GLAECONOMICS

Working Paper 35
**Come fly with me –
Airport choice in Greater London**
By **Nick Ennis**

**Transport
for London**

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Contents

Executive summary

Before arriving at an airport, passengers have made a complicated decision of their destination, airline and airport. Studies have broadly found that where flight destinations are served from more than one airport, access time is the primary determinant of airport choice, followed by the frequency of service and fare paid. Business passengers are affected more by access time while leisure passengers respond to the price of airfare more.

This paper reviews the distribution of passenger origins at London airports. It finds that airport choice in London appears to be dominated by ease of access to airports. Competition for passengers is highest for those originating in Central and Inner London where accessibility to each airport is most similar.

For all airports, Inner London is the main source of passengers. The top passenger origin postcode districts are SW1, EC and W2. These districts are amongst the top districts for each airport individually and are key origins of business travellers. The two airports with the highest number of unique destinations, Gatwick and Heathrow, have the largest number of passengers and the most populated catchment areas. Heathrow tends to dominate in Inner London, where access to all airports is similar. Outside Central London, passenger origins are not distributed evenly but there is an obvious bias to the west. This reflects the distribution of population in the Greater Southeast region.

Business travellers show a clear bias toward the west with a significant number coming from Central London and the outer metropolitan area west of London. Relatively few business travellers originate east of London.

This research suggests that demand for new airport capacity will be correlated with population distribution in the Greater Southeast, with Inner London being a major source of demand. New airport capacity placed far from Central London may not be appealing to airport users and will not see high use of public transport, particularly if new capacity is also sited far from existing urban centres outside London.

1. Introduction

Aviation is vital to London's economy. Air transport expands the market in which firms operate, allowing London to specialise in the highly productive sectors where it has comparative advantage. It also links London to the world's fastest-growing economies that are engaging in global trade. The types of businesses located in London – in particular those in the finance and business services sector and high-technology companies – are reliant on global markets and good international communication. Demand for air travel, particularly for high-frequency direct services, amongst these industries is high. Air transport also plays a key role in London's tourism economy.

All journeys to or from a London airport begin or end somewhere else, perhaps a home, office, or hotel. The aim of this brief study is to understand where trips to and from the airport begin and end and how passengers choose which airport to travel from. This will inform the choice of location for more air transport capacity and the development of schemes to increase the proportion of air passengers using public transport.

1.1 London's airports

London is considered a multi-airport region, with five airports: Heathrow, Gatwick, Stansted, Luton and London City. Each airport offers a different selection of airlines offering services to a different collection of destinations. Two airports, Heathrow and London City, are located within Greater London while the other three, Gatwick, Luton and Stansted, are situated roughly 40 to 50km north and south from London.

Figure 1: Location of London area airports
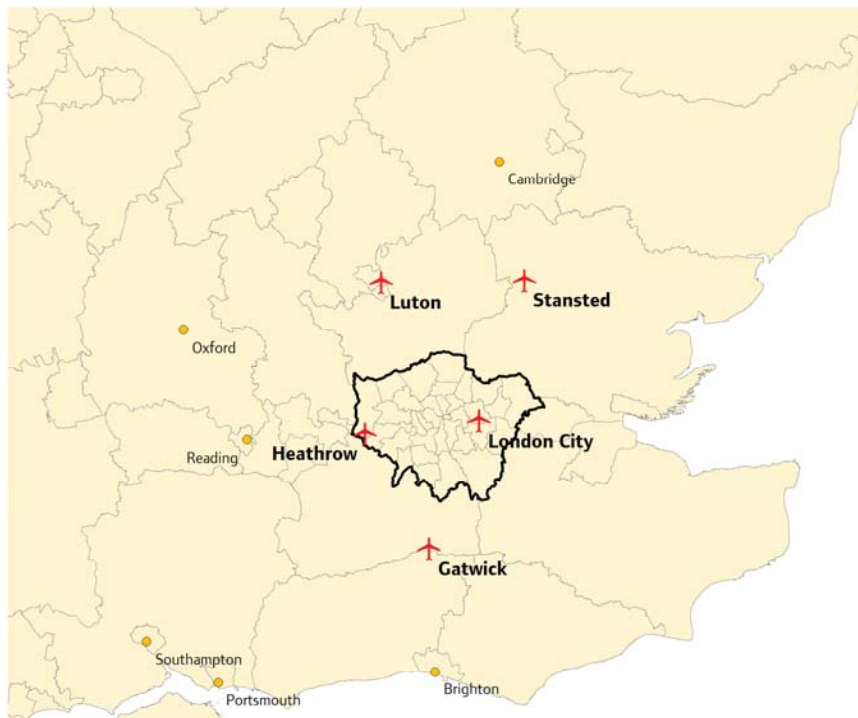
Source: CAA 2006 Annual Passenger Survey

Heathrow is by far the largest airport in London, with 44 million terminating passengers in 2006, and the start of most long-haul flights. Heathrow is the only airport to offer direct services to many popular long-haul destinations, including Chicago and Hong Kong. Gatwick is the second largest and offers a mix of long- and short-haul flights with a leisure orientation. Many of its long-haul destinations are also unique, such as Las Vegas and Antigua. A number of charter and low-cost carriers also fly from Gatwick. Stansted is around half the size of Heathrow and specialises in low-cost flights, primarily to mainland Europe. Unique destinations at Stansted tend to be secondary airports or provincial cities in Europe, such Düsseldorf (Weaze) in Germany or Aalborg in Denmark. Luton is the fourth largest airport, with a low-cost and charter airline focus. There are very few unique destinations from Luton. Finally, London City is by far the smallest London airport and specialises in business flights to mainland Europe.

Business travellers and premium fare passengers tend to use Heathrow Airport most. The much smaller London City is a specialist business travel airport and has the highest percentage of passengers travelling for business and on premium fares (see Table 1).

Table 1: Passenger profile at London airports

Airport	Terminating Passengers	Percentage of Business Travellers	Percentage of Premium Fare Passengers*
Heathrow	44,230,764	40	13
Gatwick	29,567,271	16	3
Stansted	21,271,581	18	1
Luton	8,940,747	21	0
London City	2,316,110	64	14
All airports	106,326,474	28	7

Source: CAA 2006 Annual Passenger Survey
*Premium fares include first class, business class and full fare economy (fully flexible) tickets.

All airports are accessible by public transport, though use of public transport to access each airport varies (see Table 2). Heathrow and London City are located closest to central London – the largest source of passengers – and have the highest public transport mode share, 64 and 82 per cent respectively. Roughly half of these public transport users arrive by taxi. At other airports fewer than half of passengers use public transport to travel to the airport. This reflects the lower proportion of passengers travelling to these airports from Central London.

Table 2: Proportion of passengers arriving by particular modes of transport

| Airport	Car	Taxi	Rail/Tube	Bus
Heathrow	36%	28%	23%	13%
Gatwick	51%	14%	29%	6%
Stansted	50%	9%	24%	17%
Luton	56%	14%	0%	30%*
London City	18%	40%	40%	2%

Source: CAA 2006 Annual Passenger Survey
*Passengers arriving at Luton Airport on the shuttle bus from Luton Airport Parkway railway station are included in bus user statistic.

1.2 Passenger types

Aviation's role in London's economy can be seen most directly through business travel. Business travellers account for less than one third of all airport passengers (see Figure 3) but they account for 40 per cent of Heathrow passengers and even more at London City (see Table 1). Heathrow is the favourite airport for business travellers, probably because of the different long-haul destinations served and the amenities such as lounges available. Though only 42 per cent of all air passengers passed through Heathrow in 2006, 60 per cent of business travellers and 80 per cent of premium fare passengers used the airport (see Figure 2).

Figure 2: Airport used by passenger type
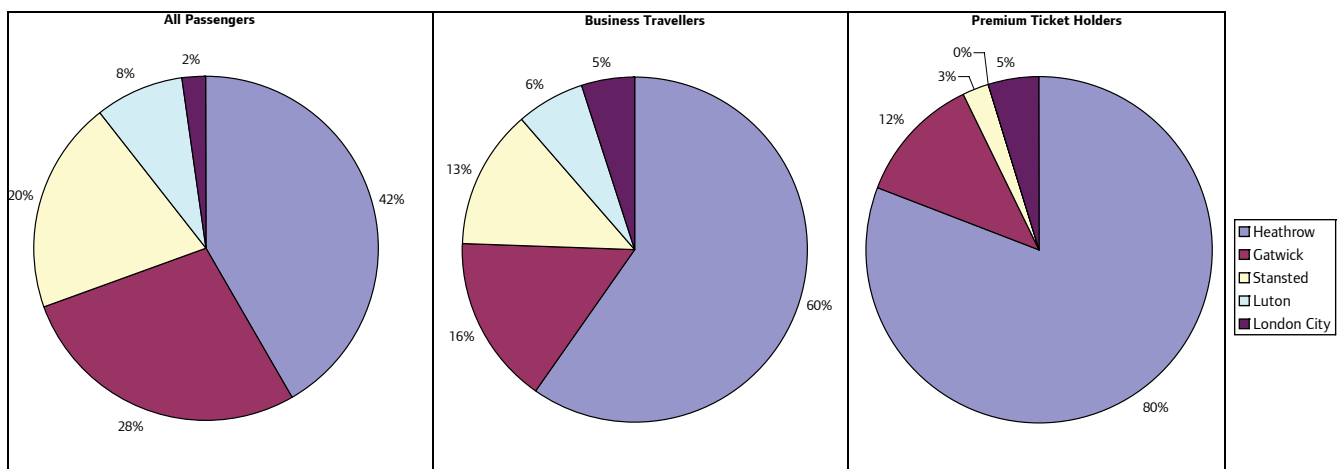
Source: CAA 2006 Annual Passenger Survey
Premium fares include first class, business class and full fare (fully flexible) economy class tickets.

1.3 Choosing airports

Before arriving at an airport, passengers have made a complicated decision of their destination, airline and airport. In some cases, the choice of destination limits the choice of airport, particularly if a passenger does not want to take an indirect flight. Taking account of indirect flights further complicates the decision.

The airport choice decision within a multiple-airport region like London has not been extensively studied, though interest in the topic has grown as the need to increase air transport capacity has risen in many cities. Those studies that have been undertaken have found broadly the same results: where destinations are served from more than one airport, access time is the primary determinant of airport choice, followed by the frequency of service and fare paid. The cost of airport access is also a factor, but of less significance. Business passengers are affected more by access time while leisure passengers respond to the price of airfare more. Frequent travellers are also more likely to switch airlines than to switch airports[1].

Though airports compete with one another for passengers, some passengers will select an airport because of unique destinations on offer. This is especially the case for Heathrow, with

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[1] See, for example, the literature review in Pels et. al 'Airport choice in a multiple airport region: an empirical analysis for the San Francisco Bay Area' Regional Studies, Feb 2001, 35 (1) and Hess, Stephanie, 'Analysing air-travel choice behaviour in the Greater London area' European Regional Science Association, Aug 2005.

its unique offering of long-haul flights to premier destinations. Passengers travelling to many European destinations can select from several airports, or in some cases like Dublin or Madrid, all airports. Therefore, it is logical that where an airport has a unique offering of popular destinations it is likely to draw passengers from the largest area. If the destinations served from an airport are not unique, the airport and the airlines will compete for passengers. Previous research suggests that airports compete on access time, meaning that each airport will tend to have a dominant catchment area.

2. Methodology

The following pages describe the surface origin of travellers from London's airports using data from the Civil Aviation Authority. The report first examines the distribution and density of all passenger origins. This analysis is followed by a review of business travellers and premium ticket passengers to see whether they behave differently from leisure travellers, as research suggests. These two passenger types represent the highest value passengers to London's economy and to the airlines operating from London's airports. Finally, passenger catchment areas for each airport are defined.

The Civil Aviation Authority conducts an annual passenger survey of passengers at UK airports. The survey asks a number of questions, including the postcode district where passengers arrived from, the purpose of the journey (business or leisure) and what type of ticket they have (economy, business, etc). This paper uses data from the 2006 survey – the most recent year in which all London airports were surveyed – to analyse the surface origin of air travellers at all London airports.

For each airport, passengers arriving from each postcode district was mapped to show the relative geography of passenger origins. A second map showing the density of passengers was created to normalise the geographical area of postcode districts. This also shows where providing public transport access to airports is most feasible. A profile of the airport was also constructed using the survey data to detail the percentage of passengers travelling on business and mode of transport used to access the airport. The top passenger origin postcode districts are also listed.

The surface origin of business travellers and premium fare passengers was analysed by local authority next. This different geography was used because survey sample sizes at postcode district level were too small for robust analysis. Aggregation at local authority level was preferred to postcode areas because using postcode areas would distort the distinction between Central, Inner and Outer London.

Finally, an attempt was made to define the natural catchment area of each airport. This was derived by comparing the passenger flows from each postcode district to the different airports.

3. Findings

This section reviews the distribution of passengers using London's airports. The broad trends are listed first in a review of passengers to all airports. This is followed by a detailed analysis of each airport. Business travellers and premium fare passengers will then be examined. And finally passenger catchment area will be looked at.

Passengers at London airports travel from the whole of the Southeast with less than half of all passengers coming from Greater London. Airports located closer to London tend to derive more passengers from London, with 78 per cent of London City's passengers but only 33 per cent of Luton's passengers coming from Greater London (see Table 3). Heathrow is the favourite airport of Londoners, with nearly half of air journeys made by Londoners leaving from Heathrow.

Table 3: Londoners use of airports

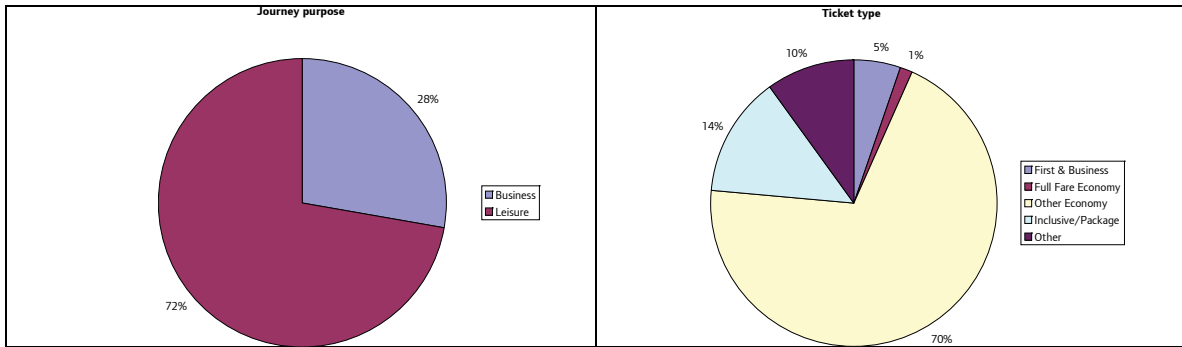| Airport	Percentage of passengers at airport coming from Greater London	Percentage of journeys made from Greater London
Heathrow	51	47
Gatwick	39	24
Stansted	42	19
Luton	33	6
London City	78	4
Total	45	100

Source: CAA 2006 Annual Passenger Survey

The largest source of passengers is Central London and the western half of Inner London. Significant numbers of passengers at London airports also come from the Thames Valley and major cities in the Greater Southeast, such as Brighton, Oxford and Cambridge. A notable proportion of passengers also travel from Portsmouth, Southampton and Reading. Only a very small percentage of passengers come from Kent and East Sussex (see Figure 4).

The large geographic size of some districts outside London exaggerates the relatively small number of passengers travelling from these destinations. In Figure 5, the map of passenger density shows the picture more clearly with a heavy concentration of passenger origins in Central London and a clear pattern of smaller cities and towns radiating out from London.

The heavy concentration of passengers in Central and west Inner London is very significant. Just over 8 per cent of London airport passengers originate in only five postcode districts, SW1, EC, W2, W1 and NW8 (see Table 4). Beyond that, no postcode district accounts for more than 1 per cent of passengers and the distribution of airport passengers is fairly broad.

**Figure 3: Passenger profile for London airports**

Source: CAA 2006 Annual Passenger Survey

Table 4: Top postcode districts of origin for London airport passengers

| Postcode District	Number of Passengers	Percentage of Passengers	District Name
SW1	2,095,000	1.97	Victoria, Pimlico & Belgravia
EC	2,092,000	1.97	City of London
W2	1,801,000	1.69	Paddington & Bayswater
W1	1,681,000	1.58	West End
NW8	1,151,000	1.08	St John's Wood
Top 5	8,820,000	8.30	

Source: CAA 2006 Annual Passenger Survey

Figure 4: Passengers by postcode district – All London airports
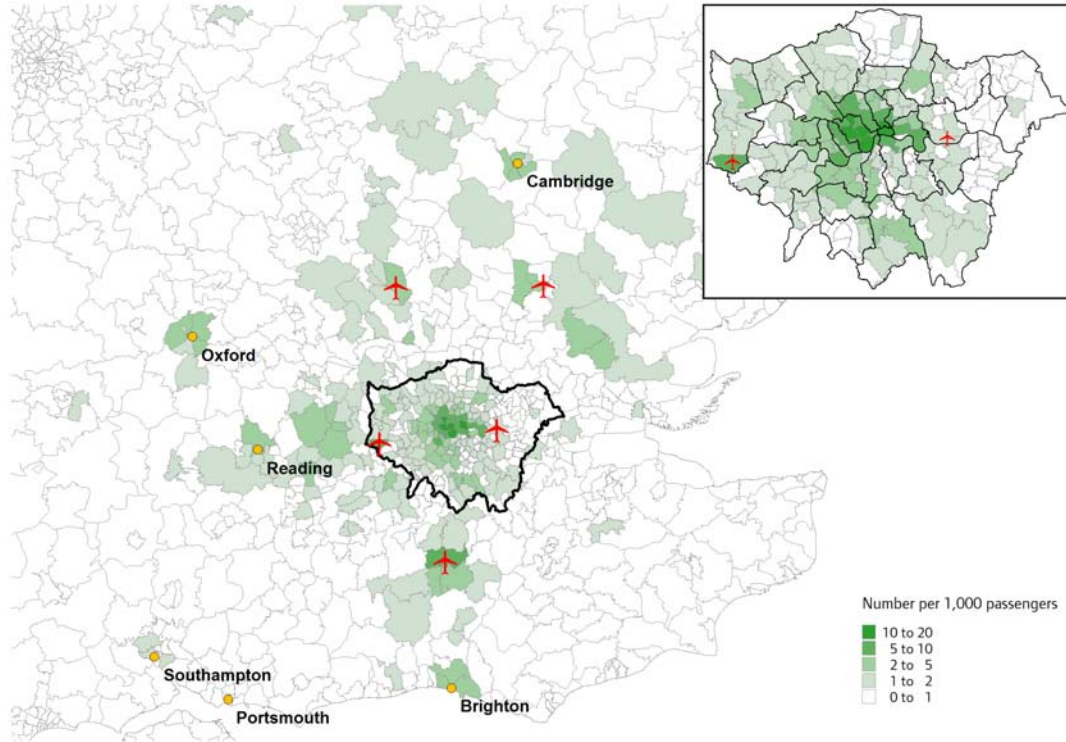
Source: CAA 2006 Annual Passenger Survey

**Figure 5: Passenger density by postcode district – All London airports**
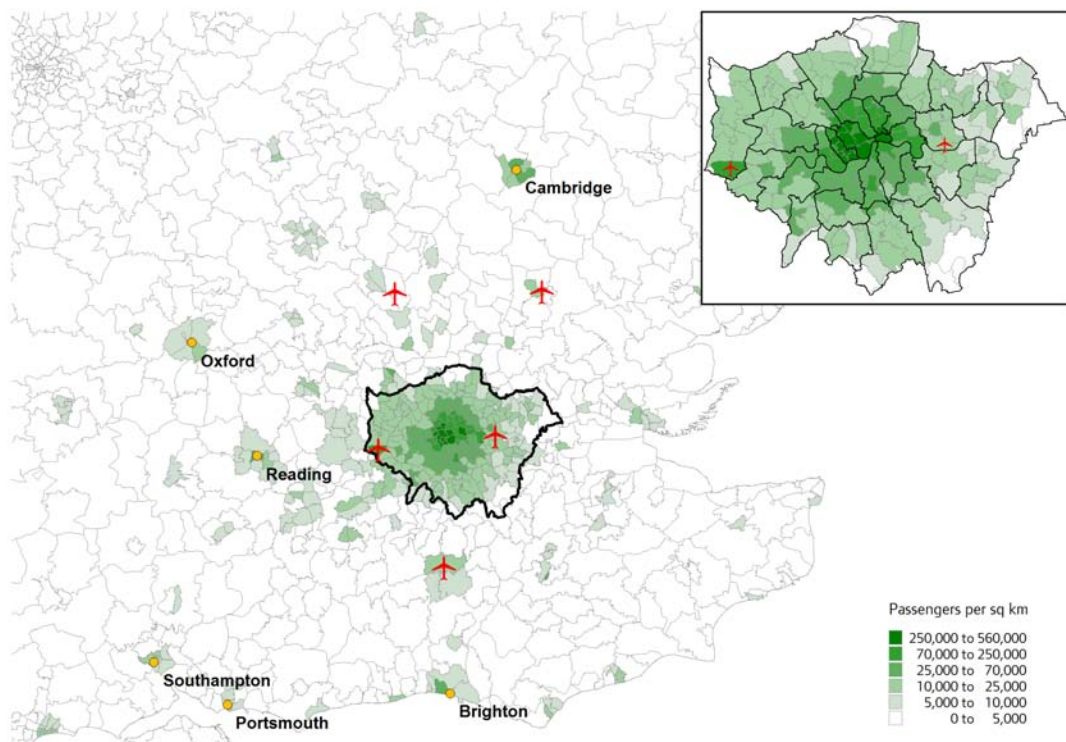
Source: CAA 2006 Annual Passenger Survey

3.1 Heathrow

Heathrow's catchment area is the largest of the London airports and extends far to the west through the Thames Valley. Because of Heathrow's offering of unique destinations, it competes with other airports for a lower proportion of its passengers. The largest concentration of passenger origins is Central London, with the top postcode districts being SW1, W2 and W1 (see Table 5). Many passengers also come from residential areas in Inner London, such as St John's Wood and Maida Vale. Very few passengers at Heathrow travel from east of Central London. The top five postcode districts, all in Central or Inner London, account for 10 per cent of passengers.

Passenger density is highest in Central London. Still, many passengers come from North West London where there are relatively poor public transport options to Heathrow. The significant passenger count in the Thames Valley appears to be relatively spread out, suggesting it may be difficult to improve public transport access to Heathrow for these passengers.

**Figure 6: Passenger profile at Heathrow**
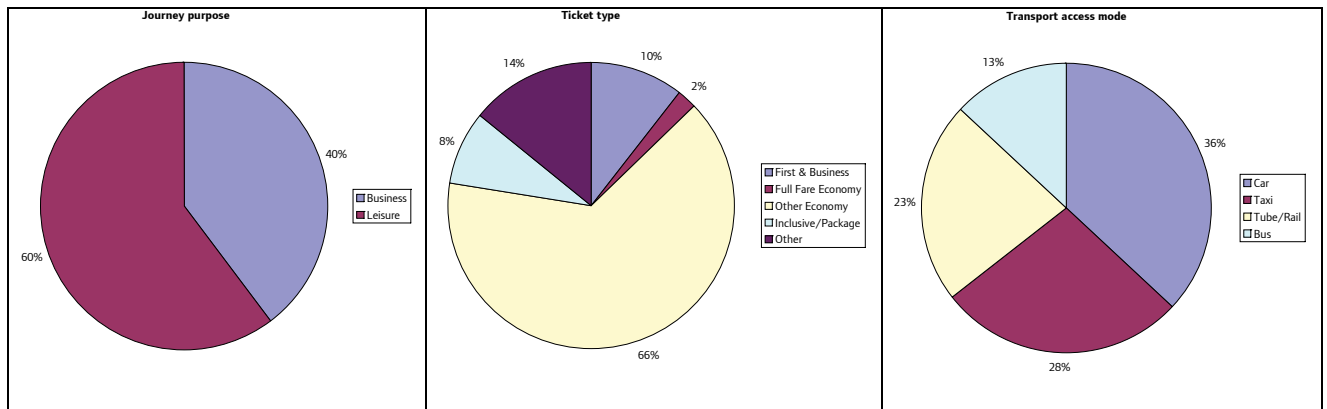
Source: CAA 2006 Annual Passenger Survey

Table 5: Top postcode districts of origin at Heathrow

| Postcode District	Number of Passengers	Percentage of Passengers	District Name
SW1	1,135,812	2.6	Victoria, Pimlico & Belgravia
W2	1,006,703	2.3	Paddington & Bayswater
W1	903,536	2.0	West End
EC	853,276	1.9	City of London
NW8	623,572	1.4	St John's Wood
Top 5	4,522,899	10.23	

Source: CAA 2006 Annual Passenger Survey

Figure 7: Passengers by postcode district – Heathrow
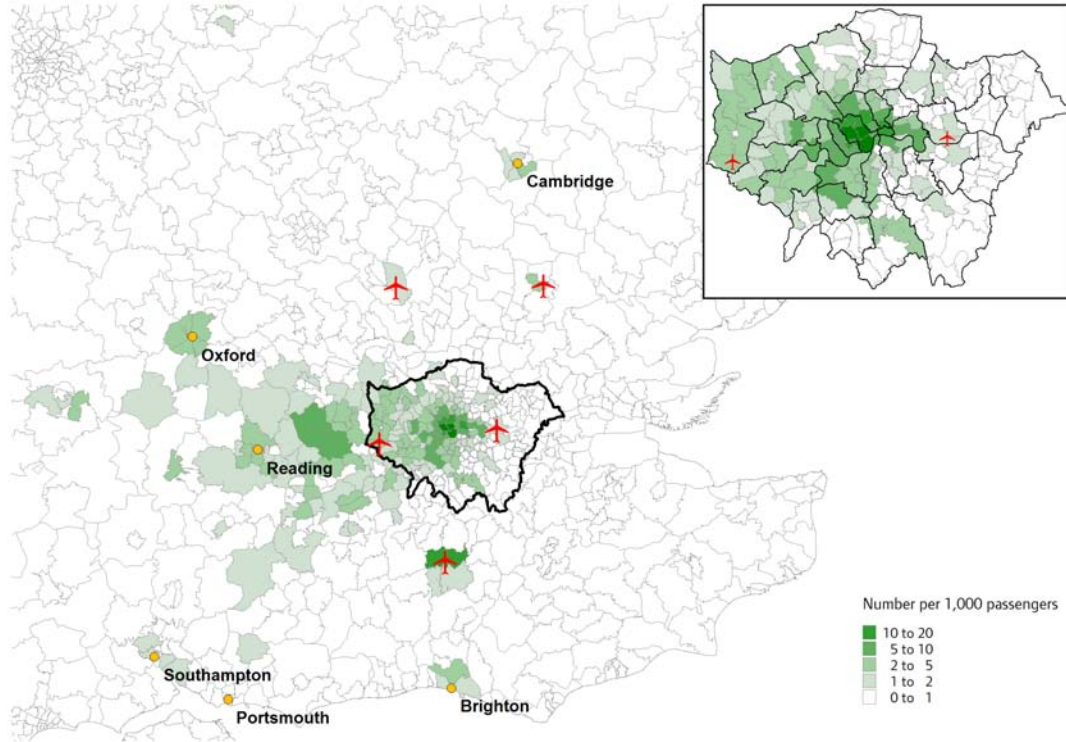
Source: CAA 2006 Annual Passenger Survey

Figure 8: Passenger density by postcode district – Heathrow
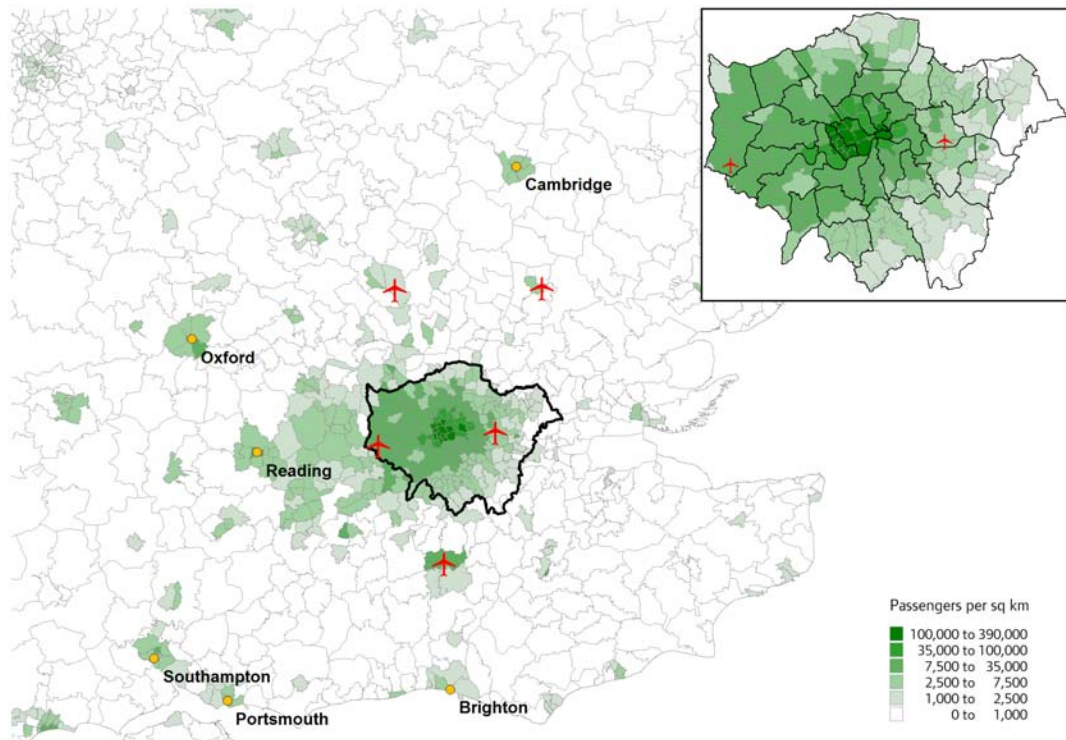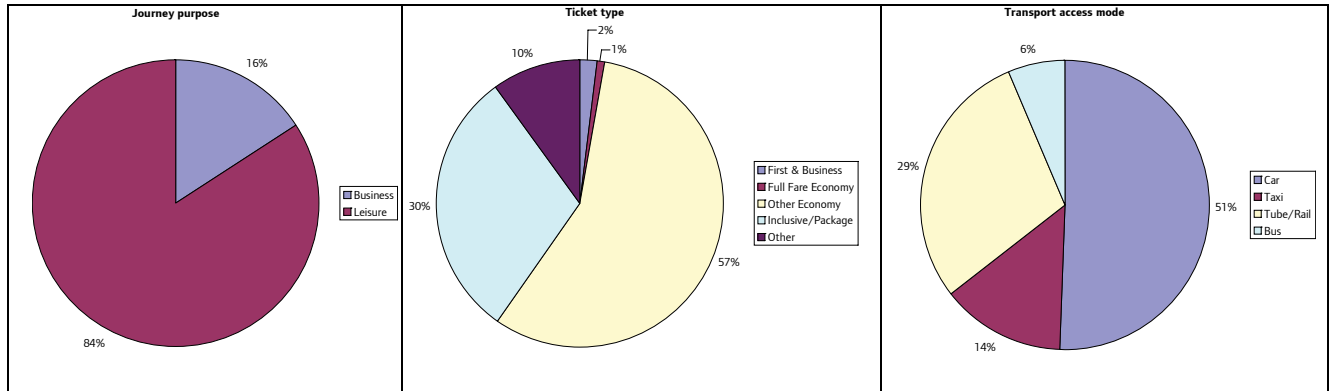

Source: CAA 2006 Annual Passenger Survey

3.2 Gatwick

Gatwick Airport was at one point a secondary hub airport but today serves a different role. European short-haul and long-haul leisure routes dominate. The data analysed here is of 2006 passenger data and will not reflect a number of significant changes at Gatwick recently, including the bankruptcy of leisure airline XL Airways and the transfer to Heathrow of long-haul flights to North America following the liberalisation of the transatlantic airspace in March 2008.

Gatwick's catchment area is very broad but with an obvious bias to the south. This reflects the unique nature of some of the airports long-haul leisure routes, such as the Caribbean, which draw passengers from outside the natural catchment area. Some passengers travel from as far as Cambridge and Oxford. The largest numbers of passengers originate in Central London, with the top postcode districts being the same as Heathrow: SW1, W2 and W1. However, the top five postcode districts account for only approximately 6 per cent of Gatwick's passengers (see Table 6).

Outside Inner London the distribution of passengers across the Southeast is thin and includes concentrations in many towns and villages around the region. These urban centres are small and dispersed. Gatwick benefits from its railway station on the key Bedford – Brighton line and connections to the broader National Rail network in South London and Reading. This allows nearly one third of passengers to arrive by rail (see Figure 9).

Figure 9: Passenger profile at Gatwick

Source: CAA 2006 Annual Passenger Survey

Table 6: Top postcode districts of origin at Gatwick

| Postcode District	Number of Passengers	Percentage of Passengers	District Name
SW1	444,853	1.5	Victoria, Pimlico & Belgravia
W2	354,576	1.2	Paddington & Bayswater
W1	351,352	1.2	West End
EC	309,488	1.0	City of London
CR0	265,916	0.9	Croydon
Top 5	1,726,185	5.84	

Source: CAA 2006 Annual Passenger Survey

Figure 10: Passengers by postcode district – Gatwick
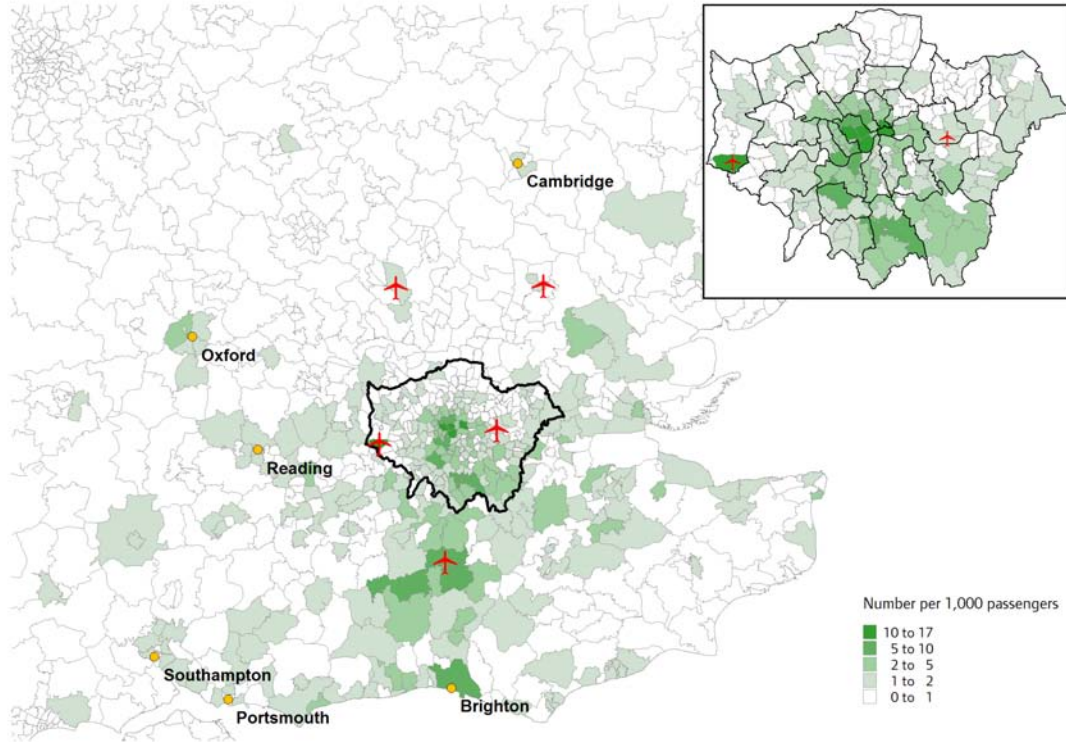
Source: CAA 2006 Annual Passenger Survey

Figure 11: Passenger density by postcode district – Gatwick
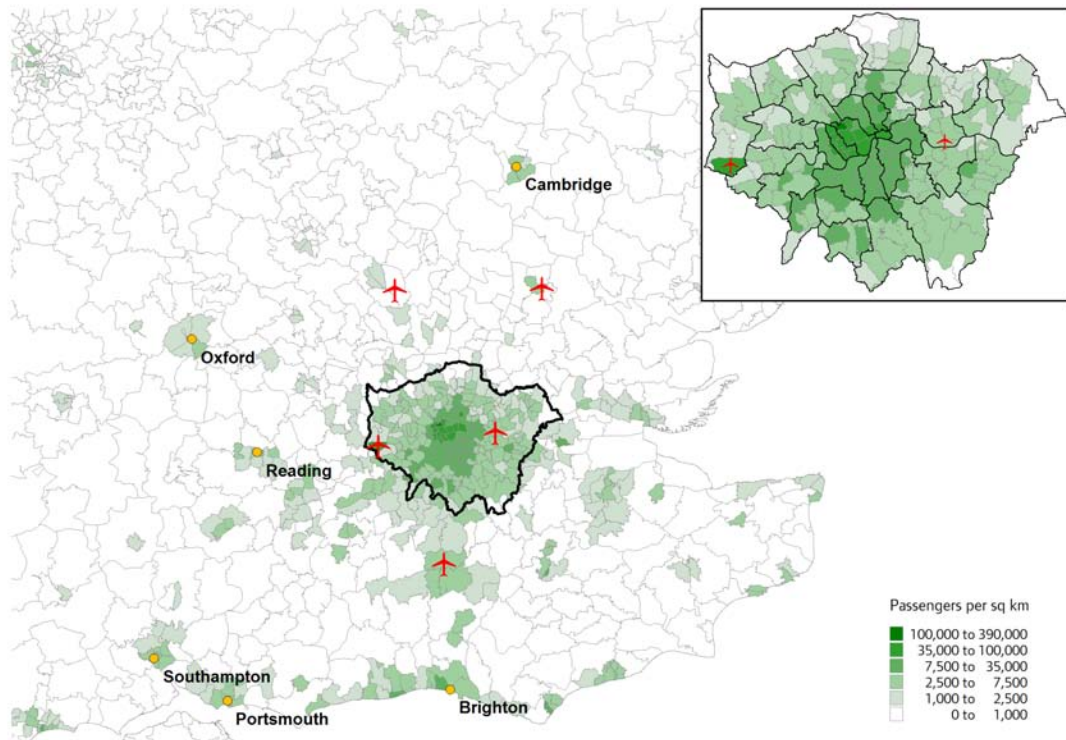
Source: CAA 2006 Annual Passenger Survey

3.3 Stansted

Stansted, in Essex, is London's third largest airport. It is used primarily for low-cost point-to-point services to Europe. There have been attempts to introduce long-haul services here but without success. American Airlines operated flights to New York from Stansted for six months, ending in May 2008. Two business class only airlines, MaxJet and Eos, operated flights to New York from Stansted before both going bankrupt.

Stansted specialises in low-cost flights, many of which fly to secondary airports in other city regions, for instance Lubeck instead of Hamburg. Other unique destinations are relatively small, such as Forli, Italy or Baden Baden, Germany. As a result, Stansted's top destinations, including Dublin and Rome compete for passengers with most other airports in the region.

Passengers at Stansted come from a broad area with the bulk of travellers coming from Inner London and East Anglia. The postcode districts from which the greatest numbers of passengers travel are EC, SW1 and CB1 (see Table 7). The top five postcodes account for 8 per cent of passengers. The greatest density of passenger origin is in Inner and North London as East Anglia is sparsely populated (see Figure 14).

A notable portion of Stansted's passengers are travelling on business, despite a distinct lack of premium services or amenities at the airport. Research has found that business travellers put high value to minimising travel time to the airport and likely select the nearest airport to fly from. Additionally, budget-conscious business travellers will act in a similar fashion to leisure passengers and will be willing to travel further for lower fares. The origin of business travellers at Stansted will be discussed later.

Many passengers at Stansted travel from relatively remote areas where public transport access is poor. As a result, public transport travel to the airport is less than 50 per cent (see Figure 12). The greatest density of passenger origin is in Central and North London, suggesting that improvements to rail connections within London may increase the number of passengers travelling by public transport.

Figure 12: Passenger profile at Stansted
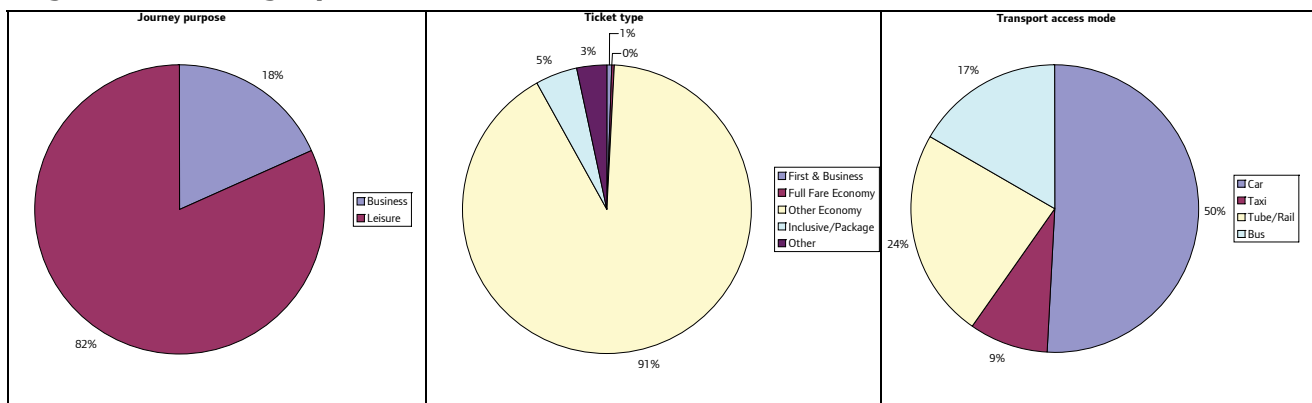
Source: CAA 2006 Annual Passenger Survey

Table 7: Top postcode districts of origin at Stansted

Postcode District	Number of Passengers	Percentage of Passengers	District Name
EC	506,580	2.4	City of London
SW1	336,052	1.6	Victoria, Pimlico & Belgravia
CB1	309,352	1.5	Cambridge
W2	276,449	1.3	Paddington & Bayswater
W1	271,641	1.3	West End
Top 5	1,700,074	8.0	

Source: CAA 2006 Annual Passenger Survey

Figure 13: Passengers by postcode district – Stansted
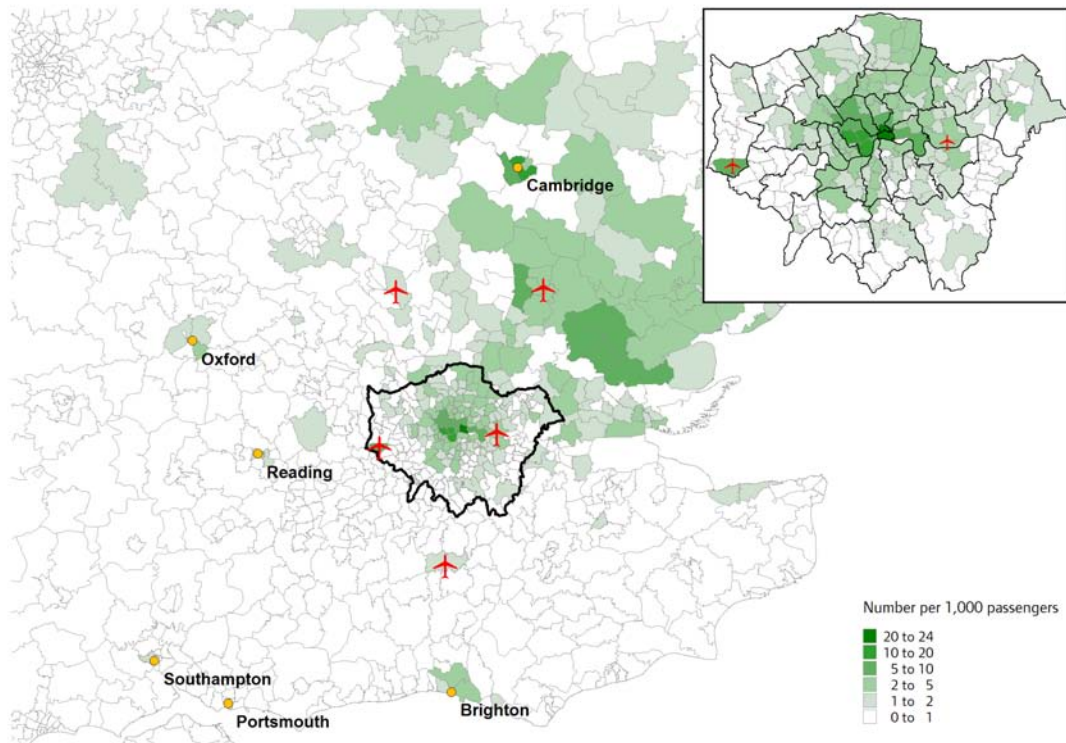
Source: CAA 2006 Annual Passenger Survey

Figure 14: Passenger density by postcode district – Stansted
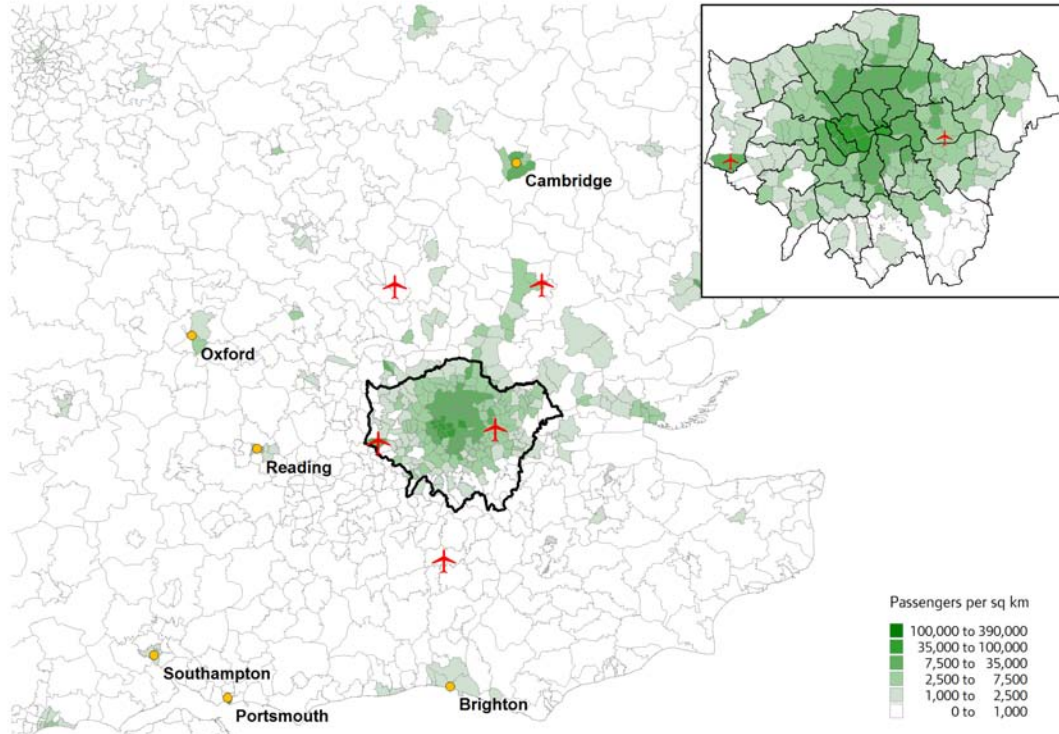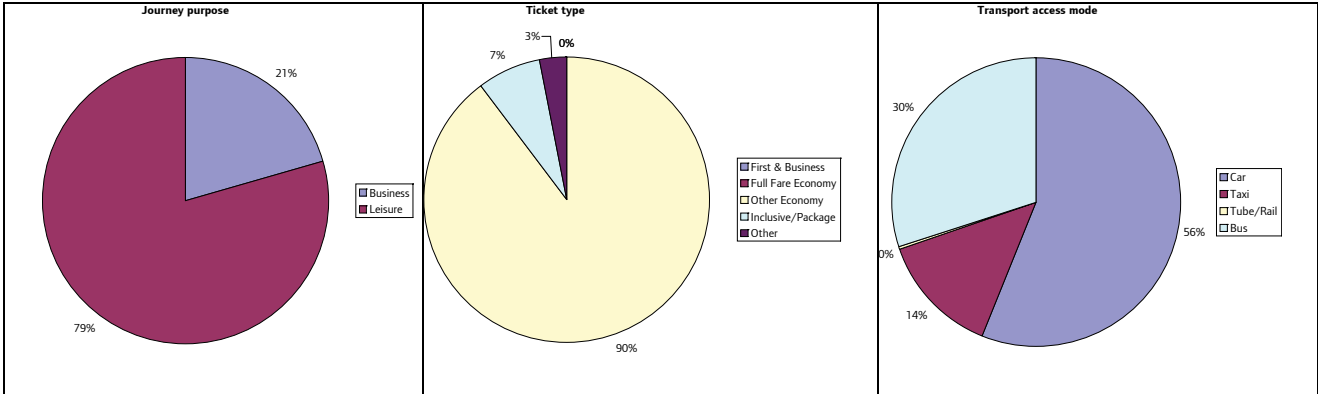

Source: CAA 2006 Annual Passenger Survey

3.4 Luton

Luton Airport is also primarily a low-cost point-to-point airport but considerably smaller than Stansted Airport with less than 10 million annual passengers. It is served by a number of low-cost and charter airlines and acts almost as a regional airport.

The catchment area for Luton is very dispersed, like Gatwick, and appears to follow the M1 north from London. Fewer passengers come from Greater London than at other airports, though Central London continues to be a major origin and destination for passengers at Luton. The top postcode districts of origin are LU2 and LU3 followed by SW1. Only 6 per cent of passengers originate in the top five districts.

Luton Airport sits between major population centres with only a small obvious passenger catchment area. It offers few unique destinations and competes for these dispersed passengers with the other London airports but also with the East Midlands, Coventry and Birmingham airports. Luton is the dominant airport in only a small area. Because passengers come from a wide area, it is unlikely public transport schemes can be devised to reduce car use outside of London and other nearby cities, such as Milton Keynes.

Figure 15: Passenger profile at Luton

Source: CAA 2006 Annual Passenger Survey

Table 8: Top postcode districts of origin at Luton

| Postcode District	Number of Passengers	Percentage of Passengers	District Name
LU2	128,499	1.4	Luton
LU3	116,725	1.3	Luton
SW1	108,303	1.2	Victoria, Pimlico & Belgravia
W2	102,525	1.1	Paddington & Bayswater
NW1	99,217	1.1	Camden & Primrose Hill
Top 5	555,269	6.2	

Source: CAA 2006 Annual Passenger Survey

Figure 16: Passengers by postcode district – Luton
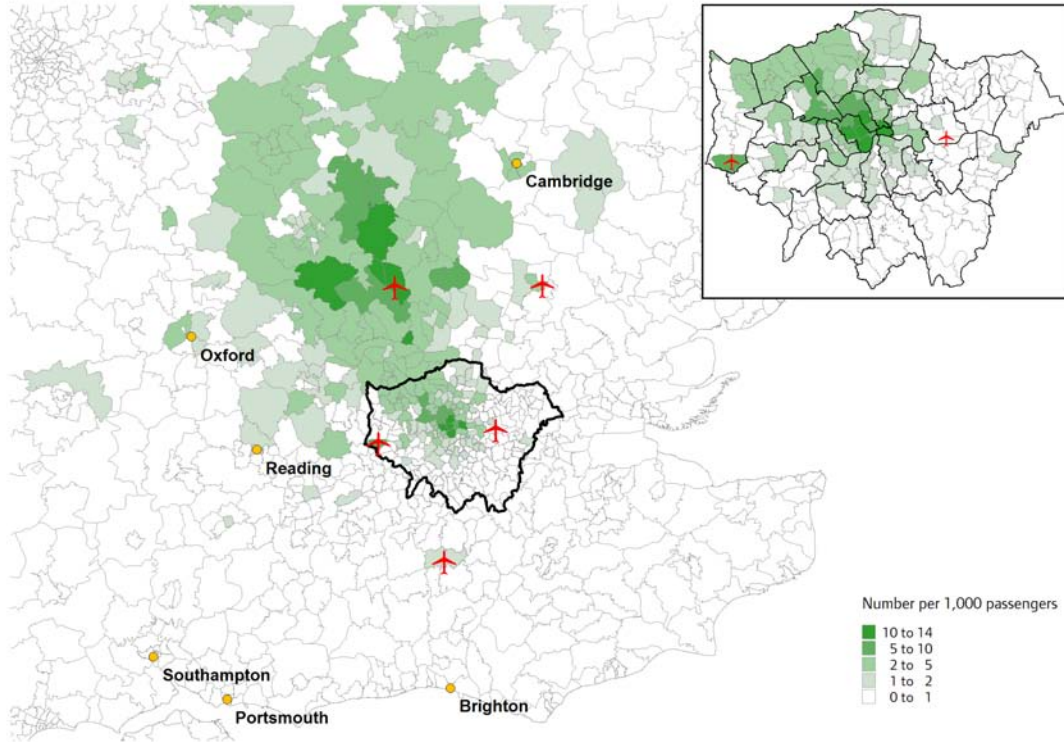
Source: CAA 2006 Annual Passenger Survey

Figure 17: Passenger density by postcode district – Luton
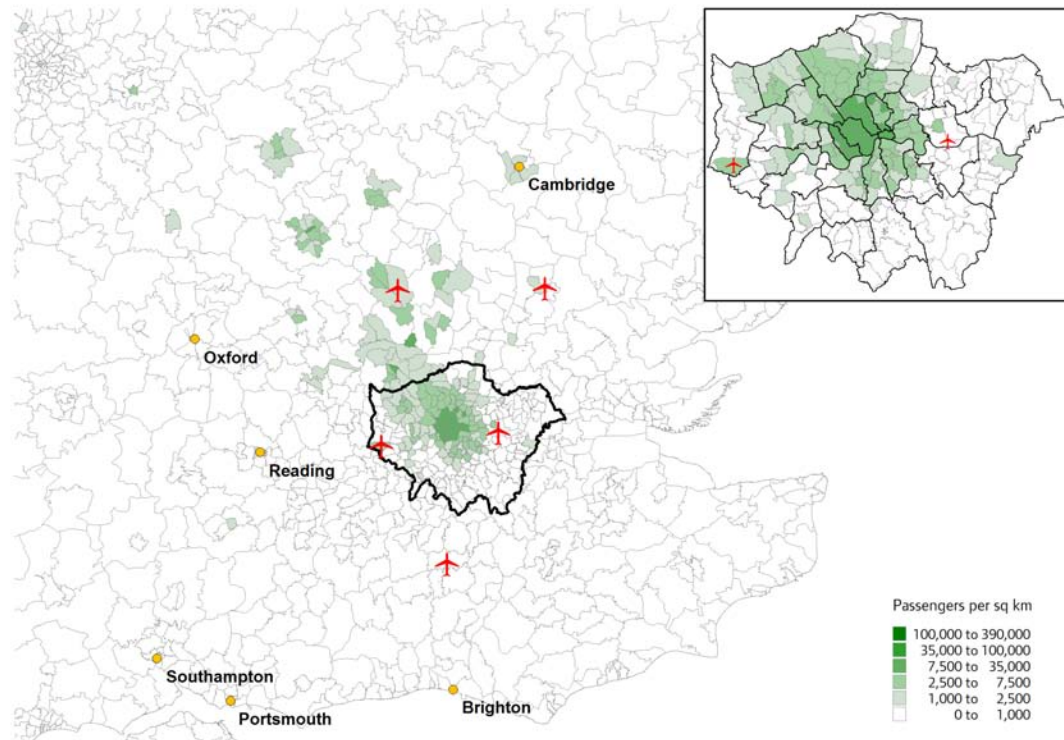
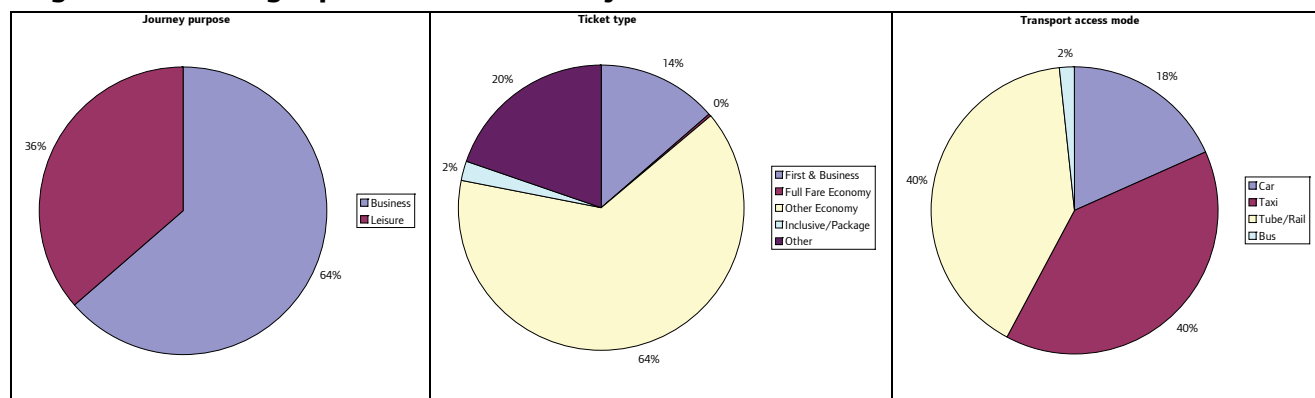*Source: CAA 2006 Annual Passenger Survey*

3.5 London City

London City Airport is located in the Docklands and is a specialty business airport. Flights from London City go primarily to mainland Europe, though British Airways has announced plans to launch a service to New York in 2009. The runway length limits the range of flights available.

Nearly two-thirds of passengers at London City are travelling for business and 14 per cent are travelling on premium ticket types.

Only two million passengers passed through London City in 2006; its catchment area is exceptionally small. The airport caters to business travellers and the postcode origin of travellers confirms this. Thirty per cent of passengers come from only five postcode districts, all in Central London or Docklands. The top postcode districts are EC, E14 and SW1 (see Table 9).

With passengers coming from such a concentrated area it is reasonable to expect a high percentage of passengers to use public transport to travel to the airport. This is certainly the case, though it should be noted that half of public transport users arrive by taxi. Business travellers are especially sensitive to journey time to the airport and not generally worried about the cost of travel to the airport. As a result, taxi use is more favourable than public transport use for many passengers at London City.

Figure 18: Passenger profile at London City

Source: CAA 2006 Annual Passenger Survey

Table 9: Top postcode districts of origin at London City

| Postcode District	Number of Passengers	Percentage of Passengers	District Name
EC	326,584	14.1	City of London
E14	177,287	7.7	Isle of Dogs
SW1	70,251	3.0	Victoria, Pimlico & Belgravia
SE1	64,555	2.8	Waterloo & Southbank
W2	60,750	2.6	Paddington & Bayswater
Top 5	699,427	30.2	

Source: CAA 2006 Annual Passenger Survey

Figure 19: Passengers by postcode district – London City
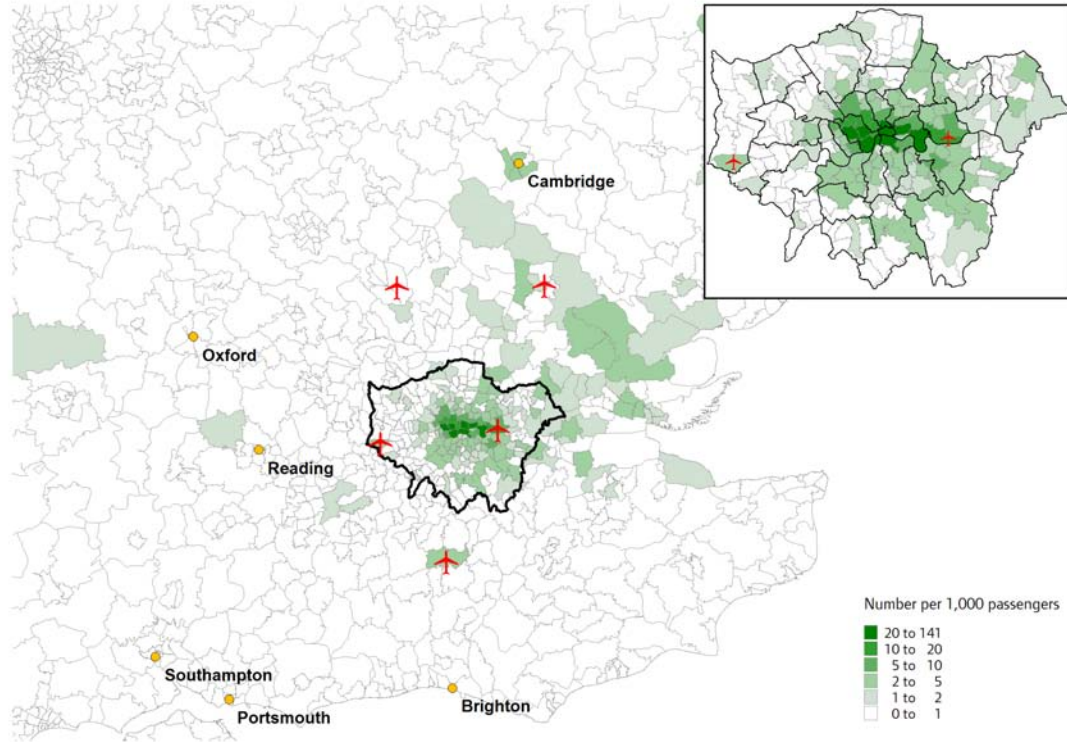
Source: CAA 2006 Annual Passenger Survey

Figure 20: Passenger density by postcode district – London City
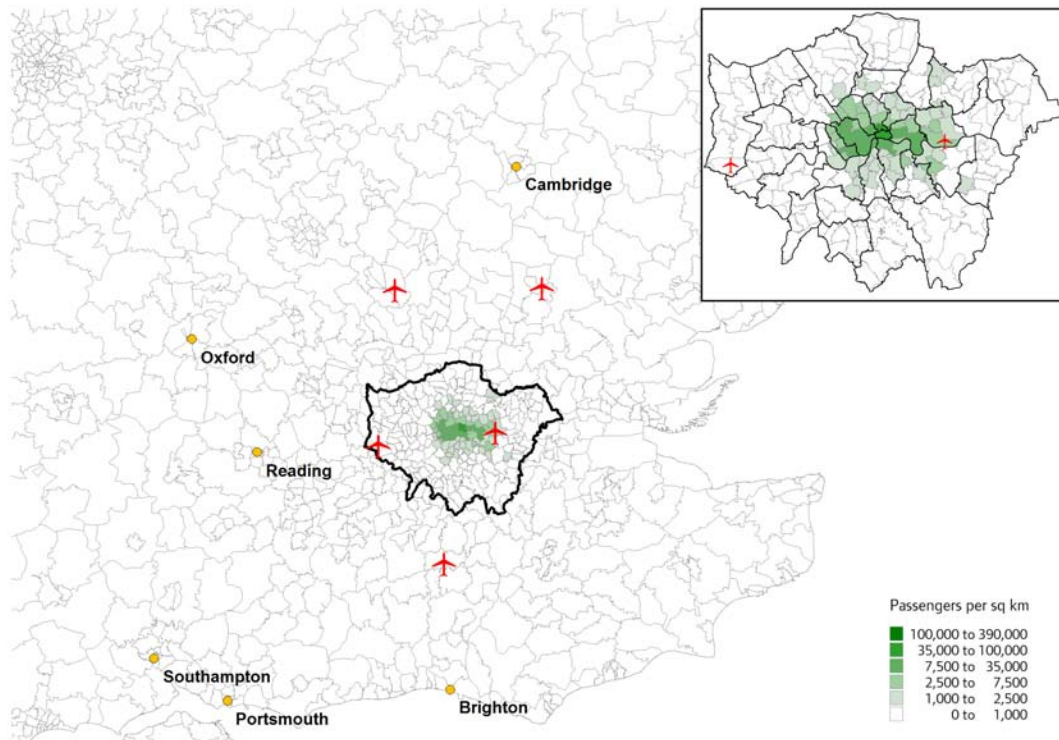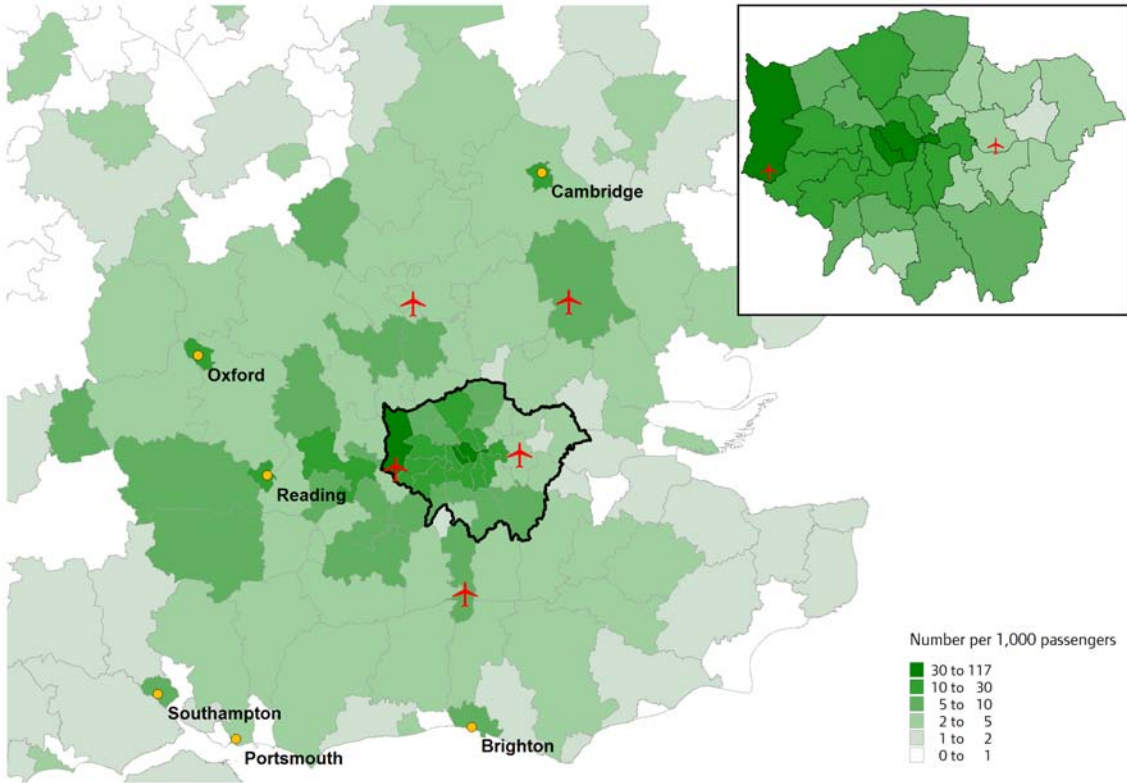

Source: CAA 2006 Annual Passenger Survey

3.6 Business travellers

Nearly one third of all terminating passengers at London airports are travelling for work. This rises to 40 per cent at Heathrow and 64 per cent at London City. Sixty per cent of all business travellers use Heathrow. However, each airport has a distinct catchment of business travellers, as is seen with all passengers. In a similar manner, Inner London, particularly the City of London and Westminster, is a significant source of business travellers for all airports.

The following maps show the percentage of business travellers at each airport travelling from each local authority. Business travellers, according to research, are likely to select the nearest airport when travelling to a destination served by more than one airport. These maps are not adjusted to show the difference in quantity of passengers travelling to each airport. The maps show that Inner London is the largest source of business travellers for all airports. Ignoring these passengers, who can access all airports roughly equally, there does appear to be a clear trend of business travellers selecting the nearest airport. The unique offering of long-haul flights at Heathrow and Gatwick give these airports larger passenger catchment areas.

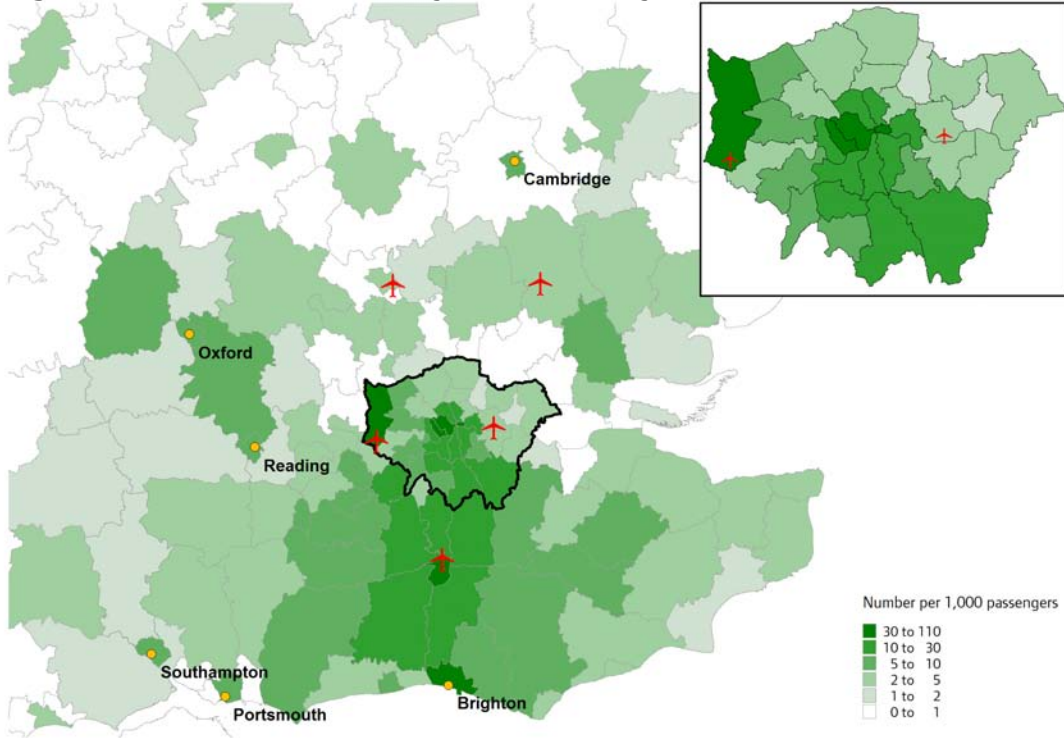**Figure 21: Business travellers by local authority – All airports**

Source: CAA 2006 Annual Passenger Survey

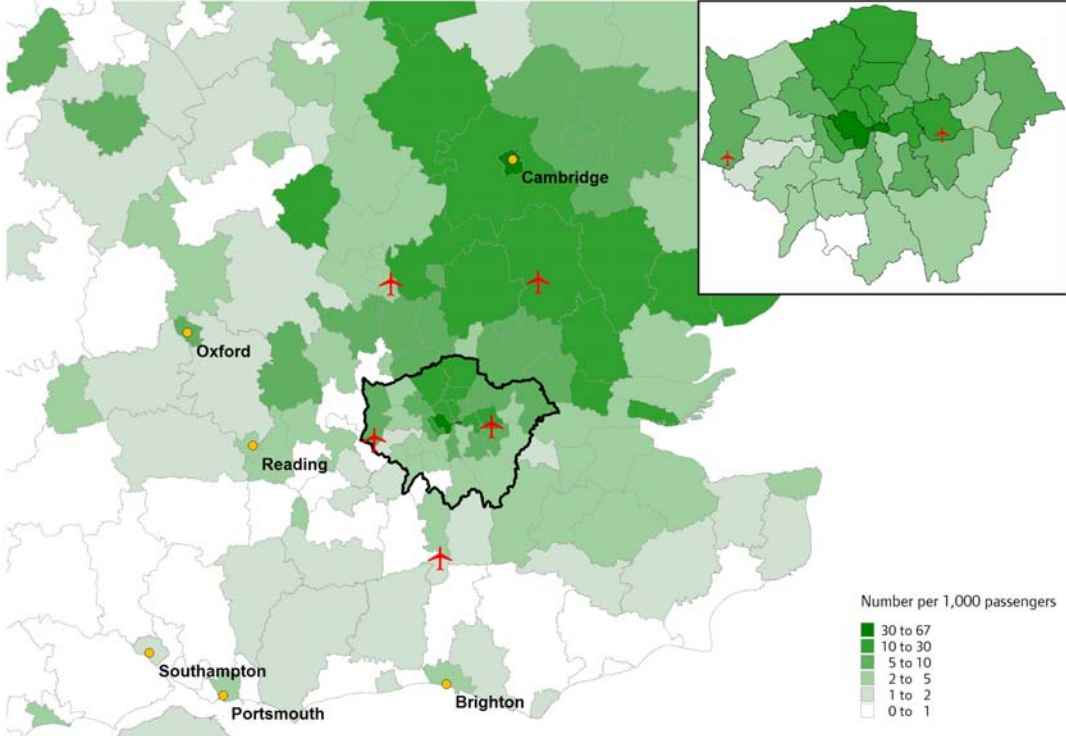**Figure 22: Business travellers by local authority – Heathrow**
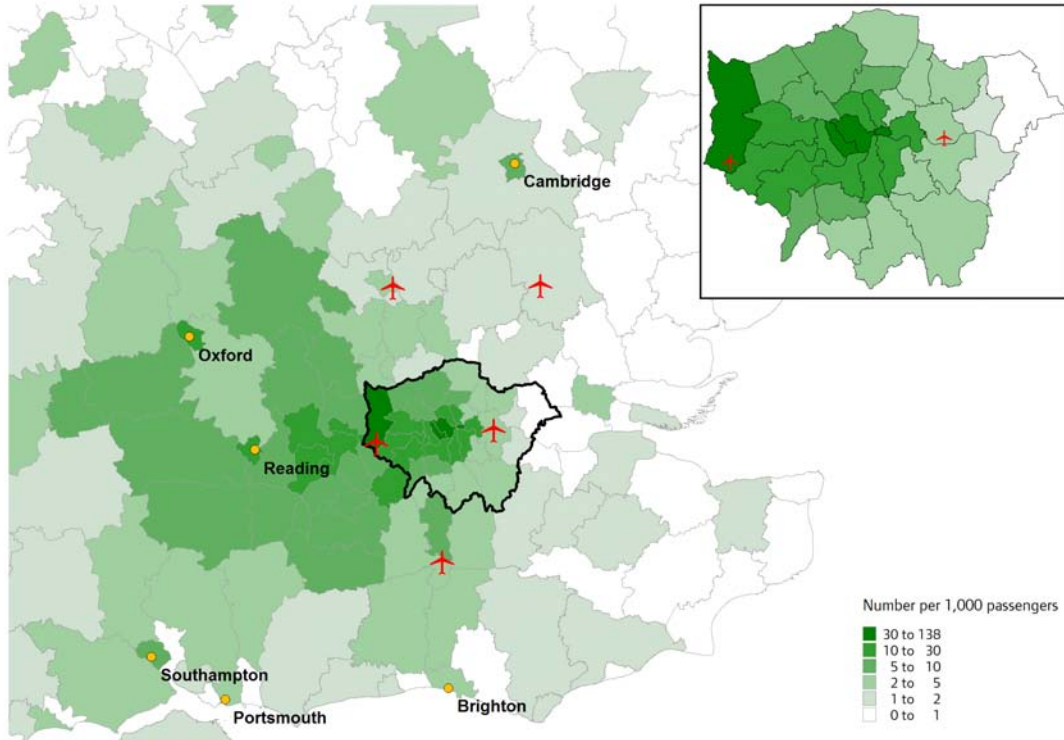
Source: CAA 2006 Annual Passenger Survey

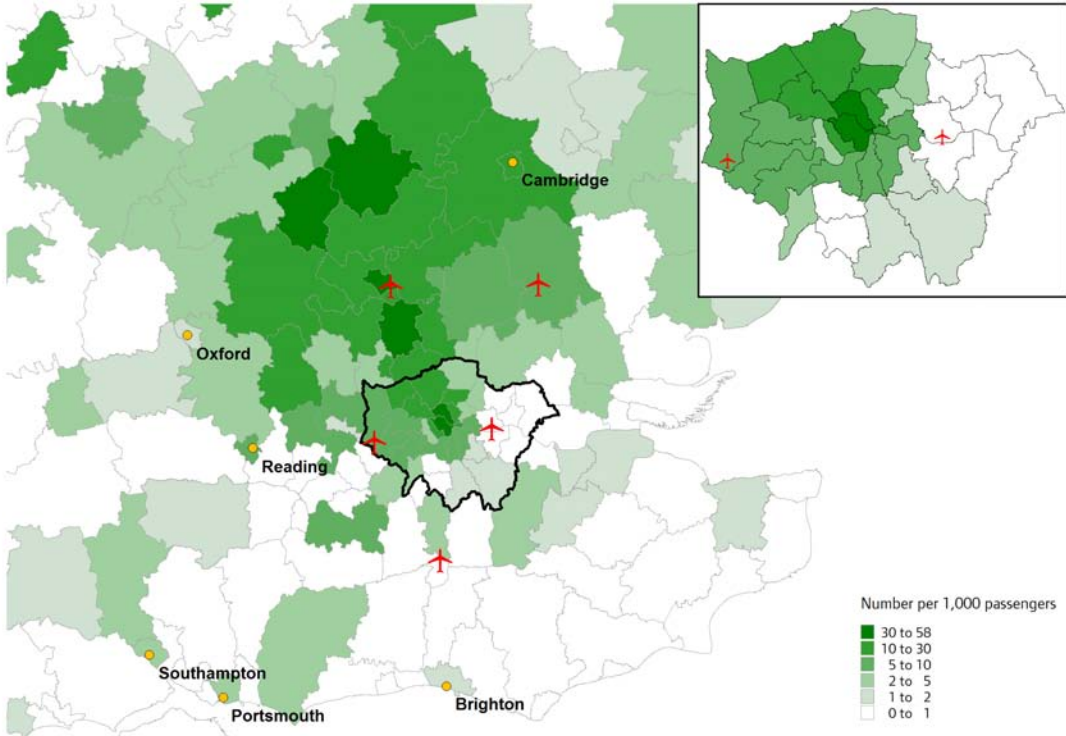**Figure 23: Business travellers by local authority – Gatwick**

Source: CAA 2006 Annual Passenger Survey

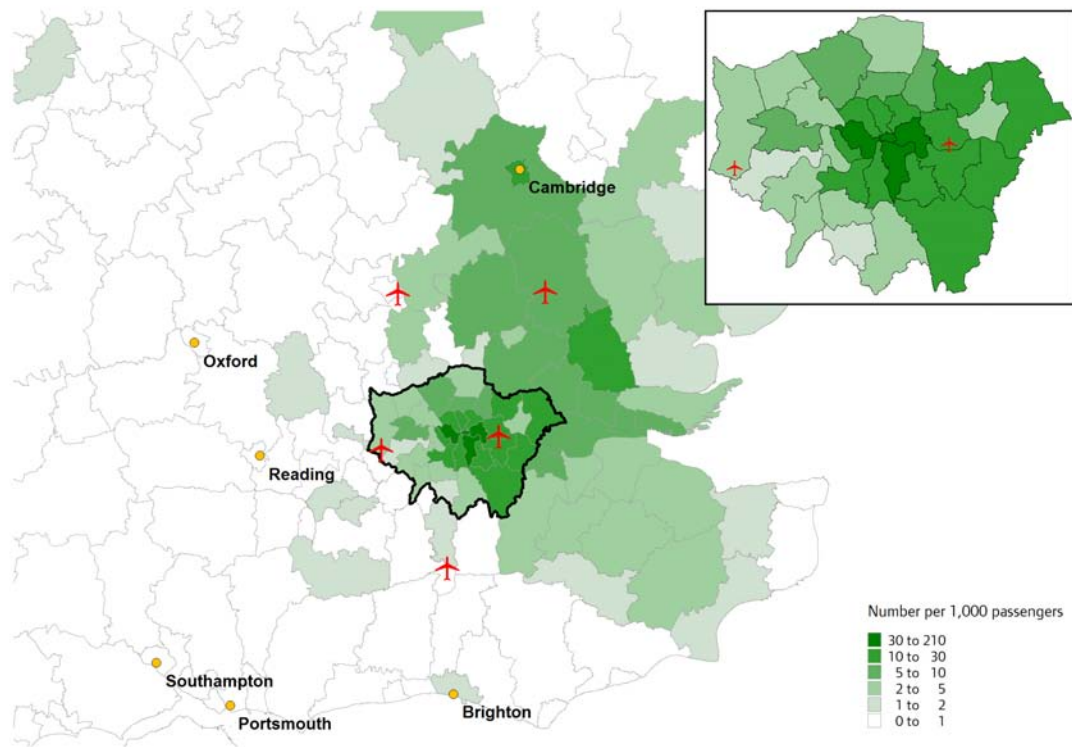**Figure 24: Business travellers by local authority – Stansted**

Source: CAA 2006 Annual Passenger Survey

Figure 25: Business travellers by local authority – Luton

Source: CAA 2006 Annual Passenger Survey

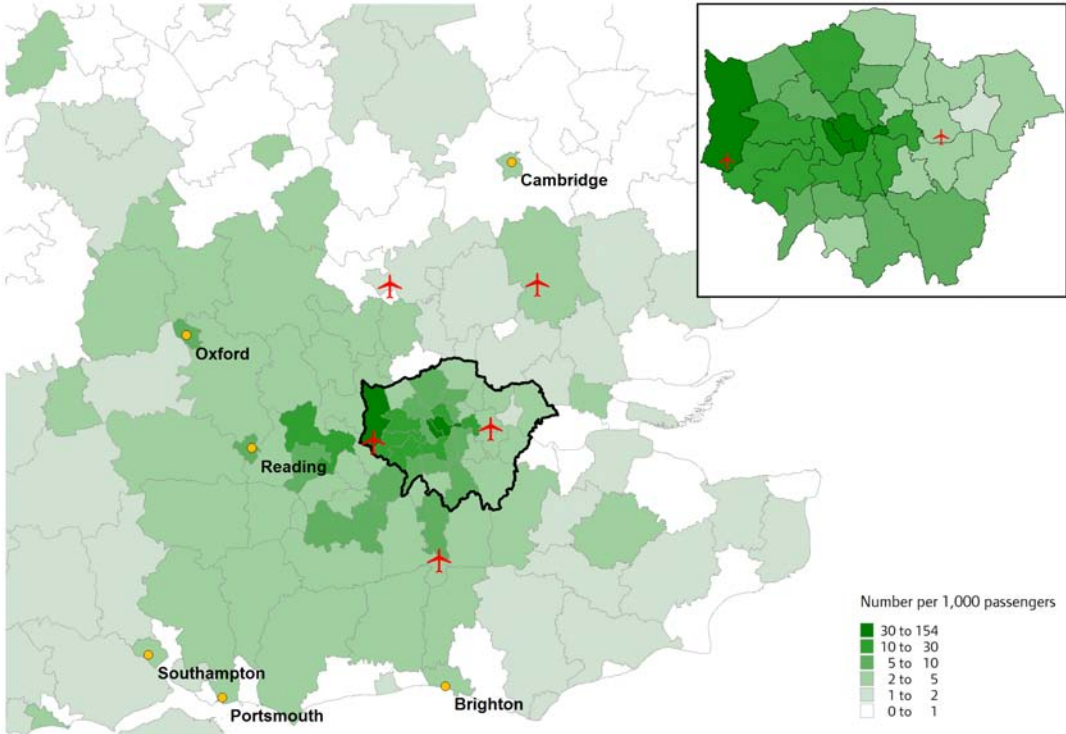**Figure 26: Business travellers by local authority – London City**

Source: CAA 2006 Annual Passenger Survey
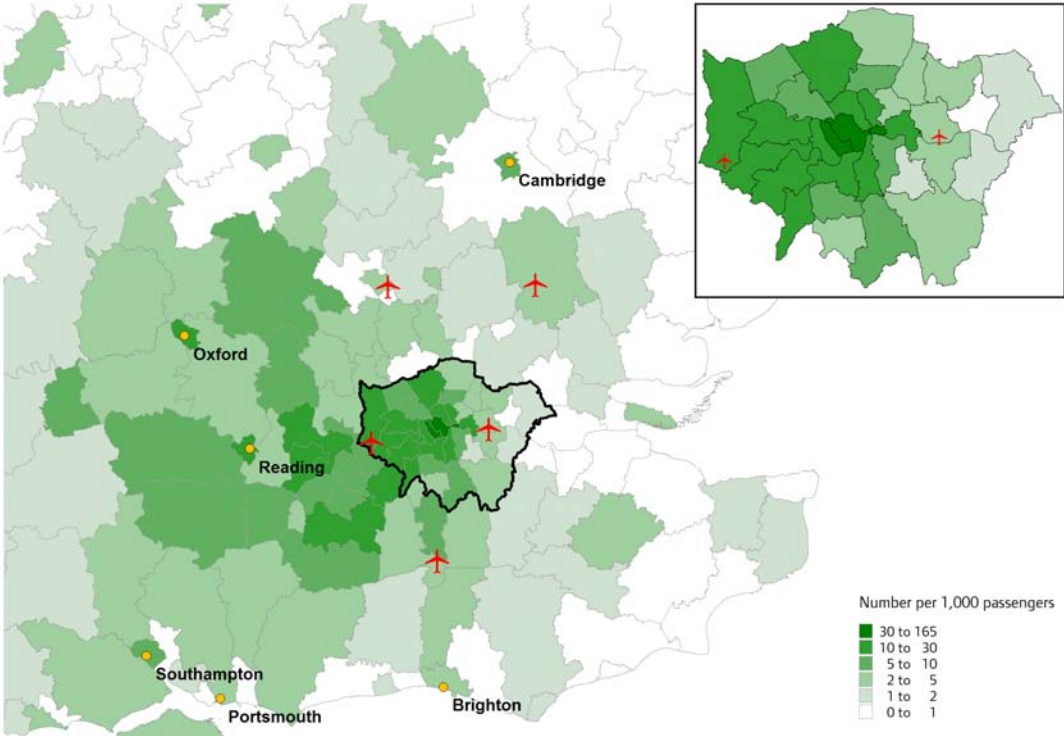
3.7 Premium fare passengers

Premium fare passengers are those travelling in premium cabins or with a fully flexible economy ticket. These passengers represent the highest profits available to airlines and carry a disproportionate weight in decision making by some airlines. Seventy-five per cent of premium passengers were flying on business and 80 per cent from Heathrow. The greatest concentration of origins and destinations of these passengers is in Central and West London. As nearly all premium fare passengers travel from Heathrow or London City, the following maps explore these two airports. Similar to business travellers, there is an obvious preference for flying from the nearest airport – where such services exist – amongst premium passengers, with premium passengers from east of London using London City and those from west of London travelling via Heathrow.

Figure 27: Premium fare passengers by local authority – All airports
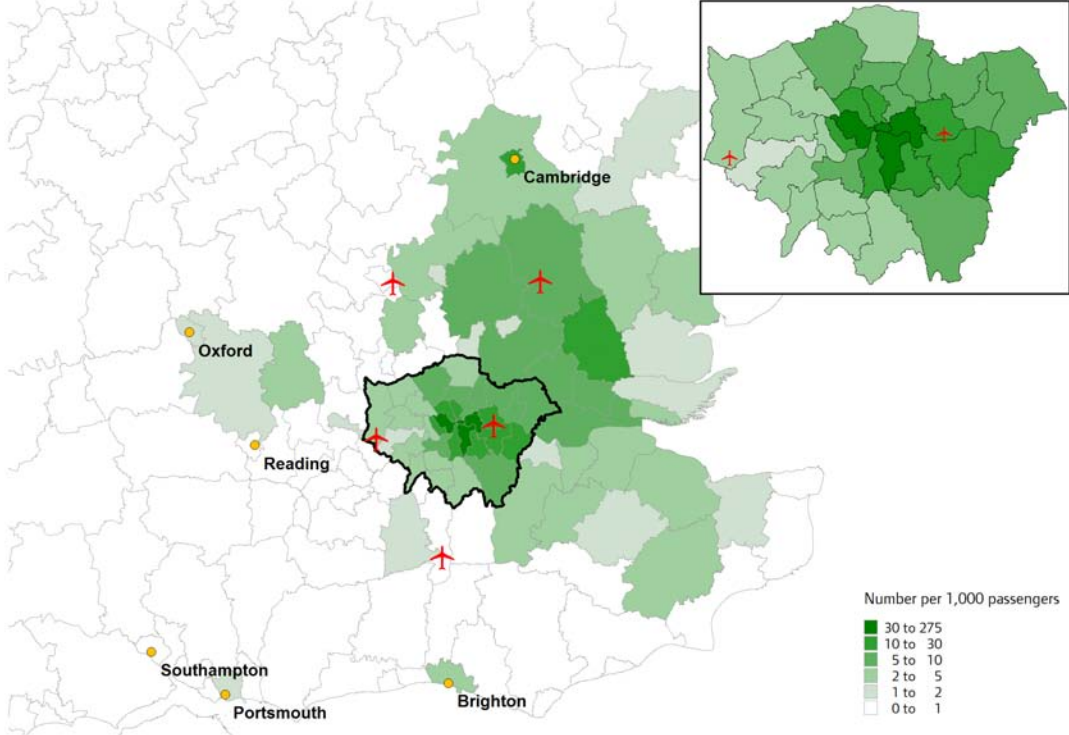

Source: CAA 2006 Annual Passenger Survey

Figure 28: Premium fare passengers by local authority – Heathrow

Source: CAA 2006 Annual Passenger Survey

**Figure 29: Premium fare passengers by local authority – London City**

Source: CAA 2006 Annual Passenger Survey

3.8 Passenger catchment area

The following maps attempt to determine the natural catchment area for each airport. This is determined by considering the percentage of air passengers from each postcode district using a specific airport. By mapping the percentage of air passengers by postcode district, rather than simply the airport with the most users from each district it is possible to analyse how distinct the catchment areas are. The following maps show that each airport has quite a distinct catchment area, with most districts showing an obvious preference for one airport. It is not possible to derive such an area for London City as the number of passengers there is too small relative to other airports.

Despite the difference in passenger numbers at each airport, the catchment area divisions lie at the point nearly equidistant from two airports. The size of airports, then, appears to partially reflect the size of population within their catchment areas. As one would expect Heathrow's catchment area is significantly larger than that of Gatwick and Stansted.

Figure 30: Percentage of passengers in postcode district using Heathrow
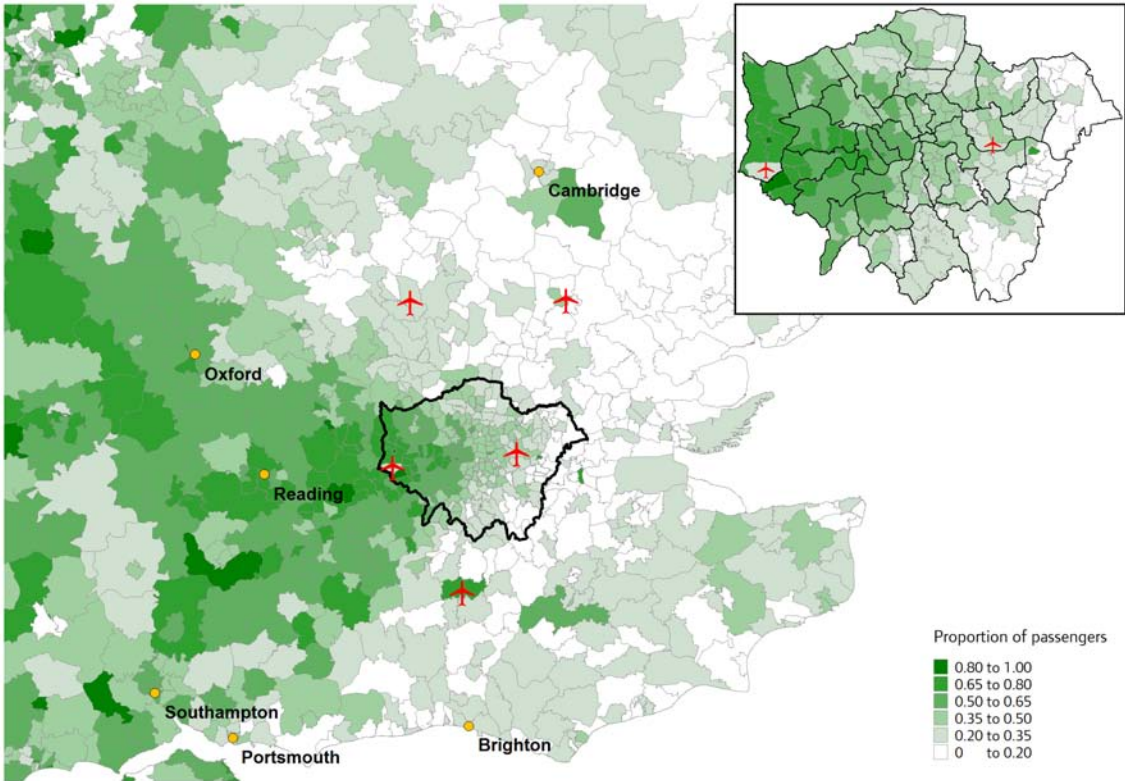
Source: CAA 2006 Annual Passenger Survey

Figure 31: Percentage of passengers in postcode district using Gatwick
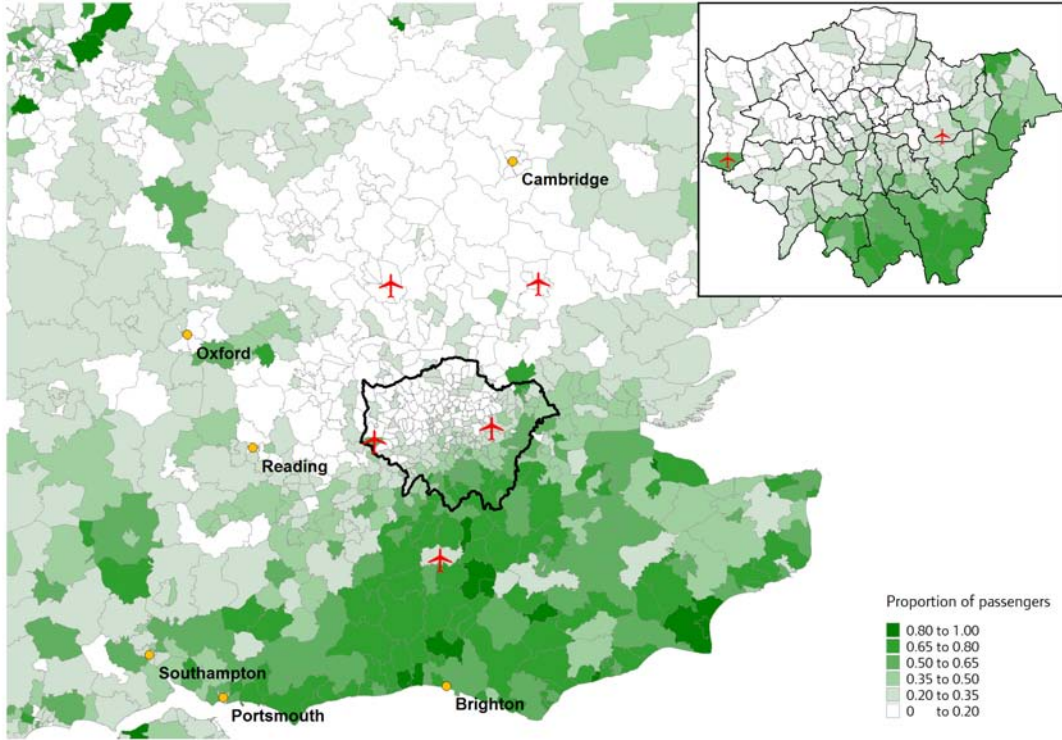
Source: CAA 2006 Annual Passenger Survey

Figure 32: Percentage of passengers in postcode district using Stansted
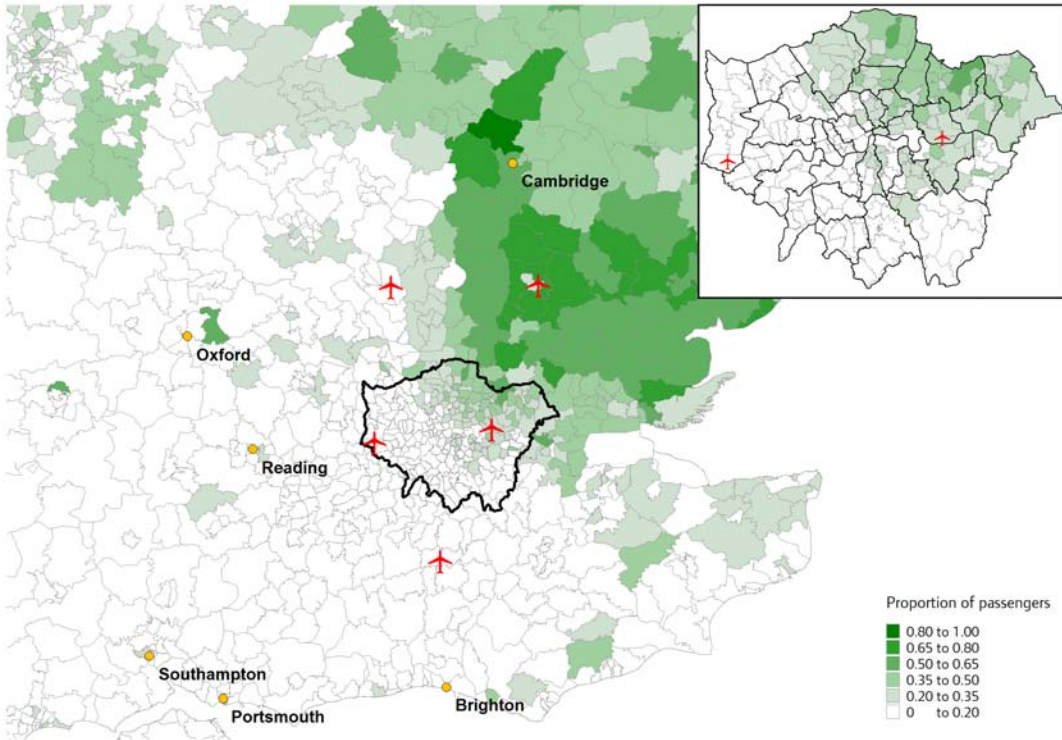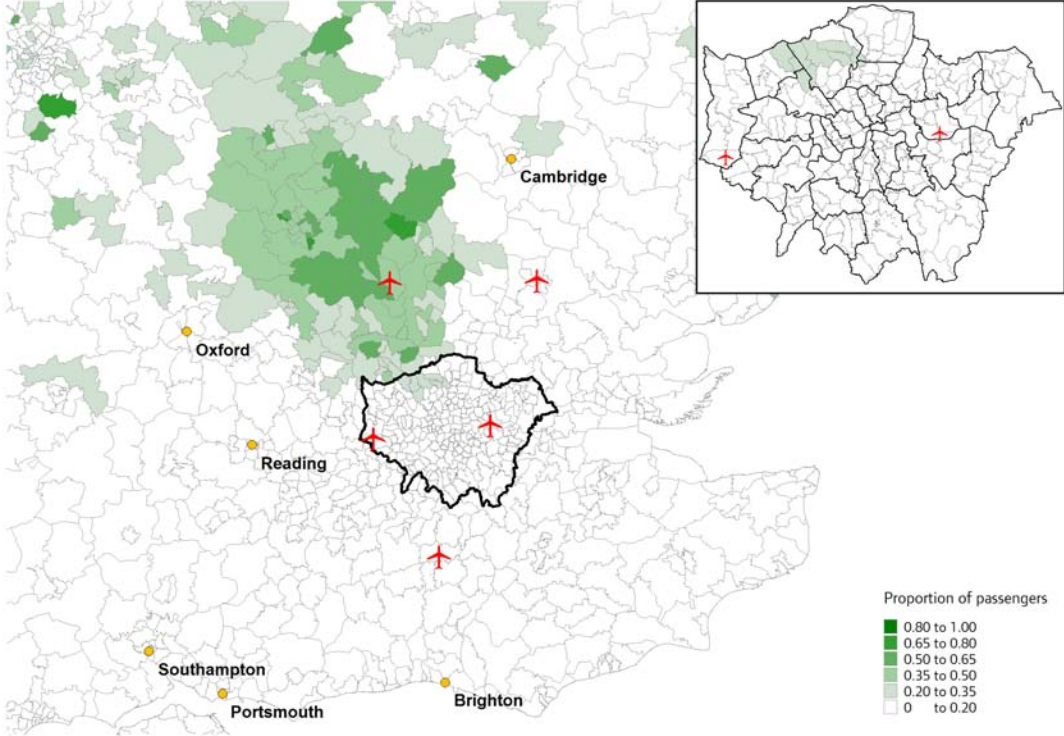

Source: CAA 2006 Annual Passenger Survey

Figure 33: Percentage of passengers in postcode district using Luton

Source: CAA 2006 Annual Passenger Survey

4. Summary

This paper has reviewed the distribution of passenger origins at London airports. Airport choice in London appears to be dominated by ease of access to airports, as found in the literature. This reflects the high degree of competition between airports as many popular destinations are served from more than one airport including Dublin, Edinburgh, Rome and Madrid. Competition for passengers is highest for those originating in Central and Inner London where accessibility to each airport is most similar. Airports, and the airlines using them, compete on fares and quality of service offered. It is no surprise that the lowest fares tend to be from airports that are least accessible, such as Stansted and Luton.

For all airports, Inner London is the main source of passengers. The top passenger origin postcode districts are SW1, EC and W2. These postcode districts are amongst the top districts for each airport individually as well and are also key origins of business travellers. The two airports with the highest number of unique destinations, Gatwick and Heathrow, have the largest number of passengers and the largest catchment areas. Heathrow tends to dominate in Inner London, where access to all airports is relatively similar. Luton airport has a very small catchment area.

Outside Central London, passenger origins are not distributed evenly. There is an obvious bias to the west in most airport catchment areas with West London contributing more passengers than East London. Even at Stansted Airport to the East, a large proportion of passengers travel from West London and urban settlements in the Thames Valley. This reflects the distribution of population in the Greater Southeast region.

Business travellers show a clear bias toward the west with a significant number coming from Central London and the outer metropolitan area west of London. Relatively few business travellers originate east of London.

Airports located closest to Central London draw the largest percentage of passengers from Greater London and see the largest proportion of passengers arrive by public transport. With the exception of Central London, many areas are difficult to connect to airports by public transport. This is because passenger density is too low to justify service for airport passengers alone. As a result, public transport schemes to increase the number of passengers travelling by public transport should consider bundling schemes with services that can carry other passengers.

This research suggests that demand for new airport capacity will be correlated with population distribution in the Greater Southeast, with Inner London being a major source of demand. New airport capacity placed far from Central London may not be appealing to airport users and will not see high use of public transport, particularly if new capacity is also sited far from existing urban centres outside London.

Appendix: Civil Aviation Authority (CAA) data explained

The data obtained from the Civil Aviation Authority recorded the responses of passengers to the annual Airport Passenger Survey. The CAA conducts this survey on departing passengers at airports in the UK. The survey results are scaled up to match the number of passengers using the airport based on the flight number given. For example if 15 passengers are surveyed on flight AX1 and 150 passengers actually flew on the flight the passenger count attributed to the survey response is 10.

This paper analyses only terminating passengers. Terminating passengers are those whose journey by air begins or ends at a London airport. Another CAA data source, the UK Airport Statistics, defines terminating passengers as all those that begin or end a flight at an airport. This would include those transferring from one flight to another but not the rare cases where a flight makes a stop at an airport but continues on with the same flight number.

When completing the survey, passengers are asked the postcode district of origin but many respond with town names of local authorities. Some do not answer this question. Where this is the case, passenger counts have been apportioned to postcode districts. Within each geography given, whether local authority or county, unspecified passengers are apportioned between the postcode districts in proportion to the number of postal delivery points within that area. A postal delivery point can be commercial or residential. The same was done at the local authority level for the analysis of business travellers and premium ticket passengers.

The data was used primarily at postcode district level. The postcode district is the first part of the postcode before the space, eg, SE1. In this paper some postcode districts have been amalgamated. This is the case for all subdivisions within the W1 and SW1 postcode districts. The postcode area was used in Central London. The postcode area is indicated by the letter or letters at the start of the postcode, eg, SE. The EC and WC postcode areas were used in preference to postcode districts, as the districts would not be legible on the maps.

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Chinese

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Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυ-δρομικά στην παρακάτω διεύθυνση.

Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطھ کریں

Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

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