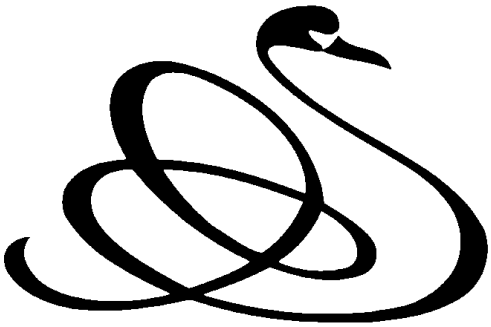


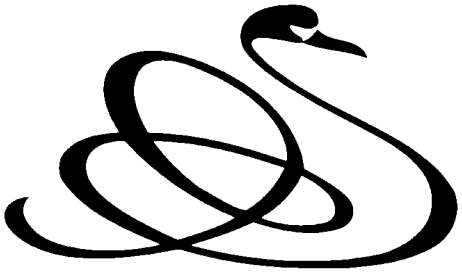
York Aviation

BAA SCOTLAND

THE IMPACT OF THE 2010 APD INCREASES IN SCOTLAND

Final Report

January 2011



York Aviation

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Dated: 7th January 2011 .....

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Dated: 7th January 2011 .....

BAA SCOTLAND

THE IMPACT OF THE 2010 APD INCREASES IN SCOTLAND

Contents

Key Points

- The UK Government has significantly increased rates and restructured APD since 2007. Rates for short haul travel have increased by around 140% but it is long haul travel that has really been penalised with rates increasing by between 200% and 325%.

- The UK appears to be out of step with much of the rest of Europe on this issue. Rates are higher than elsewhere by some margin and while some others are abolishing or reducing the burden on passengers, the UK has increased it. Austria and Germany are about to go down a similar route to the UK but even in these countries the rates of duty are considerably lower. These increases also appear excessive in comparison to the tax burden from other instruments such as Inheritance Tax or the new Bank Levy.

- The previous Government sought to brand APD as a pseudo environmental tax despite the fact that rates take no account of the actual environmental impact of a flight and future plans have never sought to reflect aviation's entry in to the EU ETS in 2012. The new Coalition Government appears to view APD more simply as a revenue raising instrument.

- Scotland and its economy is particularly reliant on air service access, being geographically peripheral from the key centres of Europe and the UK and with its history as a trading nation, reflected particularly in Edinburgh and Glasgow positions as international financial and business services centres, and in Aberdeen's position as a key global centre for the energy industry. Tourism is also a key component of the economy, bringing visitors from around the world.

- Over the next three years, we estimate that Scottish airports will lose around 1.2 million passengers or around 1.8% of total demand. The largest numeric losses will occur on Domestic services but it is the impact on longer haul services which is of perhaps greatest concern, where as much as 5% of demand may be lost. This has the potential to undermine the long term sustainability of these routes and reduce the ability of airlines to bring new destinations to the market. Any loss of connectivity will impact on Scotland's competitiveness but long haul routes are of particular economic and strategic importance to the Scottish economy.

- Falling demand will also knock-on to losses in employment at Scotland's airports, which are often vitally important components of local and regional labour markets, and impact on the tourism industry, with around 148,000 trips and £77 million in visitor expenditure lost over the next three years.

1 INTRODUCTION

Background

1.1 On 1st November 2010 Air Passenger Duty (APD) was once again increased by the UK Government. This was the last in a planned series of changes to APD that have increased rates substantially and altered the structure of the Duty significantly. There has been considerable concern raised about the damage to the air transport industry and the broader economy from these changes, particularly in terms of the effect on the UK's 'regional' airports[1], where markets are felt to be smaller and demand is less resilient. These concerns have been heightened by the introduction of these changes on top of the impact of the global recession, which has led to significant declines in passenger numbers in itself.

1.2 Scotland and its economy is particularly reliant on air service access, being geographically peripheral from the key centres of Europe and the UK and with its history as a trading nation, reflected particularly in Edinburgh and Glasgow positions as international financial and business services centres, and in Aberdeen's position as a key global centre for the energy industry. Tourism is also a key component of the economy, bringing visitors from around the world.

1.3 In November 2010 BAA Scotland, the operator of Scotland's three largest airports, Edinburgh, Glasgow and Aberdeen, commissioned York Aviation to undertake an assessment of the demand impact of the November 2010 rise in APD on the Scottish air transport market. This report focuses on three key areas:

- a review of the evolution of APD in recent years and a comparison to developments elsewhere in Europe;
- a price model based assessment of the overall impact of the rise in APD on demand at Scotland's Airports;
- a series of route level case studies examining the impact of the rise in APD on a number of strategically important routes.

[1] Those outside the London system.

2 APD AND AVIATION DUTIES IN EUROPE

Introduction

2.1 Below we provide a brief overview of the development of Air Passenger Duty in the UK in recent years. We then move on to compare the UK's position on aviation duty to other countries around Europe.

Recent History of APD

2.2 Since 2007 APD has both been increased substantially and restructured. In terms of restructuring, the Duty has moved from being a two distance band system to a four distance band system. A distinction between the rates charged to premium and economy class passengers has been retained. Passengers occupying seats in premium classes have APD levied at the full rate, while passengers in economy class or on services with only one class have APD levied at a reduced rate. The changes in rates and structure are set out in **Table 2.1**.

Table 2.1: Changes in APD Rates and Structure since 2007

	Pre Feb 2007		Feb 2007 to Oct 2009		Nov 2009 to Oct 2010		Nov 2010 onwards		% Growth
	Full	Other	Full	Other	Full	Other	Full	Other	
Band A (0 to 2000 miles) or Europe pre Nov 2009	£10	£5	£20	£10	£22	£11	£24	£12	140%
Band B (2001 to 4000 miles) or Other pre Nov 2009	£40	£20	£80	£40	£90	£45	£120	£60	200%
Band C (4001 to 6000 miles) or Other pre Nov 2009					£100	£50	£150	£75	275%
Band D (over 6000 miles) or Other pre Nov 2009					£110	£55	£170	£85	325%

2.3 This demonstrates quite clearly the extent of the increases experienced by passengers since 2007. Medium and long haul passengers have been hardest hit, with APD rates increasing by between 200% and 325%. Passengers to Band C and D destinations have been particularly hard hit due to the introduction of the greater number of distance bands. Domestic and European rates have increased by substantially less but the growth has still been dramatic, with rates increasing by 140%.

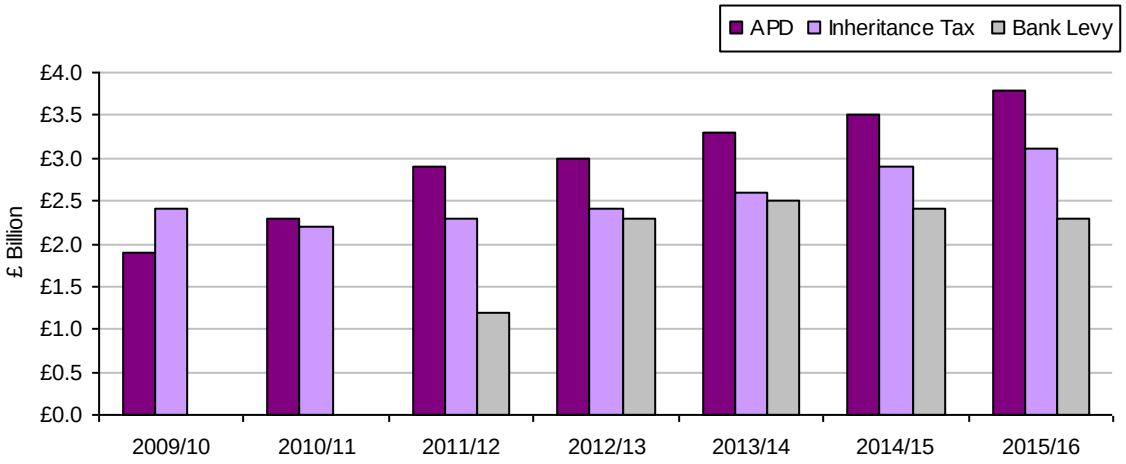
2.4 The latter stages of this development have occurred against the backdrop of the worst recession in recent history. A period in which UK air transport has seen significant falls in demand. The market is now recovering and some growth is reappearing. However, the recovery is fragile and the final stage of the planned changes to APD, the increases implemented on 1st November 2010, has put additional pressure on demand at what is a very difficult time for the industry.

2.5 It is also helpful to consider the rise in APD both in the context of other taxes and in terms of its purpose. The previous Labour Government sought to define APD as a pseudo environmental tax that, while not reflecting the cost of emissions, was helpful in sending out environmental price signals. Despite this, no allowance was made at any point for APD to be reduced once aviation enters the EU Emissions Trading Scheme (ETS) in 2012. The EU ETS will require airlines operating flights to or from EU airports to cover the costs of carbon emissions from their flights via the surrender of carbon allowances. The cost of these allowances reflects the environmental costs of emitting a tonne of carbon and thereby internalises the carbon costs of flying within the price offered to passengers. Entry in to the EU ETS is considered by the industry and the European Commission to be the most efficient way for air transport to meet its climate change obligations.

2.6 The new Coalition Government seems to be moving away from suggesting that APD is any kind of environmental tax, seeing it purely as a method through which to raise tax revenue. In this context, it is interesting to note the anticipated tax revenue from APD in coming years compared to two other taxes, Inheritance Tax and the newly introduced Bank Levy (see **Figure 2.1**).

2.7 APD continues to rise throughout the period, with tax revenue expected to double by 2015/16. However, Inheritance Tax and the Bank Levy are subject to much more modest increases (once fully implemented in the case of the Bank Levy). APD does therefore seem to be somewhat out of step with these other measures.

Figure 2.1: Tax Revenue from APD, Inheritance Tax and Bank Levy



Source: OBR Budget Forecast (June 2010)

2.8 The UK Government has not been alone in seeking to use aviation passenger duties as a means of revenue raising. Below, we review some of the other aviation duties that have been introduced or are going to be introduced in the near future.

Aviation Duty in Europe

2.9 A number of European countries have either considered or introduced aviation duties in recent years. It is difficult to be precise about exactly which countries have examined or implemented aviation duties as such duties come in a number of guises and it is not always clear on what basis the duty or charge is levied or its ultimate purpose. However, the results of our review are set out in **Table 2.2** and we believe that this represents a good picture of the development and evolution of APD style charges to passengers in Europe in recent years.

2.10 There are a number of points to note:

- relatively few European countries currently operate an APD type duty. France and Ireland appear to be the only examples currently operating, although both Austria and Germany are introducing charges at the beginning of 2011;

- ✈ nowhere in Europe imposes duties at as high a level as those observed in the UK;
- ✈ although schemes do have distance band elements within them, these are not as complex as those observed in the UK;

Table 2.2: Aviation Duties in Europe

Country	Duty	Date	Notes
Austria	€8 to Europe, €40 Outside of Europe	From 1st January 2011	Recently announced aviation duty.
Belgium		2008	Aviation duty considered by Belgian Government. Never implemented due to concerns regarding impact on the industry
Netherlands	Range between €11 and €45	Introduced in 2008 then withdrawn in June 2009	Introduced as an environmental tax but the impact on demand was such that the tax was swiftly withdrawn.
Germany	€8 short haul, €25 medium haul, €45 long haul	From 1st January 2011	Has already led to a significant reaction from airlines, including the withdrawal of low fares airline capacity.
Denmark	€10	Abolished in 2007	Briefly introduced a ticket tax but has since been withdrawn.
France	€1 in Europe, €4 outside Europe	Introduced in 2006	Purpose of this tax is unclear. Levels are relatively low.
Ireland	€10	Introduced 1st April 2009	Introduction of the tax has coincided with significant declines in passenger numbers at Ireland's airports. It has recently been announced that this will be reduced to €3 from 1st March 2011.
Malta	€23	Abolished in 2008	Removed following legal challenge from the European Commission. Tax described as discriminatory.
Spain	Various	Reduced 2009	The Spanish Government has reduced airport charges to airlines that succeed in maintaining passenger volumes at a number of Spanish airports. Details on this initiative are patchy.

Source: York Aviation web searches.

- a number of Governments have either not implemented, reduced or withdrawn aviation duties because of the potential damage to the air transport industry or the actual damage they have done. The most obvious example is the Netherlands, where the air passenger tax lasted only a year following a dramatic downturn in demand at Schiphol Amsterdam Airport. Passenger demand fell by 8% between 2008 and 2009. The Irish Government has also recently announced that it will temporarily reduce its ticket tax from €10 to €3 in an effort to boost its flagging tourism economy, which has been badly hit by the global recession and the introduction of the ticket tax in 2008;

- Austria and Germany have both recently announced the introduction of a ticket tax from 1st January 2011. In both cases this has already been greeted with considerable concern from the industry.

2.11 This review identifies APD in the UK as by far the most punitive of the aviation duties in Europe either currently in operation or about to commence. There also seems to be a recognition within a number of those countries that have tried an aviation duty in recent years that the damage to the industry and its ability to generate prosperity and drive wider economic growth is not worth the tax revenue raised.

Key Messages

2.12 APD rates in the UK have increased massively in recent years, with medium and long haul travel being particularly hard hit. More distant destinations have suffered particularly as the addition of new distance bands has enabled higher rates to be charged for these destinations.

2.13 The UK appears to be out of step with much of the rest of Europe. Rates are higher than elsewhere by some margin and while some others are abolishing or reducing the burden on passengers, the UK has increased it. Austria and Germany are about to go down a similar route to the UK but even in these countries the rates of duty are considerably lower.

3 IMPACT ON DEMAND AT SCOTLAND'S AIRPORTS

Introduction

3.1 In this Section we set out the results of our analysis of the demand impact of the 1st November 2010 APD increases at Scotland's airports. This has been based on a simple price model using data from CAA Statistics, CAA Passenger Survey 2009 and AirportIS (an IATA database providing information on passenger flows and air fares). The structure of this model and the results of this analysis are set out below.

Structure of the Model

3.2 The basic premise of the model is to identify the increase in average ticket price resulting from the 1st November 2010 change in the level of APD and then apply an appropriate price elasticity to identify the resulting impact on demand.

3.3 The model splits the Scottish air transport market in to a range of different market segments and across Scotland's main airports. The market is split in to:

- business and leisure passengers;
- premium class and economy class ticket holders;
- Scottish, other UK and foreign passengers.

3.4 This combination of factors makes for a total of 12 passenger segments when combined the various permutations available (e.g. one category would be Scottish Business passengers travelling on a premium class ticket). Passengers have then been allocated to the appropriate APD Band for their final destination (domestic travellers have been separated out from other Band A passengers as domestic passengers will attract APD for both their outward and return journeys). The data to enable this segmentation has been taken from CAA Passenger Survey 2009. An average fare for each market segment and for each APD band has then been identified using data from AirportIS.

3.5 Results have been reported for the following airports and airport groups:

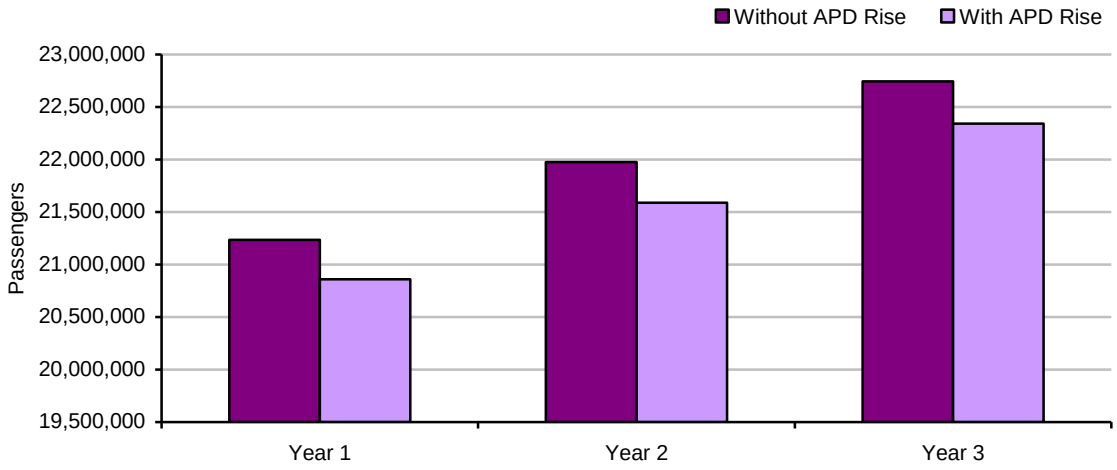
- Edinburgh;
- Glasgow;
- Aberdeen;
- Inverness;
- Glasgow Prestwick;
- other Scottish Airports.

3.6 The impact on passenger demand is forecast for the next three years, starting from 1st November 2010. For the purposes of this analysis we have assumed underlying market growth of around 3% per annum for domestic travel and around 4% per annum for international travel. This is broadly in line with the latest available Department for Transport forecasts for air passenger demand[2].

Impact on Air Passenger Demand

3.7 **Figure 3.1** shows the impact of the 1st November 2010 increase in APD on the Scottish air transport market as a whole over the next three years. It shows with and without APD rise scenarios for passenger demand.

Figure 3.1: Impact of Increased APD on Passenger Demand at Scottish Airports.



Source: York Aviation.

[2] The latest DfT air passenger forecasts were published in January 2009 and hence are likely to be somewhat optimistic as the length and depth of the recession that hit air travel in 2009 and the early parts of 2010 was not fully reflected in these forecasts.

3.8 In Year 1 (12 months from 1st November 2010), we estimate that around 375,000 passengers will be lost to Scottish airports or around 1.8% of total demand. These losses will be sustained in to the following years, with around 390,000 passengers lost in Year 2 and 402,000 in Year 3. Therefore, over the next three years, we estimate that Scottish airports will lose around 1.2 million passengers.

3.9 The majority of lost passengers are expected to be leisure travellers, around 83% or 970,000 passengers over the next three years, while in terms of nationality around 47% are expected to be Scottish, 28% other UK residents and 25% overseas residents. This is a potentially significant loss in overseas tourism numbers, around 148,000 trips, over the next three years or around £77 million in visitor expenditure[3].

3.10 There are winners and losers across the market both in terms of passengers travelling to/from different APD bands and in terms of the individual airports. **Table 3.1** shows the number of passengers expected to be lost by APD Band following the introduction of the new APD rates in November 2010 over the next three and the percentage loss compared to a baseline in which APD rates remained the same.

Table 3.1: Impact on Demand by APD Band

	Year 1	Year 2	Year 3	Total
Passengers				
Domestic	-157,548	-162,275	-167,143	-486,966
Band A	-84,720	-88,109	-91,633	-264,462
Band B	-90,391	-94,007	-97,767	-282,165
Band C	-25,929	-26,966	-28,045	-80,940
Band D	-16,082	-16,725	-17,394	-50,200
%				
Domestic	-1.5%	-1.5%	-1.5%	-1.5%
Band A	-1.1%	-1.1%	-1.1%	-1.1%
Band B	-5.0%	-5.0%	-5.0%	-5.0%
Band C	-4.6%	-4.6%	-4.6%	-4.6%
Band D	-4.6%	-4.6%	-4.6%	-4.6%

Source: York Aviation.

[3] Based on average expenditure per trip for overseas visitors in 2009 from the Visit Scotland website.

3.11 The largest losses in terms of numbers come from the Domestic market, ranging from between 158,000 passengers in Year 1 up to 167,000 passengers in Year 3. However, this group makes up by far the largest proportion of passengers and the percentage loss is relatively small, around 1.5%, when compared to longer haul markets.

3.12 It is these longer haul markets, Bands B, C and D, that must be the primary concern, with percentage losses ranging between 4.6% and 5.0%. Long haul markets are of particular economic and strategic importance, providing access to key business centres in the USA and, through the Glasgow to Dubai service, access to the emerging economic centres in the East. However, these routes are both notoriously difficult to secure in the first place and sustain in the longer term at UK airports outside of London, where markets are smaller and yields generally felt to be lower. The significant impact on demand on these routes from the rise is APD is therefore a blow to the long term sustainability of existing services and to the prospects of new long haul destinations coming on stream.

3.13 Other Band A destinations (i.e. short haul international) suffer annual losses of between 85,000 and 92,000 passengers but these only represent around a 1.1% loss in demand. This limited effect stems from the relatively small increase that applies in most cases (£1 for a Band A international economy ticket). This is half that incurred by domestic travellers as APD will only apply to the journey from Scotland.

3.14 **Table 3.2** outlines the impact on the different Scottish Airports from the introduction of the new APD rates in November 2010 for Year 1 and over the next three years.

Table 3.2: Impact of APD Rise by Airport

	EDI	GLA	ABZ	INV	PIK	Other
Year 1	-148,174	-116,919	-27,070	-5,802	-68,411	-8,294
% of Year 1 Traffic	-1.7%	-1.7%	-1.0%	-1.1%	-3.9%	-1.1%
Three Year Total	-461,146	-363,941	-84,191	-17,960	-211,822	-25,672
% of Total Traffic	-1.7%	-1.8%	-1.0%	-1.1%	-3.9%	-1.1%

Source: York Aviation.

3.15 Edinburgh and Glasgow airports largely reflect the losses across the market as a whole, losing around 461,000 and 364,000 passengers respectively over the next three years. This is unsurprising given the significant percentage of the overall market made up by these two airports.

3.16 Aberdeen is the least affected of the Scottish airports, which is a function of the high proportion of relatively price inelastic business traffic at the Airport. Inverness and the Other Scottish airports are also affected to a lesser degree than the market as a whole. This stems from their relatively limited exposure to longer haul markets (there is some exposure as passengers travel to long haul destinations via short haul hubs), which, as described above, are the most heavily affected by the rises in APD.

3.17 Prestwick is the worst affected airport in Scotland, losing around 3.9% of its traffic. This stems from the particular nature of traffic at Prestwick and its almost total focus on the low fares airline market. The average fares in this market are lower and the proportion of more price elastic leisure travellers higher, which results in a greater average increase in ticket cost and a more extreme reaction from consumers.

Key Messages

3.18 The rise in APD rates that occurred on 1st November 2010 will lead to an erosion of demand at Scotland's airports that will persist in to the future.

3.19 Over the next three years, we estimate that Scottish airports will lose around 1.2 million passengers or around 1.8% of total demand. The largest numeric losses will occur on Domestic services but it is the impact on longer haul services, Bands B, C and D, which is of perhaps greatest concern, where as much as 5% of demand may be lost. This has the potential to undermine long term sustainability of these routes and reduce the ability of airlines to bring new destinations to the market. Long haul routes are of particular economic and strategic importance to the Scottish economy. We consider the impact of this rise in APD on individual strategic routes from a number of Scottish airports in the next section.

4 IMPACT ON STRATEGIC ROUTES

Introduction

4.1 In this Section we examine the impact of the 1st November 2010 rise in APD at a more micro level, analysing the impact on demand on a number of key strategic routes from BAA's Scottish airports. The routes examined are:

- Edinburgh and Glasgow to New York;
- Glasgow to Dubai;
- Edinburgh, Glasgow and Aberdeen to Heathrow;
- Edinburgh, Glasgow and Aberdeen to Sumburgh.

4.2 In each case we examine the impact on demand on the individual routes and consider the potential impact on the load factor for the route and the possible impact on airline decision making.

Edinburgh and Glasgow to New York

4.3 New York Newark Airport is served by Continental Airlines from both Edinburgh and Glasgow using a Boeing 757 with 16 business class seats and 159 economy class seats. Currently, a daily service is offered from both airports, although the service was offered twice daily from Edinburgh for some of the previous year.

4.4 **Table 4.1** sets out the vital statistics for the routes, notably approximate demand and seat capacity in the last 12 months, average fares for business and economy class and the estimated load factor.

Table 4.1: Key Statistics for New York Routes from Scotland

	Edinburgh	Glasgow
Total Passengers	156,208	106,910
Total Seat Capacity (estimated)	182,500	127,750
Estimated Load Factor	86%	84%
Business Class Average Fare	£2,089	£2,076
Economy Class Average Fare	£398	£342

Source: York Aviation analysis of OAG, CAA Passenger Survey and AirportIS.

4.5 Both services currently operate at a 'healthy' load factor but this is likely to be offset slightly by the limited capacity for business class traffic that is important to underpinning the viability of long haul services.

4.6 New York is a APD Band B destination. Therefore, the recent changes in APD will have increased a passenger's tax liability for a return trip as follows:

- Business class passengers will have gone from paying £90 to £120, an increase in the ticket price of £30;
- Economy class passengers will have gone from paying £45 to £60, an increase of £15.

4.7 Based on the average fares described above, these changes represent an increase of around 1.4% for business class fares and 3.8% for economy class fares.

4.8 An additional consideration for the New York services is the extent to which passengers are using Newark as a hub to travel to destinations beyond New York. Our analysis of the CAA Passenger Survey for 2009 suggests onward passengers make up around 60% of traffic on both routes. In both cases around 98% of onward passengers are travelling to other Band B destinations, mostly in the USA. These passengers have been assumed to pay the average fare to the relevant APD Band for each airport. These are in truth very similar to the point to point fares.

4.9 Using a similar model to that for the Scottish market as a whole, we estimate that:

- the Edinburgh to New York service will lose around 7,850 passengers in Year 1. The great majority of these passengers will be leisure passengers travelling in economy class. These losses will include around 4,750 overseas visitors to Scotland or around £1.5 million in visitor expenditure[4];
- the Glasgow to New York service will lose around 5,500 passengers in Year 1. Again, the great majority of these passengers will be leisure passengers travelling in economy class. These losses will include around 2,100 overseas visitors to Scotland or around £0.7 million in visitor expenditure.

[4] Based on Visit Scotland average spend per trip for visitors from the USA in 2009.

4.10 In both cases we estimate that the introduction of the new rates of APD will reduce the overall load factors on the services by around 4% to 81% and 79% respectively. These load factors remain healthy at first glance but some thought does need to be given to the nature of the services. The lack of business class capacity on the services means that viability has to be supported by high load factors rather than high average yields. In this context a reduction of 4% in the average load factor is potentially significant and could put the current daily frequency at risk, even if the service as a whole is probably secure at present.

Glasgow to Dubai

4.11 Dubai International Airport is served by Emirates Airlines daily from Glasgow using a Boeing 777-300ER with 42 business class seats and 385 economy class seats.

4.12 **Table 4.2** sets out the vital statistics for the route, notably approximate demand and seat capacity in the last 12 months, average fares for business and economy class and the estimated load factor.

Table 4.2: Key Statistics for Dubai Route from Glasgow

	Glasgow
Total Passengers	244,486
Total Seat Capacity (estimated)	304,266
Estimated Load Factor	80%
Business Class Average Fare	£1,658
Economy Class Average Fare	£341

Source: York Aviation analysis of OAG, CAA Passenger Survey and AirportIS.

4.13 The service currently operates at a 'healthy' load factor and anecdotal evidence suggests that the premium seats load factor is particularly strong.

4.14 Dubai is a APD Band B destination. Therefore, the recent changes in APD will have increased a passenger's tax liability for a return trip as follows:

- Business class passengers will have gone from paying £90 to £120, an increase in the ticket price of £30;
- Economy class passengers will have gone from paying £45 to £60, an increase of £15.

4.15 Based on the average fares described above, these changes represent an increase of around 1.8% for business class fares and 4.4% for economy class fares.

4.16 Again, an additional consideration for the Dubai service is the extent to which passengers are using the Airport as a hub to travel to destinations beyond Dubai. Our analysis of the CAA Passenger Survey for 2009 suggests onward passengers make up around 79% of traffic on the route. These passengers are split between destinations across Bands B, C and D as follows:

- Band B – 9% of onward passengers;
- Band C – 36% of onward passengers;
- Band D – 55% of onward passengers.

4.17 These passengers have been assumed to pay the average fare to the relevant APD Band from Glasgow Airport.

4.18 Using a similar model to that for the Scottish market as a whole, we estimate that the Glasgow to Dubai service will lose around 13,000 passengers in Year 1. The great majority of these passengers will be leisure passengers travelling in economy class. These losses will include around 4,200 overseas visitors to Scotland and around £1.1 million in visitor expenditure[5].

4.19 We estimate that the introduction of the new rates of APD will reduce the overall load factor on the service by around 4% to 76%. This is a significant reduction in the load factor and takes the service from having a healthy load factor for a long haul service at 80% to a potentially marginal load factor. This suggests that there may be some risk to the viability of this service at this level frequency from the increase in APD.

Edinburgh, Glasgow and Aberdeen to Heathrow

4.20 The links between Scotland's three largest airports and the UK's only true intercontinental hub airport, Heathrow, are considered to be essential economic tools and are amongst the most strategically important routes for each of the airports. Currently, both British Airways and bmi offer services from Edinburgh, Glasgow and Aberdeen to Heathrow:

[5] Based on Visit Scotland average spend per trip for overseas visitors in 2009.

- British Airways currently offers 64 frequencies a week from Edinburgh, 57 frequencies a week from Glasgow and 44 frequencies a week from Aberdeen;

- bmi currently offers 40 frequencies a week from Edinburgh, 39 frequencies a week from Glasgow and 38 frequencies a week from Aberdeen.

4.21 **Table 4.3** sets out the vital statistics for the routes, notably approximate demand and seat capacity in the last months, average fares for business and economy class and the estimated load factor.

Table 4.3: Key Statistics for Heathrow Routes from Scotland

	Edinburgh		Glasgow		Aberdeen	
	BA	bmi	BA	bmi	BA	bmi
Total Passengers	748,823	515,523	618,714	424,964	470,281	136,599
Total Seat Capacity (estimated)	1,081,860	539,991	964,226	470,016	750,649	236,416
Estimated Load Factor	69%	95%	64%	90%	63%	58%
Business Class Average Fare	£216		£226		£264	
Economy Class Average Fare	£113		£114		£150	

Source: York Aviation analysis of OAG, CAA Passenger Survey and AirportIS.

4.22 The Heathrow routes are significant routes at all three airports in terms of the passenger numbers they generate, in excess of a million passengers per annum at both Edinburgh and Glasgow and over 600,000 at Aberdeen.

4.23 The load factors for the British Airways services are reasonable for a high frequency, hub feeder service of this type. The bmi load factors out of Edinburgh and Glasgow are exceptionally high[6] and reasonable out of Aberdeen.

4.24 For point to point passengers on these services (i.e. those travelling to or from London), the increase in APD due following the November rise is relatively modest even allowing for the fact that both legs of the journey will attract Duty. A premium class passenger will see an increase of £4 in their ticket price, while an economy class passenger will see a £2 increase.

[6] There may have been some changes in schedules that account for this difference.

4.25 However, a significant proportion of passengers travelling to Heathrow are travelling onwards to destinations across the APD bands and hence will attract the higher rates of APD. **Table 4.4** shows the final destinations by APD band of Heathrow passengers.

Table 4.4: Final Destinations of Travellers on Heathrow Services

	EDI		GLA		ABZ	
	BA	bmi	BA	Bmi	BA	Bmi
Point to Point	347,905	276,155	293,545	265,270	279,532	81,358
Band A	132,429	41,081	110,541	29,496	63,917	5,913
Band B	133,450	134,669	143,914	103,710	80,183	25,333
Band C	63,152	34,711	36,948	15,907	27,180	12,802
Band D	68,698	28,907	33,767	10,581	19,468	11,194
% Onward	53%	46%	53%	38%	41%	40%

Source: CAA Passenger Survey 2009.

4.26 From both Edinburgh and Glasgow, over 50% of passengers travelling on British Airways are using Heathrow as a hub to travel onward. The percentages on bmi are somewhat lower but still high. From Aberdeen, around 40% of passengers on both airlines are travelling to destinations beyond Heathrow. Band B is the most prevalent onward destination in all cases. The fares applicable to these onward passengers are assumed to be the average fare for each band for the relevant passenger group.

4.27 For Bands B, C and D, the increase in APD is considerably more significant than for point to point passengers:

- a premium class passenger travelling to a Band B destination will see an increase of £30 in the ticket price on an average fare of around £1,850, an increase of 1.6%. An economy class passenger to Band B will see an increase of £15 on an average fare of around £400, an increase of 3.8%;
- a premium class passenger travelling to a Band C destination will see an increase of £50 in the ticket price on an average fare of around £2,020, an increase of 2.4%. An economy class passenger to Band B will see an increase of £25 on an average fare of around £530, an increase of 4.7%;

- a premium class passenger travelling to a Band D destination will see an increase of £60 in the ticket price on an average fare of around £2,436, an increase of 2.4%. An economy class passenger to Band B will see an increase of £30 on an average fare of around £641, an increase of 4.7%.

4.28 Using a similar model again, we estimate that the 1st November 2010 increase in APD will result in:

- around 29,000 passengers being lost from services at Edinburgh, including around 14,100 inbound visitors, in Year 1. This will result in a reduction of around 1.5% in British Airways' load factor and around 2.4% in bmi's load factor;

- around 54,000 passengers being lost from services at Glasgow Airport, including around 13,200 inbound visitors, in Year 1. This will result in a reduction of around 3.3% in British Airways' load factor and around 4.7% in bmi's load factor;

- around 22,700 passengers being lost from services at Aberdeen Airport, including around 4,200 inbound visitors, in Year 1. This will result in a reduction of around 2.4% in British Airways' load factor and around 2.1% in bmi's load factor.

4.29 None of these losses are likely to impact on the viability of these high volume routes. However, the losses in load factor could lead to some withdrawal of frequency or other adjustments to capacity.

Edinburgh, Glasgow and Aberdeen to Sumburgh

4.30 Lifeline services to the Scottish islands play a vitally important role in ensuring social cohesion and enabling broader economic activity in the more remote parts of Scotland. The potential of APD to make travel to the Scottish islands more expensive and more difficult is therefore a considerable concern.

4.31 To illustrate the potential impact of APD on this market, we have examined the impact of the rise in APD on the services between Edinburgh, Glasgow and Aberdeen and Sumburgh on the Shetland Islands. These services are operated by Loganair on behalf of Flybe. Key statistics for these routes are shown in **Table 4.5**.

Table 4.5: Key Statistics for Sumburgh Routes from Mainland Scotland

	Edinburgh	Glasgow	Aberdeen
Total Passengers	22,185	11,560	48,464
Total Seat Capacity (estimated)	46,094	24,820	92,189
Estimated Load Factor	48%	47%	53%
Business Class Average Fare	£163	£157	£136
Economy Class Average Fare	£163	£157	£136

Source: York Aviation analysis of OAG, CAA Passenger Survey and AirportIS.

4.32 These markets are relatively small and can be fragile. Hence, the Scottish Government has used the Air Discount Scheme to subsidise travel on such routes since 2006. Consequently, relatively small increases, such as those stemming from the last round of APD increases, need to be viewed within the context of existing fragility and relatively high costs of travel. This dynamic is reflected in the relatively low load factors on these services.

4.33 The Sumburgh to mainland Scotland services are all operated as single class services; consequently the increase in ticket price in each case will be £2 (£1 each way as both airports involved are UK domestic airports). This will lead to:

- a 1.2% increase in the ticket price for Sumburgh to Edinburgh;
- a 1.3% increase in the ticket price for Sumburgh to Glasgow;
- a 1.5% increase in the ticket price for Sumburgh to Aberdeen, the most heavily used route.

4.34 This will result in the loss of around 700 passengers from these routes in Year 1, with the greatest loss from the Aberdeen service (around 400 passengers). In all cases load factors drop slightly but not significantly. It would, therefore, not seem reasonable to suggest that these services are under significant threat following the increase in APD. However, it is perhaps worth considering the additional cost to users. The total additional cost to users on what is already a relatively expensive domestic service is around £164,000 in Year 1.

5 CONCLUSIONS

5.1 The UK Government has significantly increased rates and restructured APD since 2007. Rates for short haul travel have increased by around 140% but it is long haul travel that has really been penalised with rates increasing by between 200% and 325%. In the last two years increases have come against the backdrop of a significant recession related downturn in passenger demand.

5.2 The previous Government sought to identify APD as a pseudo environmental tax but rates do not reflect actual carbon emissions and no mechanism was ever mooted to allow for aviation's introduction in to the EU ETS from 2012. The new Coalition Government appears to view APD more simply as a revenue raising exercise. The June 2010 Budget set out significant increases in forecast APD revenue in coming years, substantially above those for other taxes such as Inheritance Tax or the new Bank Levy.

5.3 The UK appears to be out of step with much of the rest of Europe. Rates are higher than elsewhere by some margin and while some others are abolishing or reducing the burden on passengers, the UK has increased it. Austria and Germany are about to go down a similar route to the UK but even in these countries the rates of duty are considerably lower.

5.4 Over the next three years, we estimate that Scottish airports will lose around 1.2 million passengers or around 1.8% of total demand as a result of the 1st November 2010 increase in APD. The largest numeric losses will occur on Domestic services but it is the impact on longer haul services, Bands B, C and D, which is of perhaps greatest concern, where as much as 5% of demand may be lost. This has the potential to undermine long term sustainability of these routes and reduce the ability of airlines to bring new destinations to the market. Long haul routes are of particular economic and strategic importance to the Scottish economy.

5.5 Edinburgh and Glasgow airports largely reflect the losses across the market as a whole, losing around 461,000 and 364,000 passengers respectively over the next three years. Aberdeen is the least affected of the Scottish airports, which is a function of the high proportion of relatively price inelastic business traffic at the Airport. Inverness and the Other Scottish airports are also affected to a lesser degree than the market as a whole. These airports do not offer any direct long haul services and hence their exposure to the worst affected long haul markets is limited to traffic via European hub airports.

5.6 Prestwick is the worst affected airport in Scotland, losing around 3.9% of its traffic. This stems from the particular nature of traffic at Prestwick and its almost total focus on the low fares airline market.

5.7 These patterns are reflected in the results for the case study routes. The Edinburgh and Glasgow routes to New York will see load factors on the services reduce by around 4% to 81% and 79% respectively, which may not ultimately impact on the overall viability of the service but could threaten the current daily frequency. The Glasgow to Dubai route is also expected to see its load factor reduced by around 4% but the drop to around 76% means it is approaching a level for a long haul service at which its viability might be compromised. The declines in demand on these services include the loss of around 11,000 overseas visitors to Scotland accounting for around £3.3 million in visitor expenditure.

5.8 The key domestic routes to Heathrow from Edinburgh, Glasgow and Aberdeen, despite the significant proportion of passengers travelling to long haul destinations, are less badly affected in the main with load factors falling by between 1.5% and 3.3%, with one extreme case of 4.5%. Again, this is not going to threaten the overall viability of the routes but could lead to some reduction in frequency.

5.9 Lifeline routes to the Scottish islands, as illustrated by the Edinburgh, Glasgow and Aberdeen routes to Sumburgh, are unlikely to be significantly affected in terms of lost demand but considering the social and economic importance of these routes and the already relatively high fares, the increase in costs to users of around £164,000 in Year 1 cannot be ignored.