

**Air Freight  
In The  
Highlands & Islands**

**Final Report**

**to**



**and**



**by**



[northpointaviation.com](http://northpointaviation.com)

Business Development ♦ Research ♦ Consultancy

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## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

HITRANS and HIAL commissioned *Northpoint* to:

- Review general air freight trends.
- Assess the current status of the Highlands & Islands air freight market.
- Identify constraints and opportunities for air freight development.
- Provide a top level action plan for taking forward specific opportunities.

The research was undertaken between January and April 2012. It largely comprised:

- A desk-based review of statistics and reports.
- Consultations with those involved in air freight and a range of other stakeholders.

### **AIR FREIGHT TRENDS**

Air freight growth rates are seen as closely related to GDP. Volumes in some parts of the world fell during the economic downturn that began in 2008. They recovered in 2010 but now seem to have, at best, stalled. Despite this, longer term growth is forecast to be strong. This is particularly the case for traffic to/from developing economies.

Since the 1990s express traffic has grown at a rate well above other segments of the air freight market. A small number of integrators dominate the express market. Increasingly important players in the UK, they carry growing amounts of air freight other than their traditional parcels and documents.

UK airport freight volumes were, in total, largely unchanged between 2000 and 2010. This is in contrast to quite strong growth in passenger numbers. While freight traffic grew at the major hub of Heathrow, it declined across other UK airports. This decrease also occurred at Scotland's airports.

Across all UK airports, most (two-thirds) of air freight by volume is carried in the bellyholds of passenger aircraft. However, if Heathrow is excluded then the bellyhold share falls to around one quarter.

### **THE AIR FREIGHT MARKET IN THE HIGHLANDS & ISLANDS**

The dedicated air freight services within the Highlands & Islands are mail flights to the Outer Hebrides, Shetland and Orkney, plus a newspaper flight to Stornoway. Some of these flights are empty on the return leg to the mainland.

There are also mail flights between Inverness and both Edinburgh and East Midlands. All mail flights within or to/from the region are operated on contract to Royal Mail.

Scheduled passenger services in the Highlands & Islands have only limited freight capacity. Cross-border passenger services from Inverness have greater freight capacity than the intra-regional flights - but it is still modest in absolute terms.

It was also reported that there are a number of freight charter flights each year out of Kirkwall. These fly lobsters to Scandinavia when prices peak.

There is a lack of reliable statistics for freight volumes through Highlands & Islands airports. However, it appears that they are very slight, with only around 120 tonnes per annum at Inverness. The passenger flights to Amsterdam and Gatwick presently carry very little freight.

Freight volumes at Inverness have declined over the last decade. The downward trend reflects the loss of the BA Connect link with Gatwick and its seamlessness with BA World Cargo. It is also due to the operation of smaller cross-border passenger planes with less bellyhold capacity than their predecessors.

Volumes have also declined over a longer period. This was particularly after Inverness lost its passenger flights to Heathrow in the late 1990s and thus fell out of the world's hub and spoke system.

Highlands & Islands freight can and does travel on flights from other Scottish airports. Glasgow, Edinburgh and Aberdeen all have integrator services to/from England. Prestwick has freight services connecting with mainland Europe and the United States.

Freight can also travel bellyhold on these airports' passenger services. These include flights to major European hubs like Heathrow, Amsterdam and Paris, and intercontinental services to the United States and Dubai.

Despite these options total air freight from Scottish airports outside the Highlands & Islands remains modest in relative terms. Edinburgh has the highest volumes, but is ranked only eighth among UK airports in terms of freight traffic.

Accurate information is not available on the volume of Highlands & Islands freight flown to/from airports outside the region. However, this leakage is likely to be substantial, given the apparently very low volumes at Highlands & Islands airports. Commodities include:

- Seafood.
- Integrator traffic.
- Other high value products (e.g. electronics).

A lot of Scottish (and thus Highlands & Islands) seafood exports to intercontinental markets are roaded to Heathrow and then flown worldwide from there. The main market is by far the United States, followed by China. Seafood that is flown directly from Scottish airports appears to go largely from either Glasgow or Prestwick and almost all to Hong Kong or Singapore.

Air freight is much less able to compete with surface transport in moving goods to customers in the south of England and near mainland Europe. Surface consignments include seafood to:

- The London area and south coast, by road.
- London, on the Inverness-London sleeper train.
- Spain, by vivier lorry.

The most significant unmet demand for air freight direct to/from the region is:

- High value seafood exports to longer haul markets, where distances mean that air is not prone to competition from surface transport.
- Inbound parcel traffic.

## **CONSTRAINTS**

The most important constraints on development of air freight at Highlands & Islands airports are:

- Limited range of suitable products and their dispersal across the Highlands & Islands.
- No strong appetite for change among transport providers or their customers.
- The cost of air freight, which can appear prohibitive for goods currently moving by surface transport.
- The existing range of services operating from airports outside the region.
- Different timing requirements for different goods, which can limit the ability to optimise use of both directions of an aircraft rotation.
- Potential customers being unwilling to co-operate and co-ordinate loads.
- Limited bellyhold capacity on Highlands & Islands passenger aircraft.
- Seasonality and potentially low volumes of outbound food products for movement by air.
- Airport security procedures and practices.

## **OPPORTUNITIES**

- Express parcels traffic from the Midlands to Inverness.
- Southbound express parcel traffic from Inverness to the Midlands and seafood to world markets via EMA.
- Empty freight aircraft off the islands as a ready source of freight capacity at marginal cost.
- Freight charter flight potential.
- The relatively new Inverness-Amsterdam passenger service.

Two opportunities were explored in detailed. First, a *scheduled Inverness-East Midlands air freight service*. This would be based on the identified unmet demand from parcels (mostly inbound to the region) and seafood exports.

Parcels would be the main traffic component. However, the service would most likely require some seafood traffic on the southbound leg to make it viable.

The service would need to be timed to meet the extensive international flight connections at East Midlands. The main attraction of the service would be reduced overall international transit times compared to existing routes. The viability of the service would be enhanced if it can receive onward traffic from the islands.

Second, *utilisation of existing spare capacity*-principally empty scheduled airfreight service capacity within the Highlands & Islands. These flights could be used primarily for seafood exports. Their viability appears to depend on their being able to feed into the aforementioned Inverness - East Midlands service and thus onwards to longer haul markets.

These opportunities could produce a number of benefits:

- Allowing main users (parcel carriers and seafood producers) to charge a premium for their products and/or increase their market share.
- Seafood exports by air from the Highlands & Islands to world markets would both piggyback on, and contribute to, growing Scottish food and drink exports and Scottish Government's internationalisation agenda.
- An East Midlands service putting Inverness back in the substantial global airfreight hub and spoke system, while introducing integrator flights to the Highlands & Islands for the first time.
- Allow inhabitants and businesses in the region to enjoy comparable despatch and receipt times for express parcels with other regions of the UK.
- Additional operating revenues for HIAL.

## **ACTION PLAN**

The plan identifies actions that HIAL could undertake to develop air freight business. These are grouped under the following five strands:

1. Effort to foster a new air freight service between Inverness and the Midlands.
2. Encourage use of dead-leg capacity from the islands.
3. Maximise bellyhold activity on Inverness cross-border flights.
4. Encourage freight charters.
5. Maintain an open dialogue with Royal Mail.

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# 1 **INTRODUCTION**

This is the final report of a study of air freight in the Highlands & Islands. The work was undertaken on behalf of HITRANS and Highlands & Islands Airports Limited (HIAL) between January and April 2012.

## 1.1 **STUDY OBJECTIVES**

The overall objective was to assess the current status of the air freight market in the Highlands & Islands and use this, along with a review of general trends in the sector, to provide recommendations on how air freight business might be developed by Highlands and Islands Airports.

The detailed objectives were to:

- Provide context in terms of air freight trends (current and future) in the rest of the UK.
- Identify the air freight market currently being served in the Highlands & Islands.
- Identify evidence of potential unmet demand in the Highlands & Islands.
- Produce an analysis of issues, constraints and opportunities for the development of air freight in the Highlands & Islands.
- Make recommendations on how the air freight market could develop in the future.
- Provide a top level action plan for taking forward specific opportunities.

## 1.2 **METHOD**

The method comprised:

- A desk-based review of statistics and reports.
- A total of 68 consultations, 25 of which were undertaken face-to-face.
- An online survey of Highlands & Islands businesses which was facilitated by local business groups.

An interim client meeting was held half way through the study. This reviewed our findings up to that point and agreed priorities for further fieldwork and investigations relating to specific issues and opportunities.

## 1.3 **REPORT STRUCTURE**

- Chapter 2** Provides context for the study by discussing a number of general trends and issues currently affecting the air freight sector.
- Chapter 3** Describes the current position regarding air freight movements to, from and within the Highlands & Islands.
- Chapter 4** Presents our analysis of constraints and opportunities.
- Chapter 5** Contains our conclusions, plus recommendations in the form of a top level action plan.

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There are also three **Appendices**. These list the main consultees for the study, provide a bibliography of main sources used and set out the key assumptions underpinning some of the figures shown at **Chapter 4**.

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## **2 THE AIR FREIGHT SECTOR**

### **2.1 INTRODUCTION**

This Chapter considers a number of generic aspects of the air freight sector by way of introduction to the Highlands and Islands specific issues which follow. In particular it describes and analyses:

- Air freight trends in the UK and internationally.
- Key actors in the air freight sector.
- The air freight process, from booking cargo through to its final delivery.
- Note on Airfreight Sustainability

### **2.2 AIR FREIGHT TRENDS**

#### **2.2.1 Role of Air Freight**

The use of air transport for moving high value or perishable cargo has become critical to national, continental and global supply chains. Distributed production patterns, time-definite international transactions, just in time and low inventory practices have driven the development of sophisticated airfreight systems. Products such as electronics, pharmaceuticals, medical devices and sophisticated components account for the majority of international air cargo by value, but highly perishable goods that see a significant decrease in value with delay have become significant users of airfreight.

Air cargo operators provide guaranteed, fast, reliable, on demand, world-wide, door-to-door movement of shipments which are tracked and controlled throughout the journey. They are the “Business Class” of freight services and play a critical role in facilitating the success of other parts of the global economy, as companies increasingly demand rapid, guaranteed delivery.

They are increasingly important:

- To ensuring the continued competitiveness of companies, and so to winning export markets and encouraging investment, something which is likely to become even more important in future as the world economy becomes increasingly integrated.
- To providing good access to markets wherever they are based.
- To enable companies to maximise the efficiency of their operations – reducing production shutdowns and allowing the implementation of best international techniques such as build-to-order, while also allow companies to minimise their inventory costs.

One area where airfreight, particularly express freight, services are likely to be particularly critical to economic success is the knowledge-based sectors, such as pharmaceuticals/biotechnology, financial and business services, and research & development. These sectors are more-than-usually dependent on express services, reflecting the time-sensitive, high value products and services they provide.

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A study in 2006<sup>1</sup> provides some useful statistics on the significance of air-freight at a global level. It states that air cargo accounts for 40% of the value of world trade. However, because it is predominantly involved in the movement of high value and low weight goods it accounts for less than 2% of world trade by weight.

Around 50% of air cargo is carried on passenger flights, accounting for just under 20% of the total passenger and cargo payload of those flights. The remainder is carried in dedicated freighters (or air cargo aircraft), operated either by Express Freight carriers such as DHL, FedEx and UPS, or mainstream carriers such as CargoLux, Polar Air Cargo. A number of network carriers also fly dedicated freighters in addition to taking cargo on their passenger services including Emirates, Lufthansa, Cathay Pacific and BA.

A large percentage of airfreight market is for long-distance services, typically inter-continental, although there is some spoke feed from intra-continental feed from smaller originating markets (Scotland would be one of these) to major hub airports which act as the principal nodes in the global air cargo network. Even then, most cargo that is fed to the long-haul freighter flights at major hub airports is carried by truck, although different carriers have different business models.

## 2.2.2 Global Trends

### **Recent Trends**

Global air cargo players currently view the industry's future from two distinct vantage points: short-term and long-term. The former viewpoint is quite cloudy, with considerable near-term economic uncertainty reflected in falling airfreight traffic numbers. But the second vantage point is fairly bright, with long-term trends pointing to relatively strong air cargo traffic growth.

It is difficult for the industry to take comfort in predictions by Boeing (see below) and other forecasters that international air cargo traffic will grow more than 5% on average annually over the next two decades. That's because the early 2030s - by which time forecasters believe there will have been a tripling of traffic - seem particularly far away from the perspective of cargo operators at the beginning of 2012, a year in which little is expected following a disappointing 2011.

World air cargo volumes began to decline in 2008. The decrease was around 2% compared to 2007 traffic levels. The rate of decrease increased significantly in 2009 when it fell between over 11% on the previous year. From 2005-2008 growth rates had been depressed by fuel prices which had seen the transfer of air freight to surface transport. However, in 2008 and 2009 the declines were closely linked to the economic downturn affecting western countries in particular. This resulted in significant variations by continent; for example some North American traffic (e.g. Latin America-North America) actually fell over the period, while other segments (notably within China) grew much more strongly than the global average.

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<sup>1</sup> Impact of Air Cargo on the Global Economy: Kasarda et al - 2006

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In 2010 the downward trends were reversed. Volumes rebounded sharply. But as of mid-December, the hoped for up-turn had proved illusory as emerging data suggested international airfreight traffic would decline year-over-year on an annual basis in 2011 (probably by about 1%), for the third time in four years. This represents a major departure from historic trends given that before 2008, global air cargo traffic had declined on annual basis just once ever (2001). That the one-year out of the last four in which traffic did rise (2010) produced a 20% growth rate (compared to a historically weak 2009) only adds to the confusion. How does a forwarder or an airline plan in such a volatile environment?

Air Cargo Management Group managing director Robert Dahl was recently quoted as saying<sup>2</sup>:

“There is just a lot of uncertainty for air cargo operators and that’s been the case the last 3-4 years. Every few months we seem to go through some sort of turbulence, creating a lot of uncertainty about where the global economy is headed.”

The airfreight industry is “the sharp head of the spear” of the cargo transport sector, according to Tom Crabtree, Boeing Commercial Airplanes regional marketing director and primary author of the manufacturer’s World Cargo Forecast:

“When things start to turn around, it’s the mode most in demand. When things get soft, it’s the mode that shippers try to retreat from.” As a result, he said, “we’re seeing . . . an exaggerated impact of trends on the airfreight industry over the last 3-4 years.”

IATA reported October 2011 traffic figures that featured a 4.7% year-over-year decline in global FTKs for the month and a drop of 0.2% for the 10 months ended Oct. 31. Since mid-year the [international airfreight] market has shrunk by almost 5% and this is far greater than the 1% fall in world trade over the same time period. Some view this as a technical correction following the big upswing in 2010 (ie the current slowdown is occurring because growth was too high in 2010). But short-term, there appears little confidence about global air cargo traffic growth prospects for this year. The general consensus is that traffic levels in 2012 will not be much different than 2011 with hope that toward the end of the year there will be some signs that 2013 is going to be a better year.

One response to this uncertainty and volatility has been to look to consolidation to drive profitability as signalled by UPS’s recent acquisition of TNT; the other integrators are also thought to be eyeing targets. The other is to drive down costs, maximise efficiencies and wait for the upturn, because confidence in long-term prospects remains strong.

Since 1970, there’s been 6.4% average growth in annual global air cargo traffic, although that number drops to about 4.8% over the last 20 years. There has been a distinct weakening in airfreight growth over the last decade but the industry remains fairly bullish about the long growth of airfreight. Historical analysis suggests that global airfreight grows at roughly a multiplying factor of 2-to-1 compared to growth in global GDP. Economists looking forward still believe that GDP long-term will grow at roughly

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<sup>2</sup> Maddening Air Cargo: Air Transport World – Jan 2012

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3% a year, and so if that multiplier effect still applies, it's logical to assume that airfreight will grow at 5%-6% per year. There is no guarantee that it's going to apply going forward but most analysts conclude that airfreight will grow on average, over the longer term, at least at the rate of global GDP, giving a spread for year on year growth somewhere in the 3%-6% range.

### **Forecasts: 2009-2029**

Given the foregoing, Boeing's long-term forecasts<sup>3</sup> need to be treated with some caution but remain one of the best forward looking assessments of the future prospects for the air cargo sector. They expect economic activity, as measured by world GDP (Gross Domestic Product) to remain the primary driver of air cargo traffic growth and forecast that annual growth in world air freight (5.9%) between 2009 and 2029 will be well above the annual growth in world GDP (3.2%).

As would be expected economic growth-and thus air freight growth-will vary in different parts of the world. Boeing forecast that GDP growth in Europe will be 1.3% per annum. Growth in European air freight is forecast to vary by counterpart region. It will range between 3.6% per annum for intra-European traffic and 6.6% for traffic between Europe and Asia. In general, air freight to/from developing economies will grow at or above the world average.

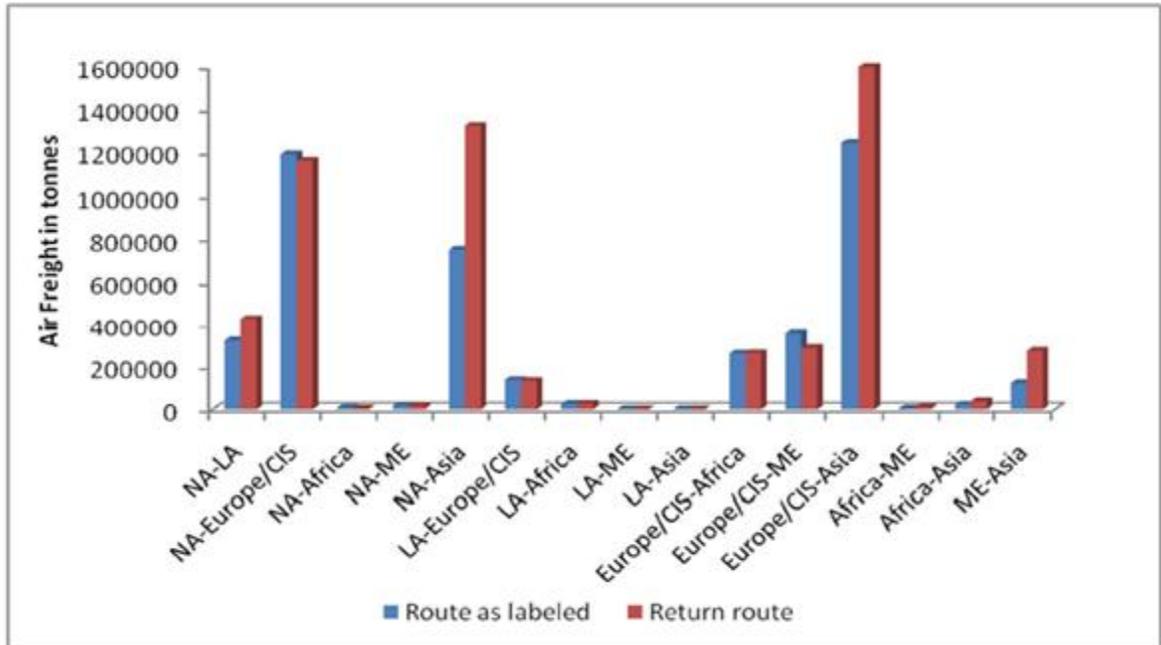
### **Freight Imbalances**

Unlike passengers, who usually make a two-way journey, air freight consignments move in one direction. This can lead to imbalances in the volumes of inbound and outbound cargo, reflecting export import imbalances between regions or countries. This can lead to large variations in air cargo rates according to the traffic direction-with traffic on the lower volume leg being moved at a lower rate. Thus trade imbalances are both a challenge to the development of airfreight routes, and an opportunity that can be exploited in established routes.

Air freight imbalances are illustrated in the chart reproduced from the *Kupfer et al* work.

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<sup>3</sup> World Air Cargo Forecast; Boeing - 2011



In some cases, such as air freight between North America and Europe/CIS the flows are quite evenly balanced. However, in others, such as between North America and Asia, and Europe and Asia, there is a sizeable difference in flows by direction.

Therefore, whilst Boeing forecast good general growth rates in air cargo flows directional imbalances may continue or even grow.

### 2.2.3 European Air Freight

According to Boeing more than two-thirds of all European air freight passes through the northern European countries of Germany, France, UK, Netherlands, Belgium, or Luxembourg.

Growth in intra-European air freight has slowed significantly since 2000. This is partly due to a relaxation of border controls and harmonisation of transport regulations within the EU. These developments have led to a switch from air to road transport.

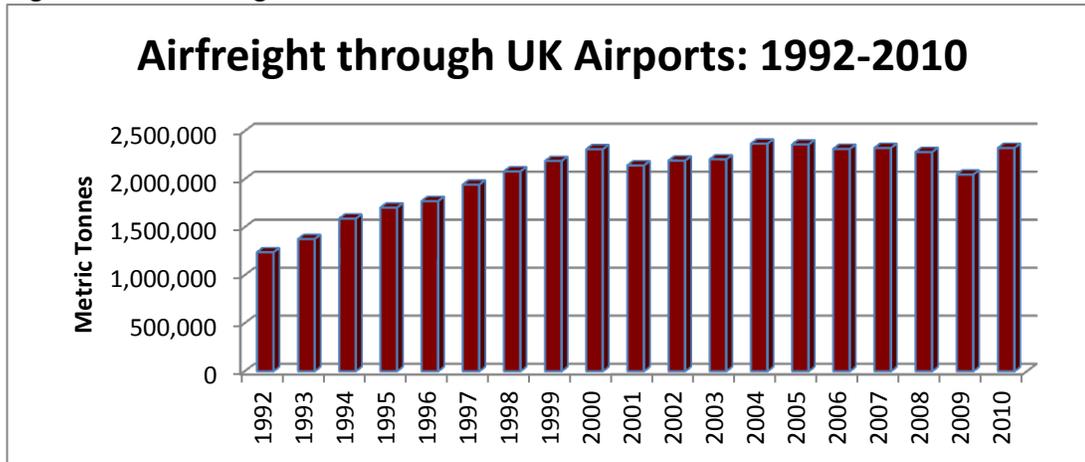
However, there is a significant variation by segments of goods moved by air. According to Boeing intra-European express traffic grew by 16% per annum. In contrast, other air freight declined slightly, while mail grew only slightly.

## 2.2.4 UK Air Freight Trends

### UK Level

**Figure 2.1** shows trends in freight volumes at all UK airports between 1992 and 2000.

**Figure 2.1: Air Freight Trends 1992-2010**



Source: CAA

Significant growth occurred between 1992 and 2000. Volumes increased from around 1.2 million tonnes per annum to over 2.3 million. However, since then volumes have changed little. While they have varied from year to year they have stayed within a band of 2.0 to 2.4 million tonnes. The slight exception is the low point of 2009 when freight fell to just above 2.0 million tonnes as a result of the economic downturn. However, it rebounded back to previous levels in 2010.

UK air freight trends are, however, significantly influenced by those at Heathrow. This is because it accounts for more than half of all UK volumes, with most freight through the airport travelling bellyhold in passenger aircraft. Between 2000 and 2010 volumes through the airport grew by 13%. In contrast, the change in combined volumes at all other UK airports was a decline of 16%.

The SDG report indicates that across all UK airports, most (two-thirds) of air freight by volume is carried in the bellyholds of passenger aircraft. However, this reflects the large volumes of bellyhold freight through Heathrow. If Heathrow is excluded then, in 2011, the bellyhold share falls to around one quarter (24%).

### Comparison To Passenger Trends

The air freight trend is different from that for passengers. Between 2000 and 2007 UK airport terminal passengers grew by one third, while air freight volumes were virtually unchanged.

Terminal passenger numbers then fell with the onset of the economic downturn. Nevertheless 2010 passenger numbers were some 17% above those in 2000. In contrast, UK air freight volumes were unchanged between these two years.

## Scotland

Air freight volumes through Scotland's airports fell by 44% between 2000 and 2010. However, this was very largely due to a major decline in international cargo through Prestwick. Volumes at other main Scottish airports changed little over the period.

Again, the freight position contrasts with that for passengers. In contrast to the fall in cargo volumes, terminal passengers at Scottish airports grew by 25% in the decade to 2010.

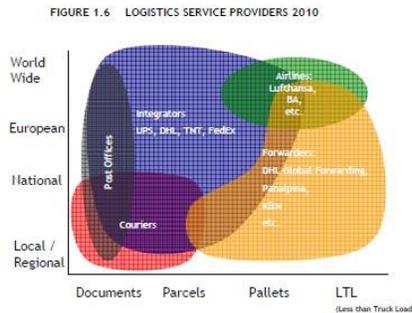
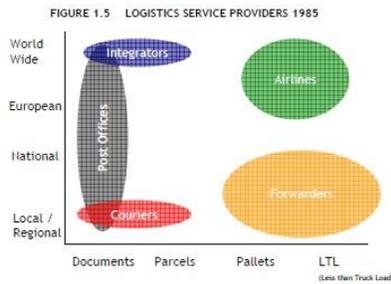
### 2.2.5 UK Air Mail

The SDG study shows that in 2008 167,000 tonnes of UK air mail were moved in 2008. This was an increase of 15% from the 145,000 tonnes in 1998.

Royal Mail is the largest consumer of UK domestic air freight. Capacity is purchased from third party suppliers through tendering processes. In the last few years Royal Mail has reduced the number of air services operated and consolidated its operation into a few regional centres. It is continually looking at ways to containerise mail or better automate aircraft loading and unloading, and reduce handling time and costs.

### 2.2.6 International Express Traffic

International express traffic expanded rapidly throughout the 1990s, and still enjoys more muted growth since 2000. Traditional providers are expanding their time-definite offerings, and express carriers, freight airlines, and postal authorities are consolidating. The SDG study illustrates this marked blurring of roles nicely in the following illustrations.



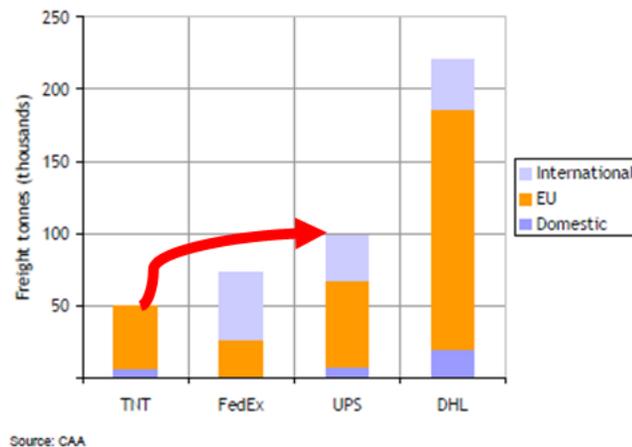
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SDG state that international express traffic expanded from 4% of total international air cargo in 1992 to 13% in 2008. Its annual growth rates were above those of air freight in general.

Integrated express carriers now move over half of all intra-Europe air cargo. The loads carried on express networks are no longer limited to their traditional small parcels and document traffic. There is significant general freight, augmenting express freighter loads on routes or backloads where core demand is light.

The international express market is dominated by four main integrators. They are DHL, FedEx, TNT and UPS. The integrators between them carry 18% of total air freight in the UK in their own aircraft. As the integrators also purchase a significant volume of bellyhold capacity on long haul flights, the total volumes attributable to them is significantly higher.

The SDG diagram below shows UK volumes carried by the four major integrators on their own aircraft.



DHL are clearly the main player with around half of the total volumes carried on integrator aircraft. Our consultations for this study confirm that their market share remains at very similar levels in 2012.

The arrow in the diagram has been added to reflect UPS' recent acquisition of TNT. This will bring their volumes closer to those of DHL.

### 2.2.7 Rates

Several studies have noted the continually eroded margins in the airfreight sector. The SDG work stated that a number of stakeholders viewed the current (2010) environment as unsustainable. One consultee of this study observed how one new airfreight entrant had undercut the freight rates out of Scotland to the Mediterranean. Despite its departure from the market freight rates had failed to recover.

### 2.2.8 Conclusions

The main points to note are that:

- Air freight plays a key role in world trade by moving high value and urgent low weight goods.
- Air freight growth rates are seen as coupled to GDP. Volumes in some parts of the world fell during the recent economic downturn. They recovered in 2010 but now seem to have at best stalled if not resumed their fall.
- Future growth rates are seen as being strong, particularly for traffic to/from developing economies.
- The nature of international and regional economic specialisation and trade can mean imbalances between inbound and outbound air freight volumes. These can depress prices on the lower volume leg and make it harder to make an air freight service “work”. They can also provide opportunities for lower air charter rates in the weaker direction. Scottish exports, for instance, might benefit from this imbalance.
- Express traffic has grown at a rate well above other segments of the overall air freight market.
- UK airport freight volumes were, in total, largely unchanged between 2000 and 2010. This is in contrast to quite strong growth in passenger numbers in the same period. This may be due to much of this growth being in the no frills sector, which has traditionally carried little or no air freight.
- While traffic grew at the major freight airport of Heathrow, it declined across other UK airports. This decrease was also observed at Scotland’s airports, although the fall in the decade to 2010 was largely due to a major decline in international freight through Prestwick.
- A small number of integrators dominate the express market but have also carried increasing amounts of other types of air freight as well as the traditional parcels and documents. They have become increasingly important players in the UK air freight market.

The rates achieved by air freight companies have been under pressure for a number of years. In part this reflects growing competition from an ever increasingly efficient road transport sector for intra-European air freight movements—with a significant proportion (SDG estimate around one fifth) of intra-European “airfreight” actually making its entire journey by road.

## 2.3 KEY ACTORS

**The shipper (or consignor)** is the party that requests a transport service. They may or may not know whether the overall transport chain used includes an airfreight component.

A **freight forwarder** is analogous to a travel agent with passengers. They typically arrange the entire transportation process for the cargo from its place of origin to its ultimate destination. This can include transport of the cargo from its origin to the departing airport (possibly by using a sub-contractor), preparing the necessary paperwork, arranging the cargo to be picked up at the arriving airport, and delivery (or contracting for the delivery) to the final destination. Thus, in effect they act as their own freight forwarders.

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The main global freight forwarders are companies such as Nippon Express, Kühne & Nagel, BAX Global, Schenker, Kintetsu and Panalpina. Damco and UTI were also mentioned in our consultations for this study. Many major forwarders have a presence in Aberdeen and the central belt, but not in the Highlands & Islands.

Dalcross Logistics, based at Inverness Airport, is the only freight forwarder based in the Highlands & Islands apart from Royal Mail and the integrators. As well as cargo through Inverness it arranges around 1,200 remote Highlands & Islands shipments each year on behalf of BA. These are shipments that do not originate from Inverness-eg, Kirkwall to Edinburgh. They are handled by Dalcross Logistics because island out-stations do not possess BA's automated cargo booking system.

Dalcross Logistics is also flybe's appointed cargo handling agent at Inverness. It raises their airway bills and provides security screening on their behalf.

**Integrators** arrange all elements of the supply chain and typically operate their own fleet of collection and delivery vehicles. They have integrated hub and spoke networks and use their own aircraft or sub-contract smaller aircraft for the spoke elements. The main integrators in the UK are Fedex, UPS, DHL and TNT. Their operations are as follows:

- *Fedex* have their main UK base in Stansted, with feeder flights from Ireland, Glasgow, Newcastle, Manchester and Birmingham.
- *UPS* have operations at East Midlands and a flight passing through Edinburgh each day.
- *DHL* have their main UK base in East Midlands. This has links with their Eurohub at Leipzig and daily flights to/from Cincinnati and Dubai.
- *TNT* have their main Eurohub at Liege with links to/from Glasgow, East Midlands and Stansted. They have very recently been taken over by UPS, and the full implications of this have still to be ascertained, although UPS have stated the Liege hub will remain.

FedEx and UPS apparently carry almost all their freight on their own fleets. Some integrators will coordinate timetables with each other. This is motivated by the same principle by which forwarders coordinate-risk sharing. DHL, interestingly and relevantly for this study, also collaborates with other non-integrators to carry some cargo on specific routes such as East Midlands-Aberdeen.

DHL and UPS have their own vehicles based in the Highlands & Islands. Each of DHL, UPS, Fedex and TNT have Inverness offices.

**National road transport operators** relevant to air freight are parcel delivery and courier companies. General haulage companies are less likely to be involved in transporting goods which travel by air at some stage. The main parcel/courier operators in the UK are DPD (Geopost), Yodel, Parcelforce, and City Link. In addition, there is a range of specialist companies providing either high priority or high value deliveries or run road trunk services throughout the spinal routes of the UK, with loads consolidated in Bellshill/Larkhall area in the central belt as part of transport to or from the Highlands & Islands.

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**Highlands & Islands road transport companies** are part of the overall transport chain. They may undertake the very first or last leg of the overall movement of goods with an airfreight component.

Freight transport to/from the Outer Hebrides, Orkney and Shetland tend to be dominated by a small number of hauliers. These include D.R. MacLeod and Woodys for the Outer Hebrides, JBT for Orkney, plus Shetland Transport and Northwards for Shetland.

AJG Parcels has developed an Inverness hub specialising in Highlands & Islands parcel deliveries. They fulfil the Highlands & Islands element for many national parcel carrier networks such as City Link, APC, UK Mail, DPD and Interlink.

Airfreight is moved by one of two means by air operators ('carriers'). First, transportation by dedicated freighter aircraft. Second, movement of cargo in the bellyholds of passenger flights. There is some overlap between the two groups of operators. For example, both BA and Loganair operate both freight-only aircraft and passenger aircraft which move cargo by bellyhold.

A **ground handler** is an agent at an airport who physically handles the freight. This includes when freight is loaded or unloaded on/from the aircraft and when it is transferred, stored, retrieved, broken down or consolidated. A variety of ground handlers operate at HIAL airports. They include Far North (at Wick), Aero Handling (Sumburgh) and owned by Loganair, and Dalcross Handling (Inverness). In addition, at other airports occasional freight is handled by the staff of the main passenger flight operator (Loganair, but not forgetting or Hebridean Air Services and Direct Flight's intra island PSO links using Islander aircraft).

**Air cargo handling agents** are invariably airside, and have a secure warehouse where they receive outbound freight from freight forwarders. They check the paperwork to confirm what is being shipped and the number of pieces and weight of the consignment. They also security screen the cargo prior to its departure. Dalcross Logistics, with DfT (Department for Transport) Regulated Agent status, is the only specialist air cargo handling agent in the Highlands & Islands.

## 2.4 THE PROCESS

### 2.4.1 Booking

Some time before departure, the forwarder will book freight on a given flight. Most large forwarders receive a pre-allocated space on routes on a daily basis. Forwarders may or may not have contracts with certain carriers.

### 2.4.2 Transport to the Departure Airport

In nearly all instances the freight is delivered to the freight forwarder by the shipper or a courier. The freight forwarder will weigh the shipment and raise the necessary paperwork. This includes the airway bill; the contract between the company responsible for paying for the transport and the airline.

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It could include other documents such as a Dangerous Goods certificate or Customs declaration. The freight is then delivered to the airline's appointed cargo handling agent.

Once in the hands of the forwarder, the cargo is likely to be consolidated with other shipments. If the goods are not highly time-sensitive, they can be stored for a number of days in the forwarder's warehouse.

### 2.4.3 Packaging

Live seafood travels wet, and is usually delivered in polystyrene boxes and these are then enclosed in sturdy plastic bags. However many, airlines will require the additional precaution of further waterproof sheeting beneath the consignment. This is to avoid water leakage into the aircraft, or onto other goods. The polystyrene boxes come in several sizes, although there is no standard size across the industry. Their capacities typically range from 5.5 kgs up to 12 kgs.

Due to the amount of protective packaging required many goods-including seafood and parcels-take up more space than implied simply by their volume. Hence, they tend to 'max out' an aircraft's cargo holds before they exceed its weight limitations.

### 2.4.4 The Process of the Freight Getting on to the Departing Aircraft

At the airport, the forwarder will deliver the freight to the carrier after it goes through security. Security is a significant component of the air cargo process involving staff hours, expensive equipment, significant cost and time.

Freight security screening training is different from passenger luggage security training. Therefore, staff require specific training to undertake freight security duties. Also, freight is now recommended to be scanned by two directional equipment, and this is necessitating an upgrade of equipment at airports across the Highlands & Islands.

As a result of 9/11 and other subsequent terrorist acts aimed at airports and aircraft, freight security has been tightened. This includes freight x-raying. This has been disproportionately onerous for HIAL and the Royal Mail in the Highlands & Islands. This is because of increasingly expensive, sophisticated and labour intensive equipment required compared to the relatively small freight and mail volumes in the region.

Security screening of freight is undertaken in a variety of ways at HIAL airports. For example, Dalcross Logistics screen freight for most users at Inverness, but Royal Mail do their own security screening at their Inverness sorting office in the city centre. At Stornoway Royal Mail acquired the x-ray equipment, but this is located at the airport, rather than at their sorting office, and is operated by HIAL staff.

Aircraft of less than 10 tonnes maximum take off weight are exempt from some DfT screening requirements. They can be loaded with goods that are not x-rayed. Northern Isles mail flights are served by aircraft (e.g. Let 410) which are sub-10 tonne. Do note however, where freight travels on a sub-10 tonne aircraft and then might join a larger aircraft at say Inverness or Aberdeen, then the cargo will have to be screened at

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Inverness or Aberdeen, before it can rejoin another flight and travel onwards. This lighter aircraft search dispensation may of course change at some point in the future.

Regular shippers of airfreight can simplify airport procedures by qualifying as a “known shipper”. All airfreight consignments must either be screened at the departure airport or originate from a Department for Transport (DfT) accredited known consignor before being loaded onto an aircraft.

Known shippers are authorised by the DfT to ship cargo as secure. They do this by receiving, inspecting, storing and managing the cargo in such a manner that they can provide assurance that their practices are secure. Known consignors are subject to checks by DfT accredited validators.

Once accredited, consignments (subject to controls) are treated as *known cargo* and not ordinarily subject to security vetting before being loaded onto the aircraft.

This can give some, albeit quite modest, cost savings to shippers through, for example not having to pay an x-ray airport throughput charge. Very few Highlands & Islands companies are presently known shippers because the costs of accreditation would exceed the savings based on their current airfreight volumes. However, some may wish to consider attaining known shipper status if volumes increased in the light of some of some proposed airfreight service developments.

#### 2.4.5 Loading Freight onto the Aircraft

The cargo is usually stored in a warehouse facility at the airport, as it waits to be loaded. It is then retrieved prior to aircraft arrival and loaded either by hand (as is the case at all HIAL airports) or via a unit loading device (ULD).

Large aircraft will have runners on the floor to allow the easier loading and unloading of containers or ULDs. HIAL airports are not currently geared up to serve these aircraft. ULDs require specialist ground equipment which permits the containers to be easily loaded.



ULD and roller floors on ATP



Hi Loader with ULDs

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#### 2.4.6 At the Arrival Airport

Cargo is flown either to the final destination airport or an intermediate airport. In the latter case, the cargo is likely to be re-consolidated and re-containerised prior to being placed on another leg.

If a given leg is international, then the cargo is subject to customs clearance, which must be arranged for the airport. Inverness is not currently a recognised international cargo airport for the importation of goods. Therefore, goods not in free circulation (i.e. non-EU) would have to be:

- Pre-cleared at the departing airport.
- Inspected by customs officers at Inverness airport by arrangement with them as they have no permanent presence at the airport.
- Landed at another Scottish airport (e.g. Edinburgh) and cleared there before flying on to Inverness.

It is, however, possible to export cargo internationally from Inverness Airport using third parties to effect Customs clearance.

At the arrival airport, the air cargo agent usually collects the cargo from the airline ground handler. The agent will hold it in the warehouse pending collection by the consignee.

#### 2.4.7 Routings And Pricing

When a shipper ships goods they do not usually have a clear idea how those goods will be delivered. The typical itinerary will involve road and air elements, and often the carrier or integrator will make day to day decisions on how to deal with daily variations. For BA World Cargo out of the central belt the freight forwarder may place goods on aircraft out of either Glasgow or Edinburgh dependent upon availability. Similarly, in the south of England trucks travel between Coventry, East Midlands, Stansted and Heathrow airports to be loaded onto the most suitable/available flights.

Cargo pricing reflects weight, volume, priority and other characteristics. The insurance risk of seafood consignments is a significant factor. As would be expected, consolidated shipments are usually charged less when the shippers' freight is consolidated with that of others.

Forwarders either book freight for individual flights, or have contracts with carriers in which space is reserved on specific flights with the forwarder. For flights in which the forwarder books separately, prices are subject to volatility. Yet it appears unlikely that even those with contracts will definitely have fixed prices during the life of the contract. Carriers retain a fuel price adjustor/surcharge option, whether it is formally articulated or not. However regular shippers are in a stronger position to negotiate more stable and lower rates.

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Freight forwarders retain an overview of the market including timetables, capacities and also have ability to book space online. They are in a position to advise clients on best delivery times to achieve their objectives. They will route the products in such a way as to fulfill the promise to the client.

However, they are also likely to concentrate their consignments on a number of services and air operators in order to obtain the best prices. This can act to drive traffic to larger air operators and hub airports. By this means some studies have noted that the impulse to centralise and concentrate may not always serve the best interests of the regions.

## 2.5 NOTE ON AIRFREIGHT SUSTAINABILITY

### 2.5.1 Policy Considerations

The European Union Council of Ministers of Transport have defined a sustainable transportation system as one that:

- allows the *basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health and promotes equity within and between successive generations*
- is *affordable, operates fairly and efficiently, offers a choice of transport mode, and supports competitive economy as well as balanced regional development*
- *limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes while minimising the impact on the use of land and the generation of noise.*

This is in line with the UK's definition of sustainable development<sup>4</sup>, which seeks to deliver the best quality of life through:

- *“social progress which recognises the needs of everyone;*
- *effective protection of the environment;*
- *prudent use of natural resources; and*
- *maintenance of high and stable levels of economic growth and employment”*

It is also reflected in the Scottish Government's National Transport Strategy<sup>5</sup>, which seeks to:

- Improve journey times and congestion
- Reduce emissions
- Improve the quality, accessibility and affordability of transport.

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<sup>4</sup> A Better Quality of Life; A Strategy for Sustainable Development for the UK: DTLR – May 1999

<sup>5</sup> National Transport Strategy: Scottish Executive - 2006

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And also in the freight strategy for Scotland<sup>6</sup> which has as its key objectives:

- Enhancing competitiveness
- Supporting the freight industry in Scotland
- Maintaining and improving the accessibility of rural and remote areas
- Minimising the adverse impacts of freight movements on the environment
- Ensuring freight policy is integrated

The common theme throughout is the need to balance environmental considerations against broader social and economic requirements.

In this vein, the Sustainable Aviation 2030 report by the IPPR<sup>7</sup> recognised that aviation, in its broadest sense, contributes to productivity by:

- Creating larger markets, allowing greater scope for economies of scale, increased specialisation in industries where the UK has a comparative advantage and more competition, therefore achieving a more efficient allocation of resources.
- Facilitating collaboration between companies, learning and research bodies in the UK and overseas and more effective networking, therefore improving innovation.
- Spreading the fixed costs of innovation, therefore improving the profitability of investment in other sectors, lowering consumer prices, and encouraging greater innovation.
- Furthermore, the sectors of the economy on which the UK may principally depend for economic growth over the next 10 to 15 years are said to be typically the most dependent on air transport, such as pharmaceuticals, computing, electronics and financial services.

A Steer Gleave Davies study<sup>8</sup> estimated a range of benefits to the UK economy both direct and indirect from airfreight, and they are considerable (combined income of £13.99 thousand million / year). The study also quantified the total environmental costs to the economy in terms of CO<sub>2</sub> emissions and noise pollution estimated at £366 million based upon the Government's shadow price of carbon and using published figures on the external costs of aviation in relation to noise (which provide monetary values for each flight by aircraft type).

The IPPR lists the implications for government policy to consider as:

- Improved economic impact assessment, taking account of the potential economic costs as well as the potential benefits of new airport developments.

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<sup>6</sup> Freight Action Plan for Scotland: Scottish Executive - 2006

<sup>7</sup> Getting There; A Sustainable Transport Vision for Scotland: Sustainable Development Commission Scotland - July 2010

<sup>8</sup> Air Freight: Economic and Environmental Drivers: Steer Davies Gleave for the Department for Transport – March 2010

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- Whether there are taxes and subsidies that may unfairly favour or disadvantage aviation in comparison with other kinds of transport and economic activity.
  - Regulation and competition to promote an economically efficient allocation of airport capacity, while safeguarding access to remote and disadvantaged areas.
  - Alternatives to air transport, including railways and information technology.
  - Ensuring that air transport pays its full economic, environmental and social costs.

They recognise two approaches to reducing the environmental impacts of airports and aviation.

1. An application of the polluter pays principle so that the aviation industry and its customers pay the full environmental costs of their activities. This requires monetary valuations of environmental impacts, a poorly developed science, so that these costs can be included in the price of flying through taxes or charges. It is a limited approach since it does not recognise that the environmental costs of aviation fall disproportionately on some individuals and communities who may not be compensated. Neither does it recognise that some environments are unique and that damage may be irreversible further adding to costs.
2. The second approach is to set environmental standards or limits, such as noise and air quality standards or limits on the amount of emissions consistent with good health and environmental protection. This requires an understanding of health effects and environmental capacity, but does not require monetary valuations.

In practice, the two approaches are complementary. The range of policy instruments available to governments include planning, regulation, fiscal and other market-based instruments and voluntary agreements. All have a part to play.

Finally, the Sustainable Development Commission of Scotland's view<sup>9</sup> is that, to be effective, any refreshed transport strategy must be framed around the five principles of sustainable development, which are listed as living within environmental limits; ensuring a strong healthy and just society, achieving a sustainable economy, using sound science responsibly and promoting good governance.

However, perhaps being mindful of the unusual needs Highlands and islands, the SDC also believes that the complex, but potentially very beneficial, relationship between transport policy and health, social justice and community is not fully understood. As they state:

*"The impact of transport policy on sustainable development should be assessed by widening the scope of what we measure. Until now emissions have been considered the most important of a relatively narrow range of sustainability measures."*

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<sup>9</sup> Sustainable Aviation 2030; Discussion document Tony Grayling and Simon Bishop: Institute for Public Policy Research - August 2001

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### 2.5.2 Aviation Emissions

There has been a growing interest in the environmental impact of aviation, both in terms of noise – daytime near major airports, but particularly at night - and aircraft engine emissions. This has resulted in a focus on both mitigation measures and methods of internalising these external costs.

Aircraft emissions have become a major political issue affecting aviation in Europe and the UK since the late 1990's as a result of the high profile given to Climate Change as a global issue following the United Nations Framework Convention on Climate Change (UNFCCC) and subsequent Kyoto Protocol. The pressure for action at a global level has been reinforced by subsequent IPCC progress reports and studies such as the UK Stern Report. The IPCC estimated aviation's contribution to total anthropomorphic emissions in 1992 (the baseline year for the Kyoto Protocol) as 2.4%; subsequent studies rounded this down to 2% if military aviation is omitted of which air cargo is but a small percentage. In contrast, shipping is estimated to account for around 4% of global CO<sub>2</sub> emissions while the figures for road and other forms of transport are many times higher.

Figures for the EU-25 in 2004 indicate air transport only accounted for 4% of total CO<sub>2</sub> emissions generated in Europe in 2004, compared to 22% for road transport and 16% for other forms of transport, which therefore combined account for 10 times air transport contribution. At a national level, UK emissions in 2005 were estimated to have been 2% of the global total, of which aviation made up 6%, the same as shipping and markedly less than road transport. And yet air transport attracts attention far in excess of its current contribution to CO<sub>2</sub> emissions first because it is a high profile industry; second because of its impact (still very uncertain) on climate change from NO<sub>x</sub> and contrails at cruise altitude which result in a multiplier effect (so-called 'radiative forcing' effect); and third because of the percentage of total capped emissions it is projected to make up under the climate change protocols which the UK (and Scottish) Governments have committed themselves through legislation to meet.

### 2.5.3 Air Cargo Emissions

In a paper for the International Air Cargo Association in 2007<sup>10</sup>, Prof Peter Morrell from Cranfield University used Qinetiq CO<sub>2</sub> aviation inventory to attempt to estimate the air cargo sectors share of total aviation emissions. He found that air freighters (ie dedicated cargo aircraft) account for 8% of the total but this rose to:

- 9.4% if it is assumed passenger flights will take place anyway and it is only the incremental fuel needed to carry the additional cargo that should be assessed, but
- If the freight payload carried belly-hold in passenger aircraft is apportioned based on its percentage of the total then this rises to 24.5% of the total

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<sup>10</sup> The Environmental Impact of Air Cargo: Prof Peter Morrell, Cranfield Univ for IACA - 2007

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Based on aviation's contribution to global CO<sub>2</sub> emissions of 2.0-2.3%, based on the forgoing air cargo share of that that would range from 0.3% to 0.6%. The climate effects of radiative forcing are still subject to a high degree of scientific uncertainty. The latest best estimate for the multiplier for aviation is 1.97, which would increase air cargo's 2002 impact to between 0.6% and 1.1%.

Trying to estimate the future share of aviation emissions in the world total is a difficult task even over short timescales. Forecasting aviation emissions has been undertaken by a number of organisations, mostly taking traffic growth of around 5% a year and fuel efficiency improvements of between 1-2% a year. IPCC (1999) forecast an increase of aviation emissions' share from 2.4% in 1992 to between 2% and 10% in 2050, or with the inclusion of the radiative forcing effect between 4% and 17%. Other estimates on different scenarios have given even wider ranges.

So aviation's share is subject to huge variation and it is thus possible to arrive at very large aviation impacts by judicious selection of assumptions to suit a particular viewpoint. A good example of this are the statements about the airfreight sector made by Airport Watch.

In a recent report<sup>11</sup> they contend that that air cargo accounts for between 20-25% of global CO<sub>2</sub> emissions from aviation (ie the upper end of Morrell's/Qinetiq's assessment). They argue that whilst airfreight volumes are small in comparison with the amount of goods transported by road, rail and shipping, the negative environmental impacts including greenhouse gas emissions are disproportionately high. They quote a report by Defra (the Department for Environment, Food and Rural Affairs) they are 4.6 times the CO<sub>2</sub> emissions of road transport per tonne kilometre, 29 times the CO<sub>2</sub> emissions of rail and between 30 and over 150 times the CO<sub>2</sub> emissions of shipping. However they ignore the fact that:

- Most freighter aircraft flights are much more fuel efficient than the average for all flights (16.2 revenue tonne-kms per US gallon versus the overall average of 8.5 for all passenger and freighter aircraft), and
- High fuel prices have a bigger impact on freighter than passenger aircraft operators, since their fuel cost is a much larger percentage of total costs; this gives a strong signal to invest in fuel efficient aircraft and emissions reduction technology without the need for emissions caps or taxes.
- Sustainable biofuels are already being extensively trialed, including by air cargo carriers and offer the potential to cut total emissions from the sector by between 25-50% in the medium term.

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<sup>11</sup> Airfreight Report: Airport Watch - December 2009

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- If all polluters are required to pay for emissions, whether by tax or cap and trade (for example the EU Emissions Trading Scheme), it is likely that aviation's share will rise somewhat from present levels because of:
    - its higher rate of growth, and
    - the fact that some other industries will be faced with lower abatement costs at the margin and will therefore benefit in terms of available investment as a result of aviation's requirement to acquire permits to emit.

Airport Watch also argues that airfreight enjoys tax-free fuel, an exemption from VAT, is not subject to Air Passenger Duty or an equivalent tax, and often is in receipt of regional assistance for airport developments. The evidence for the latter is far from clear and the other arguments form part of their broader lobbying agenda on aviation which has been well rehearsed, but not accepted nationally or internationally by policy-makers. This is not only because the international nature of aviation and the international governance of the industry makes coordinating international action very difficult. It is also due to the fact the principle of ensuring that users pay the full environmental costs of their journey has led the EU to develop the European Union Emissions Trading Scheme (EU ETS). This has been extended to aviation from 1 January 2012, although the scheme is now being opposed by 27 countries, including the US, China, Canada, the UAE, Japan, Singapore and Thailand and retaliatory measures may be forthcoming.

#### 2.5.4 Food Miles

Given the potential markets for seafood as an under-served air freight commodity in the main report, it is worth touching briefly on the *perishables* component of the air cargo industry, especially as much has been made of the CO<sub>2</sub> emissions impact of *food miles* in the climate change debate, with specific labeling having been brought in by some supermarkets. However, it needs to be borne in mind that:

- Air transport is estimated to represent only 1% of the 41.5 billion tonnes total of food imported and exported to/from the UK and perishables account for less than 10% of total air cargo moved globally and food is only one part of the perishables market. Its impact on emissions is therefore extremely marginal.
- The traditional focus for environmental ire has been on the import of tropical fruits and specialty vegetables, especially during winter; but new research suggests that it is now far from certain that foodstuffs flown into the UK from high density producers with optimal climates for growing certain types of fruit and vegetables is worse in emissions terms than if grown in artificially heated greenhouses in the UK.

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- Drawing on the wider definition of sustainability, which takes into account social and economic considerations as well as environmental ones, it is important to bear in mind that many of the fresh produce imports that arrive by air in the UK come from developing countries where they provide much needed jobs and export earnings. It is estimated that over one million people are supported by fresh fruit and vegetables exports from rural Africa just to the UK, most these going by air. The UK's International Institute for Environment and Development estimates that if UK consumers boycott fresh produce air freighted from the whole of Africa, the UK's total emissions would be reduced by less than 0.1%.
  - The air cargo industry provides a ready source of lift for emergency food aid as well as medical supplies. Governments and aid agencies charter freighter aircraft from the industry at short notice to meet emergencies. Without a flourishing air freight industry these flights would cause much greater disruption to scheduled flights and international commerce.

### 2.5.5 Airfreight in the Highlands

Applying the same range of considerations to potential shipments of perishables from the Highlands, whereby air freight

- allows naturally produced foods to reach markets which would otherwise be too remote to serve by road, fresher and with less wastage;
- helps to sustain a high value sector of the Highland food economy for markets which might otherwise seek to acquire it less sustainably; and
- will add but a tiny increment to total UK aviation emissions, which may in part be offset by reducing the need to truck long distance produce to other UK airports;

then the environmental sustainability case for moving high value, short shelf life produce by air from the Highlands becomes much less negative than might at first be thought.

Taking the broader definition of sustainable development outlined at the beginning of this note and widely recognised in EU, UK and Scottish Government policy, the following considerations also bear acknowledgement:

- One theme of this report is to review existing, largely unused, airfreight capacity within the Highlands and islands, and turn it to profitable use.
- This report also observes the high levels of freight leakage, usually by road, and then often ultimately by air, out of the region and the UK.
- The report concerns itself with addressing the export potential of regional and perishable produce beyond the reach of road transport – aimed at intercontinental markets.
- The report is concerned with underpinning the viability of H&I business, improving its competitiveness, and reducing its relative isolation within the UK and Europe.
- The report is also concerned with improving timely access to H&I residents of delivered goods, as enjoyed by residents throughout the rest of the UK.

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### **3 THE CURRENT POSITION**

#### **3.1 INTRODUCTION**

This Chapter describes and analyses the current position for air freight to/from the Highlands & Islands. It covers:

- Air freight services in the Highlands & Islands, elsewhere in Scotland and in the rest of the UK.
- Current demand for these services from Highlands & Islands air freight.
- Potential Highlands & Islands air freight currently travelling by surface transport.
- Unmet demand.

#### **3.2 CURRENT AIR FREIGHT SERVICES**

##### **3.2.1 Highlands & Islands Air Freight Services**

###### **Overview**

The services discussed in this section are shown at **Figure 3.1**, over.

###### **Outer Hebrides**

There is a morning mail flight to the Outer Hebrides. It goes from Inverness to Stornoway and then onto Benbecula. It is operated by Loganair using a Saab 340 aircraft. In the afternoon the aircraft flies mail from Benbecula to Stornoway and then back to Inverness, arriving at 1700.

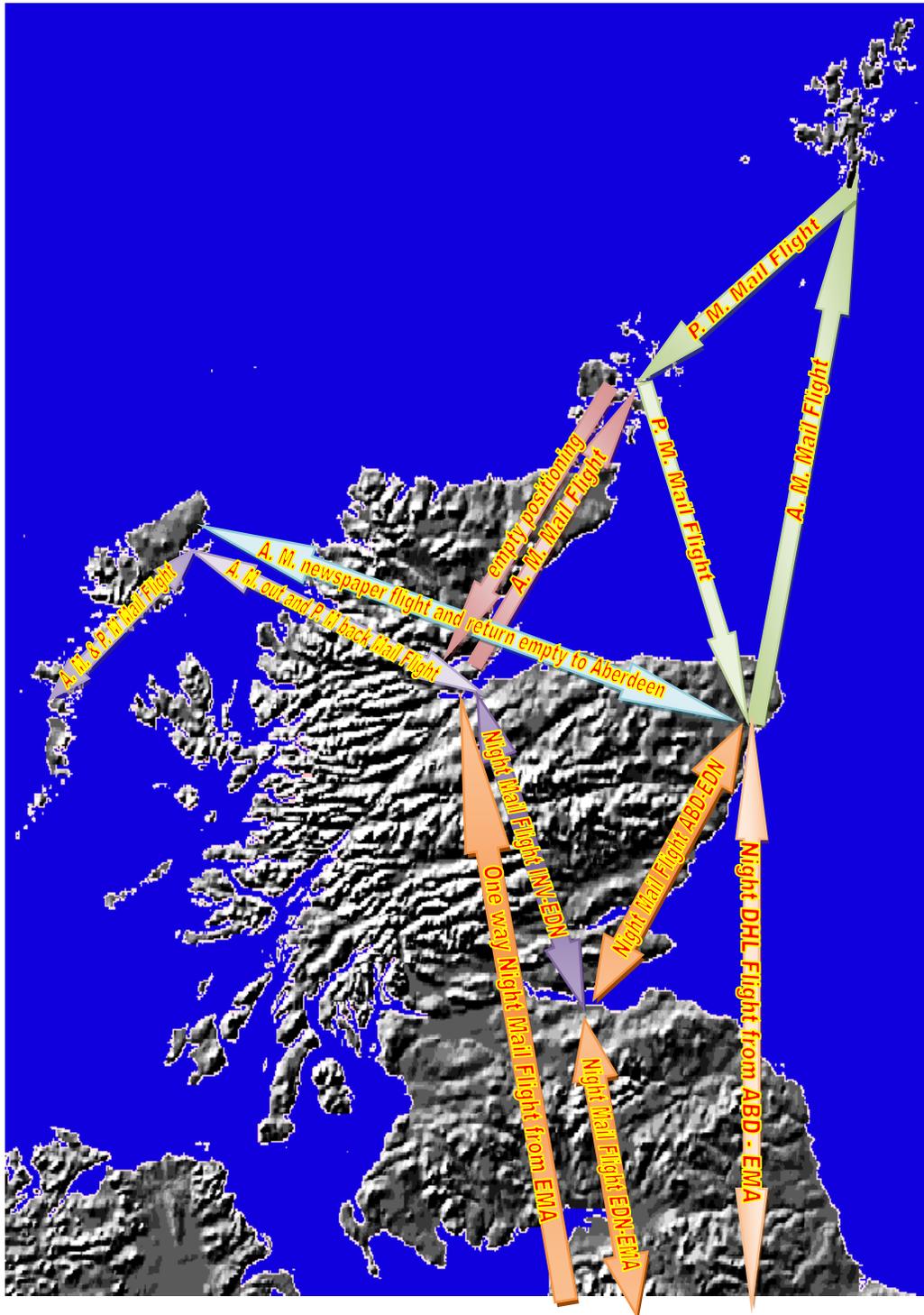
There is also a newspaper flight to Stornoway which goes from Aberdeen. It is with a Saab 340 operated by Loganair. The aircraft returns empty to Aberdeen that morning once it has unloaded.

The flights mentioned above operate 6 days per week. The Saab 340 has capacity for 3.5 tonnes of freight, although the capacity can be less than this depending on sector length and type of cargo. The newspapers typically weigh approximately 1500 kgs so there is also spare capacity on the outbound flight.

###### **Shetland**

There is a morning mail flight to Shetland, operated by Benair. It flies from Aberdeen to Sumburgh. In the afternoon, the aircraft returns with mail from Sumburgh to Aberdeen stopping at Orkney en route to pick up mail there. The aircraft is a Let 410. It has capacity for 1.8 tonnes of freight, although the capacity can be less than this depending on sector length and type of cargo. The mail flights operate six days per week.

Figure 3.1: Highlands & Islands Air Freight Services



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## **Orkney**

There is a morning mail flight to the Orkney. It goes from Inverness to Kirkwall using a Let410 aircraft, operated by Benair. This aircraft then returns empty to Inverness that morning.

However, as noted above, there is an afternoon mail flight from Orkney to Aberdeen using an aircraft that originates in Sumburgh in Shetland. The mail flights operate six days per week.

## **Inverness**

A mail flight leaves Inverness for Edinburgh and returns to Inverness between 0300 and 0330. A second mail flight arrives in Inverness from East Midlands, also between 0300 and 0330. These two flights operate six days per week.

## **Royal Mail**

All of the mail flights referred to above are operated on contract to the Royal Mail. Parcellforce has arrangements to share capacity on many/all of these flights. Royal Mail flights usually carry Royal Mail payload only.

Royal Mail is regulated by Ofcom (previously Postcomm) and has several quality of service standards/targets imposed upon it. The aviation component of their distribution network, known as Skynet, fills in those areas that cannot satisfactorily be served by road and ferry.

Currently Royal Mail is undertaking a complete review of their aviation network with a view to a synchronised tender round of all their Skynet routes simultaneously in 2013/2014. This synchronicity would allow bidders to seek out economies by bundling routes and better planning of their aircraft fleets, with benefits to both successful bidders and Royal Mail. At present the specifications of the services are being reviewed.

### **3.2.2 Highlands & Islands Passenger Services**

#### **Internal Scottish Services**

Scheduled passenger services in the Highlands & Islands have some freight capacity. These include Loganair's Saabs, Eastern Airways' Jetstream 41s, and various Twin Otters and Islanders operated by Loganair, Hebridean Air Services and Direct Flight.

The size of these aircraft means that their freight capacity is limited. However, this capacity is often quite well used. These aircraft carry newspapers to many islands (those to Shetland on the first passenger flight of the day from Aberdeen), mail to some smaller islands and a wide range of other items such as water and medical samples, emergency spare parts, dress hire, fresh flowers and many other aspects of daily life. Eastern Airways also have Saab 2000s operating into Scatsta on oil and gas related work, and this study did not investigate any cargo aspect of their operation.

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One challenge is that the freight capacity can be dramatically reduced if the aircraft is fully booked with passengers. This makes it hard to build a new stable freight link on such limited and variable capacity. As a result we have largely excluded this aspect of freight activity from this review, although its role and usefulness to local communities should not be underestimated.

### **Cross-Border Services**

flybe's larger passenger aircraft provide more predictable capability. We understand that this extends to:

- 0.35 tonnes per flight on the daily single return flight from Inverness to Amsterdam.
- 0.25 tonnes per flight on the thrice daily service from between Inverness and Gatwick, twice daily to Manchester and once daily to Birmingham.

Freight capacity on these services is relatively low. This reflects that flybe's fleet of regional aircraft have less bellyhold capacity than the previous generation of aircraft that provided cross-border services out of Inverness.

### **3.2.3 Freight Services from Other Scottish Airports**

#### **Aberdeen**

A DHL flight (using an ATP aircraft) flies from Aberdeen to East Midlands at 1935. It makes the return journey early the next morning, arriving in Aberdeen at 0710 Aberdeen. The service operates Monday-Friday.

Aberdeen also has two return mail flights. These operate overnight to/from East Midlands and to/from Edinburgh.

Freight can also be carried in the bellyholds of passenger aircraft to/from Aberdeen. Of note are the scheduled services to major international hubs at Heathrow, Amsterdam, Paris, Frankfurt and Copenhagen. These scheduled passenger flights should all be able to take freight, albeit in limited quantities. For example, flights to/from Heathrow should have capacity for up to 1 tonne of freight.

#### **Edinburgh**

Edinburgh Airport is a Royal Mail hub. It has a number of mail flights from southern England, Belfast and, as illustrated earlier, Inverness. It also has daily weekday flights operated by/on behalf of leading integrators-UPS and DHL. These connect to East Midlands as do bmibaby scheduled passenger services.

Like Aberdeen, Edinburgh has scheduled passenger flights, offering bellyhold freight capacity, to the major hubs of Heathrow, Amsterdam, Paris, Frankfurt and Copenhagen.

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## Glasgow

A Fedex ATR42 flies out of Glasgow to Newcastle and then onward to Paris to link in with the Fedex network. Another aircraft leaves Manchester via Birmingham for Stansted. These flights offer international export options.

Like Aberdeen, Glasgow has scheduled passenger flights, offering bellyhold freight capacity, to major hubs. In Glasgow's case these are Heathrow, Amsterdam, Paris and Copenhagen.

However, Glasgow's distinctive offering is Emirates' daily passenger service to/from the major hub of Dubai. It is operated by a 777 aircraft with substantial-around 17 tonnes-cargo capacity. It is expected that service frequency will increase to twice daily later in 2012. This evening service may prove a very popular freight option to the Middle and Far East.

Like Edinburgh, Glasgow has a scheduled passenger service to East Midlands, operated by bmibaby.

## Prestwick

Prestwick has three freight services.

- *CargoLux*, originating in Luxembourg and linking to Seattle and other US locations such as Los Angeles and Houston. Departures are twice weekly.
- *Air France Cargo*, twice weekly from Chicago O'Hare and then on to Paris.
- *Evergreen International Airlines* linking Prestwick with Charleston in South Carolina.

Bellyhold freight in passenger services is much less important at Prestwick than at the three main Scottish airports. This reflects the reduction in passenger services in recent years, along with many flights being no frill services, which do not target the freight market.

### 3.2.4 East Midlands Airport

As noted earlier Inverness already has an existing connection with East Midlands airport. This is through Royal Mail flights. As noted later it is one of the major UK freight airports in volume terms. It is centrally located within the UK. Some 90% of England & Wales is within a four hour drive of the airport.

The cargo services that operate out of East Midlands connect with domestic, EU and intercontinental destinations, as follows:

- *DHL* have over 20 flights a night to destinations in Europe, the United States and the Middle and Far East. These include Madrid, Frankfurt, Leipzig, New York, Cincinnati and United Arab Emirates.
- *UPS* serve Europe and the United States with six flights a night. These include services to Cologne, Louisville and Philadelphia.
- *TNT* serve Belfast and Liege hub with two nightly flights.

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Royal Mail have their largest UK air hub at East Midlands. They operate 12 services nightly to a range of UK destinations.

In 2011, East Midlands airport handled 265,000 tonnes of cargo-virtually all in cargo rather than passenger planes. Of this around 60% was on flights to/from mainland Europe, with a further 25% to/from international destinations beyond the EU. The balance of 15% was on UK domestic flights.

### 3.2.5 Carlisle Airport

Carlisle Airport is owned by Stobart Group. They have submitted a planning application to build a large 340,000 ft<sup>2</sup> distribution centre for Eddie Stobart, a transport and distribution business that is part of Stobart Group. It is anticipated that the centre will be operational within 12 months of planning consent.

The distribution centre would serve the Eddie Stobart road fleet. However, Stobart Group hope that there would be an airfreight component to the development. It is intended the warehouse will have chilled facilities. The company is aware that links with Inverness and the Scottish islands (whether by road or air) would be helpful in feeding freight into their distribution system.

The Stobart Group also owns Southend Airport. It also owns part of Aer Arran who operate ATR aircraft, which can also serve as freighters. Both of these organisations are likely to play a role in the eventual aviation activity that develops at Carlisle.

## 3.3 **CURRENT AIR FREIGHT DEMAND**

### 3.3.1 Through Highlands & Islands Airports

#### **Introduction**

As confirmed with the clients, the CAA and HIAL freight statistics are not sufficiently reliable to draw a picture of freight activity at Highlands & Islands airports. As an example, the figures for Inverness do not reflect known events and the impact of changes in the number and type of operations.

#### **Traffic Through Inverness**

We have, however, been able to secure data on annual x-ray throughput at Inverness for the years 2005-2010. These will give a good indication of total air freight flown from Inverness. The data are shown at **Figure 3.2**, over.

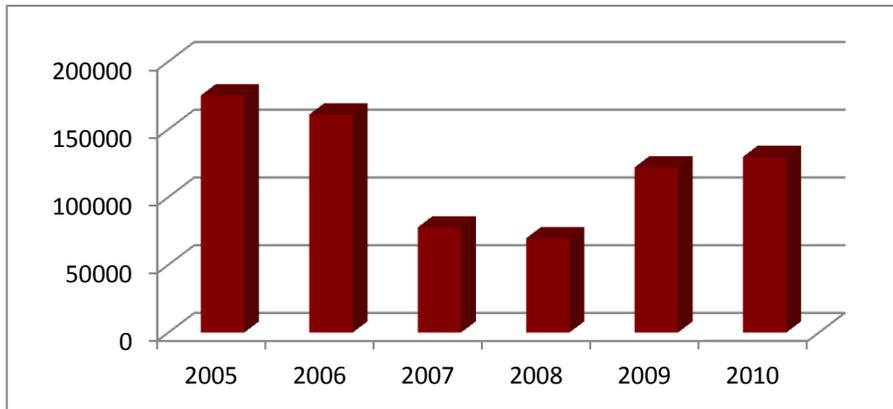
The volumes are very slight. They range between around 60 and 170 tonnes per annum. The trend is one of a sharp drop between 2006 and 2007, followed by a recovery in 2009 and 2010. Despite this rebound, volumes in 2010 were below those in each of 2005 and 2006. More detailed data do indicate any strong seasonality in traffic movements which suggests a limited amount of seafood traffic through the airport.

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The decline between 2005 and 2008 appears to reflect, first, the loss of the BA Connect link with Gatwick and its seamlessness with BA World Cargo. When flybe initially took over the Gatwick route they did not have a freight interline agreement with BA.

Gatwick used to be an important staging point for Highlands & Islands goods when Iberia was based at the airport and could deliver seafood to Spain. However, several years ago Iberia moved their flights to Heathrow with a consequent decline in freight carried on the Inverness-Gatwick flights.

**Figure 3.2: Freight at Inverness Airport: Annual X-ray Throughput (Kg) 2005-2010**



We expect that the recovery in 2009 and 2010 will reflect the establishment of an agreement between flybe and BA for onward movement of cargo at destination airports for Inverness services. Overall, however volumes remain below those in earlier years. In part this reflects the use of smaller passenger planes with less bellyhold capacity than heretofore, plus some airlines' continued lack of interest in carrying freight on their passenger planes.

Overall, the Inverness passenger flights to the hubs at Amsterdam and Gatwick presently carry very little freight. In general, passenger plane operators serving the Highlands & Islands have not been focused on optimising freight income, or have not been well coordinated with onward freight connections at destination airports outside the Highlands & Islands.

However, some air operators now appear to appreciate the potential for additional revenues from freight. flybe has recently appointed a dedicated airfreight manager who is keen to develop bellyhold freight on the cross-border services out of Inverness. Also, Loganair have been keen for HIAL to achieve approved cargo agent status at Stornoway so they can begin selling their spare airfreight capacity.

### **Other Aspects of Inverness Air Freight**

Our consultations indicate that air freight at Inverness is:

- Very largely outbound.
- Mostly travelling bellyhold on scheduled passenger services.

- Mostly to the Outer Hebrides, with less to the Northern Isles.

Press & Journal newspapers, which do not travel on the newspaper flight from Aberdeen to Stornoway, are flown from Inverness. They comprise a significant proportion of overall freight traffic. Other consignments include:

- Automotive and agricultural parts.
- Medical and water samples.

### Orkney Freight Charters

It was reported that there are around twenty freight charter flights per year out of Kirkwall. These fly lobsters to Scandinavia at times of peak prices. Norwegian aircraft are used.

### 3.3.2 Through Other Scottish Airports

#### Total Air Freight Volumes At Other Scottish Airports

**Table 3.1** shows air freight volumes for 2011 at Scotland's main non-Highlands & Islands airports.

| <b>TABLE 3.1: AIR FREIGHT VOLUMES (TONNES) AT OTHER MAIN SCOTTISH AIRPORTS: 2011</b> |                |
|--|----------------|
| <b>Airport</b>   | <b>Volumes</b> |
| Edinburgh  | 19,332         |
| Prestwick  | 11,846         |
| Aberdeen   | 5,311          |
| Glasgow  | 2,430          |

Source: CAA

Edinburgh clearly has the highest volumes-at over 19,000 tonnes-followed by Prestwick with around 12,000 tonnes. Volumes are much lower at Aberdeen and, in particular Glasgow.

Edinburgh's volumes give it a ranking of eighth highest within the UK. Its volumes are lower than at all four main London airports plus East Midlands, Manchester and Belfast International.

Heathrow has by far the highest volumes-approaching 1.5 million tonnes. The vast majority of this traffic travels bellyhold in passenger planes.

East Midlands, Stansted and Manchester are the only other UK airports with volumes of more than 100,000 tonnes per annum. Gatwick has around 88,000 tonnes per annum. Most freight through Manchester and Gatwick travels bellyhold in passenger planes. In contrast volumes through Stansted are very largely in freight aircraft.

**Table 3.2** breaks down the Scottish airport volumes in greater detail.

| <b>TABLE 3.2: AIR FREIGHT VOLUMES (TONNES) AT OTHER MAIN SCOTTISH AIRPORTS: 2011 BY AIRCRAFT TYPE</b> |              |                  |
|---|--------------|------------------|
| <b>Airport</b>  | <b>Cargo</b> | <b>Passenger</b> |
| Edinburgh   | 19,042       | 290              |
| Prestwick   | 11,819       | 26               |
| Aberdeen  | 3,816        | 1,494            |
| Glasgow   | 330          | 2,100            |

Source: CAA

The split between cargo and passenger aircraft volumes varies by airport. At Edinburgh and Prestwick almost all freight travels by cargo plane. At Aberdeen slightly over 70% of freight does so.

In contrast, at Glasgow the vast majority (86%) travels in the bellyholds of passenger aircraft. Altogether, 90% of the airports' freight moves by cargo plane.

**Table 3.3** breaks down the airport volumes by broad location of corresponding airport.

| <b>TABLE 3.3: AIR FREIGHT VOLUMES (TONNES) AT OTHER MAIN SCOTTISH AIRPORTS: 2011 BY LOCATION OF CORRESPONDING AIRPORT</b> |                 |           |               |
|---|-----------------|-----------|---------------|
| <b>Airport</b>  | <b>Domestic</b> | <b>EU</b> | <b>Non-EU</b> |
| Edinburgh   | 13,528          | 5,724     | 80            |
| Prestwick   | 18              | 4,060     | 7,767         |
| Aberdeen  | 3,925           | 159       | 1,226         |
| Glasgow   | 577             | 323       | 1,530         |

Source: CAA. Note: Categories relate to the location of the corresponding airport, whereas the freight's ultimate origin or destination airport may be elsewhere

The location of the corresponding airport varies:

- *Edinburgh*: over two thirds of freight is domestic with almost all of the rest to/from other EU countries.
- *Prestwick*: almost all freight is international and mostly non-EU.
- *Aberdeen*: around three quarters of freight is domestic, with almost all other being to/from countries outside the EU.
- *Glasgow*: over half of all freight is to/from outside the EU.

The volumes are reasonably evenly balanced between inbound and outbound flows at Edinburgh and Aberdeen. At Prestwick, most (around 60%) is inbound to the airport. In contrast, two thirds of freight through Glasgow is outbound.

### **Highlands & Islands Freight Traffic Flown To/From Other Scottish Airports**

Despite considerable effort we have not been able to obtain reasonably accurate information on the volume of roading of Highlands & Islands consignments for onward flights at other Scottish airports.

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However, the leakage from the area appears very substantial, given the very slight throughput of around 120 tonnes per year of bellyhold freight at Inverness (as shown at **3.3.1**).

Highlands & Islands products flown from Scottish airports outside the region include:

- Seafood-from Aberdeen in particular, although as shown at **3.5** much of it is actually exported from Heathrow.
- Integrator traffic, including parcels. Some of this flies on the DHL service from Aberdeen, but mainly to Glasgow or Edinburgh.
- Other high value products such as those from the electronics sector flown from Aberdeen.

Direct seafood exports from Scottish airports are covered in detail at **3.5**.

One challenge with the live seafood sector is the high dependence upon weather for the retrieval of fresh produce. Seafood exporters are loath to book capacity in such a way that if their produce is weather delayed they face cancellation charges. This makes airfreight planning for this sector more difficult. A distinction can also be made here between live seafood and fresh seafood, which sometimes is also transported by air. Fresh seafood could be products such smoked salmon which typically have a shelf life after packing of approximately 17-20 days. There is also a process known as flash or blast freezing whereby seafood is fast frozen in an attempt to cover the journey time allowing the product to arrive fresh. One consultee mentioned this was used in transporting product to the Far East and another noted that some consignments are accompanied by dry ice to help maintain their coolness.

Some consultees told us that certain integrators apparently do not take live seafood. However, it seems that this is not entirely accurate. There is a botheration, and regulatory compliance factor, with carrying live seafood and this sometimes does not make it attractive to accept small or occasional consignments. The issue about insurance claims for perished perishables is also a consideration. If there was a steady supply of predictable consignments from regular suppliers then the motivation does exist to address these issues.

## 3.4 AIRFREIGHT THROUGH OTHER UK AIRPORTS

### 3.4.1 Seafood

Seafood exports are covered in detail at **3.5**.

### 3.4.2 Gourmet Foods

Our consultations have identified companies who are using airfreight to transport other food produce which we have characterised as “gourmet food”. This includes:

- 
- Wild mushrooms (with Dalcross Logistics reporting several tonnes each year being exported through their system and the US being mentioned as a frequent destination for this product).
  - Vacuum packed wildfowl, game, North Ronaldsay lamb and Aberdeen Angus.

Orkney has a sophisticated agricultural sector with range of gourmet and organic food. Organic beef and lamb are collectively marketed under the Orkney Island Gold label. Currently road and ferry transport has been optimised to move goods to Glasgow and Manchester for onward air freight journeys. We understand that Orkney exporters have had many frustrations with attempts at air freighting directly from Orkney itself.

There are a range of specialist game producers. However, this market sector is quite small and dispersed with many relatively small producers. It still has much growth to achieve in serving the UK market, let alone reaching out to world markets, and the UK can usually be adequately served by road transport.

### 3.5 DIRECT SEAFOOD EXPORTS BY AIR

#### 3.5.1 Introduction

This section analyses data on UK exports of seafood by air freight. The data are for calendar year 2011. They were provided to us by Seafood Scotland with their original source being the UK Department of Trade and Industry and Business and Trade Statistics Ltd. The definition of seafood that was used is “fish and crustaceans, molluscs and other aquatic invertebrates”.

The data are for markets where airfreight is currently significant. They are generally for long-haul countries rather than near European countries such as France, Belgium and Spain. The data are available only at the UK level. They show the last port of exit before product is transported directly to a country outside the UK. The countries shown are, we understand, the final destinations of the product, albeit that they make use an indirect routing via a third country.

As noted above the data show the final port of exit. This can mean that Scottish seafood is exported from, say, Heathrow but has in fact been flown from a Scottish airport (say Edinburgh) to Heathrow where it is then transferred to a flight to, say, the United States. Where seafood exports as shown as being from Aberdeen or Edinburgh Airport these are **direct** to a third country outside the UK.

#### 3.5.2 United Kingdom Exports By UK Port of Departure

As noted above, Seafood Scotland do not have access to statistics which relate solely to Scottish exports. However, Highlands & Islands seafood exports will form a significant proportion of total UK exports. This is because, based on information provided to us by Seafood Scotland:

- In recent years, Scotland’s share of UK seafood exports has ranged between 63% and 72%.

- Highlands & Islands dominates Scotland's seafood production-both farmed and caught.

Thus, the following UK statistics will provide, at least, a useful indication of the routings of Highlands & Islands seafood exports.

**Table 3.4** shows total UK seafood exports broken down by the type of port of exit: that is, UK seaport/Channel Tunnel or UK airport.

| <b>TABLE 3.4: UK SEAFOOD EXPORTS TO LONGER-HAUL COUNTRIES: 2011</b> |                        |                    |
|---|------------------------|--------------------|
| <b>Last Port Of Exit</b>  | <b>Volume (Tonnes)</b> | <b>Value (£)</b>   |
| Seaport/Channel Tunnel  | 51,541                 | 81,053,234         |
| Air   | 47,478                 | 263,572,719        |
| Unknown   | 33                     | 296,569            |
| <b>Total</b>  | <b>99,052</b>          | <b>344,922,522</b> |

Approaching 100,000 tonnes of seafood was exported to the relevant markets. This was almost evenly split between volumes departing by seaport/Channel Tunnel (52%) and those flown from a UK airport (48%).

However, the value of goods air freighted is much higher than those that leave by surface transport. The value of the former is around £264 million compared to around £81 million existing via a seaport or under the English Channel. At average of £5,550 per tonne the value of air freighted seafood is 3½ times that of that using surface transport. **Table 3.5** analyses the seafood volumes that are air freighted by airport of departure.

| <b>TABLE 3.5: AIR FREIGHT EXPORTS BY DEPARTING AIRPORT: 2011</b> |                        |                    |
|--|------------------------|--------------------|
| <b>Departing Airport</b>   | <b>Volume (Tonnes)</b> | <b>Value (£)</b>   |
| Heathrow   | 45,381                 | 250,479,314        |
| Gatwick  | 1,695                  | 9,597,864          |
| Other Scottish   | 358                    | 2,917,763          |
| Aberdeen   | 14                     | 234,498            |
| Manchester   | 13                     | 46,328             |
| Edinburgh  | 9                      | 162,079            |
| Stansted   | 6                      | 53,484             |
| Newcastle  | 3                      | 81,389             |
| <b>Total</b>   | <b>47,478</b>          | <b>263,572,719</b> |

Almost all seafood exports by air leave the UK from Heathrow. It accounts for 96% of exports by volume. Almost all of the rest is flown from Gatwick. With Scottish-and Highlands & Islands-exports forming a significant proportion of UK exports, it appears that much of the Scottish seafood that departs the UK by air flies out of Heathrow. Of note is that none is flown from East Midlands.

Further, the volumes through Heathrow are much greater than the domestic airfreight volumes at Scottish airports. This implies that a large proportion of the Scottish seafood that is flown out of Heathrow travels from Scotland to London by road rather than being flown to Heathrow from, say, Glasgow or Edinburgh.

The great difference between the volumes at Heathrow and Gatwick and the other UK airports is largely accounted for by exports to the United States. These account for around 38,000 of the 45,000 tonnes ex Heathrow and 1,000 of the 1,700 tonnes that depart Gatwick.

A total of 385 tonnes are exported directly from Scottish airports. Almost all (93%) of it is flown from “Other Scottish” airports, which we assume to be Glasgow and Prestwick. While direct exports from Scotland are low in volume they have a relatively high value. Those from Aberdeen and Edinburgh airports have a value of over £17,000 per tonne, with that flown from “Other Scottish” airports is £8,100 per tonne. This compares to an average of around £5,500 per tonne for seafood flown out of Heathrow.

**Table 3.6**, over, shows air freighted volumes by destination country.

| <b>TABLE 3.6: AIR FREIGHT EXPORTS BY COUNTRY: 2011:</b> |                        |                    |
|---|------------------------|--------------------|
| <b>Country</b>  | <b>Volume (Tonnes)</b> | <b>Value (£)</b>   |
| United States   | 39,213                 | 215,628,886        |
| China   | 5,118                  | 28,056,652         |
| Hong Kong   | 988                    | 6,320,769          |
| Japan   | 770                    | 5,089,719          |
| United Arab Emirates                                    | 612                    | 4,221,585          |
| South Africa  | 521                    | 2,283,602          |
| Singapore   | 179                    | 1,371,106          |
| Russia  | 24                     | 86,597             |
| Saudi Arabia  | 22                     | 175,187            |
| Norway  | 17                     | 215,870            |
| Australia   | 10                     | 84,408             |
| Kuwait  | 4                      | 37,449             |
| New Zealand   | <1                     | 889                |
| <b>Total</b>  | <b>47,478</b>          | <b>263,572,719</b> |

Airfreight exports are dominated by the United States. It accounts for over 80% of exports by volumes and value. China accounts for much of the rest (11% by volume). The other greatest markets of Hong Kong and Japan are also in the Far East.

### 3.5.3 Direct Exports from Scottish Airports

**Table 3.7**, over, provides further detail on the volumes exported directly from Scottish airports. It shows that over 90% direct exports are to two countries. These are Hong Kong (62%) and Singapore (31%). Almost all of this seafood is flown out of “Other Scottish” airports. The two other largest volumes (to Norway and Japan) are flown from Aberdeen.

### 3.5.4 Conclusions

The analysis of seafood exports data has shown that:

- 
- Highlands & Islands has a significant share of total UK seafood exports.
  - For long-haul markets the volumes moved by surface transport and air are quite similar.
  - Heathrow is the dominant departure point for exports moved by air. This reflects its location for exports to the very largest market (United States).
  - It appears that a large majority of Scottish-and Highlands & Islands-exports that leave the UK from Heathrow arrive at that airport by road rather than being flown from a Scottish airport.
  - Direct exports by air from Scotland almost all fly from Glasgow or Prestwick and almost all are sent to Hong Kong or Singapore.

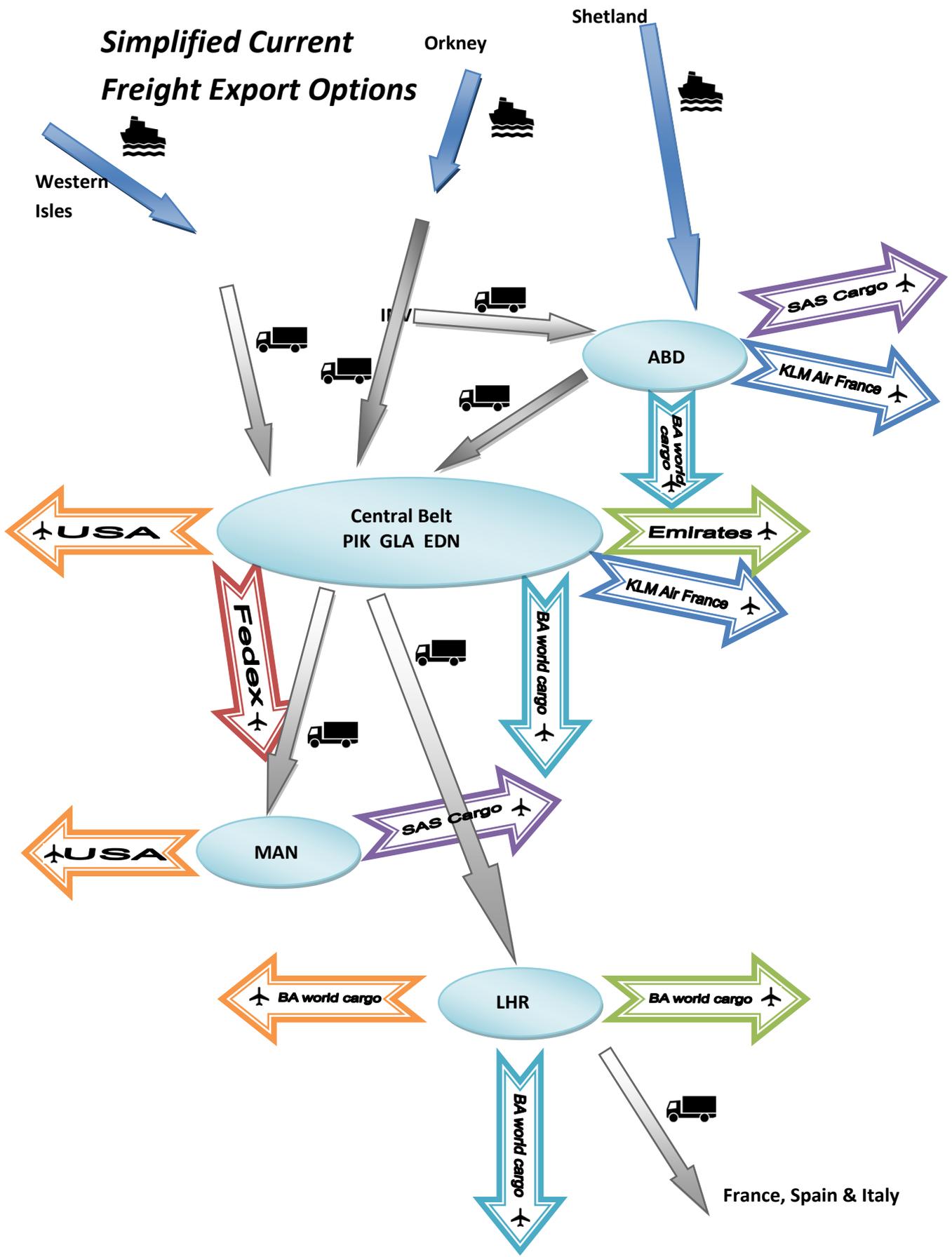
The range of air and surface options open to exporters of seafood and other products are shown in the diagram overleaf.

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**TABLE 3.7: DIRECT AIR FREIGHT EXPORTS FROM SCOTTISH AIRPORTS (TONNES): 2011**

| <b>Airport/Market</b> | <b>Hong Kong</b> | <b>Singapore</b> | <b>Norway</b> | <b>Japan</b> | <b>United States</b> | <b>China</b> | <b>Australia</b> | <b>Russia</b> | <b>South Africa</b> | <b>United Arab Emirates</b> | <b>Total</b> |
|-----------------------|------------------|------------------|---------------|--------------|----------------------|--------------|------------------|---------------|---------------------|-----------------------------|--------------|
| Other Scottish        | 238.1            | 117.3            | 0             | 0            | 0.8                  | 0.1          | 1.9              | 0             | 0                   | 0.1                         | 358.3        |
| Aberdeen              | 0                | 0                | 8.5           | 4.9          | 0                    | 0            | 0                | 0             | 0.2                 | 0                           | 13.5         |
| Edinburgh             | 3.9              | 0                | 0             | 0            | 2.9                  | 1.9          | 0                | 0.8           | 0                   | 0                           | 9.5          |
| <b>Total</b>          | <b>242.0</b>     | <b>117.3</b>     | <b>8.5</b>    | <b>4.9</b>   | <b>3.7</b>           | <b>2.0</b>   | <b>1.9</b>       | <b>0.8</b>    | <b>0.2</b>          | <b>0.1</b>                  | <b>381.3</b> |

# Simplified Current Freight Export Options



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## 3.6 POTENTIAL AIRFREIGHT CURRENTLY TRAVELLING BY SURFACE TRANSPORT

### 3.6.1 Seafood By Road

#### **Vivier Traffic To European Markets**

Over the last decades live seafood has been increasingly transported from the islands and mainland pick up points. Live seafood commands a premium over fresh seafood in markets and restaurants.

This transport has been undertaken by vivier lorries. These use aerated and temperature controlled seawater to help preserve the seafood on its journey to market. The trucks however must carry various multiples of seawater to the weight of produce, and different species have varying levels of resistance to the stresses of the journey from the sea to the end consumer. Lobsters are apparently the toughest and most resilient of all the shellfish species.

A significant proportion of the vivier fleet is operated by fish merchants based outside the UK. They send lorries to the Highlands & Islands to undertake direct deals even down to the level of individual fishermen and then transport the seafood to market.

The DfT launched a consultation on proposals for Charging Heavy Goods Vehicles on 25 January 2012, with responses to be submitted by 18 April 2012. The UK Government is proposing to introduce charges for the use of the UK road network by heavy goods vehicles (HGVs) of 12 tonnes and over. The objective is to ensure a fairer arrangement for UK hauliers. Currently, foreign-registered HGVs do not pay to use the general road network in the UK, whereas UK-registered HGVs pay charges or tolls in most European countries. Hitrans is broadly supportive of this proposal if some benefits are also delivered back to the UK based HGV operators.

#### **By Road to South of England Markets**

As part of the research for this report we spoke to a fish wholesaler who covers the south coast of England in the hope that they might appreciate a daily delivery into their heartland at Gatwick. However they are currently absolutely satisfied with the overnight road service they receive with Scottish seafood, and saw no need to change. This leads to the conclusion that any airfreight delivery of Scottish seafood really only makes sense when it permits delivery beyond the effective reach of road and vivier lorry delivery.

### 3.6.2 Parcels By Road

Express parcel traffic into Inverness arrives by road from points south and Aberdeen. This is mainly by large vehicles (38 tonnes). However, these deliveries are topped up by a number of smaller vans. These bring smaller volumes which do not justify a full sized lorry or which have arrived at depots down south after the larger vehicles have departed for Inverness.

Most road trunk carriers deliver to the main Glasgow depots, where many of the loads to the Highlands are consolidated. In addition, a few vehicles drive straight from the Midlands to Inverness.

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Based on various information from our consultations we estimates that Monday to Friday an average of 100 tonnes per day arrive into Inverness. Not all of these parcels will be in any way urgent delivery, although we would expect most (around three quarters) will be so. Consignments other than parcels will also be brought into the Inverness depots, and we have not made estimates of their volumes.

Parcel volumes southbound will be much lower than those into Inverness. They will be around 15% of the northbound flow-i.e. around 15 tonnes per day, Monday to Friday.

Overall, it is broadly estimated that next day delivery or faster times products could represent 70 tonnes northbound and 11 tonnes southbound per day.

Our consultations indicate that the integrators and express parcel companies have difficulty in providing the level of service offered to customers elsewhere in the UK. The companies offer a range of products. These generally include pre-0900 delivery, pre-1000 delivery, AM delivery and next day delivery. However, under current arrangements most next day deliveries in Inverness can only occur from the late morning onwards. This is because many of the inbound trunk deliveries from outside the Highlands do not arrive in Inverness until between 0900 and 1000. Then they have to be unloaded, sorted and consolidated for local delivery. One major distribution company mainly offers 48 hour delivery, so has no problems fulfilling his promise in the Highlands & Islands by road.

Timings for delivery in Caithness and Lochaber are inevitably several hours later. Our understanding is that the main island groups cannot expect guaranteed next day delivery by road transport, although Royal Mail and Parcelforce do manage to fulfil this requirement. Despite this, many companies, e-tailers and online stores reportedly surcharge Highlands & Islands customers for their deliveries.

For parcel traffic outbound from the region the companies close their doors in Inverness at between 1400 and 1500 for next day deliveries. The times are, of course, earlier as one travels north or west from Inverness.

### 3.6.3 Rail

One seafood exporter uses rail to export seafood from the Highlands & Islands. This is via the Inverness-London Euston sleeper service which operates six nights a week. Space is reserved with the train operator (ScotRail). Arriving at 0800 in central London means the goods can be moved easily onwards to customers in and around central London, and also reduces delivery costs under the Inner London road congestion charge.

This company also delivers to 200 UK hotels in the UK and also to France by road. They airfreight ½ tonne per week-mainly via Glasgow and Edinburgh airports-mostly between January and July and in the run up to Christmas. They are interested in airfreight as a means of reducing mortality rates of live seafood compared to those suffered in vivier lorry delivery to destinations like Spain.

A parcels train previously operated from the Midlands (Walsall) to Inverness for a period of between three and four years. We understand that it was introduced to deal with a large flow of consumer purchases on the internet.

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The integrator who had the contract for their movement was unable to secure much in the way of back loads from the Highlands & Islands goods for what would have been a relatively large number of vehicles. The use of the train was more cost effective than most of the fleet running empty south from the region.

There was no indication from our consultations of any plans for a new parcels-based rail service to be introduced.

### 3.7 COMPANY SURVEY FINDINGS

#### 3.7.1 Introduction

An online questionnaire was developed. It was distributed as follows:

- SCDI and Caithness Chamber of Commerce emailed the questionnaire/online link to their members.
- Moray Chamber of Commerce published a link to the survey on their website.
- Energy North included a link to the survey in their weekly e-newsletter that is sent to their members.

A total of eight responses was received. This low number of returns appears to reflect the view of local business representatives that air freight was not a topic that is relevant to many of their members or other businesses that they deal with.

#### 3.7.2 Respondent Profile

Most (four) of the eight respondents are based in Caithness. The others were based in Argyll & Bute, Dingwall, Elgin and Inverness.

The most common business sectors were food and drink manufacturing (two) and hotels (two). Other business types included the energy sector, professional and business services and the public sector.

#### 3.7.3 Outbound Time Critical Goods

Three respondents have time critical consignments despatched from their premises in the Highlands & Islands. The most common destinations reported for these were the UK outside Scotland and mainland Europe. Frequency of despatch varied. Some reported time critical goods being despatched daily, other that it is less than monthly.

Respondents were generally unwilling to identify the nature of these time critical goods. The only specific reference was to contract and tender documents.

Only one respondent provided further information on outbound time critical goods. This indicated that:

- Their transport is organised by their own company using Highlands & Islands staff.
- Less than half of their of their time critical goods move with either Royal Mail or Parcelforce.

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They also stated they are “quite satisfied” with current arrangements. This was seen as reflecting that the movements are quite predictable and can usually be planned well in advance. However, they would like to see an earlier guaranteed delivery time at their customers’ premises than is presently possible.

#### 3.7.4 Inbound Time Critical Goods

Most (five of the respondents) receive inbound time critical goods at their premises in the Highlands & Islands. In almost all cases these originate from within the UK, although one respondent receives goods from mainland Europe.

Frequency of delivery was varied. It was varied between every 2 and 7 days, and less than monthly. The specific inbound time critical goods identified were:

- Food & beverage products.
- Shellfish.
- Spares.
- Tender documents.

In most cases, the transport of the goods was organised by the supplier rather than the Highlands & Islands company itself.

Relatively little use was made of Royal Mail or Parcelforce. They were used for either less than half of the inbound consignments or not at all.

All respondents were “quite satisfied” with current arrangements for the inbound movements of time critical goods. The reasons cited for this view included:

- *“Availability of daily delivery from supplier”*
- *“Never had any problems”*

Despite this four of the five companies would like to see specific improvements for inbound delivery of time critical consignments. These were divided equally between:

- *Reduced total transit time to reach your premises.*
- *Earlier guaranteed delivery time at your premises (e.g. 9am).*

However, just one of the four companies would be willing to pay higher transport charges to secure their identified improvement.

#### 3.7.5 Other Comments

Respondents were asked, on an open ended basis, to provide any other comments on *the transport of time critical goods to/from their premises in the Highlands & Islands*. The comments received were:

*“Overnight couriers currently used but would use Parcelforce if they could guarantee delivery on time”*

*“We tend to use freight forwarders in the central belt so they can consolidate with a wide range of airlines from Glasgow or through London”*

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Finally, respondents made the following comments on *the current or potential role of air freight in the movement of time critical goods to/from their premises in the Highlands & Islands*:

*“Could be useful for international documents; unlikely to be of much value for UK documents where current arrangements suffice”*

*“Due to the greater number of connections we tend to use freight forwarders in the central belt and transport goods to them by overnight carriers”*

*“No comments-but would consider airfreight if available”*

*“Our time critical products need to be refrigerated so not sure if this is achievable with airfreight at a competitive price”*

### 3.7.6 Conclusions

The ability to draw conclusions is clearly very limited by the small number of responses to the online survey. This may well reflect that airfreight and time critical goods are issues for only a small minority of businesses in the region.

- General satisfaction with what is currently provided, albeit that some improvements are desired.
- Private couriers/transport companies rather than Royal Mail/Parcelforce are used for most consignments.
- Inbound deliveries tend to be organised by suppliers.
- Some businesses appear to have limited or no knowledge of the air freight option.

## 3.8 **SUMMARY OF UNMET DEMAND**

We have identified the following unmet demand. First, “leakage” of Highlands & Islands air freight to airports outside the region. There is no data available on the amount of this leakage. However, it is likely to be a very significant proportion of all air freight with an ultimate origin or destination in the region.

Some UK seafood is air freighted to long haul markets. It largely travels by road to Heathrow from where it is flown worldwide. Some Highlands & Islands seafood also flies direct from Aberdeen, Edinburgh and Glasgow. In 2011 total UK seafood volumes by air to long haul markets were 47,000 tonnes. Scottish seafood-and therefore Highlands & Islands seafood-will form a significant proportion of these UK exports.

Second, there is unmet demand from express parcels currently moved to/from the region by road (some of which is via other Scottish airports). Volumes of “urgent” parcels are broadly estimated at 70 tonnes per day (Monday-Friday) into Inverness and 11 tonnes outbound.

Some express parcel carriers view a direct freight flight into Inverness as an opportunity to improve the service they provide to their customers. They believe it could help them to win more business at existing prices and/or charge a premium for the improved service. Despite this, our research has not produced much evidence of their customers being particularly dissatisfied with the current product.

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Other identified movements appear well catered for by surface transport. These include Highlands & Islands seafood to customers in UK and near European mainland markets. They are well served by a competitive offer from road transport, including vivier lorries-plus, in one case, overnight rail to London.

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## **4 CONSTRAINTS AND OPPORTUNITIES FOR THE DEVELOPMENT OF HIGHLANDS & ISLANDS AIR FREIGHT SERVICES**

### **4.1 CONSTRAINTS**

#### **4.1.1 Identified Constraints**

##### **Limited range of suitable products and their dispersal across the Highlands & Islands**

Developing air freight services will be constrained by the nature of the regional economy, with the availability of a small number of goods, both inbound and outbound. These goods' origins and destinations are dispersed across the Highlands & Islands, including both island and mainland locations.

##### **No strong appetite for change**

Many transport and delivery company managers have spent their careers optimising the road transport network across the UK. They now have an established and long standing Scottish solution, which is largely centred on large depots in the Glasgow area.

We understand that one Highlands & Islands exporter withdrew from a new airfreight itinerary proposition, because of concerns about interchange arrangements at a major hub. Some effort will be required to persuade companies to change their current practices.

Most of the Midlands-based parcel companies consulted expressed satisfaction with current arrangements. They did not see the need or sense an appetite for change. Additionally, Highlands & Islands businesses and consumers have also become used to current arrangements and the report does not identify a strong vein of discontent that might drive or demand change.

##### **Air freight pricing**

The cost of air freight can appear prohibitive to those currently moving goods by surface transport.

##### **Existing range of air services from other Scottish and UK airports**

There are a range of airfreight opportunities out of other Scottish and UK airports, and current patterns of air freight to/from the Highlands & Islands are based around them and services from major English airports.

##### **Different timing requirements for different goods**

The requirements of different products and of inbound versus outbound flows limit the ability to use both directions of an aircraft rotation optimally.

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### **Potential users unwilling to collaborate**

Competitive pressures between different seafood producers and also parcel companies can mean they are unwilling to co-operate and co-ordinate loads in order to develop air freight services to/from the region.

### **Highlands & Islands passenger aircraft have limited bellyhold capacity**

The last twenty years have seen the aircraft types serving the Highlands & Islands reducing in size and capacity. This trend is unlikely to be reversed.

### **Seasonality and potential low volumes of outbound food products**

It is as yet unclear whether Highlands & Islands food producers can collectively deliver adequate quantities with sufficient consistency to satisfy the requirements of a daily and year round airfreight service. Historically apparent weak collaboration between seafood exporters does not provide reassurance and aid planning for any potential airfreight service provider.

### **Airport security procedures and practices**

The cost, time and procedures surrounding airfreight screening reduce its attractiveness vis-à-vis other transport modes, which do not suffer this imposition.

#### 4.1.2 Analysis of Identified Constraints

**Table 4.1**, over, provides a summary analysis of the identified constraints. It shows that some constraints (market size and air services available elsewhere in Scotland) are relatively fixed. The main other challenges are an apparent lack of appetite for change, perceived/actual cost of air freight and timing requirements for different cargoes. Possible means of addressing these are suggested in each case.

Some of the issues identified in this constraints analysis are explored further later in the Chapter.

#### 4.2 **OPPORTUNITIES**

##### **Express parcels traffic from the Midlands to Inverness**

The desire to improve delivery and despatch times to the Highlands provides a potential basis for developing enhanced airfreight services.

##### **Southbound traffic from Inverness to the Midlands**

Parcel traffic is less in volume southbound than it is northbound. However, it could be augmented with seafood and other food exports.

| <b>TABLE 4.1: ANALYSIS OF IDENTIFIED CONSTRAINTS</b>                                  |                               |   |
|---|-------------------------------|---|
| <b>Constraint</b>   | <b>Strength of Constraint</b> | <b>Possible Measures To Address Constraint</b>  |
| Limited range of suitable products and their dispersal across the Highlands & Islands | High                          | The range may be limited but the potential volumes are not  |
| No strong appetite for change   | Medium                        | Stronger marketing to Highlands & Islands businesses of airfreight as an additional/alternative transport option  |
| Air freight pricing   | Medium                        | Offer competitive prices by utilising available/potentially available capacity that may benefit from marginal pricing, and linking into onward air services outside the region that are priced inclusively. |
| Existing range of air services from other Scottish airports                           | Medium                        | Create a new service with attractive USPs such as local, optimal timetable, reasonably priced, and a new distribution channel with fresh destinations/options   |
| Different timing requirements for different goods                                     | Medium                        | Seek compromise schedule designed to maximise potential flows in both directions  |
| Potential users unwilling to collaborate  | Low-Medium                    | Proactive work to increase collaboration by more substantial players, trade organisations and public sector bodies  |
| Highlands & Islands passenger aircraft have limited bellyhold capacity                | Low-Medium                    | Maximise use of capacity that is available  |
| Seasonality and potential low volumes of outbound food products                       | Low-Medium                    | Range of food products, volumes currently travelling by road, and higher prices obtainable in long haul markets offer the potential to develop a baseload for outbound flights from the region              |
| Airport security procedures and practices   | Low                           | Relevant parties to work to ensure that these are as customer friendly as possible  |

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## **Empty freight aircraft off the islands are a ready source of freight capacity at marginal cost**

The empty aircraft leaving Stornoway and Orkney each day and the empty space in off-island Royal Mail flights provides an opportunity for air freight exports. These could feed into the aforementioned possible new airfreight service from Inverness to the Midlands.

## **Freight charter flight potential**

Benair and Loganair have freight capacity that could also be used for ad hoc air freight charter work. These ad hoc missions could include delivering seafood to nearby destinations or hubs when seafood prices peak. Charters to Scandinavia when lobster prices peak have already been noted. Charters potentially could fly to nearby hubs for further onward delivery. Other potential exists to fly island seafood to link with the Emirates flights from Glasgow to the East, or should Edinburgh ever develop a Chinese airlink they could potentially act as seafood feeders to this service.

## **Inverness-Amsterdam offers a new market opportunity**

It provides an alternative route to international markets via Schiphol, albeit that, as shown earlier, bellyhold capacity on the aircraft Inverness is quite modest.

## **4.3 DETAILED ANALYSIS OF OPPORTUNITIES (1): INVERNESS-EAST MIDLANDS AIR FREIGHT SERVICE**

### **4.3.1 Potential Sources of Demand: Northbound**

The subsequent analysis assumes that the service would operate to/from East Midlands airport, although Coventry airport could also be considered. This is because the main USP of a new air service would be to seamlessly integrate into an extensive existing international air distribution network.

## **Express parcels would be the main component of all traffic on the service-that is, in both directions.**

This service would permit northbound express parcels to be delivered earlier in:

- Inverness area (IV) postcodes.
- Caithness: KW1-Wick and KW14-Thurso.
- Lochaber PH33-Fort William postcodes.

It is also likely that such a new service would allow next day delivery to become possible for Lewis and Harris and Orkney.

The categories of consignments that have been identified as being the ones to whom this new service would be most valuable are:

- Personal electronic products, including mobile phones and iPads.
- Agricultural, automotive and other engineering parts-including increasing demand for spares for repair and maintenance of wind turbines and other renewables devices.

- 
- Medical equipment spares.
  - Deliveries for major online retailers such as Marks & Spencer, Wines Direct, Amazon and John Lewis.

Some potential participants see other benefits that may avoid the need for additional premiums to be paid on these consignments. Others see the potential to create an additional delivery surcharge for the relevant postcodes.

Those logistics managers interested in a new service identified a range of potential benefits:

- Creating a local USP for their company that will attract more business. Some carriers consider that the improved service will increase their volumes by winning business from road-based competitors, and the extra cost can be covered by the extra revenue attracted.
- Developing products (e.g. pre-0900 delivery) that can justify a surcharge for the enhanced service.
- Complementary advantages and savings in the road vehicle fleet. This would include fewer cross-border lorry movements, while within the Highlands there is potential to increase the productivity of vans and drivers by lengthening the effective length of the delivery and collection day.
- Creation of a more secure supply chain for very high value products such as electronics. An airfreight service would avoid the transfer of these goods between several intermediary delivery vans as the goods travel northwards.
- Achieving a more universal national service and reducing or eliminating the anomaly of an inferior Highlands & Islands delivery service.

#### 4.3.2 Potential Sources of Demand: Southbound

##### **Parcels**

Southbound express parcels could be collected up until much later in the afternoon in the relevant postcodes than the present 1500 in Inverness, for example if the new Inverness flight departed in the evenings. The participants could attempt to raise additional revenue by charging more for the enhanced service, or by attracting more business to their solution by providing a superior service to local businesses.

##### **Seafood**

The southbound leg could provide food and seafood products with a new route to longer haul international markets. The aim would be to create new efficient connections through East Midlands airport to European and intercontinental flights. As well as better serving existing customers, the seafood sector is consciously seeking new markets. This new service could improve their proposition.

Producers could be taking fish out of the sea in the morning and it could be delivered worldwide via East Midlands within 24 hours. This would improve freshness, reduce mortality rates and increase shelf life compared to longer journey times which typically would also require fish to be caught and packed the night before. The service would also:

- Be optimally timed to connect into onward connections from East Midlands.

- Depart from closer to many Highlands & Islands producers than Glasgow or other points south that are used to feed into the international distribution network.
- Provide additional capacity than that currently available on passenger flights to Heathrow from Aberdeen, Glasgow and Edinburgh.

The flight would *not* provide significant benefits for UK and near mainland European customers for Highlands & Islands products. These are currently well served by efficient road, rail and postal services.

The benefit would be an improvement in timings to more far flung markets where airfreight will inevitably play a role at some point in the supply chain. This is because these markets are beyond the reach of road transport, while sea transport is-for certain products and markets-considered too slow. Delivering perishable product more quickly to market can extend the amount of time the product is in a retail environment before its shelf life expires. Improved access to export markets does open up opportunities for higher margins than can be obtained from UK customers, and notably the major retail multiples who drive hard deals with domestic seafood suppliers.

To benefit from the service the seafood sector would ideally have a lead organisation or collaboration of organisations managing their use of the flights. In particular, demand would be stimulated and assured through their having commercial links and marketing presence in the longer haul target markets, notably, Russia, Middle East, Far East, North America and South America.

From the air operator's perspective their confidence would be enhanced by the lead organisation or grouping being able to:

- Book and guarantee and effectively use space on a daily freight flight.
- Plan an export book that took into account seasons, various market and price peaks, ability to deal with weather disruption by product substitution and drawing from different source areas, a wide variety of product types.

Securing some seafood traffic southbound is likely to be essential to the service's viability.

### **Gourmet Foods**

Reflecting the discussion at **Chapter 3** gourmet foods' volumes on a new Inverness-Midlands service would likely be supplementary rather than core, but should be cultivated.

#### 4.3.3 Timings, Capacity and Pricing

##### **Timings**

Flight time would depend on the type of aircraft operated and the specific Midlands airport used. However, it can be expected to take between 1¼ and 2 hours.

There are various potential users of any proposed direct air service between Inverness and East Midlands. They all have competing preferred arrival and departure times. Any new service would have to seek a compromise on these various preferences; or the

timetable could be set by a lead organiser of the service, giving other users a take it or leave it choice.

The service has the choice to prioritise the needs of either:

- UK domestic traffic; or
- linking with onward international connections, at East Midlands or Heathrow; or
- the international integrator network.

Ideally, a compromise that benefits all three of these interests could be found. This could be a 1935 departure for East Midlands (as per current Aberdeen-East Midlands DHL flight) and depart East Midlands about 0400.

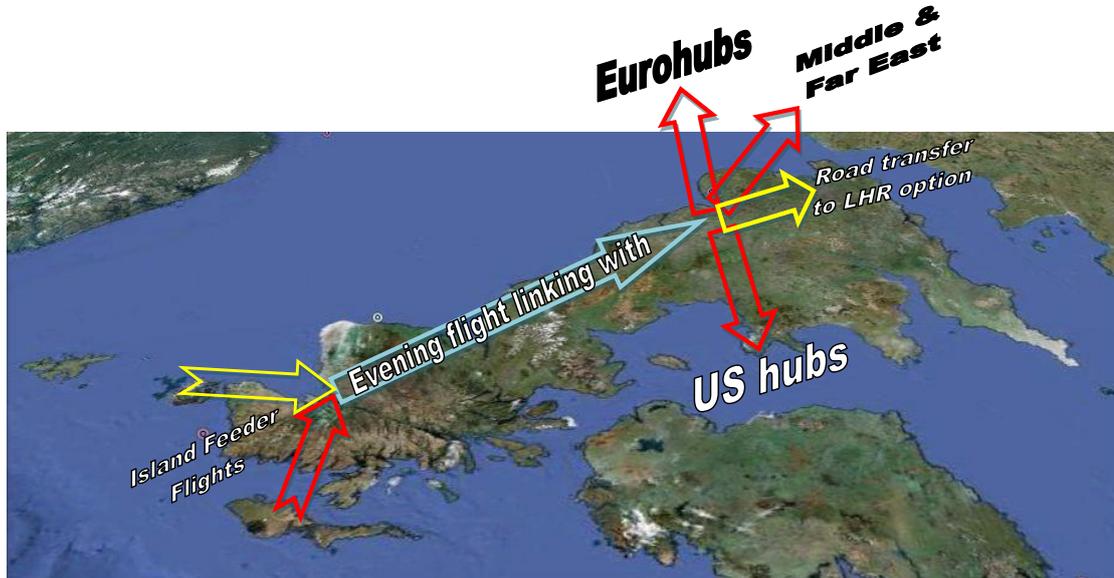
The former would fit with onward DHL connections at East Midlands. For the latter, we recognise that there some parties would wish an earlier flight for earlier delivery in the Highlands & Islands, while a later departure time at EMA would allow connections at East Midlands for further inbound international parcel flights.

**Table 4.2** sets out a range of possible arrival and departure times and the strengths and weaknesses of each one.

| <b>TABLE 4.2: INVERNESS-MIDLANDS AIR FREIGHT SERVICE: POTENTIAL TIMINGS</b> |  |   |
|---|--|---|
| <b>Departing Inverness</b>  |  |   |
| <b>Time</b>   | <b>Strengths</b>   | <b>Weaknesses</b>   |
| 1000  | Would suit any link up with incoming flights from Orkney (Let410) and perhaps attract a feeder stop-off of the returning newspaper Saab 340 from Stornoway en route to Aberdeen  | Does not improve outgoing express parcel cut off times  |
| 1930  | Would link with DHL international departure times in East Midlands   | Too early to optimise cut off times for outgoing express parcels at Highlands depots                            |
| 2030  | Would suit outgoing domestic express parcels   | Would miss some international departures at EMA   |
| 2200  | Ideal departure time for seafood as it would allow that day's catch to be despatched and connect with the early morning international departures from Heathrow   | Would miss most of benefits at EMA but would serve LHR next morning departures                                  |
| <b>Departing East Midlands</b>  |  |   |
| 0130  | Aircraft would arrive in Inverness at similar time to current mail flights-may suit HIAL night staffing preferences  | Too early to achieve comprehensive linkages with express couriers' wider networks                               |
| 0230  | Would suit domestic and some international courier services. Arrival time in Inverness would allow 0900 deliveries as far as Caithness and Skye, plus connection with Outer Hebrides ferry service (ex Ullapool) for same day delivery | Would miss many incoming international connections at EMA   |
| 0330  | Would link to most international connections. Would also allow connection with Outer Hebrides ferry service (ex Ullapool) for same day delivery  | Would not allow 0900 deliveries in Caithness and Skye   |
| 0530  | Would suit many EMA international connections  | Not achieving significant improvements in delivery times at Highlands & Islands businesses apart from Inverness |

**Figure 4.1**, over, shows potential onward connections for a southbound evening flight from Inverness to East Midlands.

**Figure 4.1: Potential Onward Connections at East Midlands Airport**



It should be noted that such a service potentially transforms the role of the currently empty backload flights from Kirkwall and Stornoway. These two flights could provide enhanced and valuable additional feeder seafood produce into the departing southbound service to East Midlands.

**Capacity**

Table 4.3 shows the capacity that the new service might offer.

| <b>TABLE 4.3: INVERNESS-MIDLANDS FREIGHT SERVICE: POTENTIAL CAPACITY</b> |                       |                                 |
|--|-----------------------|---------------------------------|
| <b>Route Leg</b>   | <b>Daily Capacity</b> | <b>Annual Capacity (Tonnes)</b> |
| <b>Saab or Shorts 360</b>  |                       |                                 |
| INV-EMA  | 3.0                   | 780                             |
| EMA-INV  | 3.0                   | 780                             |
| <b>ATP or ATR</b>  |                       |                                 |
| INV-EMA  | 5.0                   | 1,300                           |
| EMA-INV  | 5.0                   | 1,300                           |

Note: Based on Monday-Friday operation

If operated by a smaller plane such as a SAAB 340 or Shorts 360 daily cargo capacity would be approximately 3.0 tonnes in each direction (the aircraft have a notional capacity of 3.5 tonnes). This figure would increase to 5.0 tonnes if a larger aircraft-such as an ATP or ATR-was used (these aircraft can notionally carry up to 8.2 tonnes). For the calculation of the annual capacity we have assumed 50% load factors.

**Pricing**

In our consultations it proved difficult to build up a clear picture of freight rates in any detail. However, they suggest the following broad orders of magnitude:

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- Inter-continental seafood exporters seem to be able to bear £2.50 per kilo as the delivered price.
  - Depending on the capacity of the aircraft cargo from Inverness to East Midlands would be around £1 per kilo. (This compares to £0.25 to £0.50 per kilo for movement by road from Inverness to southern England).
  - This implies that, to match current total price, integrators would be prepared to complete the international leg of the delivery from East Midlands for around £1.50 per kilo.

#### 4.3.4 HIAL's Proposition for a New Airfreight Service

HIAL's proposition to potential a new airfreight operator would be based on two appeals. First, to improve the despatch and delivery times of express parcels in the Highlands & Islands. This will provide a business advantage through an enhanced product. It will allow parcel carriers to either charge a premium or attract more custom at existing prices.

Second, to create a new distribution route for seafood exports from the Highlands & Islands. As noted at **Chapter 3**, none of the long haul air freight seafood exports departs the UK from East Midlands airport. Given the significance of Highlands & Islands products within UK seafood exports, there is potential for the new air service to tap into this large potential market.

#### 4.3.5 Potential New Service Initiators and Risk Takers

This research has identified several types of organisations that could be involved in initiating and/or taking risk related to a new service. Their potential roles are shown at **Table 4.4**, over.

#### 4.3.6 Basis of Service Operation

The service:

- Would fly Monday to Friday, and costs the same to do so every day.
- Has scheduled commitments-it has to fly and must charge someone every day, whether it is full or not.

To obtain best prices and service it would be advisable for the seafood sector to involve itself in the planning of such a development. This will allow the sector to understand the opportunities and destinations opened up, to effectively pre-market prior to service launch, and to co-design the service to best serve the sector's needs. Ideally a core group could act as one collaborative negotiating partner in the preparatory, and also in the operational, phase of this project.

The air operator will prefer to deal with credible, financially secure, partners that can encourage them to undertake medium term planning and commit to the effort that needs to be made to initiate and then optimise the route.

There are some analogies to be drawn with the Scottish Daily Newspaper Society's (SDNS) delivery of newspapers to the islands by air. All the newspaper titles are normally antagonistic competitors. However for the good of the islands, and to

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minimise their own distribution costs, the industry has evolved a committee to enter contracts with air operators.

This committee, which only meets occasionally, tasks a sub-committee (Distribution Committee-DC) to manage the details of the service. This committee appoints one of their number to act as chairman on a rolling basis and that chairman calls meetings and makes day to day decisions on behalf of the interests of all the titles in their dealings with the air operators.

The DC committee also liaises with the air operator and quality controls the service. Daily reports on performance are available for circulation to interested members.

| <b>TABLE 4.4: POTENTIAL NEW SERVICE INITIATORS AND RISK TAKERS</b> |  |
|--|--|
| <b>Organisation/Role</b>   | <b>Potential Role</b>  |
| Air operator   | Could take the lead, offering the service and sell capacity to all comers. This is less likely, though not impossible, as most operators would not have a close understanding of the courier and seafood businesses. However, could still be a partner in the risk taking. Several operators are interested.   |
| Lead risk taker  | One freight related company or integrator could take the lead and the risk and then try to sell any spare capacity, above and beyond their own need, to others. Thus, one company would retain some control over their preferred timetable. They would also select the other 'partners' involved which would be one way of managing competitive tensions between many of the likely participants. Two such companies have been identified. |
| Co-ordinator   | One company could reduce the risk by signing up various companies with pre-sold capacities, before a service is committed to. This company could also act as an honest broker when dealing with competitive participants in the service. Two such companies have been identified.  |
| Airports and ground handling companies                             | Would likely be asked for new service discounts to help reduce risk by any of the above. May be asked to help with any ground equipment upgrade issues and to adapt staffing for any new service.  |

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Regarding cost, the system that has evolved by the committee is one whereby the total cost of the freight charter is allocated on a weight ratio basis to participating members, whether the aircraft is filled or not.

This system illustrates how all the participating members shared the risk of paying whether the booked capacity was filled completely or only partially. Obviously this motivated all the titles to develop a system to ensure that the aircraft was filled optimally each day. Indeed they used a ‘filler’ product-the lifestyle supplements-which are printed days ahead, and usually go by van to the islands, to use up any free space on a last minute basis.

For the seafood sector the service would “work” to the extent that the sector can collectively:

- Include a wide mix of seafood products to smooth out fluctuations in volumes.
- Minimise the risk of supply interruptions (due to weather and other factors) by sourcing seafood from a wide variety of locations.
- Include some filler produce that can be flexibly inserted should there be disruption to other produce or potentially un-used capacity. Smoked salmon may be one such candidate product.

#### 4.3.7 Possible HIAL Investment Requirements

The need for any additional ground equipment or staffing at Inverness would depend upon the aircraft that operates the route. If an aircraft of 6-8 tonne capacity is used then a *Hi-loader* would be required. This equipment could cost several hundred thousand pounds, while a second hand version could still represent a six figure cost. Leasing or renting may be more appropriate, especially whilst any new service was being trialled.

#### 4.3.8 Royal Mail Flights

If there was an evening airfreight service leaving Inverness for international destinations then the Outer Hebrides afternoon Royal Mail flight (Benbecula-Stornoway-Inverness) would be well placed to connect with it. However mail flights already exist linking Inverness and East Midlands, albeit via Edinburgh on its southbound late evening leg. This is not currently used for bulk or live seafood consignments.

With a blank sheet of paper, and no issues about competitors co-operating with one another, then upgrading the existing mail aircraft to accommodate all northbound and southbound requirements would probably be more economical than creating two essentially parallel flights.

However, such a collaborative solution appears unlikely for a number of reasons:

- Difficulties in setting a timetable that would be acceptable to a wider range of users.
- The need for control over the flight (i.e. shut outs for latecomers) in order that Royal Mail could meet its performance targets set by Ofcom and thus avoid financial penalties.

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We understand, however, some flexible co-loading of Royal Mail and others' cargoes occurs on Royal Mail flights to the Channel Islands. This approach should not be completely excluded from any enquiries of future new possible dispensations.

#### 4.3.9 Conclusions

Based on our research we conclude that there is sufficient merit and interest to take forward a new Inverness-Midlands freight service, including further detailed investigation. Within this overall finding we conclude that:

- Express parcels will be the main component of demand. However, securing some seafood traffic southbound is likely to be essential to the service's viability.
- An aircraft of between 3 tonnes and 8 tonnes capacity would be appropriate for the market.
- Orkney and Outer Hebrides exporters could also make use of the service, with potentially, empty backload and/or Royal Mail flights playing a feeder role.
- Work will be required to bring together food exporter interests to maximise the potential seafood volumes on the service.

In terms of interest, our consultations indicate that:

- Four parcel companies have expressed possible interest in leading the project.
- These parcel companies, some air operators and one other Highlands & Islands interest would possibly take, or share in, the risk, and that search for risk bearers, during the brief fieldwork of this study, could be widened if required.
- There are a number of existing companies who specialise in selling and arranging co-loading arrangements on freight flights. They could play a leading or supplementary role.

#### 4.4 **DETAILED ANALYSIS OF OPPORTUNITIES (2): UTILISATION OF EXISTING SPARE CAPACITY**

##### 4.4.1 Introduction

This section describes the spare freight capacity available on existing Highlands & Islands flights. The available capacity is summarised at **Table 4.5**, over.

##### 4.4.2 Empty Scheduled Service Freight Capacity Within The Highlands & Islands

###### **Inbound To Stornoway**

The newspaper flight with a Saab 340 out of Aberdeen to Stornoway each day has some spare capacity (estimated at 1.5 tonnes).

###### **Outbound From Stornoway**

The Aberdeen-Stornoway newspaper returns empty to Aberdeen, with a 3-3.5 tonne payload unused. Loganair are very much aware of this unexploited opportunity. The recent award of approved cargo agent status award for Stornoway airport will allow Loganair to marketing this capacity to potential customers.

| <b>TABLE 4.5: EXISTING SPARE CAPACITY (TONNES) ON SCHEDULED FLIGHTS</b> |                |  |                       |                        |
|---|----------------|--|-----------------------|------------------------|
| <b>Route Leg</b>  | <b>Airline</b> | <b>Description</b>                                 | <b>Daily Capacity</b> | <b>Annual Capacity</b> |
| <b>Freight Services</b>   |                |  |                       |                        |
| Aberdeen-Stornoway  | Loganair       | Saab: Newspaper flight                             | 1.5*                  | 390                    |
| Stornoway-Aberdeen  | Loganair       | Saab: Empty positioning                            | 3.5                   | 780                    |
| Kirkwall-Inverness  | Benair         | Let410: Empty positioning                          | 1.8                   | 468                    |
| Benbecula-Stornoway-Inverness   | Loganair       | Saab: Royal Mail flight, often under-used capacity | 1.5*                  | 390                    |
| <b>Passenger Services</b>   |                |  |                       |                        |
| Inverness-Gatwick   | flybe          | Thrice per day                                     | 0.75                  | 195                    |
| Gatwick-Inverness   | flybe          | Thrice per day                                     | 0.75                  | 195                    |
| Inverness-Amsterdam   | flybe          | Once per day                                       | 0.35                  | 91                     |
| Amsterdam-Inverness   | flybe          | Once per day                                       | 0.35                  | 91                     |
| Inverness - Manchester  | flybe          | Twice per day                                      | 0.50                  | 130                    |
| Manchester - Inverness  | flybe          | Twice per day                                      | 0.50                  | 130                    |
| Inverness - Birmingham  | flybe          | Once per day                                       | 0.25                  | 65                     |
| Birmingham - Inverness  | flybe          | Once per day                                       | 0.25                  | 65                     |

Note: Based on Monday-Friday operation. \* Estimated

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At Aberdeen these goods can be fed into other flights. As shown at **Chapter 3**, these could include BA World Cargo via Heathrow. Loganair still retains a link with BA World Cargo which would help freight to be transhipped more quickly at Aberdeen and Heathrow. Other interlining opportunities at Aberdeen would include the flights of Air France-KLM flights, Lufthansa and also SAS flights.

The aircraft can also be offered to the charter market for larger consignments, should the Outer Hebrides ever wish to export more directly, notably when seafood prices peak. Destinations that can be considered are Glasgow, Manchester, East Midlands or nearby European hubs.

#### **Outbound From Kirkwall**

As shown at **Chapter 3**, a Let410 returns to Inverness empty each day after delivering the early morning mail to Kirkwall.

#### **Outbound From Benbecula & Stornoway**

As shown at **Chapter 3**, the Shetland mail plane is able, by itself, to carry mail off both Shetland and Orkney on the one flight. This underlines the imbalance of mail flows, with outbound mail being much less than inbound to the islands. Consequently, the Saab 340 that returns to the mainland From Benbecula (via Stornoway) often has spare capacity.

#### 4.4.3 Greater Use of Freight Capacity on Cross-Border Scheduled Passenger Services

flybe, having recently concluded a Special Procurement Agreement with Air France-KLM Air Cargo. This is effectively an interline agreement for the transfer of freight between the two airline's services, with the customer having to deal with only one set of paperwork.

flybe are now making efforts to offer the capacity on their Gatwick and Amsterdam flights to the local market. The prospects for attracting traffic would be enhanced if they can identify any other cargo partners with whom they could agree cargo interlining agreements at Gatwick. This search is being widened to include possible partners at Birmingham and Manchester.

#### 4.4.4 Use of Scheduled Service Freight Aircraft For Ad Hoc Charter Work

**Table 4.6**, over, shows how the freight aircraft referred to at **Table 4.5** could be available for ad hoc charter work.

In addition, there are two day-stopping ATP cargo aircraft in Aberdeen. With some pre-planning these much larger freight aircraft could be hired for any significant ad hoc airfreight deliveries of Highlands & Islands seafood, when prices peak.

One advantage of the use of charter, as opposed to scheduled, cargo flights is that the cost would be lower due to the transport costs of the charter being zero rated for VAT. Only Royal Mail postal deliveries and not integrator or courier deliveries are exempt from VAT.

**TABLE 4.6: CONVENIENT POTENTIAL REGIONAL AD HOC AIR CHARTER CAPACITY**

| Days            | Aircraft | Available At | Capacity (Tonnes)* | Illustrative Potential Destinations |
|-----------------|----------|--------------|--------------------|-------------------------------------|
| Monday-Saturday | Let 410  | Kirkwall     | 1.8                | Bergen                              |
|                 | Let 410  | Sumburgh     | 1.8                | Stavanger                           |
|                 | Let 410  | Inverness    | 1.8                | Oslo                                |
| Sunday          | Let 410  | Inverness    | 1.8                | Bergen                              |
|                 | Let 410  | Aberdeen     | 1.8                | Stavanger                           |
| Monday-Saturday | Saab 340 | Stornoway    | 3.5                | East Midlands; Glasgow              |
|                 | Saab 340 | Inverness    | 3.5                | Amsterdam                           |
|                 | Saab 340 | Aberdeen     | 3.5                | Copenhagen                          |
| Sunday          | Saab 340 | Aberdeen     | 3.5                | Copenhagen                          |

\*Note: Actual usable capacity will be reduced with volumetric seafood

#### 4.4.5 Potential Sources of Demand

##### **Scheduled Service Freight Capacity**

Potential demand for the scheduled capacity shown at **Table 4.5** could include the following.

**Saab 340 from Stornoway to Aberdeen.** Seafood, Stornoway black pudding and Hebridean Tweed to world markets via Aberdeen feeding into trucking and air services. Also general day to day freight if it becomes a regular and reliable feeder service.

**Let 410 from Orkney to Inverness.** General day to day freight if it becomes a regular and reliable feeder service; Seafood for onward transport to Aberdeen. Seafood to feed into flybe cross-border services.

If a new Inverness-East Midlands freight service starts then both aircraft could feed this service with produce. This assumes that:

- Both aircraft would delay their return from the islands in order to deliver back to Inverness later in the day.
- The Saab could find sufficient produce, and income, to justify the additional costs of stopping off in Inverness en route to Aberdeen.

Costs to end users would be reduced because the above demand would be using available existing capacity. The opportunities identified would exploit marginal pricing possibilities on empty legs that are already in essence paid.

The use of planes already in the region or in close vicinity would minimise positioning and support stable flight patterns that will suit air operators from the point of view of planning and crewing. Using an aircraft more efficiently (such as a daystopping planes) is also an attractive way to sweat assets and ideally obtain better pricing for customers.

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## Cross-Border Scheduled Passenger Services

Potential demand for the scheduled cross-border passenger services operated by flybe could include seafood and general day to day freight. Volumes could be enhanced with Loganair and flybe's freight division working more closely together.

## Ad Hoc Charter Work

These are likely to mainly service the seafood sector when prices peak at particular times of the year.

A very much longer distance, but more occasional, cargo mission is another approach that the seafood sector could, and has explored. Such charters to Spain were undertaken in the late 1990s. This approach, however, suffers from the lack of a backload on the return flight that could help to defray the costs. It also suffers from the industry's inability to guarantee a large consignment on a particular day and time. This is because of possible weather-related disruption to the landing of shellfish.

## 4.5 POTENTIAL REVENUE BENEFITS FOR HIAL

**Table 4.7** provide an indication of the annual additional revenues that could accrue to HIAL from some of the various opportunities discussed in this Chapter. These are revenues based on mature routes, post any initial discounts that HIAL may offer.

The assumptions underlying the figures are shown at **Appendix C**.

| <b>TABLE 4.7: POTENTIAL HIAL REVENUES FROM OPPORTUNITIES</b>  |   |
|---|---|
| <b>Opportunity</b>  | <b>Estimated Annual HIAL Revenues (£)</b> |
| Bellyhold freight optimised on Inverness-Amsterdam  | 3,900                                     |
| Charters  | 17,000                                    |
| Let 410 and Saab 340 freight into Inverness   | 26,000                                    |
| Inverness-Midlands freight service-using Saab or Shorts   | 95,000                                    |
| Inverness-Midlands freight service-using ATP or ATR   | 161,000                                   |
| Inverness-Midlands freight service-using ATP or ATR <u>plus</u> daily aircraft feed in from Orkney and Outer Hebrides | 220,000                                   |

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## 5 **CONCLUSIONS AND TOP LEVEL ACTION PLAN**

### 5.1 **CONCLUSIONS**

#### 5.1.1 Wider Context

Air freight plays a significant role in sustaining international trade. This is through moving low volume but high value/urgent consignments for a range of sectors.

Air freight volumes appear to have recovered from the effects of the recent economic downturn. Industry forecasts are for continued long term growth. It is expected that there will continue to be a close relationship between air freight volumes and GDP growth. It is also forecast that the strongest growth in air freight will be to/from the main emerging economies.

Between 2000 and 2010 overall air freight volumes at UK airports remained flat, although there was some limited variation between individual years. However, this masks a combination of:

- Growth at Heathrow, the major UK air freight airport.
- Decline at regional airports as a whole, including Scottish airports-although the latter is largely due to falling traffic at Prestwick.

This suggests a growing significance of Heathrow as air freight became increasingly concentrated at a small number of UK airports as economies of scale were sought.

While UK airport traffic did not grow strongly between 2000 and 2010, there was very high growth in the express parcel traffic segment. This coincided with the increasing importance of integrators within the air freight sector, and the increasing significance of East Midlands Airport as a key UK integrator hub.

#### 5.1.2 Existing Position

There is a lack of reliable data on air freight volumes at Highlands & Islands airports. However, there appears to be a significant amount of leakage of air freight to other Scottish and UK airports. This includes seafood (especially through Heathrow), parcels through other Scottish airports and other smaller traffic (e.g. in relation to the electronics sector).

Cross-border air freight from the Highlands & Islands is currently very low. However, volumes at all Scottish airports are low in a UK context. This reflects the size and nature of the country's economy as well as road transport of air freight to the dominant hub of Heathrow.

There are only limited air freight services from the Highlands & Islands to airports outside the region. The greater range of services/volumes at other UK airports offer competitive rates to freight forwarders who consolidate loads from throughout Scotland.

There is spare and under-utilised capacity on scheduled freight flights to/from the islands and on cross-border passenger services from Inverness. However, regional business representatives feel that the air freight industry-in its widest sense-is not pushing air freight and, in particular, the "fly local" option.

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There is no evidence of significant local business dissatisfaction with what is currently offered. However, there are improvements options that customers do not realise are possible.

Nor is there evidence of significant dissatisfaction amongst general road couriers and hauliers regarding delivery and despatch arrangements for the Highlands & Islands. There is however dissatisfaction amongst logistics professionals concerned with the delivery of premium products to the region, and this could represent a key opportunity for HIAL.

Two main sources of unmet demand have been identified. First, significant volumes of seafood exports flown from UK airports outside the Highlands & Islands. Second, the most time critical parcel traffic which currently arrives in the region by road.

### 5.1.3 Constraints

The following constraints were identified for development of air freight to/from the Highlands & Islands:

- A limited range of suitable products and their dispersal across the region. In addition certain products (e.g. some seafood) are quite seasonal.
- No strong appetite for change among many transport operators and their customers.
- Air freight pricing can appear prohibitive to those currently moving goods by surface transport.
- The existing range of competing air services from other UK airports, while Highlands & Islands passenger aircraft have only limited bellyhold capacity.
- Different timing requirements for different goods potentially complicate the ability to profitably use both directions of an aircraft rotation.
- Potential users may be unwilling to collaborate to produce sufficient volumes to support new air freight services.
- Airport security procedures and practices can reduce airfreight's attractiveness.

### 5.1.4 Opportunities

#### **Scheduled Inverness-East Midlands Air Freight Service Air Freight Service**

This would be based on the identified unmet demand from parcels and seafood. The main issues around establishing such a service are as follows.

1

Parcels would be the main traffic component. However, the service would most likely require some seafood traffic on the southbound leg to make it viable. This may require seafood producers to better collaborate to ensure sufficient and consistent volumes are available.

2

The service would need to be timed to meet international flight connections in England. This makes a link to East Midlands Airport more attractive than one to Coventry. Road transport has significant competitive strengths for deliveries within the UK and near

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mainland Europe. Therefore, some of the best prospects for attracting traffic to the service are longer-haul markets for exports and express parcels within Europe.

3

The main attraction of the service would be reduced overall transport times compared to existing routes, allowing users (parcel carriers and seafood producers) to charge a premium for their products and/or increase their market share.

4

The viability of the service would be enhanced to the extent that it can receive onward traffic from the islands.

5

Work is required to get the service up and running. However, our consultations identified interest among several potential risk takers and even aircraft operators who would look to book or sell capacity on the flights.

### **Utilisation of Existing Spare Capacity**

This opportunity would comprise, first, using **existing empty scheduled service capacity within the Highlands & Islands**. The empty aircraft leaving Stornoway and Orkney each day and the empty space in off-island Royal Mail flights provides an opportunity for air exports. Rates would be competitive because these flights are already operated. They could also feed into the aforementioned Inverness-Midlands service.

Second, **greater use of freight capacity on cross-border scheduled passenger services**. There has hitherto been a lack of promotion of this capacity. However, this is starting to be addressed.

Inverness-Amsterdam, in particular, offers a new market opportunity. It provides an alternative route to international markets, albeit one with quite modest bellyhold capacity.

Third, **use of scheduled service freight aircraft for ad hoc charter work**. This would involve aircraft already in the region or in close vicinity, reducing costs to the airline and charges to customers.

### **Wider Impacts**

These opportunities could have the following wider impacts.

1

For HIAL, they would generate additional operating revenues. Development of air freight and services would contribute to HIAL's wider strategic objective of developing Inverness airport. It would also support the development of Inverness Airport Business Park, which places airfreight, and associated activities, as one of its core business opportunities.

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2

A service to East Midlands would place general air freight through Inverness back in the substantial global airfreight hub and spoke system. This has not been the case since the 1990s when the BA Heathrow service ended. Apart from the Royal Mail's network the Highlands and Islands are now only effectively wedded into the international trading system only by road and ferry deliveries for onward despatch from outside the region.

3

Such a new service would also associate HIAL more closely with the more vibrant, more profitable, and more dynamic *Integrator* portion of the airfreight sector.

4

Seafood exports by air from the Highlands & Islands would both piggyback on, and contribute to, growing Scottish food and drink exports and Scottish Government's internationalisation agenda. They would offer the potential for seafood producers to achieve higher prices. An Inverness-East Midlands flight would raise service levels for parcel deliveries to those seen elsewhere in the UK. They would also introduce new choices for the Highlands and Islands exporters to the existing distribution options of the central belt and Grampian freight forwarders.

Such developments would be in line with the Scottish Government's ambition is to increase exports by 50% over the next six years (2011). Several of the suggested strategies being considered by the Scottish Government, were articulated by the *Discussion Group Report: Internationalisation and Increasing Exports* that was hosted by Fiona Hyslop, Cabinet Secretary for Culture and External Affairs in June 2011. This initiative is in line with several of the core recommendations of that report.

- Scottish businesses would collaborate to win overseas business and may develop an overall package of support to address specific overseas opportunities. In particular the Scottish supply base of major exporters would be much stronger.
- Scottish exports would have a much bigger presence in none 'English speaking' markets with active joint effort being exerted to overcome trade barriers in different markets.
- Scottish businesses in general would have confidence in exporting and strengths in international sales and marketing competencies.
- The value of exports would be greater with more 'added-value' being developed in Scotland before exporting.

5

Air freight movements have environmental impacts. However, the opportunities include better serving long haul markets where alternatives to air freight are unlikely to be viable. Further, better utilisation of existing capacity would improve the environmental efficiency of existing flights (in terms of tonnes of freight/CO2 emissions). Additionally considered developments would deliver distribution improvements to narrow the gap

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between Highland and Islands residents and businesses and the accepted freight connectivity standards of residents and businesses throughout the rest of the UK.

## 5.2 TOP LEVEL ACTION PLAN

### 1. Effort to foster new freight air service between Inverness and Midlands

- a. Contact interested actors. These will include those potentially interested in leading, coordinating or participating in any new service. Five or six key contacts should suffice for these initial soundings.
- b. If matters progress, meet and coordinate Scottish stakeholders. This could include representatives from Scotland Food and Drink, Seafood Scotland, Scottish Salmon Producers Association, HIE/(SDI), fishermen's associations, Scottish Land & Estates and larger seafood/food exporters. These discussions should also be used to highlight existing spare air freight capacity.
- c. Arrange for a Highlands & Islands delegation to meet relevant stakeholders at East Midlands and Coventry airports.
- d. Facilitate and host a visit to Inverness by Midlands stakeholders, including facilitating dialogues with Highlands & Islands stakeholders.
- e. Identify any roadblocks (eg ground infrastructure, risk or pricing issues) and consider how they might be managed.

One should be prepared to take an elapsed period of 9-12 months to undertake the above actions and see the service up and running.

### 2. Encourage use of dead-leg capacity from islands

Help promote the existing immediately available capacity. Engage with the seafood sector to discuss exporters' use of capacity that will be created through approved cargo agent status at Stornoway. Achieve approved cargo agent status at Sumburgh (to support oil and gas emergency ad hoc freight and scheduled service freight capability). Other HIAL airports should follow.

### 3. Maximise bellyhold activity on Inverness cross border flights

Discuss with flybe Cargo Manager the use of these flights for airfreight and how HIAL can support his efforts. This may well include facilitating a dialogue with potential Highlands & Islands-based customers.

### 4. Encourage freight charters at HIAL airports

Publicise existing local charter capacity with potential exporters. HIE, Seafood Scotland and the fishermen's associations should also be briefed as part of this activity.

### 5. Maintain an open dialogue with Royal Mail

Royal Mail is the longest serving and largest air cargo customer for HIAL, and any airfreight development efforts should remain mindful of their needs and

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requirements as a customer. Their operating environment is changing and it likely to change further over the next few years. Discussions with a Royal Mail network planner and/or strategic planner would be worthwhile. These would provide useful insight to the constraints and opportunities within which the organisation operates.

## **Appendix A**

### **List of Consultees**

M=Face-to-Face meeting, otherwise by telephone (occasionally only email)

### **Airlines**

Benair (M)  
Loganair x 2  
Atlantic Airlines – Coventry (M)  
flybe Cargo x 2  
Farnair/BDA (telephone and M below)  
BA World Cargo (Birmingham based manager responsible for Scotland) (telephone and M)  
SAS Cargo  
KLM Cargo  
RVL (East Midlands) (M)  
Direct Flight Cranfield (M)  
Nightexpress - Germany

### **HIAL**

Inverness  
Kirkwall  
Sumburgh  
Stornoway  
'Southern States' Airport manager  
Dundee

### **Airports**

EMA (Cargo Business Development) (M)  
Coventry Airport (Business Development) (M)  
Carlisle Airport (Airport Director)

### **Ground Handlers and freight forwarders**

Dalcross Logistics (M)  
Ocean Sky Handling Prestwick  
Aviation Solutions-(East Midlands) (M)

### **Integrators**

UPS Inverness  
Fedex Inverness & Belgium  
DHL East Midlands (M)  
DHL Inverness  
DHL Scotland

**Royal Mail** – Procurement and OPS - London

### **Parcel Carriers**

AJG Parcels (2 x M)  
Northwards Ltd (M)  
Woody's Express Parcels  
City Express – Coventry (M)  
BDA – Coventry (M)  
Parcelforce - Glasgow x 3  
DB Schenker Logistics in London & Coventry  
Palletforce  
Palletways  
Panalpina  
Kuehne + Nagel Ltd – London and Scotland  
DPD - Geopost  
APC Overnight  
Yodel

**Food and drink**

Scotprime (Ayr)  
SAOS-Scotland's cooperative of food producers (M)  
Orkney Fisherman's Association  
Orkney Rose  
Western Isles Fisherman's Association  
Keltic Seafayre  
Shetland Seafood Centre  
Seafood Scotland (telephone and M)  
Scottish Land & Estates (M)  
Lossie Seafoods (M)  
Moray Seafoods (M)

**Public sector**

HIE (Tony Jarvis & Iain Sutherland) (M)  
HITRANS (Frank Roach)  
HIE-Orkney, Shetland and Outer Hebrides offices  
SDI

**Other**

British International Freight Association – Scottish Rep  
Scottish Daily Newspaper Society  
Avinor-Norwegian state-owned airport operator (by email)  
Howard Brindley (M and email)  
Scotland Electronics International Limited Forres (SEIL) (M)  
Herbert Nielsen – Danish aviation journalist re Faroese airfreight

**Business organisations**

SCDI (M)  
Inverness Chamber of Commerce (M)  
Caithness Chamber of Commerce  
Moray Chamber of Commerce

## **Appendix B**

### **Bibliography**

- A Review of Air Services In the Highlands & Islands For HITRANS and ZetTrans By Mott MacDonald Ltd Final Report February 2010
- Air Freight: Economic and Environmental Drivers – undertaken on behalf of the Department for Transport by Steer Davies Gleave – March 2010
- Inverness Airport Masterplan – Highlands and Islands Airports Limited - July 2007
- HIAL Conditions of Use and Airport Charges from May 2011
- A Review of the air freight sector – its customer needs and service opportunities for the Highlands and Islands – A scoping study prepared by Traverse Ltd on behalf of Highlands and Islands Enterprise Transport Team 2004
- Highland Wide Local Development Plan Main Issues – Highland Council –Planning and Development Service - Aug 2009
- A sustainable future for Carlisle Lake District Airport - Stobart Air Limited
- Airport Watch Airfreight Report December 2009 Researched and written by Rose Bridger Additional research and contributions by Sarah Clayton
- IAPB Brochure – Roxhill
- Scottish Multi-Modal Freight Locations Study Final Report Scott Wilson Ltd June 2009
- The Impact Of The Air Cargo Industry On The Global Economy prepared by John D. Kasarda, Stephen J. Appold and Makoto Mori The Center for Air Commerce Kenan Institute for The International Air Cargo Association Air Cargo Forum Calgary, Canada September 13, 2006
- Air freight and merchandise trade: towards a disaggregated analysis by Franziska Kupfer, Hilde Meersman, Evy Onghena and Eddy Van de Voorde The Journal of Air Transport Studies Volume 2, Number 2, July 2011
- ERG Aviation Trends Q3 2011
- IATA eChartbook Q4 2011
- Air Freight Industry – White Paper J. Petersen The Supply Chain and Logistics Institute H. Milton Stewart School of Industrial and Systems Engineering Georgia Institute of Technology April 1, 2007
- Boeing World Air Cargo Forecast Jan 2012
- Working to advance the world of air cargo TIACA [www.tiaca.org](http://www.tiaca.org) The International Air Cargo Association Jan 2010
- CO2 Emissions from Freight Transport: An Analysis of UK Data Alan McKinnon Logistics Research Centre, Heriot-Watt University, Edinburgh, UK EH10 7HR
- Air Cargo Engine for Economic Development John D Kasarde and Jonathan Green The Centre for Air Commerce Kenan Institute of Private Enterprise Kenan-Flagler Business School for International Air Cargo Association Air Cargo Forum Bilboa Sept 2004
- The air freight end-to-end journey An analysis of the end-to-end journey of air freight through UK international gateways DFT May 2009
- Sustainable Aviation 2030 Discussion document Tony Grayling and Simon Bishop August 2001 Institute for Public Policy Research
- Getting There - A Sustainable Transport Vision for Scotland - Sustainable Development Commission Scotland July 2010
- Minneapolis-Saint Paul Air Cargo Study SITA Logistics Solutions, Geneva, Switzerland, December 2001
- The Eddington Transport Study The case for action: Sir Rod Eddington's advice to Government December 2006
- Internationalisation And Increasing Exports – Scottish National Economic Forum – Seventh Meeting: 22 June 2011 Venue: Our Dynamic Earth
- Maddening Air Cargo: Air Transport World – Jan 2012
- A Better Quality of Life; A Strategy for Sustainable Development for the UK: DTLR – May 1999
- National Transport Strategy: Scottish Executive - 2006
- Freight Action Plan for Scotland: Scottish Executive – 2006
- The Environmental Impact of Air Cargo: Prof Peter Morrell, Cranfield Univ for IACA – 2007

## **Appendix C**

### **Assumptions Underlying HIAL Revenue Estimates**

1. Based on current published HIAL charges (May 2011).
2. X-Ray revenues to HIAL assumed as 5p per kilo.
3. Saab/Shorts assumed to carry 3 tonnes of freight per day, ATP/ATR 5 tonnes per day. 0.3 tonnes freight per day bellyhold on Inverness-Amsterdam service.
4. 50% utilisation of cargo capacity on the East Midlands service.
5. Charters based on 20 flights conveying 1 tonne of freight.
6. Revenues are gross. HIAL's airports are unlikely to incur additional costs for the developments-except perhaps for staff costs for an early morning arrival of flight from East Midlands.
7. Revenues do not include parking fees.