

**York Aviation**

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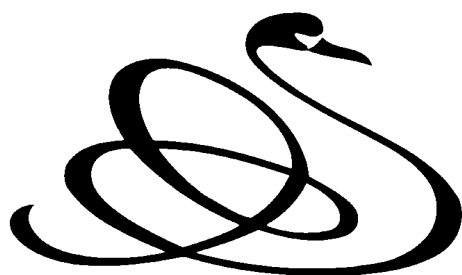
**CONSORTIUM OF REGIONAL AIRPORTS**

**THE POTENTIAL IMPACT OF AN APD HOLIDAY ON LONG  
HAUL ROUTE DEVELOPMENT AT UNCONGESTED AIRPORTS**

**Final Report**

**October 2013**

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**York Aviation**

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## **CONSORTIUM OF REGIONAL AIRPORTS**

### **THE POTENTIAL IMPACT OF AN APD HOLIDAY ON LONG HAUL ROUTE DEVELOPMENT AT UNCONGESTED AIRPORTS**

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## 1 INTRODUCTION

- 1.1 In September 2013, a consortium of UK regional airports including Birmingham Airport, Bristol Airport, Manchester Airport Group and Newcastle International Airport commissioned York Aviation to examine the potential impact of introducing an APD 'holiday' for new long haul services from uncongested airports.
- 1.2 The UK's long haul air transport market is focussed on Heathrow, albeit there are important services from a range of regional airports. The combined effect of the large London economy and the presence of British Airways' hub at Heathrow have meant that the airport has developed one of the most extensive long haul route networks in the world. There are, however, concerns that the UK regions are potentially losing out in connectivity terms because of this focus on Heathrow and that ultimately this will disadvantage them economically as the world economy continues to globalise and its economic centre of gravity continues to move east and further away.
- 1.3 One key factor that is felt to be hindering the development of more long haul services away from Heathrow is the level of Air Passenger Duty (APD) in the UK. APD is by far the highest aviation tax of its type in Europe and represents a significant additional cost to passengers seeking to fly to / from the UK. This is particularly true for long haul travel where rates are substantially higher than for short haul travel (see **Table 1.1**).

<b>Table 1.1: APD Rates by Band in 2013</b>		
	<b>Reduced Rate</b>	<b>Full Rate</b>
Band A (0 to 2000 miles)	£13	£26
Band B (2001 to 4000 miles)	£67	£134
Band C (4001 to 6000 miles)	£83	£166
Band D (over 6000 miles)	£94	£188
Source: HMRC.		

- 1.4 Ultimately, this reduces the size of long haul passenger markets by discouraging people from travelling and as a consequence makes UK airports a less attractive choice for airlines looking to place long haul aircraft capacity in Europe. For example, an airport with a similar catchment area in terms of population and wealth which is not subject to APD will tend to be more attractive than one that is subject to APD, because, although theoretically they should both generate similar levels of passenger demand, the additional cost associated with APD will reduce demand in the latter catchment area or mean that the airline is forced to squeeze its profit margins to capture the same level of demand.

- 1.5 Below, we consider whether an APD ‘holiday’ for new long haul routes from the UK’s uncongested airports could help to address this issue and enable long haul route development to be more effectively spread across the UK:
- in **Section 2** we consider how, in theory, an APD ‘holiday’ could affect long haul route development and then explain our approach to analysing the effect;
  - in **Section 3** we present our analysis of the potential impacts of an APD holiday on a number of case studies route opportunities from uncongested UK airports.

## 2 THE EFFECTS OF AN APD HOLIDAY

2.1 The purpose of this report is to consider whether the introduction of an APD 'holiday' for new long haul routes from uncongested airports in the UK could impact on the pattern of development. Such a holiday would involve reducing APD to zero for passengers on new long haul routes for a period of time. This could potentially have three effects:

- it could bring forward in time the development of long haul routes. By removing the cost to passengers associated with APD, the APD holiday would essentially boost the size of the market for a period of time. This might enable routes to start earlier, while allowing the underlying market time to grow sufficiently that the routes remain viable once the holiday ends;
- for routes where there is already sufficient demand within an airport's catchment area for a route to be viable but it is still not operating, an APD holiday would boost potential load factors such that an airline could have greater confidence in meeting its targets for a route. This could make the difference for an airline in deciding to start a route by addressing what is essentially an information failure. Again, once the route is proven and the market has grown further in the intervening period, it should remain viable once the APD holiday ends;
- similarly, where demand appears to be sufficient currently for a route to start but it is not operating, an airline may have concerns as regards the average yields it can earn. Again, an APD holiday can assist. Rather than passing on the associated reduction in APD to passengers, an airline could choose to increase the profit margin it makes from each passenger. As above, once the route is proven and demand has grown in the intervening period, APD can be reapplied and the airline can maintain its margins by focussing on the now larger, higher yielding segment of the market.

2.2 In reality, it is likely that some combination of all three is likely to affect airline decision making. A new long haul service is a considerable commitment for an airline and, particularly in new or unproven markets, it comes with substantial risk. All three channels are essentially about reducing the risks facing an airline in starting a new service at any given point in time by strengthening the market demand for the service or effectively increasing the achievable per passenger yield.

- 2.3 At Heathrow these risks are generally perceived to be relatively low. Away from Heathrow, where airports have less of a track record in long haul markets, they are deemed to be considerably higher. Providing a complete 'holiday' from APD or tapering in APD over time for new services at the UK's uncongested airports could potentially help to redress this imbalance.
- 2.4 Clearly, the process of market development and the ultimate decision by an airline to commence a service is complex and, indeed, there are a wide range of permutations as to how a potential destination might be served. However, we have endeavoured to demonstrate the potential impact of an APD holiday using a price elasticity model to examine a series of case study routes from uncongested airports.
- 2.5 The process and key assumptions used within our analysis are set out in **Table 2.1** below.



**Table 2.1: Process for Modelling the Impact of an APD Holiday**

Step	Description	Key Sources
1)	<b>Identify Potential Route Opportunities</b> – our case study routes have been identified through discussions with the individual airports involved in the research and through analysis of the largest potential long haul route opportunities identified in CAA Passenger Survey data for each airport.	Participating Airports, CAA Passenger Survey.
2)	<b>Develop Year by Year Base Traffic Forecast</b> – we have then identified a base traffic forecast for each case study route using underlying demand data, market capture rates and onward connecting percentages derived from CAA Passenger Survey data. These forecasts are split between business and leisure passengers. Markets have been assumed to grow in line with the relevant world region growth rate from DfT's UK Aviation Forecasts 2013.	CAA Passenger Survey, DfT UK Aviation Forecasts
3)	<b>Identify a Potential Airline or Group of Airlines and Operating Patterns</b> – for each route we have assigned a likely possible airline operator, the aircraft that might be used and possible operating patterns in terms of levels of frequency and seasonality. Clearly this is an area that is open to interpretation but we believe the assumptions adopted are reasonable.	York Aviation
4)	<b>Identify Route Passenger Viability Threshold</b> – based on the choice of airline and the operating pattern, we have identified the level of demand at which the airline might consider starting the service. In most cases this is at a 75% load factor. However, for some leisure focussed services the required load factor is assumed to be 90%.	York Aviation
5)	<b>Identify the Base Start Year</b> - this is the year in which the base traffic forecast exceeds the passenger viability threshold.	
6)	<b>Identify an Average Fare</b> – CAA Passenger Survey data has been used to identify an average fare for each route for business and leisure passengers based on fares observed at other UK airports.	CAA Passenger Survey
7)	<b>Identify the Average APD Rate</b> – for each route we have calculated the average APD liability per passenger based on the distance band and the proportion of premium class travel by business and leisure passengers.	CAA Passenger Survey
8)	<b>Calculate the Impact of Removing APD</b> – we have then estimated the demand impact of removing APD from the average fare. For business passengers we have assumed a price elasticity of -0.5 and for leisure passengers a price elasticity of -1.5. These have been based on a review of research by IATA and the DfT Aviation Forecasts 2013. It should be noted that for the purposes of this analysis we have assumed the full APD saving is passed on to passengers. In reality, as described above, airlines may choose to retain some of the saving to improve achievable yields per passenger. This would reduce the time or load factor impact in terms of changes in demand but would improve profit margins.	DfT UK Aviation Forecasts, IATA Economics Briefing No. 9
9)	<b>Identify a Without APD Year by Year Forecast</b> – using the outputs of Step 8, we have adjusted the base traffic forecast for each route to provide an estimate of the level of demand without APD in each case.	
10)	<b>Identify the Without APD Start Year</b> – using the Without APD traffic forecast, identify the potential new start year for each case study.	

### 3 IMPACT OF AN APD HOLIDAY ON CASE STUDY ROUTES

3.1 **Table 3.1** overleaf sets out the results of our analysis of the impact of an APD holiday on a range of different potential long haul route opportunities from uncongested airports across the UK. The Table shows:

- the route origin and destination;
- the assumed airline operator, weekly operating frequency;
- the period from which the route would be viable without any change to APD;
- the period from which the route would be viable with an APD holiday in place;
- the average load factor boost in any given year resulting from an APD holiday.

3.2 There are a number of key points to note from this analysis:

- the first point to note is that removing APD can have a dramatic effect on either the timeframe for the development of a route or its load factor. Given the proportion of the ticket price that is now made up by APD on long haul routes this is not surprising;
- for Manchester an APD holiday could potentially bring forward in time substantially routes such as Bangkok, Hong Kong, Delhi and Beijing. On average, it brings forward development by around six years. It would also provide a considerable load factor boost to services that appear viable now such as Mumbai;
- for Birmingham the pattern is similar, with Beijing and Auckland being brought forward in time by around 7 years, while a New York JFK service and an Orlando service, which appear viable now, would receive a boost in load factors;
- Bristol in particular has a number of routes that it would appear could be viable now, including New York, Toronto and Dubai. Again, an APD holiday would either support load factors or yields, perhaps pushing airlines in to taking an initial risk on the market.

Table 3.1: Impact of an APD Holiday on Case Study Routes

Airline & Operational Information		Load Factor Boost	Scenario	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Manchester																					
Bangkok	Thai Boeing-777-200ER, Daily	16%	Base																		
			With Holiday																		
Hong Kong	Cathay Airbus A340-300, Daily	10%	Base																		
			With Holiday																		
Delhi	Air India Boeing-787-8, 5 per week	14%	Base																		
			With Holiday																		
Mumbai	Air India Boeing-787-8, 5 per week	12%	Base																		
			With Holiday																		
Beijing	Air China Airbus A330-200, 5 per week	9%	Base																		
			With Holiday																		
Birmingham																					
New York (JFK)	US Carrier Boeing-757-200, Daily	24%	Base																		
			With Holiday																		
Orlando (MCO)	Virgin Airbus 2-CL Airbus A330-200, 5 per week, Summer	18%	Base																		
			With Holiday																		
Beijing	Air China Airbus A330-2005 per week	13%	Base																		
			With Holiday																		
Auckland	ANZ Boeing-777-200ER, 3 per week	9%	Base																		
			With Holiday																		
Bristol																					
New York	US Carrier Boeing-	29%	Base																		

## Impact of an APD Holiday on Long Haul Development

**Table 3.1: Impact of an APD Holiday on Case Study Routes**

	Airline & Operational Information	Load Factor Boost	Scenario	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
(Combined)	757-200, Daily		With Holiday																		
Toronto	Rouge Boeing-767-300ER Summer, 3 per week	25%	Base																		
			With Holiday																		
Dubai	Emirates 2-CL A330-200, Daily	24%	Base																		
			With Holiday																		
Abu Dhabi	Etihad A330-200, Daily	14%	Base																		
			With Holiday																		
Newcastle																					
New York (Combined)	US Carrier Boeing-757-200, Daily	16%	Base																		
			With Holiday																		
Toronto	Rouge Boeing-767-300ER Summer, 3 per week	11%	Base																		
			With Holiday																		
Stansted																					
New York (JFK)	US Carrier Boeing-757-200, Daily	16%	Base																		
			With Holiday																		
Toronto	Rouge Boeing-767-300ER Summer, 3 per week	18%	Base																		
			With Holiday																		
Dubai	Emirates 2-CL A330-200, Daily	16%	Base																		
			With Holiday																		
Johannesburg	South African A330-200, 4 per week	16%	Base																		
			With Holiday																		
Source: York Aviation.																					

- for Newcastle, a key win would be a New York service. An APD holiday would potentially bring forward viability on this route by around six years, making the route a strong prospect now. A Toronto service could also be a possibility a bit further in to the future, with again a commencement date coming forward substantially;
- Stansted has perhaps suffered particularly from a proximity to Heathrow and also BAA's strategy in the past in relation to the London airports. However, with the airport now owned by MAG, there are a number of potential long haul prospects that could be assisted by an APD holiday, such as New York, Toronto, Dubai and Johannesburg. These are already strong prospects in terms of demand from the airport's catchment area and an APD holiday would further strengthen the business cases. The development of long haul services at Stansted would have a particular benefit in terms of providing greater choice in the Greater South East market, providing more 'local' access to long haul services for many passengers and in relieving pressure at the heavily constrained Heathrow;
- one point to note is the extent to which viability can be brought forward in time. This is a double edged sword. It demonstrates the potential effectiveness of an APD holiday but it also hints at a challenge in the design of an APD holiday. It suggests that an APD holiday would need to last for a number of years, perhaps between three and five years and that there may be some merit in tapering the re-application of APD over time. Otherwise, there is a danger that some services may prove unsustainable if APD is reapplied too quickly.

3.3 Overall, this broad analysis would seem to suggest that an APD holiday for long haul services from uncongested UK airports has the potential to assist in enabling opportunities to come to fruition, either by giving further confidence to airlines as regards already strong opportunities or by bringing forward in time currently more speculative opportunities.