- Heathrow in facilitating outbound leisure trips.

Moray

Moray	Gatwick	Luton	Bristol	Manchester	Amsterdam
All	1	2	3		
Inbound Business	1	2	3		
Outbound Business	1		3	2	
Inbound Leisure	1	2	3		
Outbound Leisure	1	2			3

Again, Gatwick is the highest volume route for all categories. Luton and Bristol are the other key routes in volume terms. However, Manchester is also significant for outbound business, as is the Amsterdam service for outbound leisure.

Caithness and Sutherland

Caithness and Sutherland	Gatwick	Luton	Heathrow	Bristol	Amsterdam
All	1	2	3		
Inbound Business	1	2	3		
Outbound Business	1			2	3
Inbound Leisure	1		3	2	
Outbound Leisure	1	2			3

Gatwick is the highest volume route for all categories, followed by Luton and Heathrow. The latter is significant for inbound traffic, as is Amsterdam for outbound travel. Bristol supports both inbound and outbound trips.

Lochaber, Skye and Wester Ross

Lochaber, Skye and Wester Ross	Gatwick	Luton	Heathrow	Bristol	Belfast	Manchester	Birmingham
All	1	2	3				
Inbound Business	1	3			2		
Outbound Business	1					2	3
Inbound Leisure	1		3	2			
Outbound Leisure	1	2	3				

Once again, Gatwick is the highest volume route for all categories. However, a further six routes are also significant. They include Heathrow for leisure passengers, Bristol for inbound leisure, plus Luton, Belfast, Manchester and Birmingham for business travel.

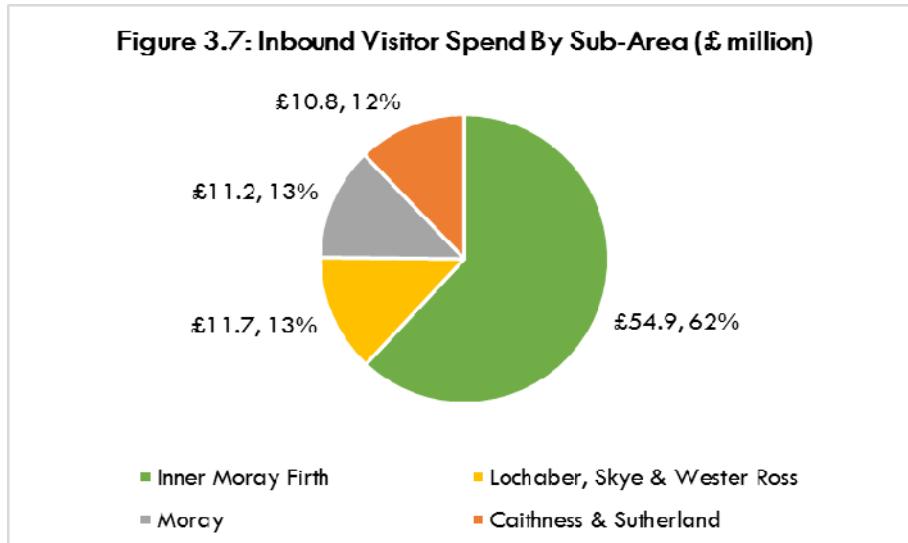
Overview

The key point is that while Gatwick clearly has the highest volumes a further seven routes are also significant for one or more of the sub-areas of the catchment.

The specific routes vary by sub-area. Particularly notable is the importance of the Heathrow service to overall passenger numbers-and especially inbound leisure travellers-for both Caithness and Sutherland and Lochaber, Skye and Wester Ross.

3.10.4 Inbound Visitor Expenditures

Figure 3.7 shows the estimated inbound visitor expenditures by sub-area.



Most (62%) of the spend is in the Inner Moray Firth area. The other 38% is split quite evenly between the other three areas, with the highest amount (£11.7 million) accruing to Lochaber, Skye and Wester Ross where, as shown at Chapter 2, tourism is a major employer.

That area along with Caithness and Sutherland accounts for more than one quarter of the total inbound visitor spend. This again highlights the role that Inverness Airport plays in supporting the economy of north-west mainland Scotland as a whole.

Table 3.8 identifies the three routes in sub-each area which contribute the most in terms of inbound visitor expenditures, in order of the amount they contribute.

TABLE 3.8: MOST SIGNIFICANT ROUTES FOR INBOUND VISITOR SPEND					
Area/Air Route	Gatwick	Luton	Bristol	Heathrow	Share of Total Visitor Expenditures
Inner Moray Firth	1	3		2	52%
Moray	1	2	3		64%
Caithness and Sutherland	2		3	1	57%
Lochaber, Skye and Wester Ross	1	2	3		58%

Source: Inverness Airport economic impact study

This encompasses a total of four routes. Gatwick makes the largest contribution overall, while Luton and Bristol are significant in three of the four sub-areas. The role of Heathrow is also notable. It generates the largest expenditures in Caithness and Sutherland and the second largest in the Inner Moray Firth area.

While the analysis shows just four routes, it is clear that other ones not shown (Amsterdam, Birmingham, etc.) also make an important contribution. For example, in Inner Moray Firth the routes outside the “top three” generate just under half of total visitor expenditures. Similarly, routes outside the top three generate more than 40% of total visitor spend in both Caithness and Sutherland and Lochaber, Skye and Wester Ross.

3.11 CONCLUSIONS

Inverness passenger traffic grew by 30% between 2008 and 2017. This growth was concentrated in 2016 and 2017, demonstrating that *demand has been responsive to both new routes and increased frequencies on existing ones*. Yet, *Inverness passenger numbers remain far below those at the three larger Scottish airports*.

Despite this good passenger growth *Inverness' scheduled route network is largely unchanged since 2008/2009*. It is limited in the following respects:

- Frequency on many routes is no more than one per day all year round, with some less than daily in winter.
- Only a small number of UK regional airports are served.
- Limited all year round frequency to London-only Gatwick is more than one per day-which severely limits day trip opportunities.
- Flights to only two non-UK airports.

Inverness Airport's route network is much more limited than those at Aberdeen, Edinburgh and Glasgow. That is despite Edinburgh and Glasgow in particular having much shorter surface journey times to English destinations, while all three other airports have much more frequent direct rail services to major English centres

Thus, any reduction in frequencies or in destinations served would have a significant impact on Inverness' route network. In addition, total passenger volumes are, arguably, fragile given they are highly dependent on the:

- Decisions of two airlines-easyJet and Loganair.
- Carryings on the London routes.
- Performance of the three highest volume routes (Gatwick, Luton and Bristol).

Given the size of Inverness' catchment area, some of its residents and visitors have a *more than two hour drive to the airport*. If existing Inverness passengers were to switch to another of the main Scottish airports due to changes in fares, frequency or destinations from Inverness-then a drive of *more than three hours* would be the norm, with a trip of *over four hours* from many settlements.

Public transport journey times are even greater. They are also less convenient as all the journeys to the three other Scottish airports require changing services en route.

This would mean higher travel costs plus, possibly, accommodation costs from having to stay overnight before, say, catching an early morning flight from Edinburgh. This is in a context where there is already a high level of leakage of passengers from the Inverness catchment area to Aberdeen, Edinburgh and Glasgow airports.

Many of the drive times from the catchment area to Glasgow Airport are longer than the equivalent road journey between Glasgow City and Manchester. A number are longer than the drive from Edinburgh to Leeds or from Glasgow to Birmingham.

The drive times from the catchment area are well above those to central belt airports from either north east or south west Scotland.

Inverness' current scheduled route network supports the catchment area economy through having:

- A significant proportion of passengers travelling on business.
- A majority of passengers flying inbound to Inverness rather than a majority of residents flying outbound.
- Relatively high spending international visitors accounting for 25% of all inbound visitors using the airport, thus boosting visitor spend.

It also plays an *important social role* with VFR travellers accounting for more than 25% of all passengers.

A key point is that a *range of Inverness' routes* contribute to the mix of passenger traffic and thus to the airport's economic and social impacts. Some have a particular strength in attracting international visitors, others in facilitating outbound business travel, and so on.

Inverness's *range of routes* also contribute to the c£89 million of spend per annum by inbound visitors. Four routes account for over two thirds of this spend.

However, the other ones still contribute good amounts, while Heathrow and Amsterdam play an important role in bringing in higher spending international visitors.

While among the lowest volume routes Inverness' *services to the islands support those communities in a number of ways*. That includes facilitating trips for health, education, less than daily commuting to work, and VFR, while also having a strong component of business travel.

Overall, a reduction in the range of routes operating out of Inverness-or reducing their effectiveness by raising fares or reducing frequency-would adversely affect the airport's impacts.

Inverness and the wider Inner Moray Firth area account for a majority of the catchment area's population and businesses and, thus, a majority of the Airport's passengers and inbound visitor spend.

However, *Inverness Airport very clearly serves the north west mainland of Scotland as a whole*. It has more than 300,000 passengers with a surface origin or destination outside Inner Moray Firth. Of these 145,000 are to/from Caithness and Sutherland or Lochaber, Skye and Wester Ross-the two parts of the catchment area facing the strongest economic and demographic challenges. In particular, Inverness' routes support outbound business travel from Moray and inbound leisure trips to both Caithness and Sutherland/Lochaber, Skye and Wester Ross.

A majority (eight) of Inverness' scheduled routes are significant in volume terms for the four sub-areas. There are variations in the routes that are important by sub-area: for example, the important role of the Heathrow service for traffic to/from both Caithness and Sutherland and Lochaber, Skye and Wester Ross.

These two areas generate 25% of the total inbound visitor spend in the catchment area. Again, most routes in each sub-area make a good contribution to their total visitor spend.

4 INVERNESS AIRPORT: POTENTIAL IMPACTS OF LOSS OF APD EXEMPTION

4.1 BASIS OF THE ANALYSIS

4.1.1 Implications of APD for Airlines

If APD was introduced on departing flights at Inverness in most cases this would require the airline to pay £13 to Government for each departing passenger. They could pass on the charge in full to their passengers. Alternatively they could take the view that their profitability would better be maximised by passing on some of the charge and treating the rest as a cost that their business would bear.

4.1.2 Potential Effects on Fare Levels

Approach

The Inverness Airport impact study included an illustrative analysis of current outbound single fares at Inverness. This was done by extracting fares data from airline websites for each route across a number of travel dates-i.e. one week, two weeks, one month, three months and six months in advance of travel. The same was done for the same routes at each of Aberdeen, Edinburgh and Glasgow. This allowed a comparison of fares between Inverness and those at the other three airports.

This fares analysis is only illustrative. That is because the information on the fare available on a particular day does not capture the distribution of *actual fares* paid on a flight. From the web search there is no way of knowing *how many seats* are available at the price shown on the day when the fares were sampled. Nor how fares will change closer to the day of travel.

Notwithstanding this the fares analysis is useful. However, detailed information on *actual fares paid* would be needed to produce reasonable quantified estimates of the impacts of fare changes on passenger demand.

Findings

The main findings were, first, that even with the current APD exemption, the lowest fares at Inverness tend to be more expensive than those at Edinburgh, Glasgow and Aberdeen.

Second, if the APD exemption was removed and the £13 charge passed on in full, nearly half of Inverness' average (median) fares would increase by 20% or more and a significant proportion would increase by over 30%.

The actual level of increase varied across the routes-between 5% and 42%. The largest percentage increases would be on the high volume routes (notably Gatwick, Luton, Bristol) and the lowest on the Dublin, Heathrow and Amsterdam services.

The research for the impact study suggested various specific effects from fare increases:

- Business passengers would be less price elastic (i.e. less likely to not use a route if fares went up) than leisure passengers. However, business travel would be more sensitive to reduced frequency/less business-friendly flight times.
- Passengers making Holiday trips are likely to be the most price sensitive.
- Smaller airlines may be particularly affected as they have a higher cost per seat through the use of smaller planes. Most Inverness routes operate with aircraft of less than 100 seats.

In passing on all or some of the APD airlines would look to target fare increases at certain types of traveller-i.e. those who more likely to bear higher fares-in order to limit the reduction in passenger numbers.

The ability to do this is increased if the airline operates a number of flights per day on a route. It could, say, target the first flight of the day as it is likely to have a relatively high number of business passengers.

However, the ability to do this on Inverness' flights is limited. That is because only the Gatwick and Manchester routes offer more than a single flight per day all year round. In addition some others operate less than daily frequency in winter (e.g. Bristol, Dublin).

4.1.3 Potential Impacts of Removal of APD Exemption

The main potential impacts of introducing APD on outbound flights from Inverness are:

1. Airlines increasing their fares.
2. Reduced passenger numbers-particularly in the most price sensitive parts of the market.
3. Lower route profitability.
4. Reduced frequencies.
5. Fewer route enhancements than might otherwise have taken place and potential reversal of previous ones.

The first of these (i.e. reduced passenger numbers at Inverness) may, in part, arise from increased use of other Scottish airports by those travelling to/from Inverness' catchment area. This is most likely to consist of:

- Outbound and inbound leisure passengers. There is already significant leakage of the former to other Scottish airports.
- Those travelling to/from Moray as it is relatively near to Aberdeen.
- Business passengers, as a reduction in frequency (per day or per week) on Inverness routes could mean their journey would now best be made by flying from, say, Edinburgh or Glasgow.

As shown at **Chapter 3**, these passengers would incur additional travel time and costs (possibly including overnight accommodation) to fly from Aberdeen or the central belt rather than Inverness.

Because of the additional travel time inbound leisure passengers using another Scottish airport may spend less time and money in the Inverness catchment area (or, indeed, travel to another destination instead). This would *reduce the total inbound visitor spend in the catchment area*.

Inbound business passengers may get less value from their trip. For example, they may have fewer meetings in Inverness' catchment area because of the additional travel time to get there from, say, Edinburgh Airport. This would *reduce the business benefits* of using air services.

It is less clear, however, that introducing APD on the outbound flights would lead to the *withdrawal of any existing Inverness routes*.

Finally, as airline costs would rise some *airlines could seek reduced charges from HIAL* to help offset their higher costs. It would be Inverness' bigger volume customers who would be in the strongest position to do so.

These various issues would arise in a context where airlines already face a challenge in developing/sustaining certain types of route at Inverness. That is due to the catchment area's small population and business base (as shown at **Chapter 2**). As well as benefiting passengers, the current exemption also helps create more of a level playing field with Scotland's largest airports in terms of route development.

4.2 ROUTE BASED ANALYSIS

4.2.1 Introduction

This section aims to identify the routes, traffic types and sub-areas potentially most vulnerable to the introduction of APD. Based on the preceding discussion it is assumed that leisure passengers travelling for Holiday purposes are most price sensitive and thus most likely to discontinue using an Inverness route if fares were increased.

Similarly, it is assumed that the end of the APD exemption could result in reduced frequencies on some routes. These could have a negative impact on those routes' usefulness for business passengers.

4.2.2 Potential Impact on Inbound Visitor Expenditures

A reduction in inbound visitors using Inverness Airport would reduce total visitor spend in its catchment area. That would particularly affect Lochaber, Skye and Wester Ross because more than three quarters (77%) of its total visitor spend comes from those travelling for Holiday purposes. It could also clearly affect Caithness and Sutherland which sees around two thirds (65%) of its visitor spend from passengers on Holiday.

The routes whose total inbound visitor spend is most reliant on inbound *Holiday* passengers are:

- Heathrow: Holiday passengers account for 75% of total visitor spend.
- Amsterdam: 74%.

- Bristol: 62%.

Heathrow, Gatwick and Luton are the routes with the highest *absolute* levels of spend by Holiday passengers.

4.2.3 Potential Impacts on Routes

We have produced an analysis of the potential impacts on individual routes.

First, it highlights the routes most dependent on/contributing most of the following passenger types: inbound Holiday and outbound Holiday. As explained earlier these passengers are the most likely to no longer use an Inverness route if the end of the APD exemption leads to higher fares.

Second, it highlights the routes most dependent on/contributing most business passengers. These would be particularly affected by reduced frequencies.

Third, the analysis identifies the routes with the most potential for reduced frequencies. These are assumed to be routes that currently:

- Do not operate at a daily frequency all year round and have relatively low volumes: i.e. Belfast and Dublin.
- Operate no more than a single daily flight all year round. Their days of operation could be reduced to less than seven days per week, at least during the winter. These would be Amsterdam, Birmingham, Heathrow and Luton.

Finally, using the results of the Inverness Airport impact study, it highlights routes where full application of APD could see the largest percentage increases in average fares.

The results are shown in the Table below. Essentially, the more boxes that are shaded for an individual route the greater the potential impact of the full application of APD.

	Significant For			Potential For Reduced Frequency	Relatively High Potential Fare Increases
Route	Inbound Holiday	Outbound Holiday	Business		
Heathrow					
Amsterdam					
Bristol					
Gatwick					
Luton					
Dublin					
Manchester					
Birmingham					
Belfast					

4.3 CONCLUSIONS

If APD was introduced on Inverness' outbound flights the airlines could pass on the charge in full to their passengers. Alternatively they could pass on some of the charge and treat the rest as a cost that their business would bear.

Previous research produced an illustrative analysis of outbound fares on Inverness's cross-border routes. It had two main findings. First, even with the current APD exemption, the lowest fares at Inverness tend to be more expensive than those at Edinburgh, Glasgow and Aberdeen.

Second, if the APD exemption was removed and the charge passed on in full, nearly half of Inverness' average fares would increase by 20% or more and a significant proportion would increase by over 30%.

The research also found that:

- Business passengers would be less price sensitive than leisure passengers. However, business travel would be more sensitive to reduced frequency/less business-friendly flight times.
- Passengers making Holiday trips are likely to be the most price sensitive.
- Smaller airlines may be particularly affected as they have a higher cost per seat through the use of smaller planes.

It would be possible for airlines to target particular passenger types for fare increases in order to minimise the fall in demand. However, the ability to do this on Inverness flights is limited by the low frequency on many routes.

The main potential impacts of introducing APD on outbound flights from Inverness are:

- Airlines increasing their fares.
- Reduced passenger numbers-particularly in the most price sensitive parts of the market.
- Lower route profitability.
- Reduced frequencies.
- Fewer route enhancements than might otherwise have taken place and potential reversal of previous ones.

Some passengers would choose to use a Scottish airport instead of Inverness. They would incur additional travel time and costs (possibly including overnight accommodation) to fly from Aberdeen or the central belt. As a result inbound leisure passengers may spend less time and money in the Inverness catchment area (or, indeed, travel to another destination instead). This would reduce total inbound visitor spend.

Inbound business passengers using another Scottish airport may get less value from their trip-e.g. have fewer meetings in Inverness' catchment area because of the additional travel time to get there. This would reduce the business benefits of using air services.

Finally, as airline's costs would rise some of them could seek reduced charges from HIAL to help offset their higher costs.

These various issues would arise in a context where airlines face a challenge in developing/sustaining certain types of route at Inverness. That is due to the catchment area's small population and business base.

A reduction in inbound Holiday visitors using Inverness Airport would particularly affect Lochaber, Skye and Wester Ross. That is because over three quarters of its total visitor spend comes from those travelling for Holiday purposes. It would also affect Caithness and Sutherland where the corresponding figure is around two thirds.

Impacts on an individual route basis were considered through an analysis based on four factors. *Assuming equal weighting to each of those factors* the routes with the potential to be most affected would be Luton, Amsterdam, Birmingham, Bristol and Gatwick.

These potential effects show that removing the APD exemption could act against the Inverness City Region Deal commitments made by UK and Scottish Governments⁸. Specifically:

- Ensuring continued air access for the economic development of the region, in particular business-friendly daily links to international hubs.
- Maintaining and improving the level of air access to London, and a daily rotation to Amsterdam.
- Facilitation of tourist visits from an increasing range of countries and regions.
- Widening access to national and international destinations.
- Confidence that routes will be maintained.
- Provide support in line with the wishes of the airport operator (i.e. HIAL).

⁸ City-Region Deal Signatory Document

5 OTHER HIGHLANDS AND ISLANDS AIRPORTS

5.1 INTRODUCTION

This Chapter considers the potential impacts of introduction of APD on flights from: Benbecula, Stornoway, Islay, Kirkwall, Sumburgh and Wick John O'Groats.

Reasonably readily available data were used to profile the airports' catchment areas. The Chapter then looks at air route networks, passenger carryings and the surface transport alternatives to the available flights. Finally, it considers the potential impacts of the introduction of APD on outbound flights.

5.2 CATCHMENT AREA PROFILES

5.2.1 Population

Table 5.1 sets out the population levels of the six airports' catchment areas.

TABLE 5.1: POPULATION LEVELS IN AIRPORT CATCHMENT AREAS: 2011

Catchment Area	Population	Population Density-persons per sq km (Scotland =65)
Caithness and Sutherland	39,732	5
Shetland	23,167	16
Lewis/Harris	21,574	10
Orkney	21,349	19
Uist	4,846	8
Islay/Jura	3,424	5

Source: 2011 Census

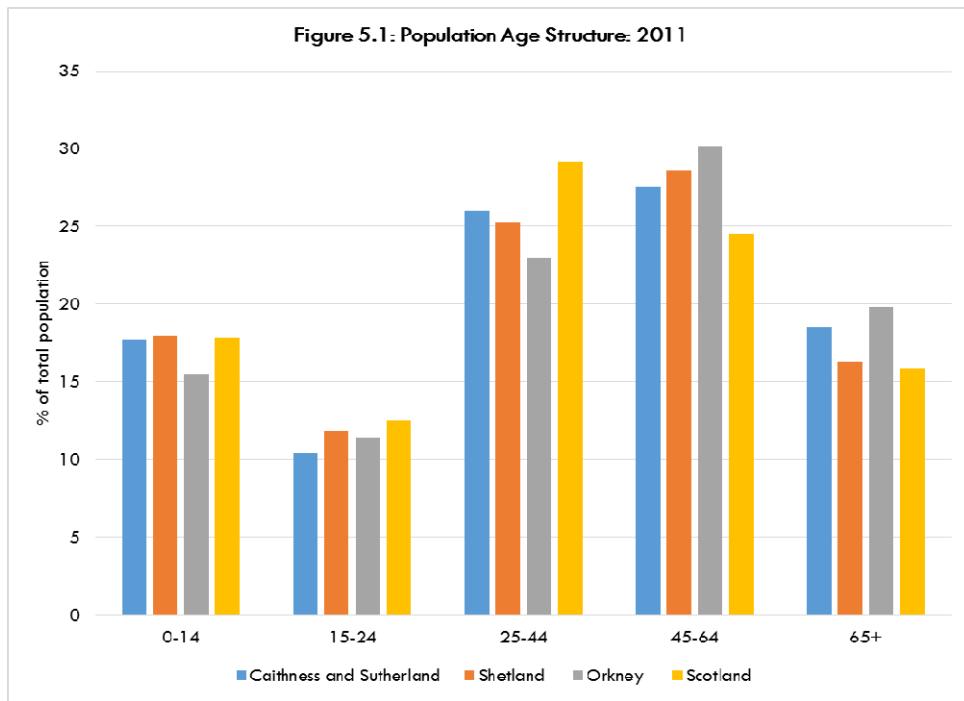
They are low. All six areas have a population of under 40,000, with most around the 20,000 mark. Uist and Islay/Jura much the lowest, each with fewer than 5,000 residents.

This is reflected in low population densities in the catchment areas. Shetland has the highest (19 person per sq km) but this is far below the Scottish figure of 65. Apart from Shetland and Orkney the densities are very low indeed: down to 5 persons per sq km in both Caithness and Sutherland and Islay/Jura.

As discussed at **Chapter 2** low population densities bring the challenges of:

- Additional costs in the provision of goods and services.
- Limited local labour markets.
- Businesses having few chances to interact with other firms.

Figure 5.1, over, shows the age structure of the populations of Caithness and Sutherland, Shetland and Orkney.



Source: 2011 Census

A comparison with Scotland shows that each has a relatively low share of population aged between 15 and 44. The shortfall ranges from 4.5 percentage points in Shetland to over 7 percentage points in Orkney.

It is adults up to the age of 44 who are most likely to be economically active and also to have families. Thus, this age group makes a very significant contribution to areas' economic vitality and future community sustainability.

To some extent this weakness is offset by each area having a higher proportion than Scotland of people aged 45-64, many of whom will be economically active. However, each area also has a higher proportion than Scotland of people aged 65+.

The available data for Lewis/Harris and Uist show a similar picture. Compared to Scotland both areas have a lower proportion of those aged 16-64. They also have a greater proportion of residents aged 65+. A similar position exists on Islay/Jura.

5.2.2 Fragile Areas

As noted at **Chapter 2**, HIE's designated fragile areas include, first, all islands with a population of 300 or less, all islands off other islands, and peninsulas with island characteristics.

Second, other areas are deemed fragile where they face particular challenges in terms of:

- Population trends.

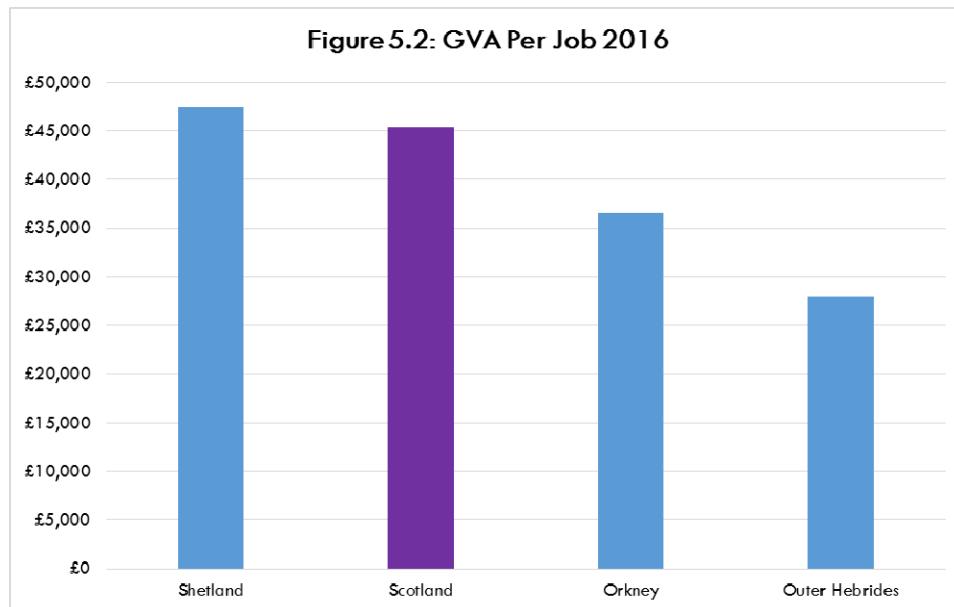
- Drive time to the nearest service centre with a secondary school, NHS hospital and a large chain supermarket.
- Household income.
- Unemployment rate.

In total the six catchment areas contain more than half (45) of the 79 Highlands and Islands fragile areas, as follows:

- Lewis/Harris: 12.
- Caithness and Sutherland: 11.
- Uist: 7.
- Islay/Jura: 5.
- Orkney: 5.
- Shetland: 5.

5.2.3 Gross Value Added

Figure 5.2 shows GVA per job for a number of the catchment areas.

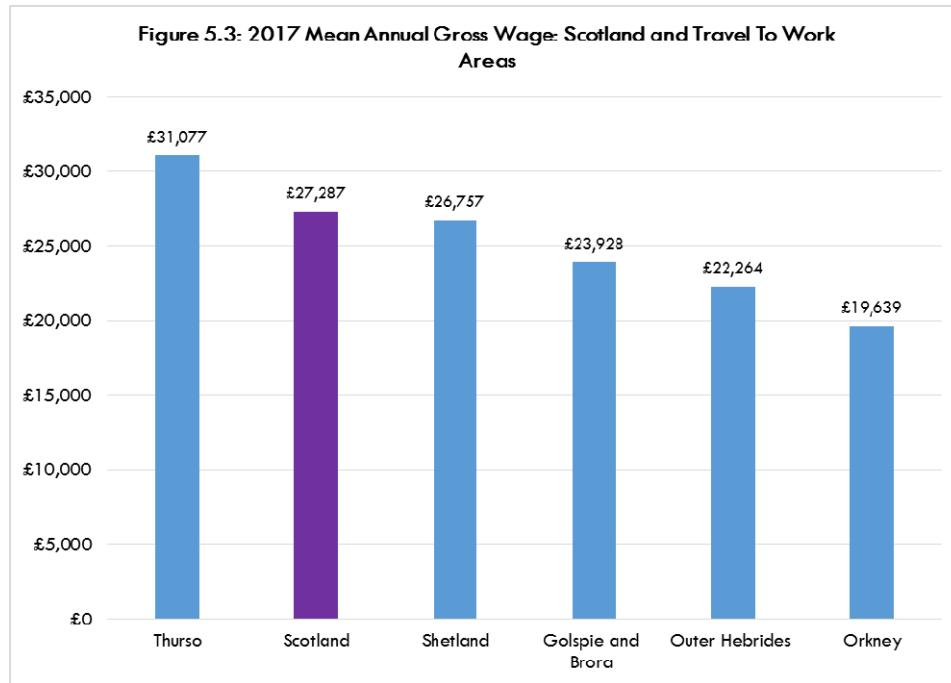


Source: Scottish Annual Business Survey 2016. Note: This dataset does not include the self-employed. It also excludes the financial sector, parts of agriculture and the public sector. No data available for Caithness and Sutherland or Islay/Jura

The figure for Shetland is higher than for Scotland (by 5%). In contrast GVA in both Orkney and the Outer Hebrides (which almost wholly comprises Lewis/Harris and Uist) are markedly lower. The former's GVA per job is around 80% of the Scottish level while the Outer Hebrides figure is only 62% of the national one.

5.2.4 Wage Levels

Figure 5.3 compares wage levels across the various airport catchment areas.



Source: ONS Annual Survey of Hours and Earnings 2017. Note: No data available for Wick TTWA or Islay/Jura

It shows considerable variation between the various areas (although some caution must be attached to the data which are based on quite small sample sizes).

The average wage for the Thurso TTWA (Travel to Work Area) is over £31,000 per annum-very clearly above the Scottish average. That will reflect well paid jobs associated with the Dounreay nuclear facility.

In contrast, all the other TTWAs have an average wage below the Scottish level. Shetland has the highest-at 98% of the Scotland figure. However, those for the Outer Hebrides and Orkney are much lower (around 80% and 70% of the Scottish level, respectively).

These average wages need to be viewed in the context where the cost of living is relatively high. Research undertaken for HIE⁹ shows that the budget required by households to achieve a minimum acceptable standard of living is markedly higher than elsewhere. For example the required budget for a single person (excluding rent) is:

- Outer Hebrides: between 26% and 42% higher than in urban parts of the UK.

⁹ A Minimum Income Standard For Remote Rural Scotland: A Policy Update, for Highlands and Islands Enterprise, 2016

- Orkney and Shetland: between 27% and 64% higher than in urban parts of the UK.

5.2.5 Employment Profile

Employment Levels

Table 5.2 shows the limited employment levels in each catchment area.

TABLE 5.2: EMPLOYMENT LEVELS IN AIRPORT CATCHMENT AREAS: 2016	
Catchment Area	Number of Jobs
Caithness and Sutherland	16,425
Shetland	13,990
Orkney	10,710
Lewis/Harris	8,595
Uist	2,320
Islay/Jura*	1,775

Source: BRES. Data exclude self-employed and farm agriculture. *Includes Colonsay

There are fewer than 20,000 jobs in each area, including under 9,000 in Lewis/Harris. The smallest numbers are in Uist and Islay/Jura.

Employment Structure

Table 5.3, over, describes the sectoral distribution of employment in the catchment areas and for Scotland as a whole.

The areas show some similarities and especially the high proportion of employment in the public sector. Taken together Public admin, etc., Human health and social work activities, and Education account for over 30% of total employment in each area bar Islay/Jura.

The following sectors are also generally significant employers:

- Wholesale and retail trade, etc.
- Construction.
- Transport and storage.

However, there are generally *lower* levels of employment in the higher value added/higher wage industries of:

- Information and communication.
- Financial and insurance activities.
- Professional, scientific and technical activities.

TABLE 5.3: EMPLOYMENT BY STANDARD INDUSTRIAL CLASSIFICATION: 2016

Industry	Share of Total Employment						
	Ork	Shet	Uist	L&H	I/J*	C&S	Scot
Agriculture, forestry and fishing	4%	5%	7%	2%	3%	3%	3%
Mining and quarrying	1%	1%	0%	0%	0%	0%	1%
Manufacturing	4%	7%	3%	8%	12%	3%	7%
Electricity, gas, steam and air conditioning supply	1%	1%	0%	0%	0%	0%	1%
Water supply, sewerage, waste management and remediation activities	0%	1%	0%	0%	1%	9%	1%
Construction	9%	11%	6%	7%	8%	7%	5%
Wholesale and retail trade, etc.	15%	13%	12%	13%	14%	14%	14%
Transport and storage	8%	8%	6%	4%	8%	3%	4%
Accommodation and food service activities	8%	7%	15%	7%	13%	12%	7%
Information and communication	1%	2%	1%	4%	1%	1%	3%
Financial and insurance activities	1%	0%	1%	1%	1%	1%	3%
Real estate activities	1%	1%	2%	2%	2%	1%	1%
Professional, scientific and technical activities	5%	4%	8%	3%	2%	7%	7%
Administrative and support service activities	4%	4%	1%	3%	2%	3%	7%
Public administration and defence; compulsory social security	7%	5%	2%	12%	4%	5%	6%
Education	8%	8%	12%	9%	11%	8%	7%
Human health and social work activities	18%	17%	19%	21%	12%	18%	16%
Arts, entertainment and recreation	4%	4%	4%	2%	4%	3%	3%
Other service activities	1%	4%	1%	3%	1%	2%	2%
Total	100%	100%	100%	100%	100%	100%	100%

Source: BRES. Data exclude self-employed and farm agriculture. Row data do not sum to 100% due to rounding. *Includes Colonsay

A number of industries have relatively high shares of employment in some of the catchment areas:

- Accommodation and food service activities (a proxy for the tourism sector)-Uist, Islay/Jura, Caithness and Sutherland.
- Manufacturing-Islay/Jura.
- Agriculture, forestry and fishing-Uist, Shetland.
- Water supply, etc.-Caithness and Sutherland.

Catchment Area Economic Specialisms

Table 5.4 describes the sub-sectors with the highest Location Quotients¹⁰ (i.e. above 5.0) and their employment levels.

TABLE 5.4: SUB-SECTORS WITH HIGHEST LOCATION QUOTIENTS			
Catchment areas	Sub-Sector	Total Employment	Key Employers
Islay/Jura	Manufacture of beverages	200	Diageo
Caithness & Sutherland	Waste collection, treatment and disposal activities; materials recovery	1,500	Dounreay nuclear site
All areas	Fishing and aquaculture	Orkney: 400 Shetland: 700 Uist: 200 Lewis/Harris: 200 Islay/Jura: <100 Caithness and Sutherland: 300	Various
Uist	Scientific research and development	200	QinetiQ/Hebrides air range
All areas except Caithness and Sutherland	Water transport	Orkney: 200 Shetland: <100 Uist: <100 Lewis/Harris: <100 Islay/Jura: <100	Ferry operators, Harbour Authorities
Lewis/Harris	Manufacture of textiles	200	Harris Tweed Hebrides
Lewis/Harris	Motion picture, video and television programme production, etc.	200	MG Alba Independent television companies
Uist	Libraries, archives, museums and other cultural activities	100	Various
Shetland	Air Transport	100	Airport operators and airlines

Source: BRES 2016. Data exclude self-employed and farm agriculture. Employment figures rounded to nearest 100

It shows a range of specialisms in each catchment area, with water transport and fishing and aquaculture common to almost all of them. Orkney also has a specialism in renewable energy. However, this is not fully identifiable through the categories used in BRES.

Table 5.4 also shows that many of these specialist sub-sectors are locally significant employers. More than half of them have at least 200 direct jobs, with many also generating significant additional employment through their supply chains.

¹⁰ Location Quotients (LQs) are a means of quantifying how concentrated a particular industry is in an area compared to its concentration within Scotland as a whole. They can reveal what makes a particular area “unique” in comparison to the national average. LQs were calculated for each industry by dividing its local area share of employment by its Scottish level share of employment. Thus, a LQ of more than 1 shows that an industry is more important (in employment terms) locally than it is nationally

5.3 AIR SERVICES

5.3.1 Route Networks

Table 5.5 describes the flights that are available all year round from the six airports.

TABLE 5.5: AIR ROUTE NETWORKS: WINTER TIMETABLE 2018-2019		
Destination	Days Per Week	Frequency Per Day (Most Days)
Benbecula		
Glasgow	7	1
Inverness	5	1
Islay		
Glasgow	7	2
Kirkwall		
Aberdeen	7	3
Edinburgh	7	1,2 or 3
Glasgow	7	1
Inverness	7	1
Sumburgh	7	1
Stornoway		
Glasgow	7	4
Inverness	6	3
Edinburgh	5	2
Aberdeen	5	1
Sumburgh		
Aberdeen	7	5
Edinburgh	7	2 or 3
Glasgow	7	1
Inverness	7	1
Kirkwall	7	1
Wick John O'Groats		
Aberdeen	5	2
Edinburgh	6	1

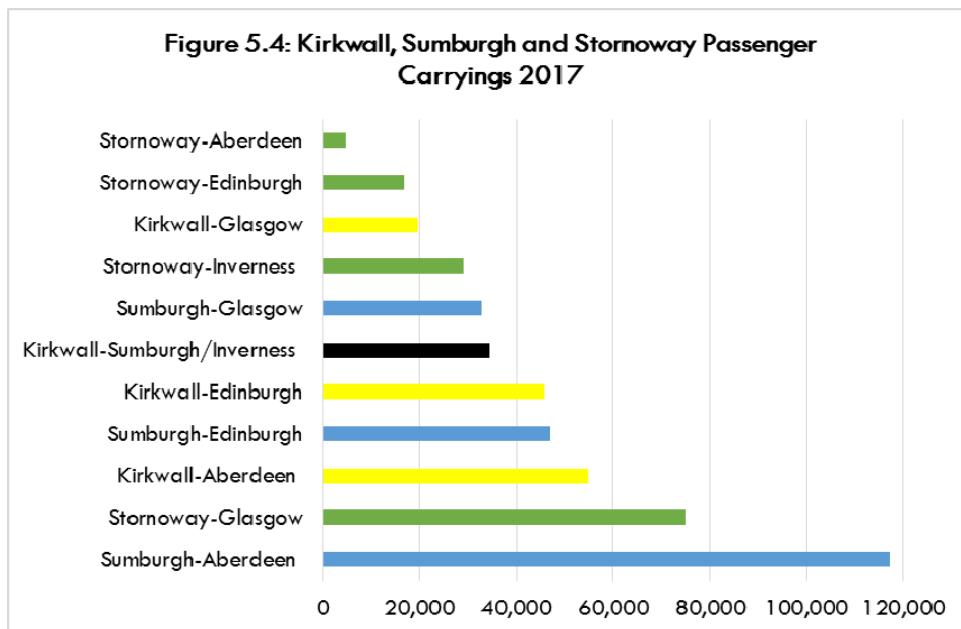
The airports can be divided into two groups. First, the island capitals of Kirkwall, Stornoway and Sumburgh. These airports have flights to a range of destinations, mostly operating daily. Frequency is reasonable to good on the main services-e.g. Stornoway to Glasgow and to Inverness; and from the Northern Isles to both Edinburgh and Aberdeen. However, some of the routes are limited to only one flight per day-e.g. Stornoway-Aberdeen, Northern Isles to both Inverness and Glasgow.

Flights are quite limited at the other three airports. Wick John O'Groats and Benbecula have two routes, while Islay's only flight (outside Argyll and Bute) is to Glasgow.

Each of the three airports' primary route has a double daily frequency-albeit Wick John O'Groats to Aberdeen operates only five days per week. The secondary flights from Wick John O'Groats (to Edinburgh) and Benbecula (to Inverness) are a single rotation and operate less than daily.

5.3.2 Passenger Volumes

Figure 5.4 shows 2017 passenger volumes on the routes that operate all year round from Kirkwall, Stornoway and Sumburgh.



Source: CAA

Most of the eleven routes can be termed “thin” or even “ultra-thin”. Only three have more than 50,000 passengers and four have fewer than 30,000. Those with the lowest carryings tend have just a single flight per day. (Although Stornoway-Inverness has three rotations most days it carries less than 30,000 passengers).

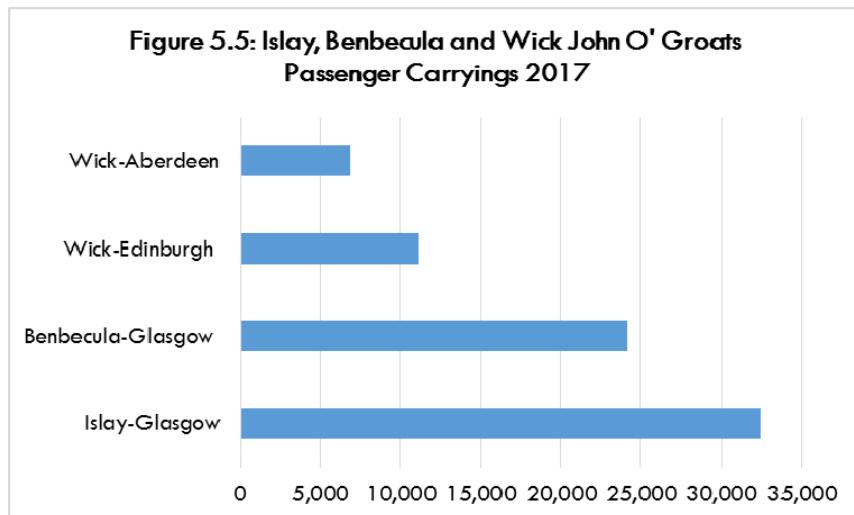
Figure 5.5, over, describes passenger volumes on the Benbecula, Islay and Wick John O’Groats routes.

They are thinner than most of those from Kirkwall, Sumburgh and Stornoway. Only the Islay service has more than 30,000 passengers, while Benbecula-Glasgow has just under 25,000. The two Wick John O’Groats routes have the lowest numbers, carrying just over 18,000 passengers in total.

5.3.3 Passenger Profile

Table 5.6, over, provides a broad profile of passengers using the services. (This excludes flights to/from Inverness which are covered at **Chapter 3**).

Each airport’s routes plays a distinctive role. This reflects each of the catchment area’s characteristics: notably population level, economic structure and available surface transport alternatives.



Source: CAA. No data available for Benbecula-Inverness

TABLE 5.6: PASSENGER PROFILE: 2016

Airport	Business		Leisure		Total
	Outbound	Inbound	Outbound	Inbound	
Benbecula	10%	11%	64%	15%	100%
Islay	7%	15%	38%	39%	100%
Kirkwall	10%	25%	42%	22%	100%
Stornoway	17%	17%	45%	21%	100%
Sumburgh	16%	25%	35%	24%	100%
Wick	20%	44%	30%	5%	100%

Source: CAA Passenger Survey 2013. Note some rows do not sum to 100% due to rounding

These can be summarised as:

- Benbecula: strongly outbound leisure trips by residents.
- Islay: strongly leisure travel.
- Kirkwall: mainly outbound leisure and inbound business travel.
- Stornoway: mainly outbound leisure.
- Sumburgh: more balanced between business and leisure.
- Wick: most trips are business.

Leisure trips are in the majority on all bar the Wick services. Yet business travel is still significant. It accounts for more than 20% on all the services and over one third on the Wick John O'Groats, Sumburgh, Kirkwall and Stornoway routes.

5.3.3 Surface Transport Alternatives

Table 5.7, over, describes the surface alternatives to a selection of the air routes.

The air services generally perform better in terms of service frequency and, in particular, overall journey time. Only on Islay-Glasgow and Orkney-Inverness are there fewer flights than ferry sailings.

TABLE 5.7: SURFACE TRANSPORT ALTERNATIVES TO SELECTED AIR ROUTES

Journey	Air		Ferry/Car	
	Flights per day (Most days)	Journey time: Hours and minutes	Sailings per day (Most days)	Journey time: Hours and minutes
Uist to Glasgow Airport	1	0-55	5 per week	6-34 to 7-18
Islay to Glasgow Airport	2	0-45	3	4-14
Orkney to Aberdeen Airport	3	0-55	4 per week	7-33
Orkney to Inverness Airport	1	0-45	5	4-21 to 4-48
Stornoway to Inverness Airport	3	0-45	2	4-15
Stornoway to Glasgow Airport	4	1-00	2	7-11
Shetland to Edinburgh Airport	2 or 3	1-25	1	14-20 to 15-50
Shetland to Aberdeen Airport	5	1-05	1	12-18 to 13-48
Wick to Edinburgh Airport	1	1-00	N/A-road journey	5-00

Source: Winter 2018-2019 ferry and air timetables and RAC Route Planner

The flight times are all short. They range from 45 minutes to 1 hour and 25 minutes.

The surface journeys are much longer-all are more than 4 hours duration. Indeed, most take more than 6 hours, although it is recognised that the longest journeys from Orkney and Shetland include overnight ferry travel. This reflects the long surface distances involved and the need to travel by ferry in most cases.

Importantly, almost all the air services offer a day trip opportunity. This can only be achieved on a few of the surface alternatives (e.g. to/from Islay). However, that would mean a total journey time of more than 8 hours in a single day. Air is especially suited to day trips, as well as urgent trips where time is of the essence (e.g. in times of illness/bereavement).

5.4 POTENTIAL IMPACTS OF LOSS OF APD EXEMPTION

Based on the Inverness Airport analysis at **Chapter 4** the main potential impacts of introducing APD on outbound flights from the six airports are:

1. Airlines increasing their fares.
2. Reduced passenger numbers-particularly in the most price sensitive parts of the market including larger parties (e.g. family of four).
3. Lower route profitability.
4. Reduced frequencies.

These potential effects are in a context where:

- a) Residents' ability to pay higher fares will be constrained by most areas' having both low wages and a high cost of living.
- b) Fares on many routes are already very high. Research for HITRANS in 2016 showed business travellers facing return air fares of between £106 and £515, and between £70 and £274 return if the passenger was eligible for ADS.
- c) Most routes will already have limited profitability.
- d) Reduced frequency would have a disproportionate effect given the generally low number of flights on many routes.

e) Switching to surface transport would result in much longer journey times.

Criteria similar to those used for Inverness (see **Chapter 4**) were used to identify routes that could see the greatest potential impact from full application of APD. These criteria are airports whose traffic levels are most dependent on:

- Leisure traffic (both inbound and outbound). These passengers are the most likely to no longer use a route if the end of the APD exemption leads to higher fares.
- Business passengers, as they would be particularly affected by reduced frequencies.

Third, routes with most potential for reduced frequencies. Again, these are assumed to be ones with no more than a single daily flight all year round.

Giving the three criteria equal weighting the routes with the potential to be most affected by full application of APD are:

- Benbecula: Glasgow and Inverness.
- Islay-Glasgow.
- Stornoway-Aberdeen.
- Sumburgh: Edinburgh and Glasgow.
- Wick-Aberdeen.

5.5 CONCLUSIONS

5.5.1 Economic and Demographic Challenges

The catchment areas of the six airports each face a number of challenges.

1

Remoteness from the main commercial and service centres of Scotland, and even more so from the rest of the UK.

2

Small population levels and densities, with the constraints these impose on economic development, reflected in their number of designated fragile areas and higher cost of living.

3

Small business bases, leading to a need to travel elsewhere to access some personal services (e.g. health) and for companies to access markets and business partners. Thus, flights are generally used by many members of the local community rather than air travel being confined to more prosperous residents.

4

A relatively low proportion of residents aged 15-44. This reduces the pool of workers, businesses and families required to generate sufficient levels of sustainable growth.

5

An overrepresentation of sectors with relatively low GVA/productivity and wages.

These challenges-and the vital importance of air transport-is evidenced by Scottish Government's Air Discount Scheme (ADS). This provides reduced fares to local residents and third sector organisations for flights at the six airports.

In response to these challenges there is a need to recognise the economic specialisms/advantages of the six catchment areas. These include food and drink and other manufacturing, nuclear industry, fishing and aquaculture, scientific research and development, and media. These sectors are largely intensive users of air services and/or reliant on external markets and investment. Hence the importance of air transport to their future growth and development.

5.5.2 Current Air Services

Most of the routes are thin or ultra thin. Each airport has a limited number of destinations and low frequencies on most services. Thus, any reduction in frequencies or in destinations served would have a significant impact on each route network. The fragility of the networks is increased by four airports being served by just one airline (Loganair) while Stornoway and Wick John O' Groats are served by two (Loganair and flybe).

The air services facilitate trips for health, education and VFR; inbound tourism; less than daily commuting to work (e.g. offshore); and general business travel.

Surface travel alternatives are long and in most cases include slow and infrequent ferry crossings. Air effectively shrinks these distances allowing day trips and urgent trips to be made.

5.5.3 Potential Impacts of Loss of APD Exemption

The main potential impacts of introducing APD on outbound flights are:

- Airlines increasing their fares.
- Reduced passenger numbers-particularly in the most price sensitive parts of the market.
- Lower route profitability.
- Reduced frequencies.

These potential impacts are in a context where:

- Residents' generally face both low wages and a high cost of living.

- Most routes have limited profitability.
- Reduced frequency would have a disproportionate effect given the low number of flights on many routes.
- Switching to surface transport would result in much longer journey times and fewer day trip opportunities.

Impacts on an individual airport/route basis were considered through an analysis based on three criteria. *Assuming equal weighting to each of those factors* the routes with the potential to be most affected would be:

- Benbecula: Glasgow and Inverness.
- Islay-Glasgow.
- Stornoway-Aberdeen.
- Sumburgh: Edinburgh and Glasgow.
- Wick-Aberdeen.