Appendix 1 – Passenger Charge Differential by Destination

Introduction

Heathrow Airport Limited (HAL) structured its departing passenger charges by assessing the difference in asset costs for handling different passengers. The assessment showed that differentiating between 'European' and 'Other' best represented the different asset costs associated with handling 'European' and 'Other' passenger types at HAL.

The analysis shown in this appendix summarises the assessment carried out. The summary includes Domestic and Republic of Ireland asset cost figures. The Domestic and Republic of Ireland asset cost differential was not considered material enough to justify a separate Domestic and Republic of Ireland (ROI) departing passenger charge.

Methodology

The approach undertaken to determine the differential between handling different passengers was based on asset costs, which is a recognised cost relatedness principle. The analysis was then undertaken by using three separate space planning models of theoretical terminals for Domestic/ROI, European and Other passengers only, which were then applied to the Regulated Asset Base (RAB) to determine the relative value of assets utilised by different passenger groups at HAL. The objective of the analysis was to assess the space requirements of different groups of passengers, such as those departing to and arriving from Domestic/ROI, European and Other, who have different needs and passenger requirements.

This analysis considers the asset cost implications of the different passenger characteristics such as space required.

General notes

The following provides some general notes accompanying the analysis:

- The space requirements and supporting key driver notes below are based on a theoretical 5 million passenger per annum terminal (mppa) for Domestic/ROI, 10 mppa terminal for All EU and 15 mppa terminal for Non EU;
- Average RAB 2009/10 is the midpoint of the opening and closing RABs taken from Table 15-6 of the 2008 CAA Decision (Page 189);
- Rail assets are taken from the Heathrow Airport Ltd annual report for the year ended 31 December 2009;
- Terminal, Landing & Parking assets are taken from the Heathrow fixed asset register as at December 2009 - general assets that cannot reasonably be categorised between passenger, landing and parking are allocated pro-rata, as are other differences between the asset register and the average RAB;
- Space allocations are based on a theoretical new build terminal for either Domestic/ROI only, All EU only or Non EU only passengers;
- Terminal assets are allocated pro rata to the theoretical space requirement per passenger;
- Other passenger assets are allocated equally to all passengers ; and
- The cost relativity difference is different to the version shown in the "Heathrow Airport, Structure of Aeronautical Charges Proposals, A Consultation Document, 2nd August 2010, Appendix D" where "Outside EU" was 1.37 and the below illustrates 1.41 because of the addition of a separate category for Domestic/ROI passengers which alters the allocation of non terminal passenger assets.

Space - key driver notes

The key driver for this analysis was the space requirements for different passenger groups and the below provides the key assumptions used:

- General

  A driver for all of the area space requirements used in these calculations is the Heathrow Busy Hour Rate (BHR). This is the volume of passengers that are processed in a typical peak hour and is a function of the typical spread of flights through the operating day and the typical number of passengers per flight. A separate BHR is calculated for arrivals and departures. Terminal space requirements are based on these peak hour volumes.

	Domestic & ROI	All EU	Non EU
Passenger (millions)	5	10	15
BHR - Arrivals	775	1370	3900
BHR - Departures	775	1330	2810

- Connections

  Space requirements are driven primarily by the BHR for arrivals.

- Immigration

  Space requirements are driven by the BHR for arrivals and average processing time for each passenger. Non EU passengers require c. 2.5 times the processing time of EU passengers. Domestic/ROI passengers do not require immigration facilities but do require biometric enrolment and validation system to prevent illegal entry to UK.

- Baggage reclaim

  Space requirements are driven by the BHR for arrivals and the baggage hall utilisation time. The latter is a function of the maximum size of an individual flight, the proportion of passengers who travel only with cabin baggage and the average number of hold bags per passenger. These combine to produce a utilisation time which is lowest for Domestic/ROI at 12 minutes and highest for Non EU at 25 minutes.

- Customs

  Space requirements are driven by the BHR for arrivals. There are no customs requirements for domestic arrivals and those for the ROI are considered to be immaterial.

- Arrivals concourse

  Space requirements are driven by the BHR for arrivals and the average number of escorts per passenger together with their dwell time. The latter produces a peak hour number of waiting escorts of 204 for Domestic/ROI, 340 for All EU and 896 for Non EU.

- Check-in

  Space requirements are driven by the BHR for departures and the average transaction time at check-in, calculated separately for economy and business/first class passengers. Whilst transaction times are shorter for Domestic/ROI passengers, this is offset by the BHR.

- Departures concourse

  Space requirements are driven by the BHR for departures and the average number of escorts per passenger together with their dwell time. The latter produces a peak hour number of waiting escorts of 317 for Domestic/ROI, 738 for All EU and 2029 for Non EU.

- Central security search
  Space requirements are driven by the BHR for departures and the average number of items per departing passenger requiring screening. The latter is 1.6 items per passenger for Domestic/ROI and All EU and 2.0 for Non EU.

- Departure lounge
  Space requirements are driven by the BHR for departures and the average dwell time of passengers. The latter is 30 minutes for Domestic/ROI and All EU and 45 minutes for Non EU.

- Gaterooms
  Space requirements are driven by the BHR for departures, the maximum flight size together with the average aircraft capacity and dwell time. Lower maximum flight sizes and shorter dwell time result in a lower space requirement for Domestic/ROI.

Analysis of Asset Base – Passenger Charge Differential by Destination

Calculation and Result

	Domestic & ROI £m	All EU £m	Outside EU £m	All £m
Allocation of terminal assets	1,012	1,251	2,113	4,377
Allocation of other passenger assets	874	874	874	2,621
Total passenger assets - average RAB 2009/10	1,886	2,124	2,987	6,997
Cost relativity	**0.89**	**1.00**	**1.41**	
Check total - should be zero				0

Working data

Space requirements	Domestic & ROI	All EU	Non EU	All	Key driver
Terminal capacity - mppa	5	10	15		
Areas required :	sq m	sq m	sq m		
Connections	109	217	447		Passenger characteristics
Immigration	0	890	3,434		Passenger characteristics
Baggage reclaim	1075	2,370	6,265		Maximum flight size and passenger characteristics
Customs	0	500	700		Passenger characteristics
Arrivals concourse	439	731	1,927		Passenger/Escort dwell time
Check in	485	948	3,060		Passenger characteristics
Departures concourse	682	1,587	4,363		Passenger/Escort dwell time
Central security search	194	291	510		Passenger characteristics
Departure lounge	805	1,609	4,532		Passenger dwell time
Gaterooms	3,231	8,200	18,715		Maximum flight size
Total area	7,019	17,343	43,953		
Area per 1 mppa	1,404	1,734	2,930	6,068	

Asset values

Analysis of RAB

	£m
Average RAB 2009/10	10,335
Less Rail	-1,361
Average RAB 2009/10 excl Rail	8,974
Less Landing assets	-1,641
Less Parking assets	-336
	6,997
Less Terminal assets	-4,377
Other passenger assets	2,621

Analysis of Heathrow fixed asset register as at December 2009

	Passenger £m	Landing £m	Parking £m	Total £m
Terminals	4,377			4,377
Runways & taxiways		273		273
Stands			180	180
Control tower		72		72
Roads and car parks	784			784
Land & landscaping	77	1,037	106	1,220
Services-Electricity, Gas, etc	274	14		289
Baggage systems	446			446
	5,957	1,397	286	7,640
Pro rata to Average RAB 2009/10 excl Rail	6,997	1,641	336	8,974