



Civil Aviation Authority – Airport Market Power Assessment

Passengers' airport preferences Results from the CAA Passenger Survey

Working paper November 2011

Table of contents

1.	Introduction.....	3
2.	Passenger airport preferences.....	7
3.	Reasons for airport preference	19
4.	Passenger responsiveness to changes in price	25
5.	Conclusions.....	30
	Annex A. CAA Passenger Survey methodology	32

1. Introduction

Purpose of this paper

- 1.1 The CAA has committed to carrying out assessments of the market power held by Heathrow, Gatwick and Stansted. These assessments will form part of the evidence base informing the approach to the upcoming regulatory reviews (“Q6”) for these three airports. They may also provide useful evidence on other issues such as disputes between airports and airlines (e.g. price discrimination investigations under section 41 of the Airports Act 1986), complaints about compliance with the EU Airport Charges Directive (ACD), and the development of economic licences for airports under the Government’s proposed reforms of economic regulation.
- 1.2 The CAA’s initial thinking on these competition assessments will be published by the end of 2011, in order to inform the discussions on the appropriate ways of regulating the three airports. More information on this process and how the competition assessments relate to the price controls can be found in the CAA’s consultation document “Setting the scene for Q6”, which was published in July 2011¹.
- 1.3 This working paper forms part of the CAA’s work on the market power assessments. This paper presents analysis of CAA Passenger Survey data regarding the preferences and price responsiveness of passengers at Heathrow, Gatwick and Stansted. This paper, together with the CAA’s working paper on catchment area analysis², is particularly relevant to understanding the relevant market(s) in which the airports operate, and is also relevant to the analysis of the competitive constraints faced by the three airports.
- 1.4 This paper does not attempt to draw any direct conclusions regarding the market power of Heathrow, Gatwick and Stansted. Instead, it provides evidence that will support this assessment. While this working paper focuses on the implications of passenger preferences with regard to the three designated London airports, the competitive constraints imposed by regional airports will also be considered in the CAA’s initial assessments. The CAA’s initial view on the market power of Heathrow, Gatwick and Stansted is expected to be published in January 2012.

Data and methodological issues

- 1.5 This paper makes use of data obtained from the CAA Passenger Survey in order to analyse the extent to which an airport’s passengers may be willing and able to switch away from that airport, the possible reasons why passengers choose a particular airport, and their price responsiveness. As well as using data from a question in the 2011 CAA Passenger Survey

¹ CAA, Q6 Setting the Scene: Review of Price and Service Quality Regulation at Heathrow, Gatwick and Stansted airports - consultation document, July 2011, available at <http://www.caa.co.uk/docs/5/Q6SettingScene.pdf>.

² CAA *Catchment area analysis working paper* October 2011 <http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

asking passengers why they chose to fly from their current airport, four supplementary questions were added for a subsample of passengers at Heathrow, Gatwick and Stansted between June and August 2011.

- 1.6 The four supplementary questions covered various aspects of passenger airport choice. Passengers were first asked which other airports they had used in the past two years and which other airports they had considered for their current flight. In order to obtain an indication of their propensity to switch between airports, passengers were asked to state their response to a price increase in the cost of using their current airport. The last question asked them to state the airports that would be their first and second preferences, if the same flight were available at all airports at the same price. Full details of these questions are available in Annex A.
- 1.7 Due to the more limited sample sizes for the supplementary questions, compared to the full CAA Passenger Survey, it may not be possible to place reliance on small percentage values and small differences in average responses, as these may not be statistically significant. In general terms, it may be more informative to analyse the relative magnitudes of the responses rather than their exact values. It should also be noted that, while the full CAA Passenger Survey provides weighted and scaled results to be representative of both departing and arriving passengers, the data obtained from the supplementary questions are unweighted and are representative only of the departing passengers who responded to the survey.
- 1.8 As with all empirical methods, survey data have a number of advantages and disadvantages, which are discussed below. However, a number of general points can be made:
 - No technique in isolation is likely to provide definitive evidence on the market definition and the strength of competitive constraints faced by an airport.
 - All quantitative techniques require some judgment to be applied, either through the determination of required input assumptions, the appropriate structuring of the surveys, or in the interpretation of the results.
 - By their nature, quantitative techniques all rely on the availability, quality and robustness of the data that are used for the analysis. The empirical methods in this working paper use survey data as an input, which could raise a number of issues commonly associated with survey data (see also paragraphs 1.9 and 1.10 below).

Stated preference data

- 1.9 This working paper makes use of stated preference data due to the lack of robust data regarding the actual preferences and observable price responsiveness of passengers (i.e. revealed preference data). The CAA Passenger Survey provides a means of obtaining stated preference data to investigate passenger preferences and resulting decisions.

1.10 However, while stated preference evidence provides one way of understanding passenger preferences and choice, it is important to understand that these results are an imperfect proxy for observable actual choices and decisions. In addition to issues associated with obtaining a representative sample, surveys carry a number of bias risks that need to be taken into account, including a possible non-response bias of respondents, framing of survey questions and personal perceptions and expectations of respondents. Nevertheless, if conducted appropriately, surveys can provide useful information, often providing evidence that cannot be gleaned from available data on observed behaviour. A more complete discussion of the use of stated preference data can be found in the CAA's working paper on *Empirical methods for assessing geographic markets, in particular competitive constraints between neighbouring airports*³.

The structure of this paper

1.11 The rest of this paper is structured as follows:

- Chapter 2 focuses on passenger airport preferences, and their strength;
- Chapter 3 presents analysis of the possible reasons why passengers may choose to fly from a particular airport;
- Chapter 4 analyses how likely passengers at Heathrow, Gatwick and Stansted are to switch away from the airport in light of an increase in price; and
- Chapter 5 summarises and set outs what key implications could be inferred from the analysis in this paper.

Views invited

1.12 This paper presents analysis of CAA Passenger Survey data regarding the preferences and price responsiveness of passengers at Heathrow, Gatwick and Stansted. We would welcome stakeholders' views on the information presented in this paper, in particular where there are important considerations that are not covered, or where stakeholders interpret the information differently.

1.13 At this stage, we have a preference for dialogue and discussion with stakeholders, rather than for a detailed written response to this paper. There will be a number of opportunities to comment on the contents of this paper going forward, including by:

- responding to the CAA's initial assessments expected to be published in January 2012; and/or

³ CAA *Empirical methods for assessing geographic markets, in particular competitive constraints between neighbouring airports* <http://www.caa.co.uk/docs/5/geogmarketworkingpaper.pdf>

- responding to later consultations that form part of the Q6 price control process.
- 1.14 More generally, we encourage stakeholders to share their views with the project team. If you would like to discuss the contents of this working paper, in the first instance please contact Alexander Düнки on 020 7453 6212 / alexander.dunki@caa.co.uk.
- 1.15 You can also contact:
- Isabell Kohten on 020 7453 6234 / isabell.kohten@caa.co.uk
 - Alina Jardine Goad on 020 7453 6229 / alina.jardine@caa.co.uk
 - Chris Hemsley on 020 7453 6237 / chris.hemsley@caa.co.uk

2. Passenger airport preferences

- 2.1 This chapter focuses on passengers' airport preferences, including their awareness of UK airports, previous usage, and which airports they may consider as substitutes. Analysing these results can inform an understanding of passengers' potential willingness and ability to switch between airports. However, these data cannot provide evidence as to why passengers choose a particular airport. For this reason, the results should be viewed alongside those in chapter 3, which consider the reasons given by passengers for their airport choice.
- 2.2 This chapter analyses the passengers' responses to the following⁴ questions:
- First, which airports in England and Wales they have flown from in the past two years, and which other airports they had considered for their current flight; and
 - Second, assuming their flight was available at all airports for the same price, which airports would be their first and second preferences.

Passenger awareness of UK airports

- 2.3 A passenger's willingness and ability to switch between different airports would depend on their awareness and viability of potential alternatives. A strong awareness of UK airports, and the services operated from them, could increase the likelihood that passengers switch between airports.
- 2.4 In order to get an indication of passengers' awareness of alternatives at the three designated London airports, two supplementary questions were added to the CAA Passenger Survey at these three airports. The first question asked passengers to state from which airports in England and Wales⁵ they had flown in the past two years, excluding their current flight. The second question asked them to state from which airports they had considered flying for their current journey, before choosing their actual departure airport.
- 2.5 In order for the sample sizes to be representative of each airport's passenger base, the results are presented according to whether passengers are surface passengers (travelling to the airport from their land-based point of origin) or connecting passengers (who fly into the airport to connect to another flight⁶). Surface passengers are further categorised according to whether they are on a short haul or long haul flight from their current UK airport⁷. Methodological details can be found in Annex A.
- 2.6 The CAA previously added the same questions discussed in the chapter to the CAA Passenger Survey in 2006, with the results being reported in Supporting Paper II of the CAA's *Initial price control proposals for Heathrow*,

⁴ Unlike the responses to the questions including in the full CAA Passenger Survey, the data obtained from these supplementary are unweighted and only reflect the responses of the departing passengers responding to them. Please see paragraph 1.6 for more details.

⁵ Scotland was considered to be a sufficiently distinct market when considering the London airports.

⁶ Connecting passengers were only interviewed at Heathrow.

⁷ The analysis classifies passengers according the flight duration of the current flight they are taking, which may be one leg of their travel between their origin and destination.

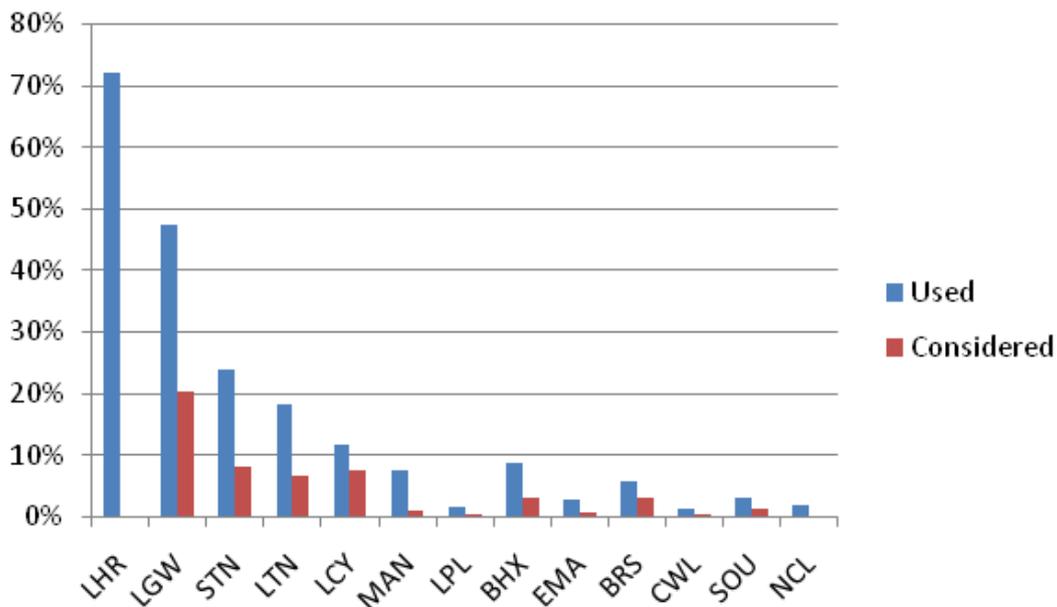
Gatwick and Stansted airports which was published in December 2006. Additionally, the Competition Commission (CC) cites, in appendix 3.5 of its *BAA airports market investigation* published in March 2009, the results of a BAA survey carried out in the summer of 2006 that includes questions regarding passengers' second choice airport and their previous airport usage in the previous 12 months⁸.

Surface short haul passengers

Heathrow

2.7 Figure 1 below shows the responses in percentage terms of short haul surface passengers⁹ at Heathrow. Approximately 70% of the passengers had previously used the airport, as can be seen from the blue bars, suggesting a very high level of “repeat customers” at the airport, with approximately 30% of respondents not having flown from Heathrow in past two years. Possible reasons for this are discussed later when comparing Heathrow’s results with those for Gatwick and Stansted.

Figure 1 Airports previously used in the past two years and airports considered as alternatives for current flight by short haul passengers at Heathrow



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.8 Overall, Heathrow passengers have most often previously used and considered other airports in the London area. Gatwick is the second highest used (48%), although with significantly fewer passengers, followed by

⁸ CAA *Initial price control proposals for Heathrow, Gatwick and Stansted airports Supporting Paper II* December 2006 <http://www.caa.co.uk/docs/5/ergdocs/airportsdec06/sp2.pdf>
 Competition Commission *BAA airports markets investigation* March 2009 http://www.competition-commission.org.uk/rep_pub/reports/2009/fulltext/545.pdf

⁹ In this paper, short haul passengers include those on domestic and international short haul flights.

Stansted (24%), Luton (18%) and London City (12%) airports. It is interesting that Gatwick has been used by Heathrow passengers considerably more often than Stansted, Luton and London City.

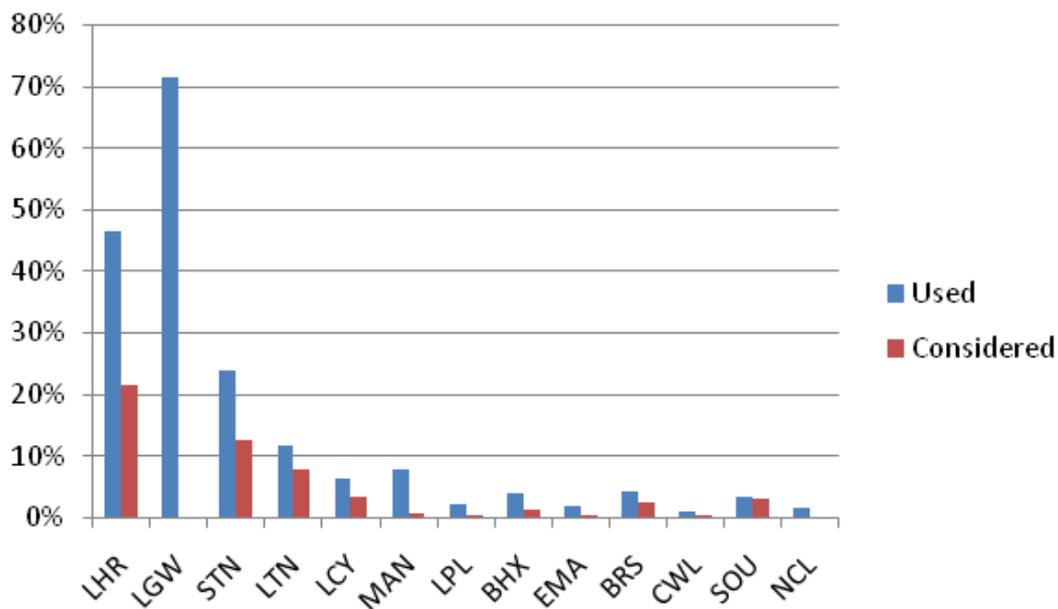
- 2.9 Of the airports outside of the London area, only Birmingham, Manchester and Bristol have been previously used by significant numbers of Heathrow passengers, albeit by less than 10% of passengers in each case. This is perhaps unsurprising, as the catchment area analysis revealed that the London districts were the most important source of surface passengers, due in part to their high population density and popularity with inbound foreign passengers, and that these districts were those over which the catchment areas of all four major London airports overlapped. Additionally, the fact that three non-London airports were previously used by a significant percentage of passengers could suggest that a substantial percentage of passengers travel by surface transport from regional conurbations to fly from Heathrow, which would also reflect the findings in the catchment area analysis working paper¹⁰. Alternatively, this could show that Heathrow passengers are sometimes willing to travel to an airport outside of the London area.
- 2.10 Gatwick (20%) was the airport most often considered as an alternative airport for a passenger's current flight, while none of the other London airports were considered as alternatives by more than 10% of passengers. It is also worth noting that none of the airports outside of the London area were considered by more than 5% of respondents for their current flight.

Gatwick

- 2.11 Figure 2 shows the results for short haul passengers at Gatwick. There are many similarities to the responses of Heathrow passengers. As for Heathrow, a high share of Gatwick respondents (72%) had previously used the airport, which would suggest that it has a large number of "repeat customers". After Gatwick, Heathrow (46%) is the most often used airport by Gatwick passengers, which is an almost symmetrical result to those for Heathrow. This could reflect the routes available at these two airports, as well as possibly their relative proximity. With a significantly lower percentage, Stansted (24%) is third most used airport, followed by Luton, Manchester and London City airports.

¹⁰ CAA *Catchment area analysis working paper* October 2011 Chapter 4
<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

Figure 2 Airports previously used in the past two years and airports considered as alternatives for current flight by short haul passengers at Gatwick



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.12 Heathrow (21%) was the airport that was the most often considered as an alternative departure airport for Gatwick short haul passengers' current flights, which is again a nearly symmetrical result to that for Heathrow. Stansted and Luton airports were considered far less as alternatives, while London City and the non-London airports were not considered by more than 5% of passengers.

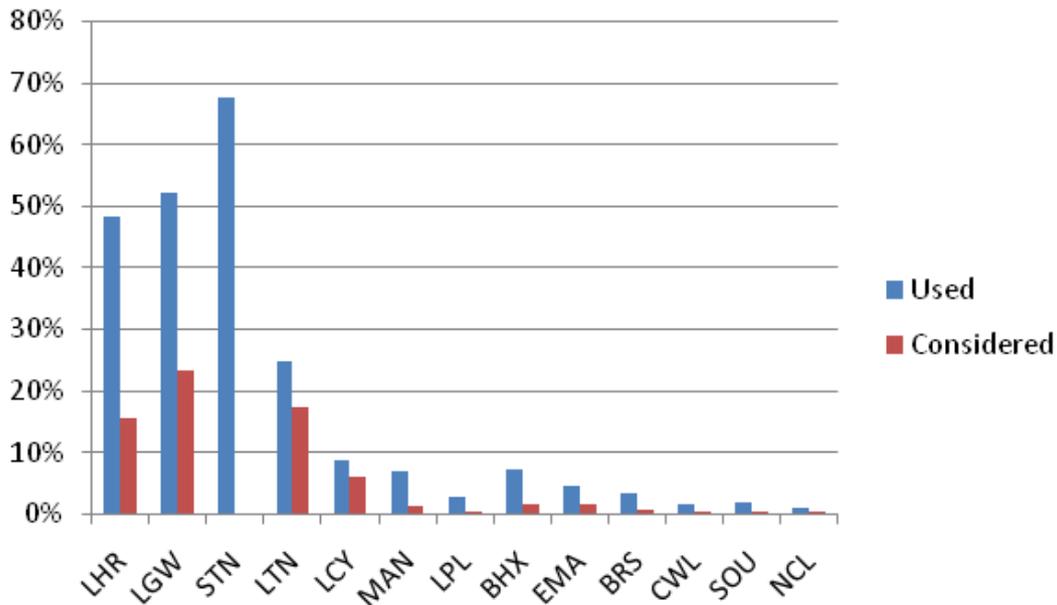
Stansted

2.13 Figure 3 shows the results for short haul passengers at Stansted. As with Heathrow and Gatwick passengers, a high proportion of Stansted passengers had previously used the airport. Again, other airports in England and Wales, were generally neither used in the past years nor considered as alternatives, with only Manchester and Birmingham having been used in the past two years by more than 5% of Stansted's short haul passengers, although even these airports were not considered as alternatives for passengers' current flights.

2.14 However, there appears to be an asymmetric relationship between Stansted and Gatwick/Heathrow. Almost 50% of Stansted's short haul passengers have previously used Heathrow and/or Gatwick in the past two years, and 23% and 16% of Stansted's short haul passengers respectively have considered Heathrow and Gatwick respectively as alternative airports for their current flight. In contrast, only approximately 25% of both Heathrow and Gatwick short haul passengers had used Stansted in the past two years, while approximately 10% of both airports' short haul passengers had considered Stansted as an alternative airport for their current flight. However,

unlike short haul passengers at Heathrow and Gatwick, a considerable percentage of Stansted's short haul passengers have used Luton airport in the past two years (25%) and considered it as an alternative for their current flight (17%).

Figure 3 Airports previously used in the past two years and airports considered as alternatives for current flight by short haul passengers at Stansted



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

Surface long haul passengers

2.15 The following section sets out the responses to the same questions given by long haul surface passengers at Heathrow and Gatwick. The questions were not asked to long haul passengers at Stansted due to their small number. Due to differences in their characteristics, such as overall travel time, the responses may differ to those of short haul surface passengers.

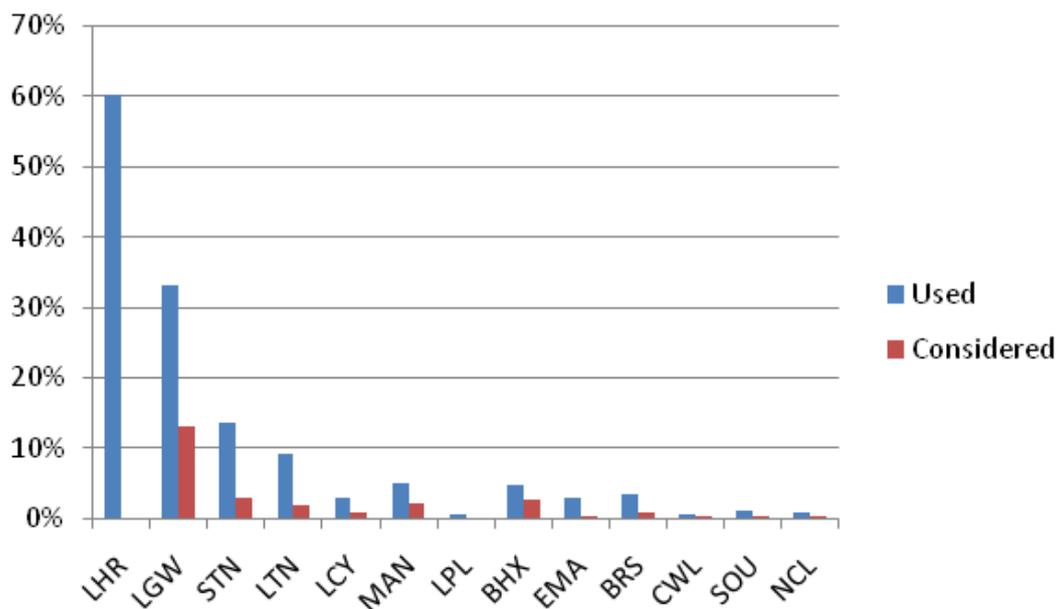
Heathrow

2.16 Figure 4 shows the responses from long haul surface passengers at Heathrow. Fifty-nine percent of Heathrow respondents had previously used Heathrow in the past two years, while Gatwick (33%) is the second most previously used, followed by Stansted (14%) and Luton (9%). As with Heathrow's short haul passengers, airports outside of the London area have not been frequently used in the past two years, with only Manchester and Birmingham having been used by a considerable, but small, percentage of Heathrow long haul passengers.

2.17 Overall, long-haul passengers seem to have used Heathrow and other airports less frequently than short-haul passengers, before their current flight. One possible explanation might be that, compared to UK passengers, foreign

resident passengers may have not used Heathrow (or other UK airports for short haul flights. Other airports were also considered much less frequently as an alternative (only Gatwick with 13% was considered by more than 5% of passengers), possibly reflecting the limited availability of long-haul flights from other airports (with the exception of Gatwick), but also possibly the lower awareness of other UK airports. This would be consistent with the high share of inbound passengers that use Heathrow (52% of all foreign resident passengers at London airports).

Figure 4 Airports previously used in the past two years and airports considered as alternatives for current flight by long haul passengers at Heathrow

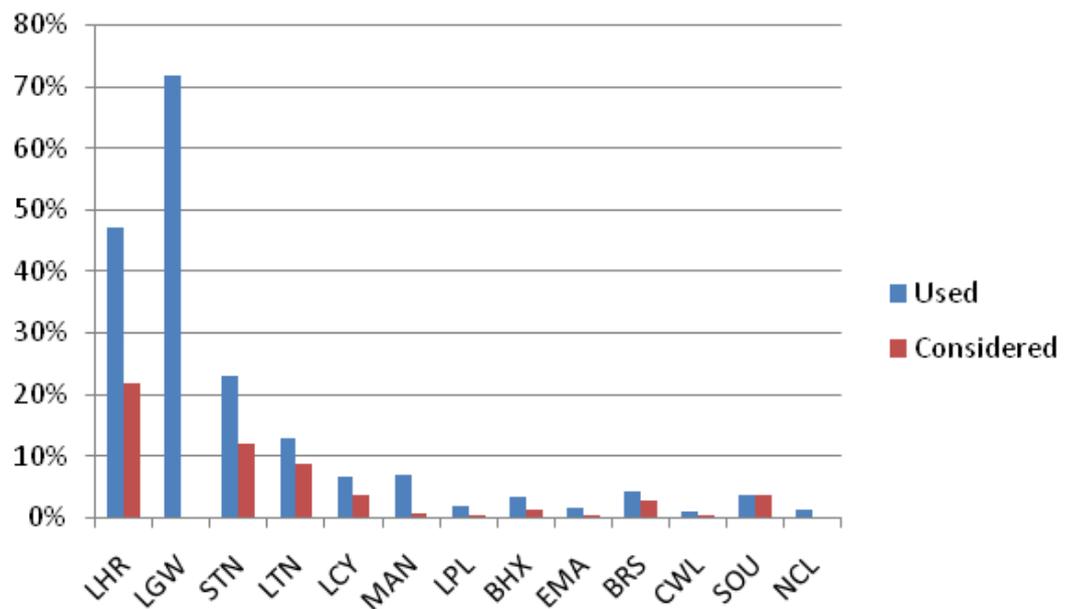


Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

Gatwick

2.18 Figure 5 sets out the responses for long haul surface passengers at Gatwick. Unlike Heathrow, the same percentage as short haul passengers (72%) of Gatwick’s long haul passengers said that they had previously used the airport in the past two years. Heathrow, as with Gatwick short haul passengers, has the second largest proportion of usage (47%), followed by Stansted (23%). While Luton was used by 13% of respondents, London City and Manchester were the only other airports that were used by a significant percentage of Gatwick long haul passengers. Compared with Heathrow long haul passengers, Gatwick long haul passengers seem to have used more airports more often in the past two years. This could be due to Gatwick airport having a larger share (78%) of UK resident passengers than Heathrow (56%).

Figure 5 Airports previously used in the past two years and airports considered as alternatives for current flight by long haul passengers at Gatwick



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.19 According to the red bars, Heathrow (22%) was the airport most considered as an alternative to Gatwick for the respondents’ current long haul flight. This percentage is greater than Gatwick’s corresponding result for Heathrow long haul passengers, possibly due to Heathrow’s large number of, and reputation for, long haul flights. The results show that Stansted and Luton were considered by approximately 10% long haul passengers as possible alternatives for their current long haul flight, despite their very low number of long haul destinations, potentially suggesting that passengers would have considered flying on a long haul flight from these airports had they been available.

Connecting passengers at Heathrow

2.20 Connecting passengers at Heathrow were asked to state which airports they would have chosen for interlining for their current journey. The results show that approximately 35% of connecting passengers had considered connecting through other major European hubs, Amsterdam Schiphol, Frankfurt Am Main or Paris Charles de Gaulle, instead of Heathrow. Each of these airports was considered by approximately 10% of respondents.

Passenger preferences of the London airports

2.21 The previous section considered passengers’ awareness and use of airports across England and Wales. The results showed that the majority of passengers at Heathrow, Gatwick and Stansted had most often used and considered the other London airports. This section builds on these results and considers the order of preference held by passengers for the five London

airports. The first section below analyses the results for short-haul passengers, and the second section focuses on the results for connecting passengers. Data for long-haul passengers is not discussed separately in this section as their analysis did not produce significantly different results from those for short-haul passengers¹¹.

- 2.22 In order to obtain an indication of the order of passengers' preference for the London airports, a supplementary question was added to the CAA Passenger Survey. Passengers at Heathrow, Gatwick and Stansted were asked to state which airport would be their first and second choice if their current flight were available at all airports for the same price. The choice of airport was not restricted to the London airports, which means that it is possible that a non-London airport may be preferred to one or more of the London airports. Methodological details can be found in Annex A. As this question is hypothetical, the responses do not necessarily depend on the current offers available at UK airports although they may influence indirectly the responses via the perceptions of passengers.

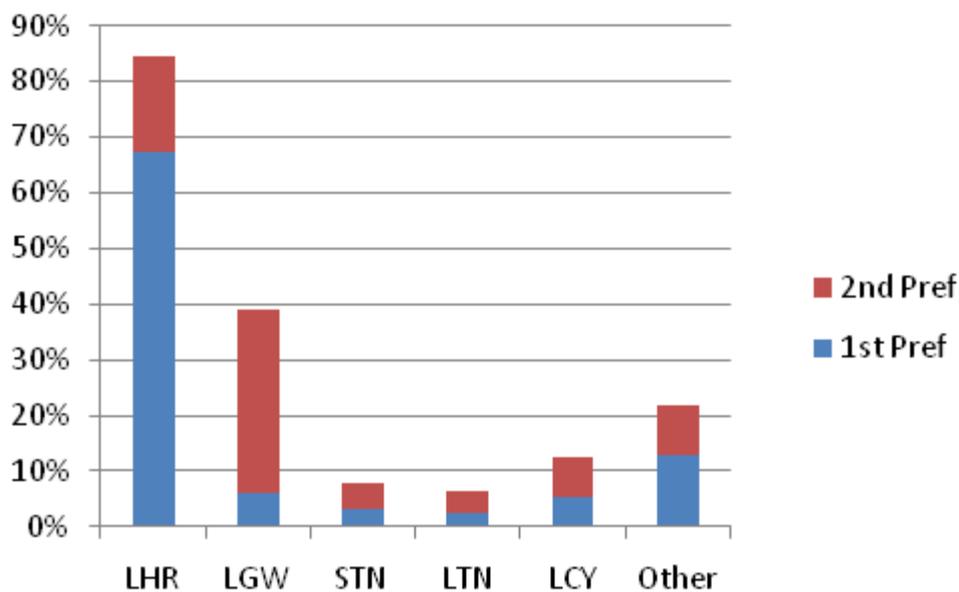
Surface short haul passengers

Heathrow

- 2.23 Figure 6 shows the responses for passengers at Heathrow, where 67% of respondents said that Heathrow was their first preference airport, while 17% use it as their second choice. Gatwick and London City are the second and third airports in terms of first preferences, but there is a large gap between Heathrow with 67% and Gatwick and London City with only 6% and 5% respectively.

¹¹ The fact that short- and long-haul passengers responded in the same way might suggest that passengers did abstract from actual flight availability in answering this particular question, as actual flight availability could have been expected to affect the way in which respondents think about viable alternative airports.

Figure 6 First and second preference airports for Heathrow short haul passengers



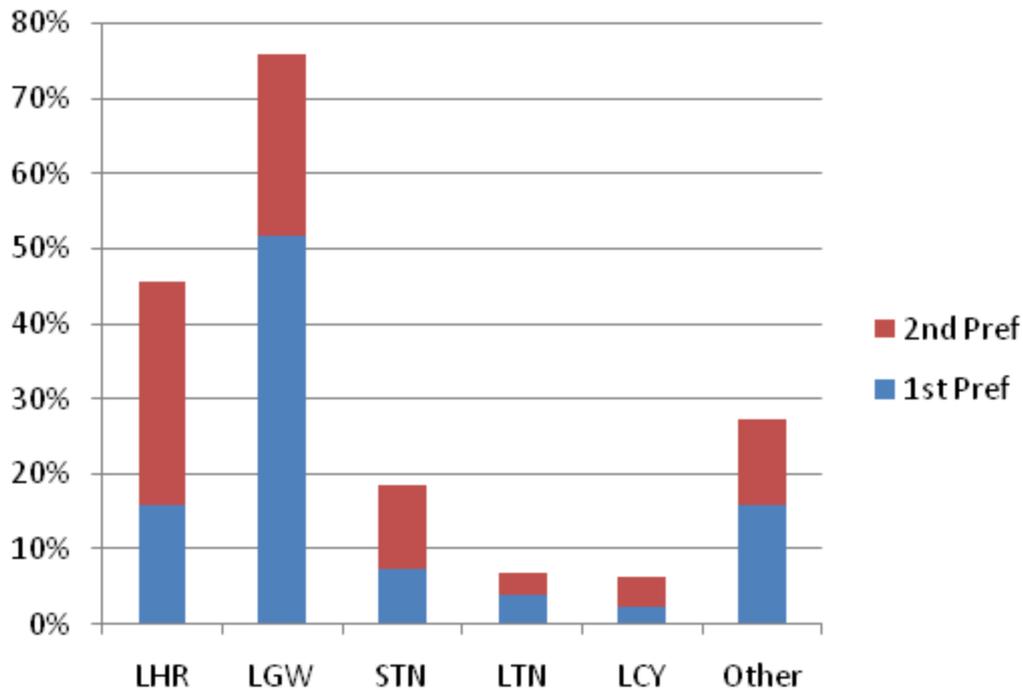
Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.24 Thirty-three percent of Heathrow short haul passengers consider Gatwick airport to be their second preference and London City airport is the third most cited second preference airport.

Gatwick

2.25 Figure 7 sets out the airport preferences for passengers interviewed at Gatwick. Fifty-two percent of Gatwick short-haul passengers (compared with Heathrow's 67%) consider the airport as their first preference, while 16% would prefer Heathrow followed by Stansted (7%). While the differences are not large, it might suggest that Heathrow passengers might be less inclined to use other airports than Gatwick passengers. Possible reasons for this are explored in the next chapter.

Figure 7 First and second preference airports for Gatwick short haul passengers



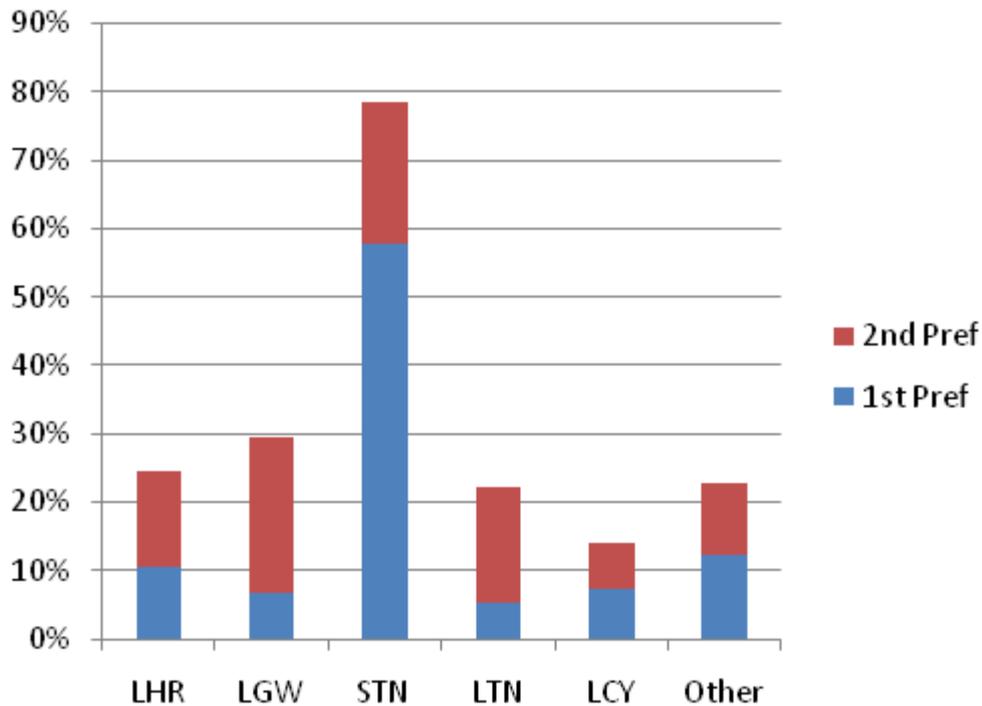
Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.26 Similarly to Heathrow, the results appear to indicate that passengers at Gatwick have on the whole a strong preference for flying from the airport, although a smaller percentage than at Heathrow say it was their first choice airport. Further, Heathrow is most often cited as Gatwick short haul passengers’ second choice airport. Heathrow is cited as second preference by 30% of Gatwick short haul passengers, while 24% are using Gatwick as their second preference and 11% chose Stansted.

Stansted

2.27 Figure 8 illustrates the preferences of Stansted short haul passengers. Fifty-eight percent of these passengers prefer Stansted as their first choice airport (which is higher than Gatwick passengers naming Gatwick as their first choice but less than at Heathrow), followed by Heathrow, Gatwick and London City.

Figure 8 First and second preference airports for Stansted short haul passengers



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

2.28 Gatwick is most often cited as the second preference of 23% of Stansted short haul, while 21% use Stansted as their second choice airport, followed by Luton and Heathrow. Compared with the results at Heathrow and Gatwick, the second preferences at Stansted are more evenly distributed across the London airports.

2.29 There also appears to be a similar asymmetry as was apparent in the questions regarding passengers’ previous usage and consideration of other airports: while a notable share of Stansted passengers named either Gatwick or Heathrow as first or second preference airports, less than 10% of Heathrow’s passengers and less than 20% of Gatwick’s passengers named Stansted as first or second preference.

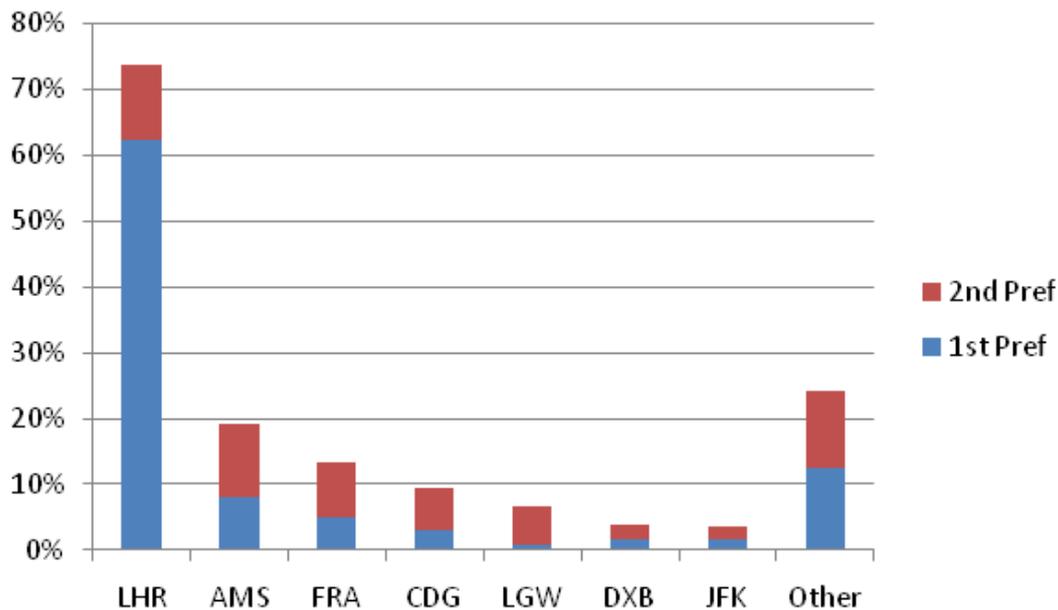
Connecting passengers at Heathrow

2.30 The analysis has so far focused on surface passengers. However, connecting passengers who fly in to the airport only to connect to an onward flight to their final destination may consider different airports as substitutes.

2.31 Figure 9 shows the responses of connecting passengers at Heathrow with regard to their first and second preference airports. Thirty-five percent of Heathrow’s passengers do not travel to the airport by surface transport but rather connect between flights at Heathrow. The majority (62%) of Heathrow’s connecting passengers expressed a first preference for connecting through Heathrow, and comparatively small percentage of passengers expressed a first preference for other European hubs such as

Amsterdam Schiphol and Frankfurt am Main. In terms of second preference, there is a relatively even distribution of Heathrow connecting passengers who consider each of the four main European hubs as a viable second choice airport, as well as Gatwick.

Figure 9 First and second preference airports for Heathrow connecting passengers



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

Summary

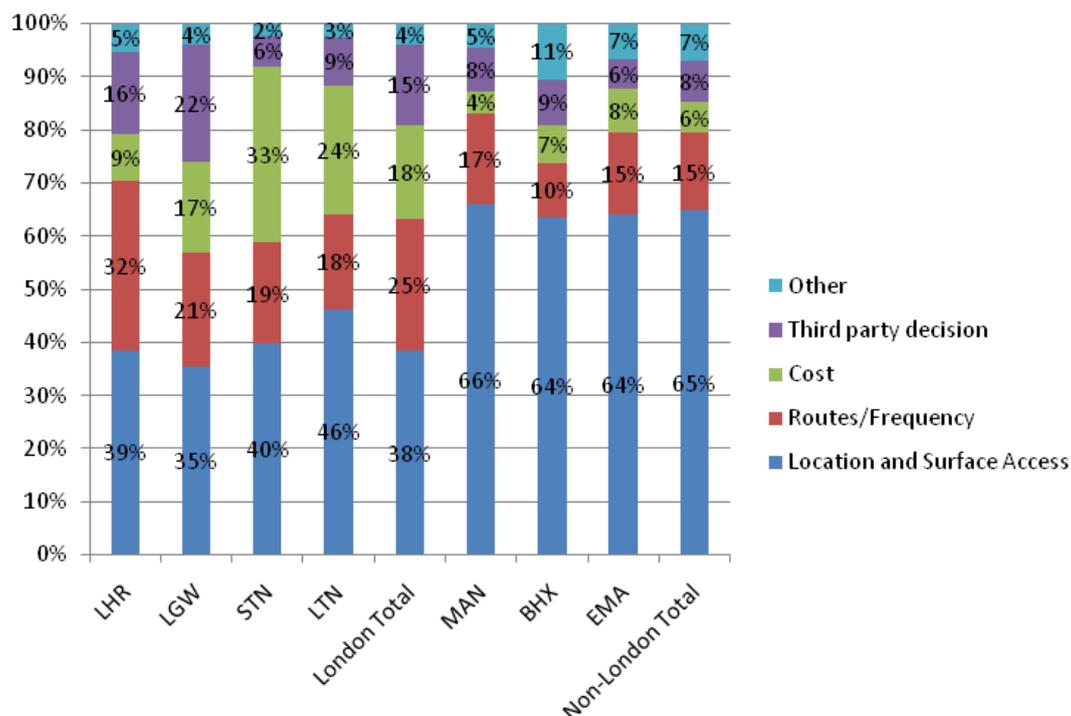
- Generally surface passengers at Heathrow, Gatwick and Stansted appear to prefer other London airports over non-London airports.
- Heathrow's and Gatwick's surface passengers appear to consider Stansted as an alternative airport less frequently than Stansted surface passengers consider Heathrow or Gatwick as alternatives. The relationship between Heathrow and Gatwick appears to be more symmetric than between any other two airports.
- Stansted surface passengers seem most likely to have previously used and considered Heathrow and Gatwick airport as substitutes, followed by Luton airport.
- Connecting passengers at Heathrow, while strongly preferring to fly from Heathrow, also name other European hub airports or hubs further afield as potential substitutes.

3. Reasons for airport preference

3.1 The previous chapter analysed passengers' stated preferences regarding their airport choice. However, it did not provide information regarding the factors which may drive passengers' choice of airport. In order to ascertain the possible reasons for passengers' particular choice of airport, it would therefore be informative to analyse the factors that may motivate them.

3.2 Figure 10 uses data from the CAA Passenger Survey¹² where passengers were asked to state the reason why they chose to fly from a particular airport. The question was asked for the first two quarters of 2011 at the seven airports shown¹³. Respondents were only allowed to choose the main factor. Methodological details, including a list of possible responses, can be found in Annex A.

Figure 10 Reasons for airport choice



Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

3.3 The results suggest that, for each of the sampled airports, ease of surface access from a passenger's point of origin (for outbound passengers), or to their final UK destination (for inbound passengers), is most often why passengers chose their departure airport. However, the relative importance of surface access is greater at the non-London airports¹⁴ than for the four

¹² Although CAA Passenger Survey collects responses from only departing passengers, the data are weighted and scaled to be representative of both departing and arriving passengers at each surveyed airport.

¹³ The question was first introduced in CAA Passenger Survey in January 2011.

¹⁴ These are Manchester, Birmingham and East Midlands airports.

major London airports¹⁵, where other considerations were of relatively higher importance to many passengers.

- 3.4 At the London airports, the second most stated reason why passengers choose to fly from one of the four major London airports is the availability and frequency of the routes operated from them (denoted by “Route/Frequency” in Figure 10). At Heathrow, this factor was cited by 32% of passengers. It was also important for approximately 20% of passengers at Gatwick, Stansted and Luton. At the non-London airports, route availability and frequency seems was only the most important for approximately 15% passengers at Manchester and East Midlands, and 10% at Birmingham airport.
- 3.5 After surface access reasons, price was the most often stated reason why passengers chose to fly from Stansted (33%) and Luton (24%). This is notably higher than at Gatwick (17%) and Heathrow (9%).
- 3.6 For 22% of passengers at Gatwick, the reason why they were flying from the airport is that their choice was made by a third party, denoted as a “Third party decision” in figure 10, which makes it the joint second-most common reason, along with route availability and frequency. Since approximately half of Gatwick’s passengers travel for leisure purposes¹⁶, it could be that a considerable percentage of these passengers are travelling on package holidays where the departure airport has been stipulated by the tour operator or another person in their travelling party (family member or friend). A passenger’s choice of airport may also be determined through the existence of a contract between their employer and a particular airline. For example, it is possible that the 16% of responses at Heathrow that cited a third party decision as a reason for their airport choice may reflect, to some extent, the activity of business passengers who are covered by corporate contracts, or where bookings are made by central travel offices.
- 3.7 The results in Figure 10 represent the preferences for all passengers who were flying from the sampled airports. However, it is possible that these aggregated responses mask the differences in the reason for airport choice across different types of passengers. As set out in the CAA’s *Competition Guidelines Issues*¹⁷ paper and *Guidance on the assessment of airport market power*¹⁸, it can be useful to categorise passengers in different ways including according to:
- journey purpose;
 - flight distance (short or long haul); and
 - whether they are UK or foreign residents

¹⁵ These are Heathrow, Gatwick, Stansted and Luton airports.

¹⁶ CAA *UK Airports Market – general context* September 2011 Figure 14
<http://www.caa.co.uk/docs/5/20110905%20Market%20Context-FINAL.pdf>

¹⁷ CAA *Competition Guidelines Issues* September 2010
<http://www.caa.co.uk/docs/5/ergdocs/CompetitionGuidelinesIssuesPaper.pdf>

¹⁸ CAA *Guidance on the assessment of airport market power* April 2011
<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

3.8 The following tables set out the five most commonly cited reasons for airport choice by journey purpose, also disaggregating together UK and foreign residents to analyse their particular preferences.

Journey purpose

Leisure passengers

3.9 Table 1 shows the five most frequently stated reasons for airport choice for leisure passengers according to their residence, at the four major London airports.

Table 1 Top 5 reasons for airport choice by leisure passengers at the four major London airports¹⁹

Rank	UK		Foreign	
1	Nearest to home	31%	Cost	36%
2	Third party decision	27%	Third party decision	17%
3	Route network	18%	Nearest to leisure	17%
4	Cost	15%	Route network	15%
5	Timing of flights	4%	Nearest to home	7%

Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

3.10 Third party decisions are the second most common reason for airport choice by both UK and foreign resident leisure passengers, although 10% more UK passengers cited as their reason for airport choice. This may be an indication that a significant percentage of leisure passengers may travel on tour packages. Additionally, it may be unsurprising that the availability of a passenger’s preferred flight (shown as “Route Network”) is also an important reason.

Business passengers

3.11 Table 2 sets out the responses for business passengers. For both UK and foreign business passengers, the proximity of the departure airport to their point of origin or final surface destination appears to be clearly the most important reason for their choice of airport. This is consistent with the surface travel time estimates in the CAA’s *Catchment area analysis working paper*²⁰. Airport proximity is most important for 44% UK business passengers, with travelling to the airport from home (33%) and from their business location (11%), while 38% of foreign business passengers cite it as their main reason for their choice of airport.

¹⁹ Heathrow, Gatwick, Stansted and Luton.

²⁰ CAA *Catchment area analysis working paper* October 2011 Chapter 4
<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

Table 2 Top 5 reasons for airport choice by business passengers at the four major London airports

Rank	UK		Foreign	
1	Nearest to home	33%	Nearest to business	38%
2	Route network	20%	Third party decision	20%
3	Third party decision	14%	Route network	16%
4	Nearest to business	11%	Cost	8%
5	Timing of flights	10%	Timing of flights	7%

Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

3.12 According to the above results, business passengers' choice of airport often seems to be influenced by the decisions of a third party, with this being the reason for choosing the airport for 14% of UK and 20% of foreign resident business passengers. Lastly, whether a route is available (the route network) appears also to be an important consideration, as business passengers may need to fly to a certain destination at short notice, which reflects their time sensitivity. Cost and the timing of flights appear to play a subordinate role to the reasons mentioned above, with costs not even appearing in the top 5 reasons for UK resident business passengers.

VFR passengers

3.13 Table 3 details the results for VFR passengers. As with business and UK leisure passengers, a significant proportion of both UK and foreign VFR passengers choose a departure airport mainly because it is closest to their point of origin. Similarly to the business passengers, UK and foreign VFR passengers cite both the proximity to their home and their leisure location as an important reason for their choice of airport. Cost is also a common consideration (indeed the main reason for foreign VFR passengers), but subordinate to proximity to home and route availability for UK passengers.

Table 3 Top 5 reasons for airport choice by VFR passengers at the four major London airports

Rank	UK		Foreign	
1	Nearest to home	36%	Cost	28%
2	Route network	25%	Nearest to leisure	26%
3	Cost	20%	Route network	20%
4	Nearest to leisure	5%	Nearest to home	10%
5	Timing of flights	4%	Third party decision	5%

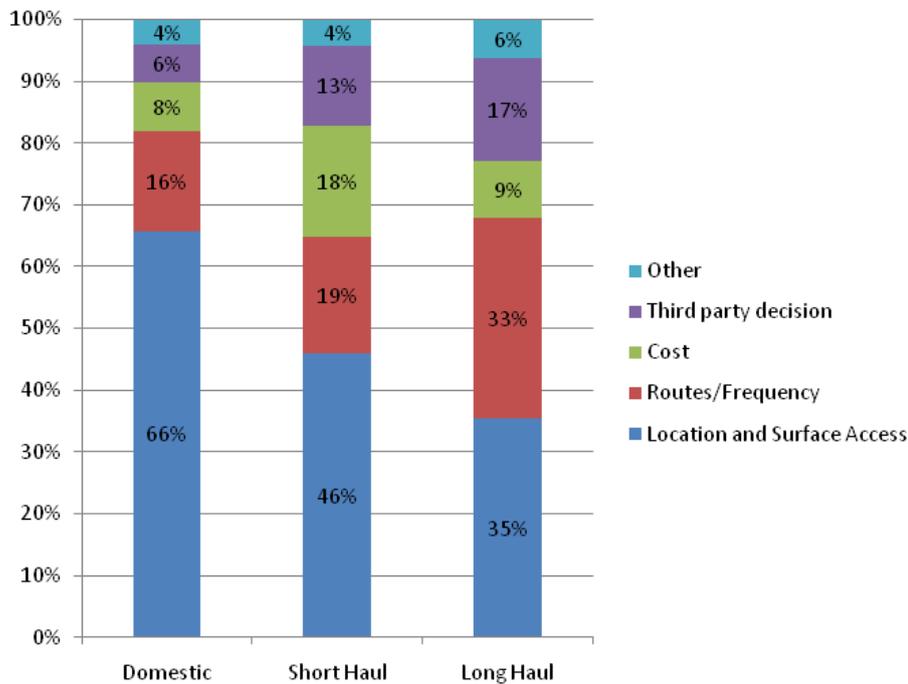
Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

Flight duration

3.14 Depending on the duration of their flight, passengers may have different reasons to choose their departure airport. Figure 11 below sets out the main

reasons for the choice of airport for domestic, international short haul and long haul surface passengers at the four major London airports.

Figure 11 Reason for airport choice according to flight duration at the four major London airports



Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

- 3.15 For 66% of domestic passengers, location and surface access appear to be the most common reason for their airport choice. This probably reflects the importance of surface access travel as a proportion of their overall travel time, which could mean that domestic passengers would choose the nearest or most easily accessible airport to reduce their surface travel time as much as possible. The second most frequently stated reason is the availability and frequency of flights, although for only 16% of domestic passengers. Only 8% of domestic passengers choose their airport mainly on the basis of overall air travel cost.
- 3.16 Location and surface access reasons (46%) are also important to international short-haul passengers, again possibly due to the impact of surface travel time on their overall travel time. However, in contrast to domestic passengers, route availability and frequency (19%), cost (18%) and third party decisions (13%) are most often cited as the main reason for a passenger's choice of airport.
- 3.17 For long haul passengers, the availability and frequency of routes (33%) is almost as often the main reason for airport choice as location and surface access reasons, which could be because fewer airports have a substantial number of long haul operations. Surface travel time is less often the main

reason for a long haul passenger's choice of airport, possibly because it constitutes a smaller proportion of a passenger's overall travel time.

Summary

- Surface access is the most often cited reason for passengers' airport choice irrespective of the airport, their travel purpose or duration of their flight. It appears to play a larger role at airports outside of London.
- The importance of individual reasons differs somewhat according to passenger origin (UK resident or foreign resident) and travel purpose. Cost appears to be of higher importance to foreign residents (top reason for leisure and VFR), while airport proximity scores highest for UK residents across all journey purposes.
- The frequency with which the location of the airport and the surface access are given as the main reasons for airport choice decreases as flight duration increases, although remains the most often cited reason.
- For short haul flights, a considerable amount of passengers have also cited the availability and frequency of routes and the cost of flying. Long haul passengers often cite the availability and frequency of routes, but also third party decisions.

4. Passenger responsiveness to changes in price

Introduction

- 4.1 The previous two chapters have focused on analysing passengers' preferences regarding the various UK airports and the principal reasons why different types of passengers may choose a particular departure airport. The results showed that certain types of passengers could be particularly sensitive, in principle, to increases in price.
- 4.2 As set out in the CAA's *Guidance on the assessment of airport market power*²¹, part of the hypothetical monopolist framework used in market definition asks whether a small but substantial non-transitory increase in price of between 5 and 10% would be profitable for the airport. Due to nature of airport pricing, and the potential dynamics due to interdependence between different airport user groups, it would be difficult to calculate the reaction of an airport's passengers to a rise in airport charges. However, it can also be informative to analyse the response of passengers to an increase in the cost of flying through a particular airport. This could provide some evidence as to their price sensitivity and propensity to switch away from their current airport.
- 4.3 The CAA has previously asked the question analysed in this chapter in its December 2006 Supporting Paper II for the *CAA's Initial price control proposals for Heathrow, Gatwick and Stansted*. However, due to the context, the question was only asked to UK leisure short haul passengers on scheduled services. The current survey results include responses from all types of passengers, as this would ensure that the sample is representative of the passengers at each of the three designated airports.

Methodology

- 4.4 In order to analyse passenger responsiveness to an increase in their airfare, a hypothetical stated preference question was added to the CAA Passenger Survey²² asking passengers to state their response to an increase in the cost of flying from their departure airport. The choice of the price increase was based on a 10% increase on an approximation of the average short haul and long haul airfares using CAA Passenger Survey data. The amounts chosen were £5 for a short haul single, £10 for a short haul return, and £50 for a long haul journey. An increase of £40 was chosen for a journey involving an indirect routing (i.e. connecting flights).
- 4.5 The following question was asked to short haul and long haul surface passengers at Heathrow, Gatwick and Stansted, long haul surface passengers at Heathrow and Gatwick, and to connecting passengers at Heathrow only.

²¹ CAA *Guidance on the assessment of airport market power* April 2011

<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

²² Unlike the responses to the questions including in the full CAA Passenger Survey, the data obtained from these supplementary are unweighted and only reflect the responses of the departing passengers responding to them. Please paragraph 1.6 for more details.

If your flight and every other [single/return] flight at [airport] cost [FEE] more per person, would you have:

<i>Still booked your current flight?</i>	<i>1</i>
<i>Booked a flight from Heathrow to a different destination or at a different time?</i>	<i>2</i>
<i>Booked a flight from a different airport?</i>	<i>3</i>
<i>Chosen not to fly?</i>	<i>4</i>

- 4.6 The respondents choosing options 3 or 4 were considered to be switching away from their current airport. Passengers were asked to state their response given their knowledge of the alternatives available from other airports. Methodological details are available in Annex A.

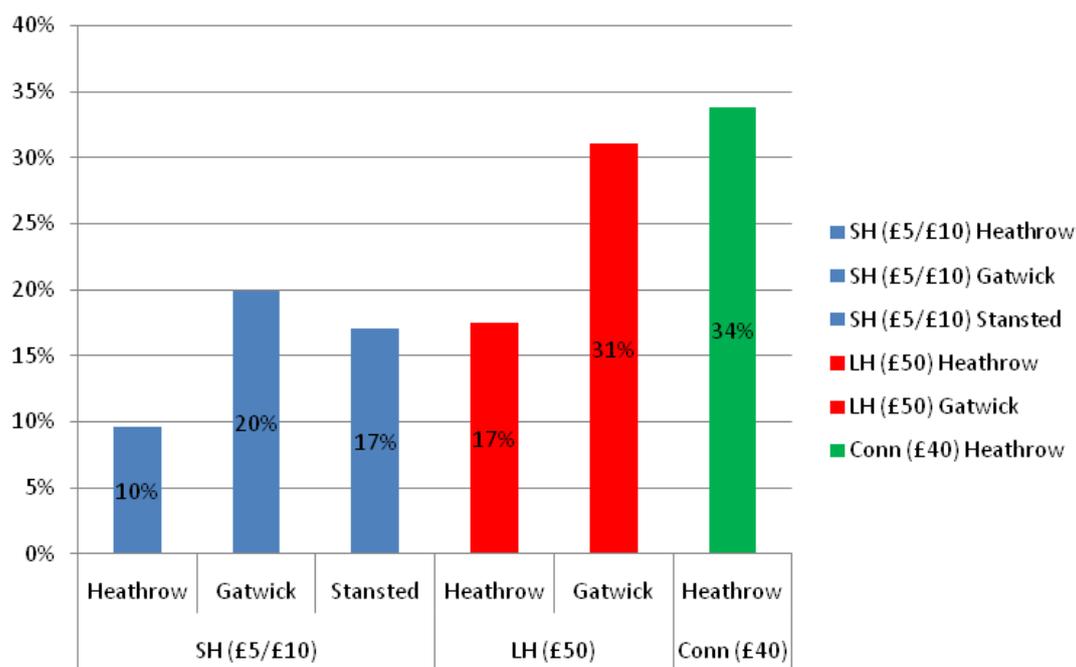
Results

- 4.7 Figure 12 reports the proportion of passengers at each of the three designated airports, disaggregated according to flight duration, who would be willing to switch away from their current airport in light of an increase in the cost of using it. Short haul passengers²³ were asked to state their reaction in light of an increase of £10 (return)/£5 (single). Long-haul passengers were asked to state their response to an increase of £50 in the cost of using their departure airport.
- 4.8 Overall, passengers at Heathrow appear to be the least willing to switch in response to an increase in price. This is perhaps not unexpected, as Heathrow has the largest proportion of passengers travelling for business reasons, who may be less price sensitive and may be more likely to travel under a corporate contract. Further, since prices at Heathrow are typically higher than other London airports (with the possible exception of London City), Heathrow passengers responding to this question would have already revealed themselves as perhaps having a relatively high willingness to pay (albeit for a possible higher perceived service quality at the airport).
- 4.9 By contrast, approximately 20% of short haul passengers at Gatwick and Stansted would be willing to switch away from their current airport in light of a price increase, suggesting that they could be more price responsive than their Heathrow counterparts.²⁴

²³ For this question, domestic and international short haul passengers are aggregated into the short haul category.

²⁴ The difference between the percentages for the two airports cannot be said to be statistically significant.

Figure 12 Passenger price responsiveness to an increase in the cost of using their current airport



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

Note: The price increase for each type of passenger is given in brackets.

4.10 The results in Figure 12 show that long haul surface passengers at Gatwick (31%) would be more likely to switch away, compared with those at Heathrow (17%). This considerable difference could again in part be due to Gatwick having a larger proportion of price sensitive passenger types, with 57% leisure and 29% VFR passengers compared with 31% leisure and 35% VFR passengers at Heathrow²⁵. Additionally, a considerable number of charter airlines operate from Gatwick. The lower percentage of passengers that would switch away from Heathrow might be due to the passengers not knowing that their preferred route may be available at another airport. Further, it is possible that many long-haul passengers may not be willing or able to travel to another European hub airport by surface transport or to accept an indirect routing (connecting flights) through another hub.

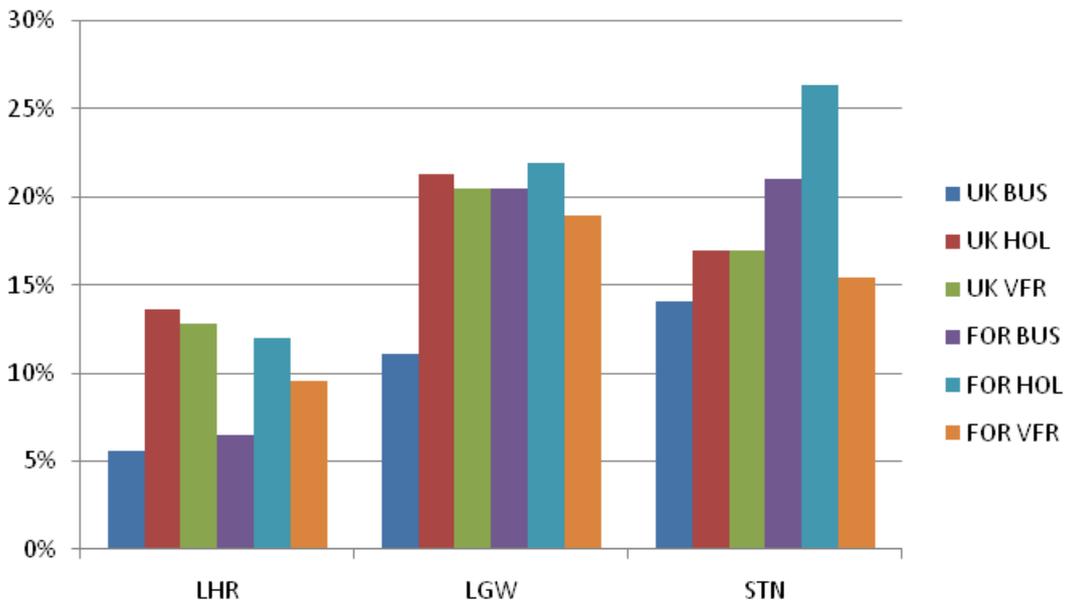
4.11 By comparison, connecting passengers at Heathrow seem to be much more likely to switch away in light of a price rise, as opposed to their short haul and long haul surface counterparts. Thirty-four percent of connecting passengers stated that they would switch away from Heathrow when faced with a £40 increase in the cost of flying through Heathrow, which is a similar proportion to the overall percentage of passengers that had considered another European hub airport through which to interline. This could suggest that connecting passengers using Heathrow may know that they would be realistically able to interline via other European hub airports, as well as other international hub airports.

²⁵ CAA UK Airports Market – general context Figure 14
<http://www.caa.co.uk/docs/5/20110905%20Market%20Context-FINAL.pdf>

Passenger switching according to journey purpose

4.12 The level of stated switching by flight duration at each airport may mask some variations according to journey purpose. Figure 13 sets out the switching responses of passengers at each airport according to journey purpose and residence.

Figure 13 Passenger price responsiveness to an increase in the cost of using their current airport, by journey purpose and residence



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

4.13 The results reflect the overall switching responses, where Gatwick had the most passengers willing to switch, followed by Stansted and then Heathrow. Leisure passengers (denoted in Figure 13 as “HOL”) appear to be more responsive to an increase in the cost of using their departure airport than both business and VFR passengers at both Heathrow and Gatwick. At Stansted, foreign resident leisure and business passengers are more likely to switch than their UK counterparts, while foreign VFR passengers are approximately as likely to switch as UK business passengers. At Heathrow and Gatwick, UK business passengers across the three airports seem to be those least likely to switch, whereas their foreign resident counterparts at Gatwick and Stansted would be more willing to switch than nearly all UK passengers at those airports, though less so than foreign leisure passengers, who are the most likely foreign resident passengers to switch away from their airport in light of a price rise. In contrast, foreign business and VFR passengers appear to be less likely to switch than their UK business and leisure passengers.

4.14 However, some caution needs to be exercised when analysing the results in Figure 13, as they do not take account of differences in flight duration (considered in Figure 12) or airline business models. For example, the results

for Gatwick aggregate short haul and long haul surface passengers while the results for Stansted are the switching responses for short haul passengers only. Further, due to the prevalence of low cost carriers at Stansted, short haul passengers may be responding differently to a price increase on a relatively low cost of using the airport compared with those at Gatwick. At Heathrow, passengers could be unwilling to switch because their route may not be able available at other potential substitutes, a possibility supported by Figure 10 that shows that Heathrow is often chosen due to the availability and frequency of routes operated from the airport. Nevertheless, it remains possible to make general observations regarding the level of switching at each airport according to journey purpose and residence.

Summary

- Overall, surface passengers at Heathrow are the least likely to switch away in light of an increase in the cost of using the airport for both short haul and long haul flights.
- For short haul, passengers at Gatwick and Stansted are more likely to switch away from their airport than those at Heathrow.
- For long haul, Gatwick passengers are more likely to switch away than at Heathrow.
- UK business passengers generally seem the least likely to switch away from their airport when faced with a price increase. While UK and foreign passengers could be said to be approximately as likely to switch away from Heathrow and Gatwick (except for business passengers), foreign passengers seem to be more likely to switch away from Stansted than UK passengers (except for foreign VFR passengers).
- A considerable proportion of Heathrow's connecting passengers stated that they would switch in light of a price rise.

5. Conclusions

- 5.1 This working paper forms part of the CAA's work on the market power assessments. It pulls together survey data on passengers' familiarity with, and perceived substitutability of, airports across the UK, relative to Heathrow, Gatwick and Stansted. Additionally, stated preference data on price responsiveness are analysed.

Passenger airport preference

- 5.2 Chapter 1 analysed the survey results regarding passengers' airport preferences. Passengers at Gatwick appear to most often use and consider Heathrow as an alternative departure airport, and vice versa. However, the effect is stronger for Gatwick passengers who are more likely to consider Heathrow. Stansted passengers seem more likely to have previously used and considered Heathrow and Gatwick airports as substitutes, followed by Luton.
- 5.3 Connecting passengers, while strongly preferring to fly from Heathrow, seem to be willing and able to switch to other European hub airports, as well as potentially hubs further afield.

Reason for airport preference

- 5.4 In light of the results in chapter 2, this chapter has analysed survey results where passengers stated the reason why they chose to fly from a particular airport.
- 5.5 While surface access is the most often cited reason for passengers at each of the sampled airports, it is by far the most common reason why passengers fly from the airports outside the London area, in this case Birmingham, East Midlands and Manchester. At the London airports, in contrast, the availability and frequency of routes is particularly important at Heathrow, while third party decisions and cost are particularly important to many passengers at Gatwick and Stansted respectively.
- 5.6 For each journey purpose, airport proximity is the most often cited main reason for a passenger's choice of airport. Additionally, leisure passengers find cost and third party decisions important, supporting the assertion that they are price sensitive. Business passengers value route availability and frequency, third party decisions and flight timing, while many VFR also cite availability and frequency of routes as their main reason for their airport choice.
- 5.7 The frequency with which the location of the airport and the surface access are given as the main reasons for airport choice decreases as flight duration increases, although remaining the most often cited reason. For short haul flights, a considerable amount of passengers have also cited the availability and frequency of routes and the cost of flying. Long haul passengers also often cite the availability and frequency of routes, but also third party decisions.

Passenger responsiveness to changes in price

- 5.8 This chapter presented results of survey responses with regard to passengers' price responsiveness at the three designated airports.
- 5.9 Overall, surface passengers at Heathrow are the least likely to switch away in light of a 10% price increase for both short haul and long haul flights. For short haul, passengers at Gatwick are most likely to switch away from the airport, followed closely by Stansted. This may be explained by Gatwick having the greater percentage of price sensitive passengers. For long haul, Gatwick passengers are again more likely to switch away, while a considerable proportion of Heathrow's connecting passengers stated that they would switch in light of a price rise.
- 5.10 UK business passengers generally seem the least likely type of passenger to switch away from their airport when faced with a price increase, while their foreign counterparts are the most likely foreign resident passengers to do so. The UK leisure and VFR passengers appear to be as likely to switch away from their airport. Of the foreign resident passengers, leisure foreign passengers seem to be more likely than VFR passengers to switch.

Overall conclusion

- 5.11 Overall, the analysis in this paper would suggest that passengers at the three designated London airports would be more likely to use and consider the other London airports as substitutes, than airports outside the London area. Airport proximity appears to be a particularly important reason why passengers tend to choose a particular airport, although there are several other important factors. Gatwick and Stansted passengers appear to be most responsive to a price increase. However, any inferences with regard to the level of competition requires this evidence to be combined with evidence available on a range of other factors, notably on switching, to reach a view on the level of competition faced by each airport.

Annex A. CAA Passenger Survey methodology

A.1 This annex presents details of the CAA Passenger Survey questions which were analysed in this paper. An explanation of the methodology and weighting techniques used in the survey, together with an example of the survey questionnaire, can be found on the CAA's website²⁶.

Reason for airport choice survey questions

A.2 The data on the main reason why passengers chose their particular airport were collected by asking passengers the following question, included in the standard passenger survey:

A.3 Q.38 "Why did you choose to fly from [insert airport] today?"

A.4 The respondents are then given a card of options from which to select one answer.

A.5 The question was asked for the first two quarters of 2011 at Heathrow, Gatwick, Stansted, Luton, Birmingham, East Midlands, and Manchester airports. The sample sizes of surface passengers with valid responses to this question in the provisional CAA Passenger Survey in the first 6 months of 2011 are given by table A.1. The data for this question has been weighted and scaled to be representative of both departing and arriving passengers.

Table A. 1 Sample size of valid responses to Q38 in the CAA Passenger Survey

Airport	Sample size
Heathrow	6466
Gatwick	6413
Stansted	6558
Luton	2349
Manchester	7310
Birmingham	4451
East Midlands	2148

Source: CAA Passenger Survey (January to July 2011 provisional)

Supplementary survey questions

A.6 In order to assess the characteristics of passenger demand the CAA appended four additional questions to the end of the departing passenger survey. The data collected from these questions have been included within analysis presented in this paper. Unlike the responses to the questions including in the full CAA Passenger Survey, the data obtained from these supplementary are unweighted and only reflect the responses of the departing passengers responding to them.

²⁶ CAA 'CAA Survey of passengers at Aberdeen, Durham Tees Valley, Edinburgh, Gatwick, Glasgow, Heathrow, Inverness, Luton, Manchester, Newcastle, Prestwick and Stansted Airports in 2009' 2009 <http://www.caa.co.uk/default.aspx?catid=81&pagetype=90&pageid=7640>

A.7 These survey questions were included in the CAA Passenger Survey between 3 June 2011 and 12 August 2011, at Heathrow, Gatwick, Stansted and Luton airports.

Surface passengers

A.8 The supplementary questions for surface passengers, and sample sizes, are set out below:

1. *Before today, which airports in England and Wales have you flown from then the past two years? Please note all mentioned airports:*
2. *Other than Heathrow, for the trip you are about to take, which airports did you consider flying from? Please note all mentioned airports:*
3. *If your flight and every other [single/return] flight at Heathrow cost [FEE] more per person, would you have:*

<i>Still booked your current flight?</i>	1
<i>Booked a flight from Heathrow to a different destination or at a different time?</i>	2
<i>Booked a flight from a different airport?</i>	3
<i>Chosen not to fly?</i>	4

[FEE] = SH single: £5 SH Return: £10 LH: £50

A.9 The amounts for questions were chosen as round numbers that approximate a 10% increase on the average airfare in each case, based on data collected using the CAA Passenger Survey.

4. *If the same flight was available at all airports for the same price, which would have been your:*

<i>1st choice airport?</i>	
<i>2nd choice airport?</i>	

Table A. 2 Sample size of surface passengers for questions 1, 2, and 4

Flight duration	Airport	Sample size
Short Haul	Heathrow	928
	Gatwick	849
	Stansted	738
Long Haul	Heathrow	915
	Gatwick	708

Source: CAA Passenger Survey – additional stated preference questions

Table A. 3 Sample size of surface passengers for question 3

Flight duration	Airport	Sample size
Short Haul	Heathrow	898
	Gatwick	831
	Stansted	733
Long haul	Heathrow	858
	Gatwick	688

Source: CAA Passenger Survey – additional stated preference questions

Connecting passengers

A.10 The supplementary questions for connecting passengers were the following:

1. Was a direct flight available between your origin airport and your final airport?

Yes (1)	No (2)
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2. Other than Heathrow, for the trip you are about to take, which airports did you consider using for interlining? Please note all mentioned airports:

3. If your flight and every other flight through Heathrow cost £40 more per person, would you have:

Still booked your current flight?	1
Booked a flight through Heathrow to a different destination or at a different time?	2
Booked a flight through a different airport?	3
Booked a direct flight?	4
Chosen not to fly?	5

A.11 The amount of £40 was chosen because it was considered reasonable, based on the fact that most passengers at Heathrow connect from a short haul to a long haul service.

4. If you could have connected through any airport for the same price, which would have been your:

1 st choice airport?	
2 nd choice airport?	

Table A. 4 Sample size of connecting passengers for questions 1, 2 and 4

Airport	Sample size
Heathrow	439

Source: CAA Passenger Survey – additional stated preference questions

Table A. 5 Sample size of connecting passengers for question 3

Airport	Sample size
Heathrow	437

Source: CAA Passenger Survey – additional stated preference questions

