

Aviation Trends

Quarter 1 2014



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Introduction

Welcome to Aviation Trends. Every quarter we update key figures which summarise the levels of activity at the UK's airports. Each edition also includes a section entitled 'Did you know?' which presents interesting facts derived from the various data sources available to the CAA; this time we look at how much, despite significant growth in flight and passenger numbers at Heathrow, the noise contour area around the airport has reduced since the early 1970s given the improvement of aircraft performance and engine design.

In this edition of Aviation Trends, we show a rise in the number of passengers, in the number of commercial flights and in the cargo tonnage handled at all UK airports, compared to the levels in the same quarter last year.

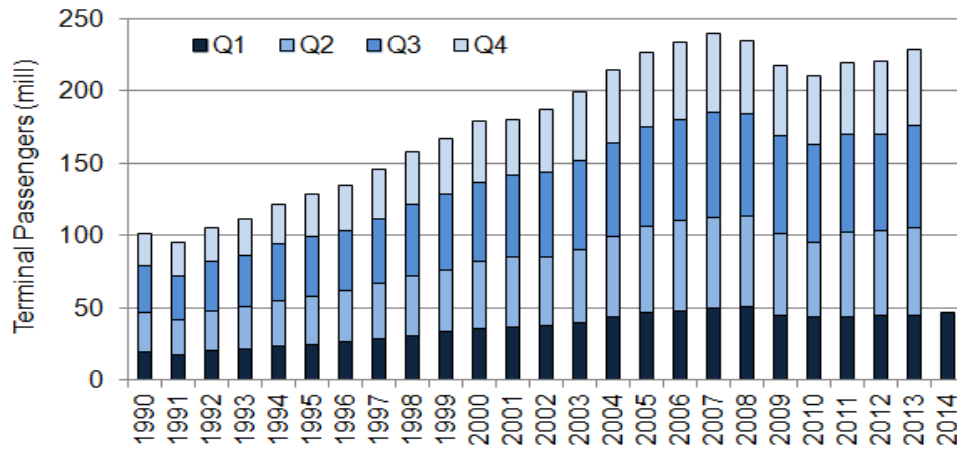
The Aviation Trends series is available at www.caa.co.uk/aviationtrends, part of Aviation Intelligence, the online home of the CAA's monthly airport and airline statistical publications. Please note that historic numbers may be subject to minor change as the result of prior period adjustments¹. Due to rounding of figures, there may be an apparent slight discrepancy between the sum of the constituent items and the total as shown.

For a list of all statistics available on the CAA website, see www.caa.co.uk/statistics.

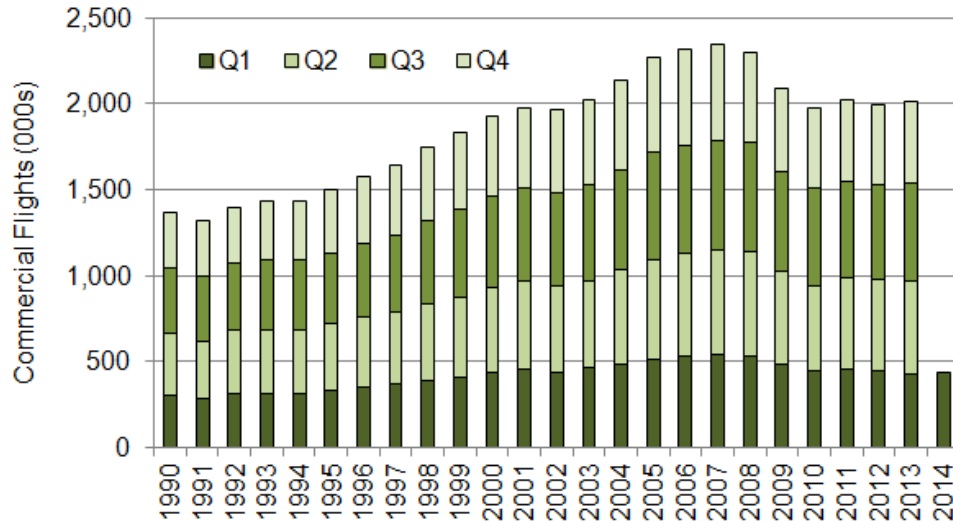
¹ Also, in editions of Aviation Trends prior to quarter 4 2008, all figures included activity at Channel Islands and Isle of Man airports. These islands are not formally part of the UK, and as we wish to present only the trends at UK airports, their figures are now excluded.

1. Historical overview of traffic see note 5 on p.17

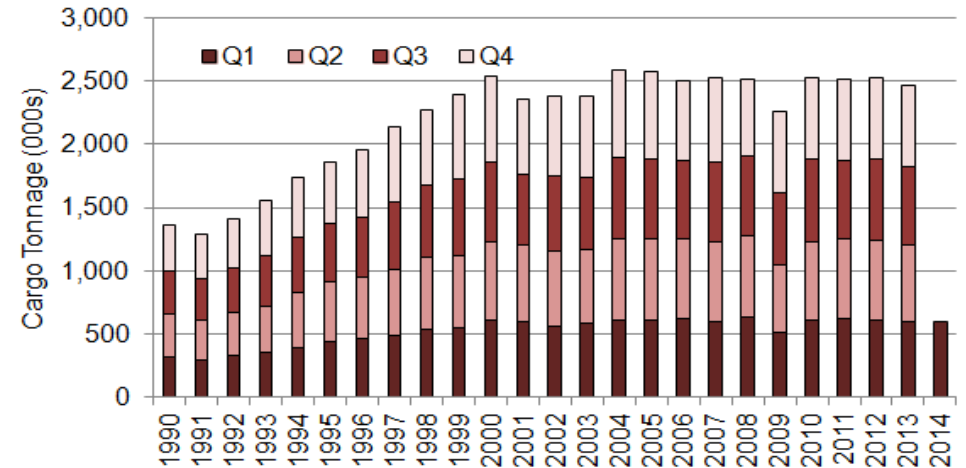
a. Terminal passengers



b. Commercial flights



c. Cargo tonnage



The three time-series charts on this page show both seasonal and annual trends in UK aviation activity in terms of terminal passengers, commercial flights and cargo tonnage.

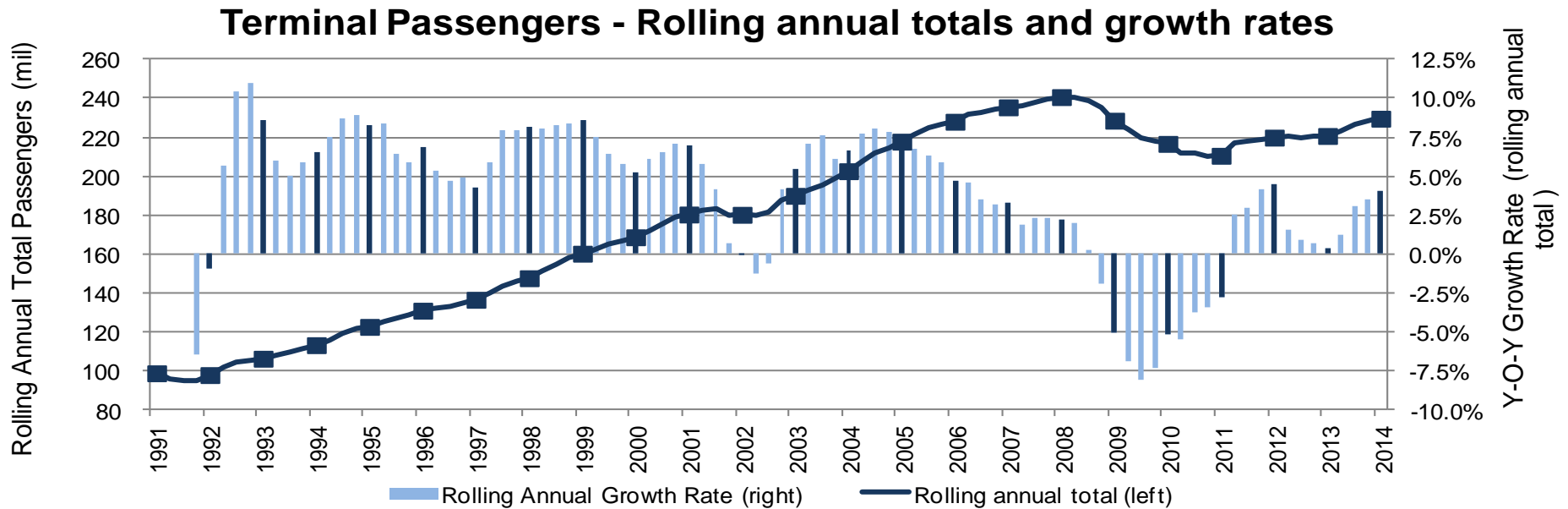
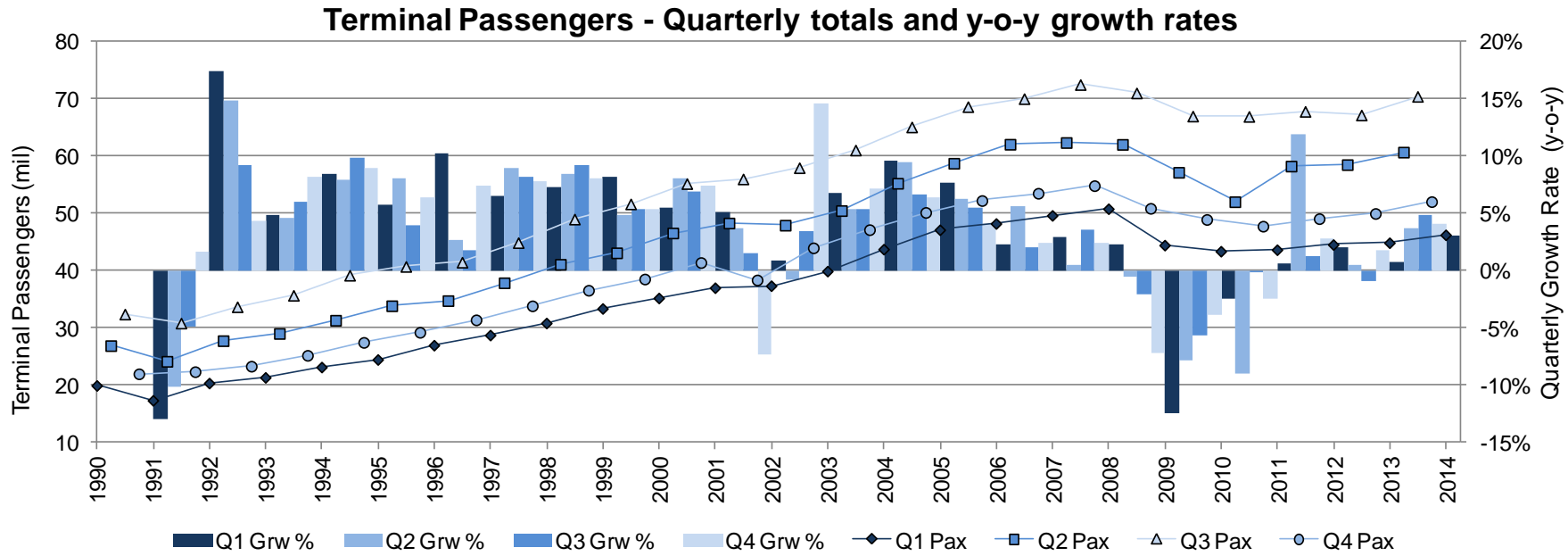
On pages 4 to 6, the top charts show traffic volume in each quarter (left axis), and the corresponding year-on-year quarterly growth rates (right axis).

The bottom charts show the rolling annual total traffic in each quarter (left axis), and the year-on-year percentage growth of the rolling annual total (right axis). The highlighted data points indicate the annual traffic volumes and growth rates of the respective calendar years.

In Q1 2014, UK airports handled 46.3 million terminal passengers (an increase of 3.1%), 439 thousand commercial flights (an increase of 1.6%), and 600 thousand tonnes of cargo (an increase of 0.4%) compared to the same quarter last year.²

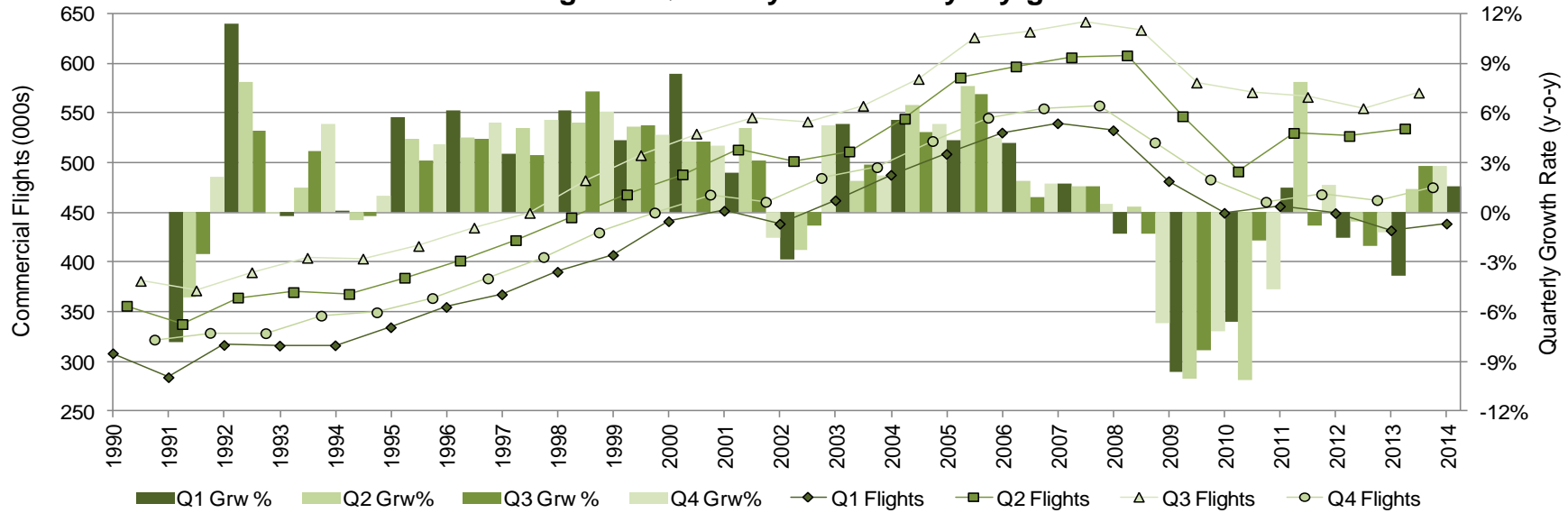
² These figures include traffic to and from North Sea oil rigs, which are excluded from the detailed tables in Parts 2 – 7.

a. Terminal passengers

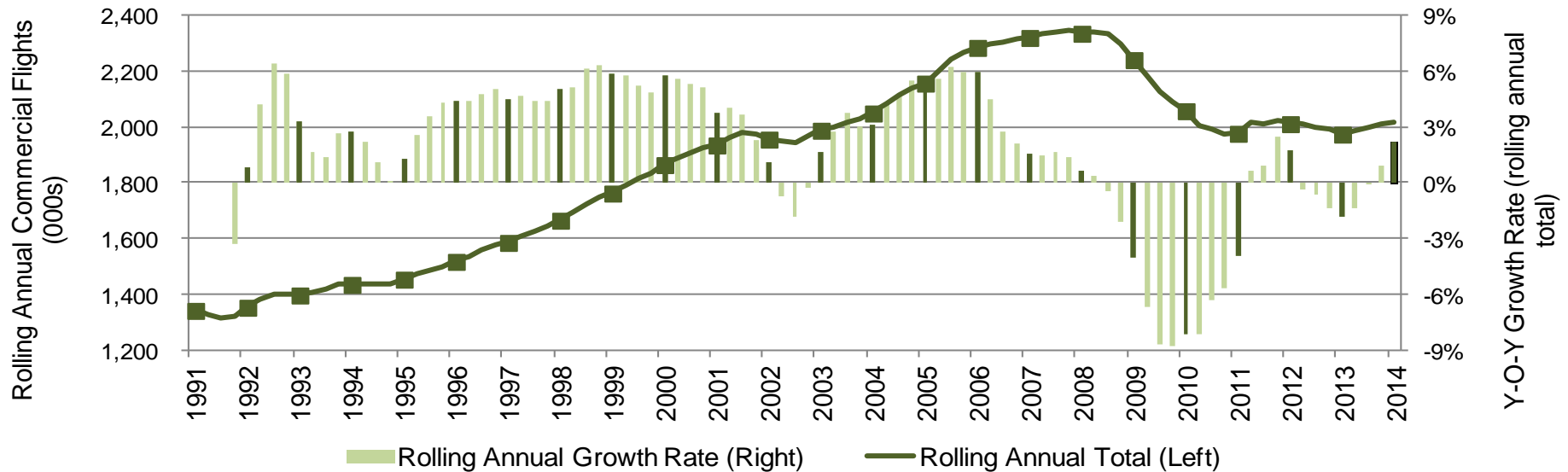


b. Commercial flights

Commercial Flights - Quarterly totals and y-o-y growth rates

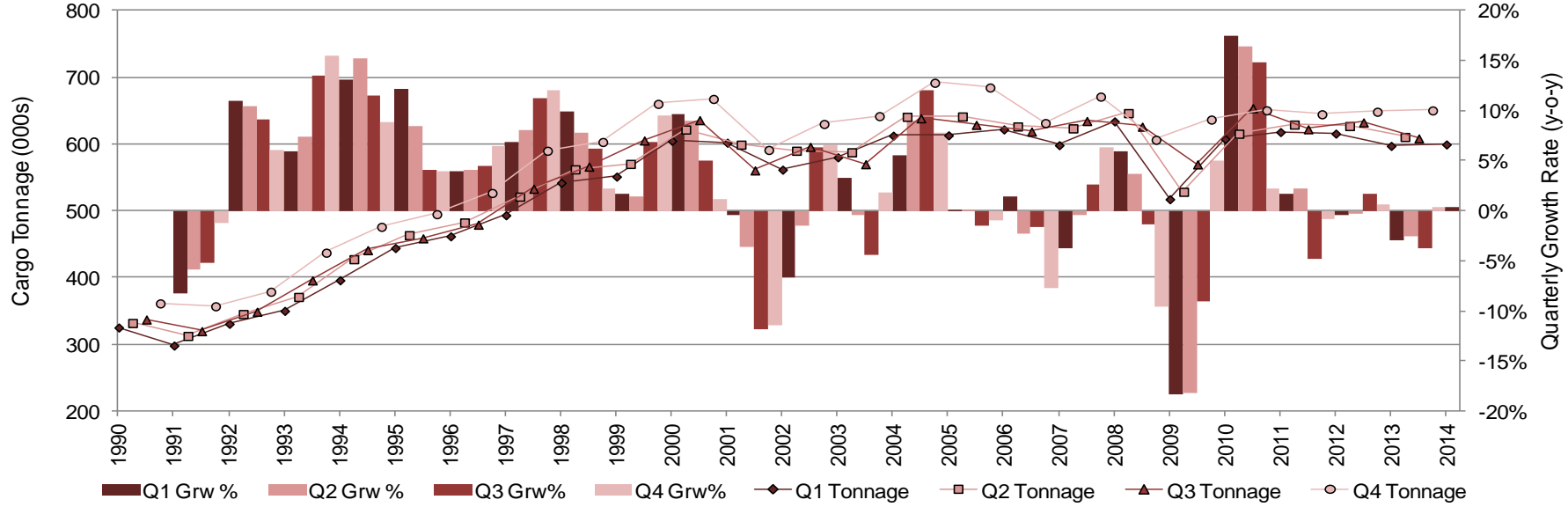


Commercial flights : Rolling annual totals and y-o-y growth rates

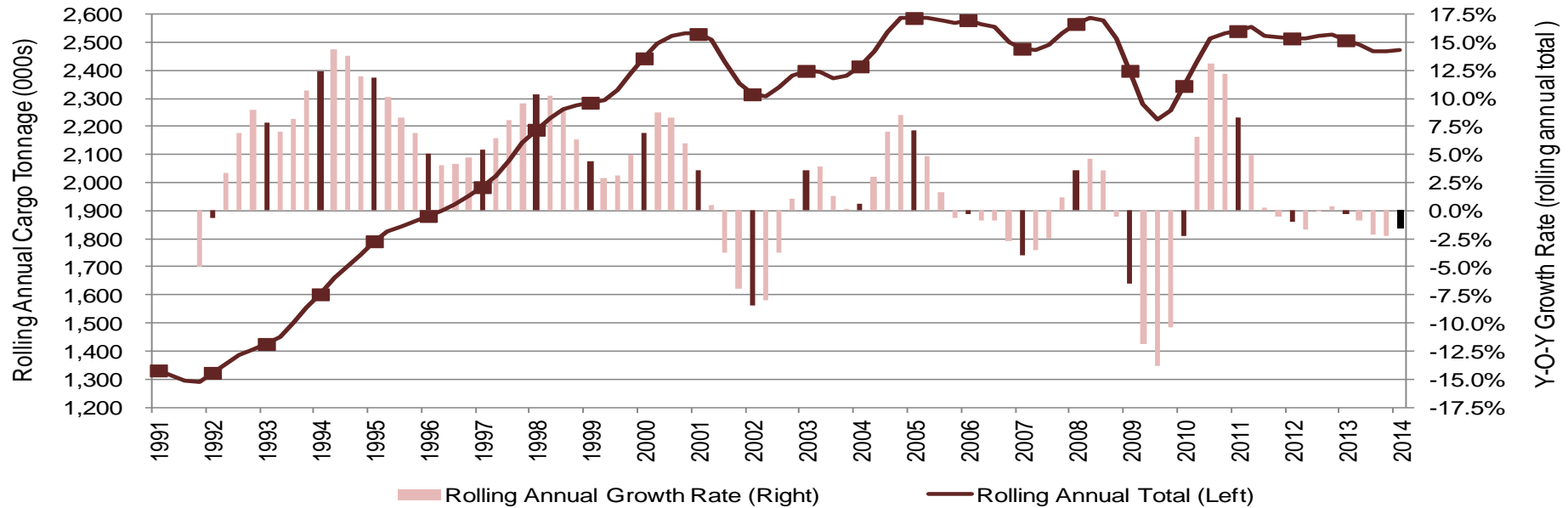


c. Cargo tonnage

Cargo Tonnage - Quarterly totals and growth rates

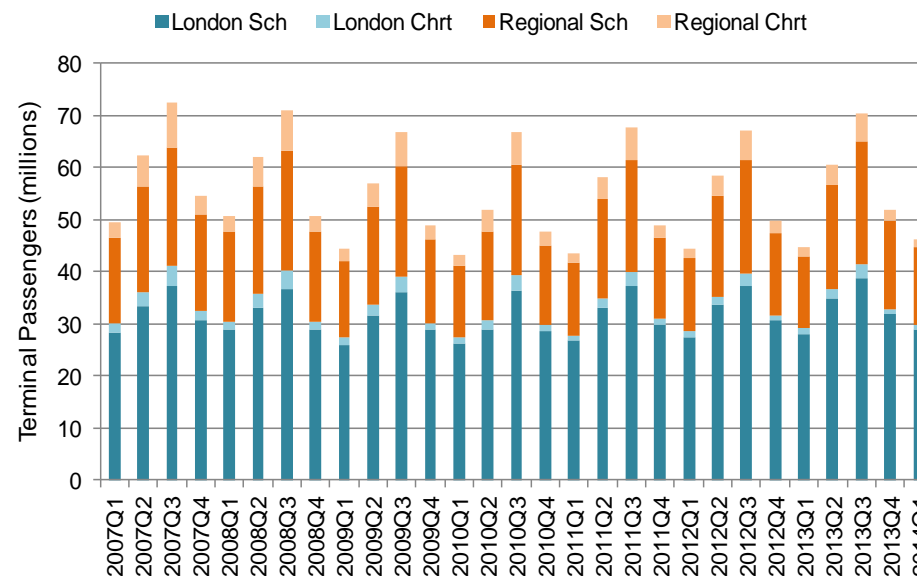


Cargo tonnage - Rolling annual totals and y-o-y growth rates



2. Terminal passengers at UK airports see note 5 on p.17

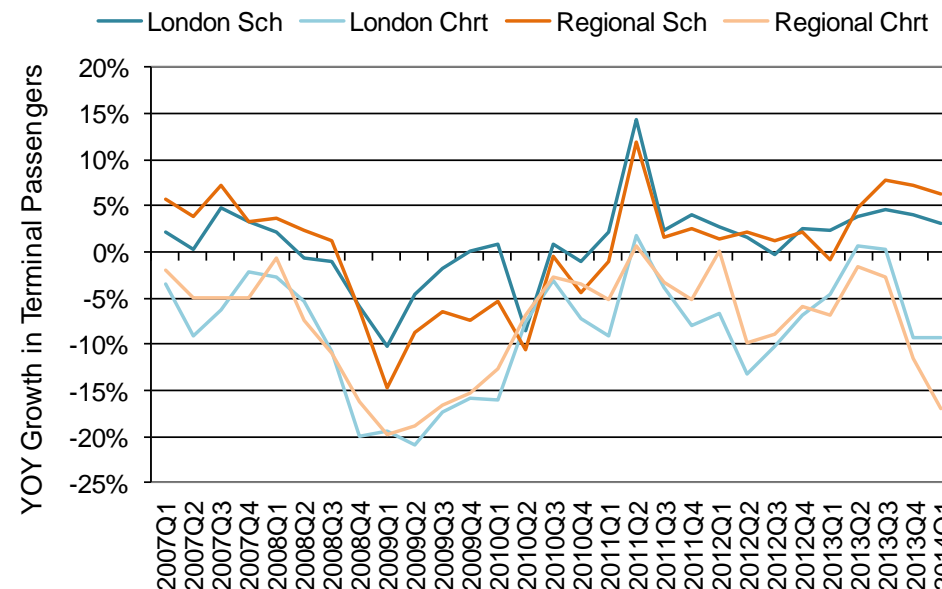
Passengers (millions)	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013		+/- %	Q2 13 – Q1 14		Q2 12 – Q1 13		+/- %
	Flights (000s)	% of total	Flights (000s)	% of total		Flights (000s)	% of total	Flights (000s)	% of total	
London Airports	29.8	65%	29.1	65%	2.7%	140.4	61%	135.5	62%	3.6%
- Scheduled	29.0	63%	28.1	63%	3.1%	134.6	59%	129.5	59%	3.9%
- Charter	0.8	2%	0.9	2%	-9.2%	5.8	3%	5.9	3%	-2.6%
Regional Airports	16.2	35%	15.7	35%	3.7%	88.3	39%	84.5	38%	4.6%
- Scheduled	14.8	32%	13.9	31%	6.4%	75.7	33%	71.0	32%	6.5%
- Charter	1.5	3%	1.8	4%	-17.0%	12.7	6%	13.4	6%	-5.8%
All Airports	46.1	100%	44.7	100%	3.1%	228.8	100%	220.0	100%	4.0%
- Scheduled	43.8	95%	42.0	94%	4.2%	210.3	92%	200.6	91%	4.8%
- Charter	2.3	5%	2.7	6%	-14.3%	18.5	8%	19.4	9%	-4.8%



UK terminal passengers are those travellers who board or disembark an aircraft on a commercial flight at a reporting UK airport. The figures in the table and graphs on this page therefore exclude transit passengers – those who remain onboard aircraft which land at a UK airport and then continue on to another destination.

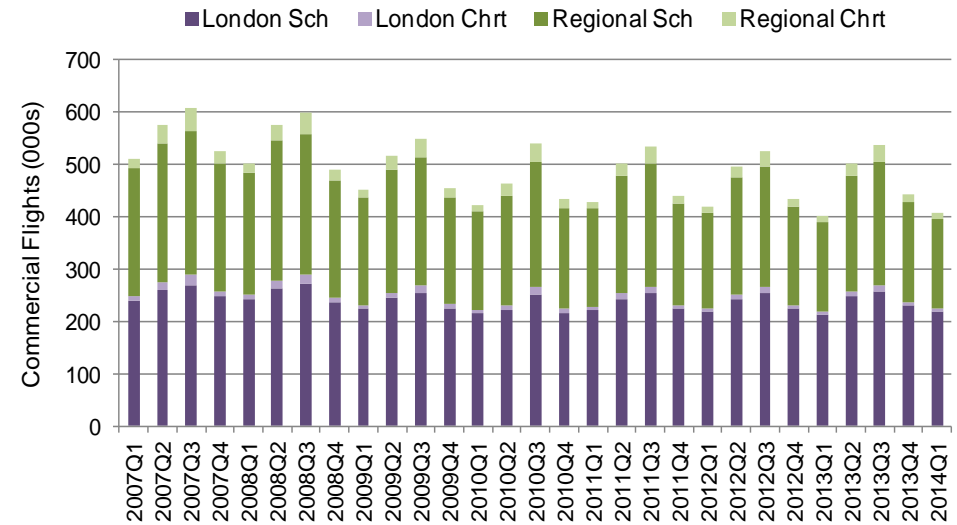
In Q1 2014, London and regional airports handled 2.7% and 3.7% more passengers than in the same quarter last year. On a rolling year basis, total passenger numbers were 3.6% higher at London airports and 4.6% higher at regional airports than the year before.

Across all UK airports, the number of passengers on scheduled flights was up 4.2% but down 14.3% on charter flights compared with the same quarter in 2013.



3. Passenger flights to and from UK airports see note 5 on p.17

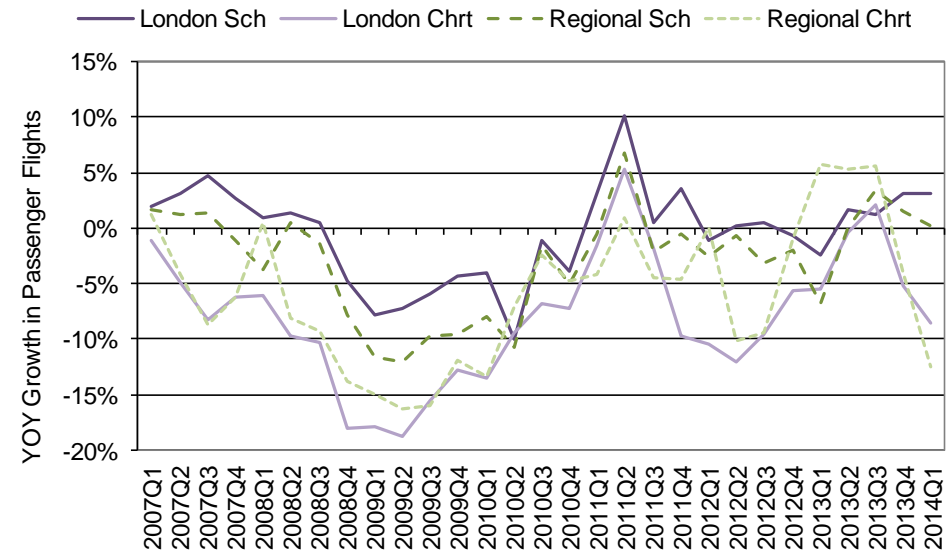
Number of flights (000s)	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013		+/- %	Q2 13 – Q1 14		Q2 12 – Q1 13		+/- %
	Flights (000s)	% of total	Flights (000s)	% of total		Flights (000s)	% of total	Flights (000s)	% of total	
London Airports	224.7	55%	218.5	54%	2.8%	986.4	52%	966.5	52%	2.1%
- Scheduled	219.9	54%	213.3	53%	3.1%	954.7	51%	934.3	50%	2.2%
- Charter	4.8	1%	5.2	1%	-8.5%	31.7	2%	32.2	2%	-1.6%
Regional Airports	182.7	45%	184.0	46%	-0.7%	899.9	48%	888.2	48%	1.3%
- Scheduled	171.5	42%	171.2	43%	0.2%	820.7	44%	809.6	44%	1.4%
- Charter	11.2	3%	12.8	3%	-12.5%	79.2	4%	78.6	4%	0.7%
All Airports	407.4	100%	402.5	100%	1.2%	1,886.2	100%	1,854.7	100%	1.7%
- Scheduled	391.4	96%	384.5	96%	1.8%	1,775.4	94%	1,743.9	94%	1.8%
- Charter	16.0	4%	18.0	4%	-11.3%	110.9	6%	110.8	6%	0.1%



The figures in this table are for commercial passenger flights and thus exclude air freighter flights (those carrying cargo only).

Compared to Q1 2013, the number of total passenger flights at all UK airports increased by 1.2% in Q1 2014. There were 1.8% more scheduled flights but 11.3% less charter flights. On a rolling year basis, the number of scheduled flights was up by 1.8% and the number of charter flights was up by 0.1%.

There were 2.8% more flights at the London airports but 0.7% less flights at regional airports in Q1 2014 than in Q1 2013. On a rolling year basis, the number of flights was up by 2.1% at the London airports and by 1.3% at the regional airports.

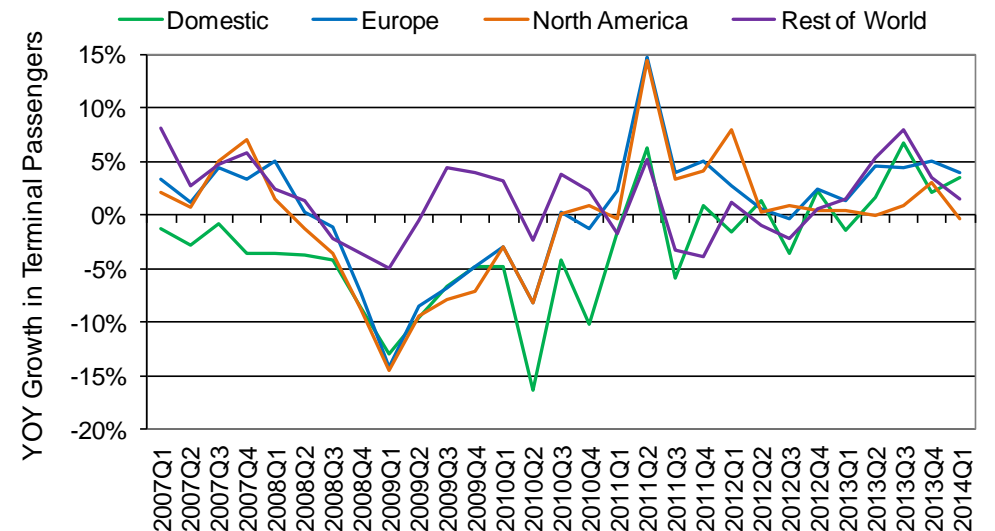
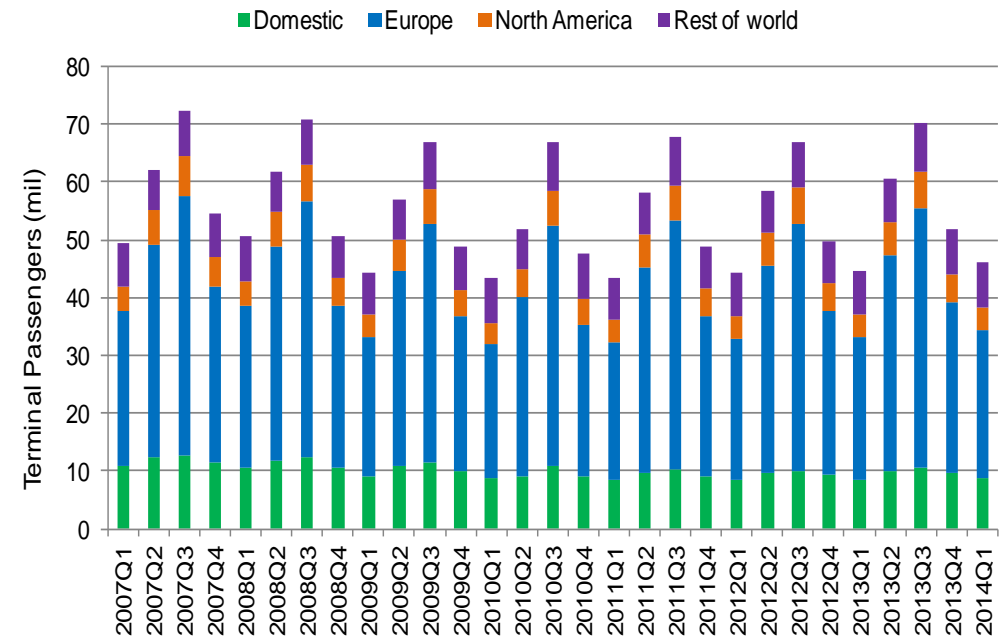


4. Terminal passengers at UK airports by origin / destination see note 5 on p.17

Passengers (millions)	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013		+/- %	Q2 13 - Q1 14		Q2 12 - Q1 13		+/- %
	Pax (millions)	% of total	Pax (millions)	% of total		Pax (millions)	% of total	Pax (millions)	% of total	
Domestic	8.6	19%	8.3	19%	3.4%	38.5	17%	37.2	17%	3.5%
- Scheduled	8.5	18%	8.2	18%	3.5%	38.0	17%	36.8	17%	3.4%
- Charter	0.1	0.3%	0.1	0.3%	1.7%	0.5	0.2%	0.4	0.2%	14.8%
Europe	25.7	56%	24.7	55%	3.9%	137.6	60%	131.7	60%	4.5%
- Scheduled	24.2	52%	22.9	51%	5.6%	123.0	54%	116.2	53%	5.8%
- Charter	1.5	3%	1.8	4%	-16.6%	14.6	6%	15.5	7%	-5.5%
North America	4.0	9%	4.0	9%	-0.3%	20.9	9%	20.7	9%	0.9%
- Scheduled	4.0	9%	4.0	9%	0.0%	20.7	9%	20.3	9%	1.8%
- Charter	0.0	0.0%	0.0	0.0%	-79.6%	0.2	0.1%	0.4	0.2%	-47.9%
Rest of World	7.7	17%	7.6	17%	1.5%	31.7	14%	30.3	14%	4.6%
- Scheduled	7.1	15%	6.9	15%	2.7%	28.6	12%	27.2	12%	4.9%
- Charter	0.7	1%	0.7	2%	-10.0%	3.1	1%	3.1	1%	1.8%
Total	46.1	100%	44.7	100%	3.1%	228.8	100%	220.0	100%	4.0%
- Scheduled	43.8	95%	42.0	94%	4.2%	210.3	92%	200.6	91%	4.8%
- Charter	2.3	5%	2.7	6%	-14.3%	18.5	8%	19.4	9%	-4.8%

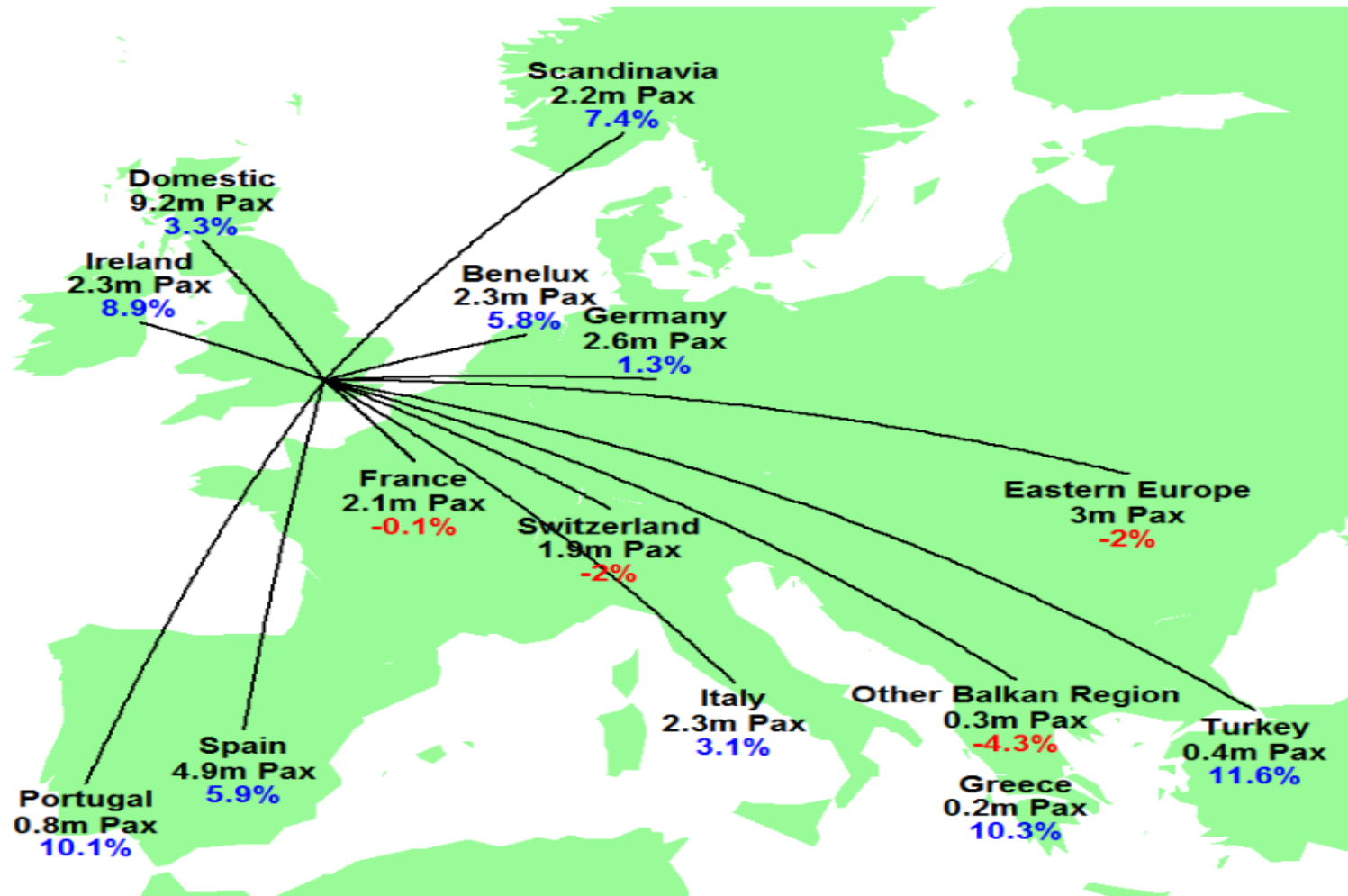
Compared to the same quarter last year, there have been increases in the number of passengers travelling to and from Europe (3.9%), Rest of the World (1.5%), and Domestic destinations (3.4%). However, traffic to and from North America has seen a marginal decrease of 0.3% in Q1 2014.

On a rolling year basis, the total number of passengers was up by 4.0%. This was made up of an increase of 4.5%, 0.9% and 4.6% of passengers travelling to and from Europe, North America and Rest of the World respectively, and a 3.5% rise in domestic traffic. Overall, passengers on charter flights have declined by 14.3% in Q1 2014 and by 4.8% on a rolling year basis.



a. Passengers at UK airports by sector origin/destination – Travel within Europe see note 6 on p. 17

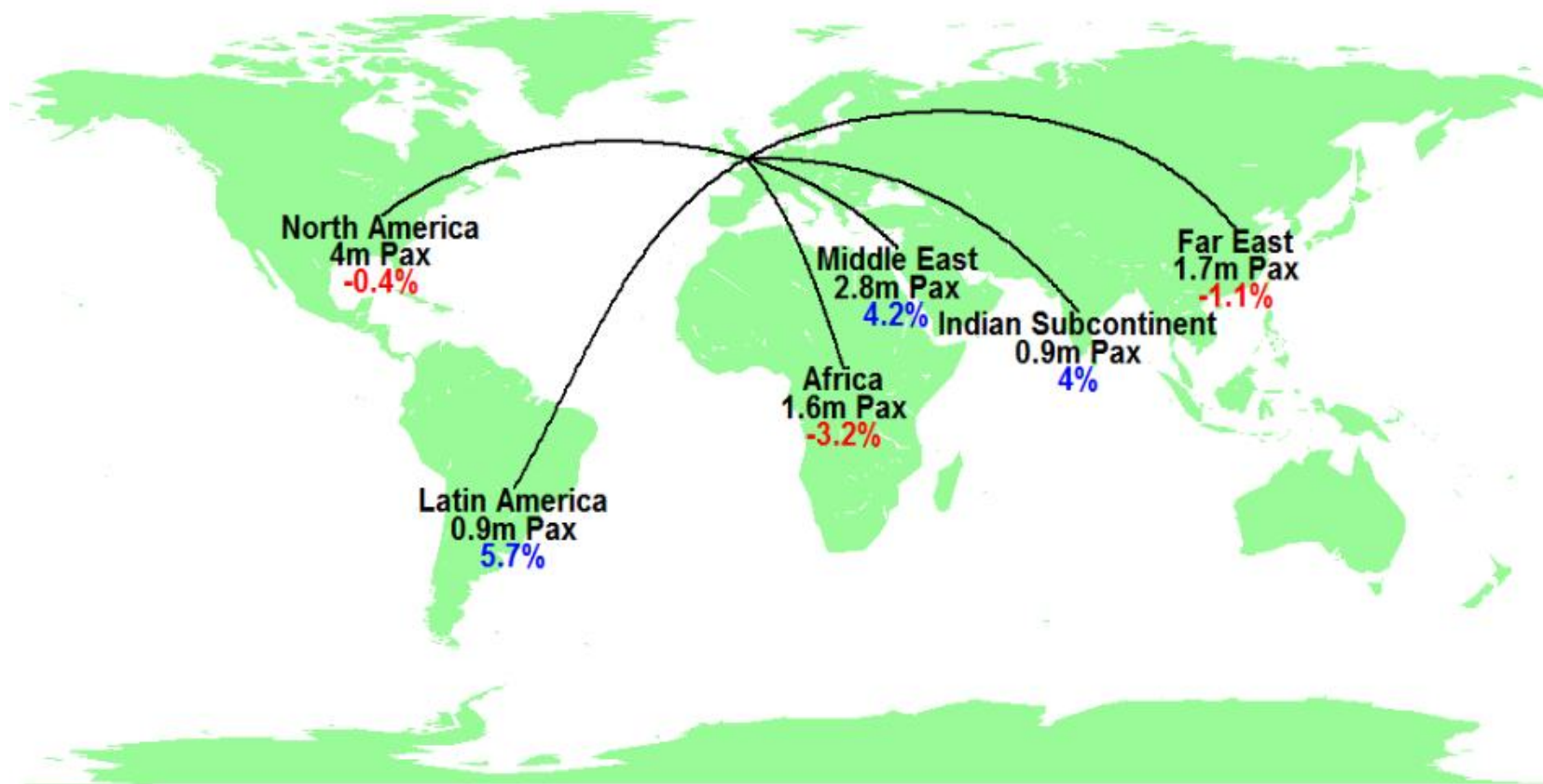
Total passengers numbers Q1 2014 and % change from Q1 2013



Note: passenger destination is defined by the first stop for the aircraft after leaving the reporting airport, or the last stop before arriving at the reporting airport. Hence for a multi-sector flight, the first/last part of the flight is shown.

b. Passengers at the UK airports by sector origin/destination – Travel outside of Europe

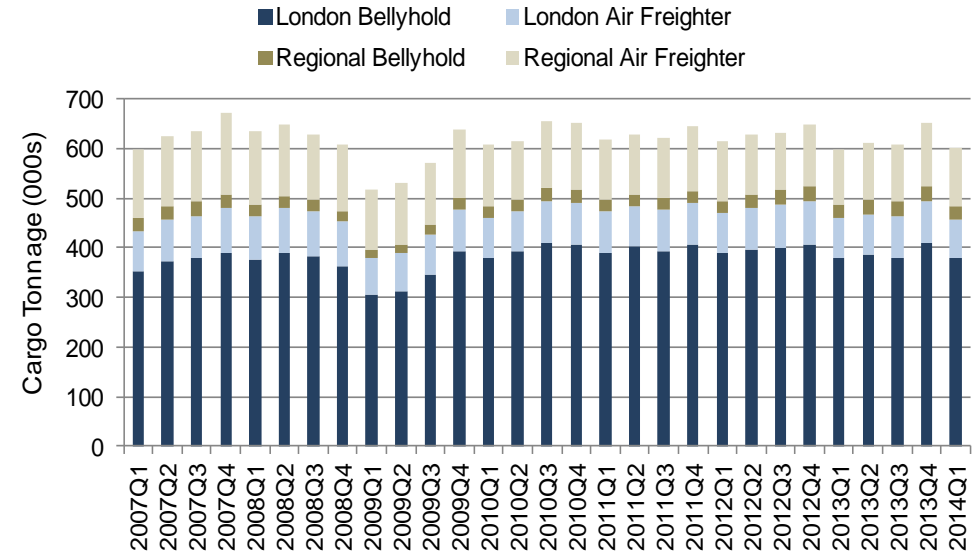
Total passengers numbers Q1 2014 and % change from Q1 2013



Note: passenger destination is defined by the first stop for the aircraft after leaving the reporting airport, or the last stop before arriving at the reporting airport. Hence for a multi-sector flight, the first/last part of the flight is shown.

5. Air cargo tonnes carried to and from UK airports see note 5 on p.17

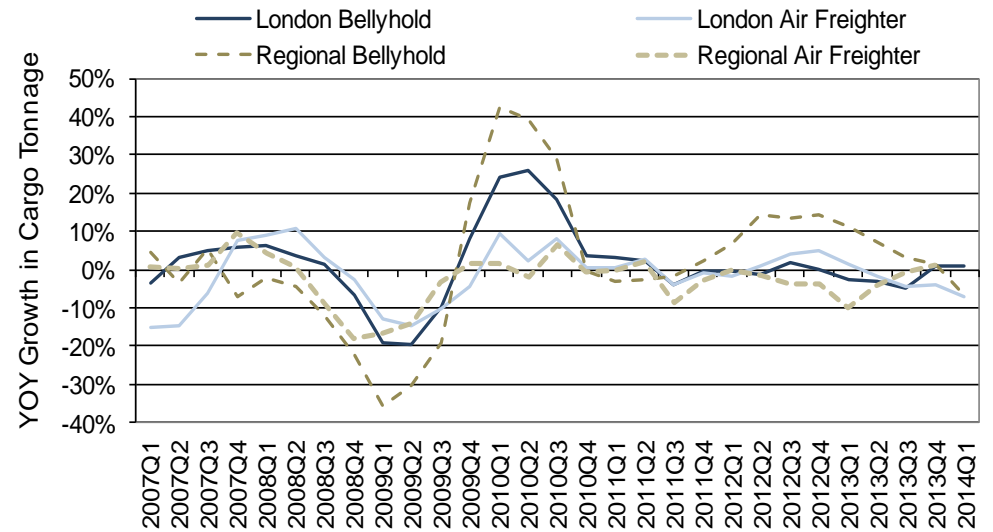
Tonnes (000s)	CURRENT QUARTER					ROLLING YEAR				
	Q4 2013		Q4 2012		+/- %	Q1 13 – Q4 13		Q1 12 – Q4 12		+/- %
	Tonnes (000s)	% of total	Tonnes (000s)	% of total		Tonnes (000s)	% of total	Tonnes (000s)	% of total	
Cargo on cargo only flights	193.2	32%	192.5	32%	0.3%	798.6	32%	810.7	32%	-1.5%
- London	76.2	13%	81.9	14%	-7.0%	324.0	13%	338.3	13%	-4.2%
- Regional	116.9	20%	110.6	19%	5.7%	474.6	19%	472.4	19%	0.5%
Bellyhold cargo	406.4	68%	405.1	68%	0.3%	1,671.3	68%	1,695.3	68%	-1.4%
- London	380.8	64%	377.6	63%	0.8%	1,555.1	63%	1,580.6	63%	-1.6%
- Regional	25.7	4%	27.5	5%	-6.5%	116.2	5%	114.6	5%	1.3%
Total cargo	599.6	100%	597.6	100%	0.3%	2,469.9	100%	2,506.0	100%	-1.4%
- London	457.0	76%	459.5	77%	-0.6%	1,879.2	76%	1,918.9	77%	-2.1%
- Regional	142.6	24%	138.1	23%	3.3%	590.8	24%	587.1	23%	0.6%



Air cargo – freight and mail – is transported in and out of the UK on air freighters and in the bellyhold of passenger aircraft.

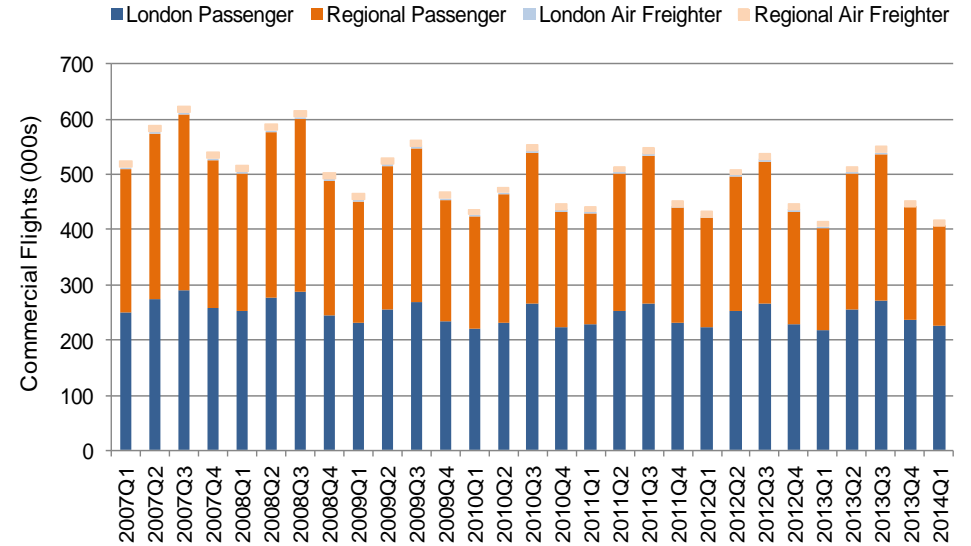
Compared to Q1 2013, total cargo tonnage at all UK airports was up 0.3% in Q1 2014. This consisted of a decrease of 0.6% at London airports and an increase of 3.3% at Regional airports. Both air freighter and bellyhold cargo tonnage increased by 0.3% compared with the same quarter last year.

On a rolling year basis, total cargo tonnage handled at UK airports was down by 1.4% compared with the year before, driven by reduction at the London airports.



6. All commercial flights to and from UK airports see note 5 on p.17

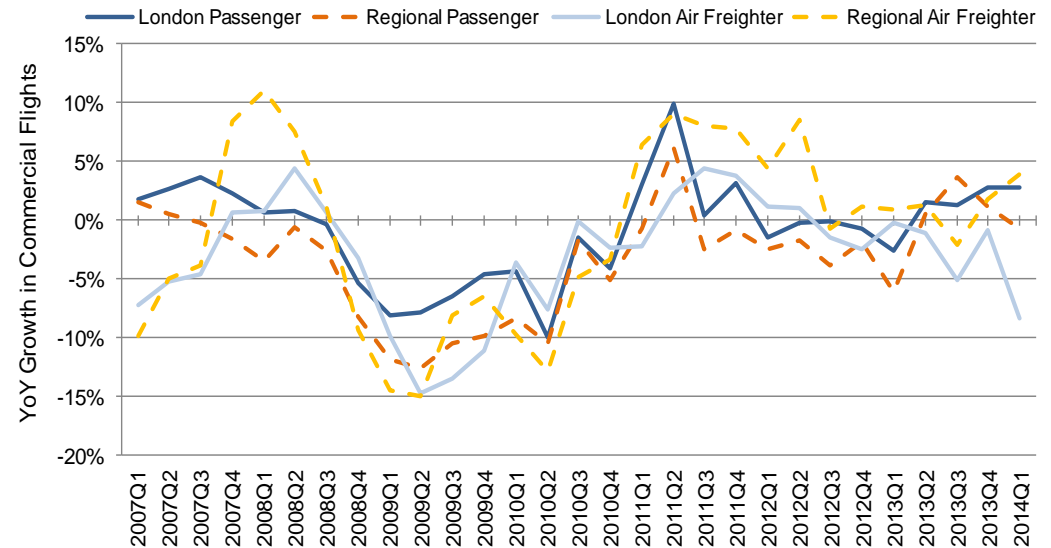
Flights (000s)	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013		+/- %	Q1 13 – Q4 13		Q1 12 – Q4 12		+/- %
	Flights (000s)	% of total	Flights (000s)	% of total		Flights (000s)	% of total	Flights (000s)	% of total	
Air freighter	13.2	3%	13.1	3%	0.7%	53.8	3%	53.9	3%	-0.1%
- London	3.2	1%	3.5	1%	-8.3%	13.6	1%	14.1	1%	-3.8%
- Regional	10.0	2%	9.7	2%	3.9%	40.2	2%	39.8	2%	1.2%
Passenger flights	407.4	97%	402.5	97%	1.2%	1,886.2	97%	1,854.7	97%	1.7%
- London	224.7	53%	218.5	53%	2.8%	986.4	51%	966.5	51%	2.1%
- Regional	182.7	43%	184.0	44%	-0.7%	899.9	46%	888.2	47%	1.3%
Total flights	420.6	100%	415.7	100%	1.2%	1,940.0	100%	1,908.6	100%	1.6%
- London	227.8	54%	222.0	53%	2.6%	1,000.0	52%	980.6	51%	2.0%
- Regional	192.8	46%	193.7	47%	-0.5%	940.1	48%	927.9	49%	1.3%



The number of commercial flights at reporting UK airports is a measure of commercial aviation activity in the UK. It includes both passenger and cargo flights, but excludes military flights, general aviation, and aircraft that pass through UK airspace without landing.

In Q1 2014, the total number of commercial flights in the UK was up 1.2% compared to Q1 2013. The number of passenger flights increased by 1.2% and the number of freighter flights increased by 0.7%.

The London airports saw an overall increase of 2.6% in total number of flights whereas the regional airports experienced a reduction of 0.5%. On a rolling year basis, the total number of flights was up 1.6% compared with the year before.



7. Punctuality of passenger flights to and from UK airports see note 7 on p.17

a. On-time performance

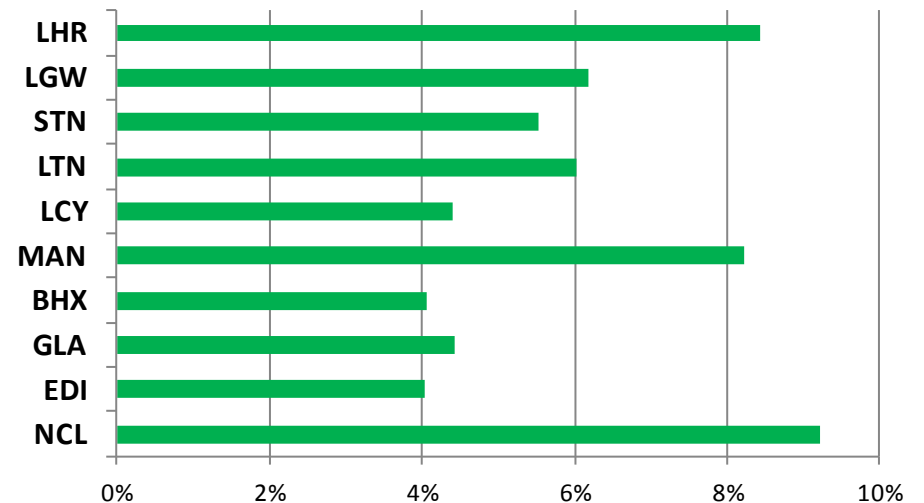
Matched flights (000s), % of flights on-time	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013			Q2 13 – Q1 14		Q2 12 – Q1 13		
	Flights (000s)	% on-time	Flights (000s)	% on-time	Change (% points)	Flights (000s)	% on-time	Flights (000s)	% on-time	Change (% points)
London Airports	221.8	83.3%	215.7	76.2%	7.1%	972.6	79.8%	952.8	77.5%	2.4%
- Heathrow	111.5	82.1%	110.9	73.6%	8.4%	467.0	77.6%	464.0	74.9%	2.6%
- Gatwick	52.5	82.2%	49.1	76.0%	6.2%	246.9	78.1%	236.9	76.4%	1.7%
- Stansted	27.6	85.6%	26.1	80.1%	5.5%	122.9	84.7%	120.2	82.5%	2.2%
- Luton	13.9	84.9%	13.6	78.9%	6.0%	67.4	83.0%	67.4	79.8%	3.2%
- London City	16.4	90.5%	15.9	86.1%	4.4%	68.4	89.7%	64.2	87.8%	1.9%
Regional Airports	91.9	86.2%	92.2	80.2%	6.1%	454.9	83.6%	446.8	80.8%	2.8%
- Manchester	31.7	83.9%	32.5	75.6%	8.2%	158.5	79.9%	156.9	76.7%	3.2%
- Birmingham	17.5	85.5%	16.5	81.4%	4.1%	84.9	87.2%	81.8	83.0%	4.2%
- Glasgow	14.8	88.3%	15.0	83.9%	4.4%	71.7	84.2%	71.1	82.7%	1.5%
- Edinburgh	19.9	88.7%	19.8	84.6%	4.0%	98.7	85.3%	95.4	83.7%	1.6%
- Newcastle	8.1	87.4%	8.3	78.2%	9.2%	41.1	85.7%	41.6	82.0%	3.7%
All Airports	313.8	84.2%	307.9	77.4%	6.8%	1,427.5	81.1%	1,399.6	78.5%	2.5%

Punctuality of arriving and departing passenger flights are measured by comparing actual and planned times of operation. The data covers five London airports and five regional airports.

The on-time performance is defined as the proportion of flights arriving or departing early or up to 15 minutes late. It is calculated from the scheduled on-stand time, the reported runway time and the expected time an aircraft takes to travel between a stand and the runway.

In quarter 1 2014, a recorded 84.2% of all measured flights were on time, which was up by 6.8 percentage points compared to the same quarter last year. The significant year-on-year improvement in punctuality was partly explained by the milder weather experienced between January and March 2014 compared with the same period in 2013. On a rolling year basis, the percentage of on-time flights increased by 2.5 percentage points across the ten London and regional airports.

q-o-q change in on-time performance (% points)



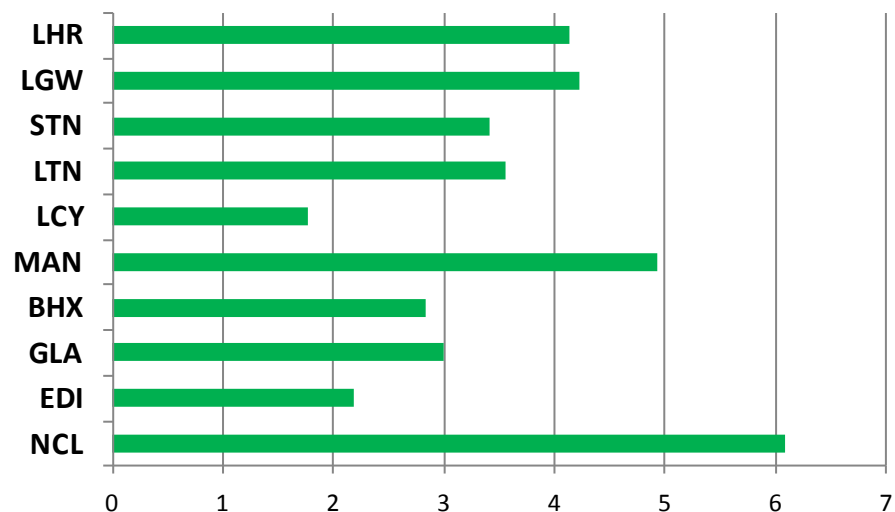
b. Average Delay

Matched flights (000s), average delay (min)	CURRENT QUARTER					ROLLING YEAR				
	Q1 2014		Q1 2013		Decrease in Avg. delay (min)	Q2 13 – Q1 14		Q2 12 – Q1 13		Decrease in Avg. delay (min)
	Flights (000s)	Avg. Delay (min)	Flights (000s)	Avg. Delay (min)		Flights (000s)	Avg. Delay (min)	Flights (000s)	Avg. Delay (min)	
London Airports	221.8	10.0	215.7	13.9	3.9	972.6	11.6	952.8	12.9	1.3
- Heathrow	111.5	10.9	110.9	15.0	4.1	467.0	12.7	464.0	14.0	1.3
- Gatwick	52.5	10.5	49.1	14.7	4.2	246.9	13.0	236.9	14.1	1.1
- Stansted	27.6	7.9	26.1	11.3	3.4	122.9	8.7	120.2	9.9	1.2
- Luton	13.9	8.9	13.6	12.5	3.6	67.4	10.1	67.4	12.2	2.1
- London City	16.4	6.5	15.9	8.2	1.8	68.4	6.3	64.2	7.1	0.8
Regional Airports	91.9	8.6	92.2	12.3	3.7	454.9	10.2	446.8	12.1	1.9
- Manchester	31.7	9.7	32.5	14.7	4.9	158.5	12.0	156.9	14.8	2.7
- Birmingham	17.5	9.6	16.5	12.4	2.8	84.9	8.2	81.8	10.9	2.6
- Glasgow	14.8	7.2	15.0	10.2	3.0	71.7	10.3	71.1	11.0	0.7
- Edinburgh	19.9	7.0	19.8	9.2	2.2	98.7	8.9	95.4	9.6	0.7
- Newcastle	8.1	8.3	8.3	14.4	6.1	41.1	9.5	41.6	12.0	2.5
All Airports	313.8	9.6	307.9	13.4	3.8	1,427.5	11.2	1,399.6	12.6	1.5

Average delay per flight across the ten airports was 9.6 minutes for Q1 2014. This represented an improvement of 3.8 minutes against the same quarter last year, partly due to a milder weather experienced this year.

On a rolling year basis, the overall average delay per flight reduced by 1.5 minutes.

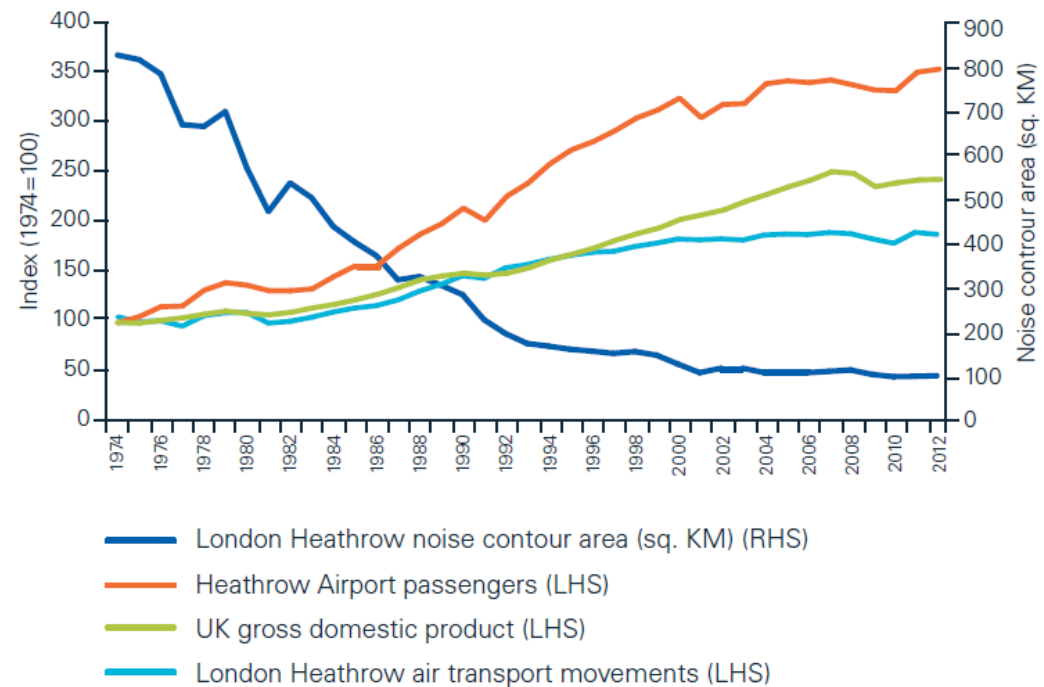
q-o-q reduction in average delay (min)



Did you know?

In May 2014, the CAA published [Managing Aviation Noise](#), a series of recommendations to help drive improvements in the way the aviation industry manages aircraft noise.

Over the past half century, flight numbers have grown significantly, while the performance of aircraft has improved, especially in terms of noise and fuel efficiency. At the same time, UK GDP has risen steadily, population growth has increased, and quality of life has improved for many. These factors all influence the impact of aviation noise on local communities and their perception of it. The chart highlights that despite growth in flight and passenger numbers at Heathrow, the noise contour area has reduced by almost 90 percent since the early 1970s. However, the chart also shows little improvement since 2000, and whilst the noise level per flight has dramatically reduced over 40 years, many residents of the Heathrow area experience significantly more aircraft overflying them than they did in the early 1970s.



In the UK, the long-term level for the onset of significant annoyance at aviation noise has been 57 dBA L_{eq} . This contour is used in the chart above. However, as explored in Chapter 2 of [Managing Aviation Noise](#), there are a variety of competing and complementary metrics available to represent aviation noise, and use of 57 dBA L_{eq} should not be interpreted as a belief that it is the sole effective measurement.

1. The Civil Aviation Authority data is prepared with the co-operation of the United Kingdom airport and airline operators. The assistance from all these organisations is gratefully acknowledged.
2. The information contained in this report has been compiled from various sources and it is not possible for the CAA to check and verify whether it is accurate and correct, nor does the CAA undertake to do so. Consequently the CAA cannot accept any liability for any financial loss caused by any person's reliance on it.
3. More detailed data are available from the Civil Aviation Authority website at the following address - www.caa.co.uk/aviationintelligence.
4. The CAA is the UK's specialist aviation regulator whose regulatory activities range from ensuring the aviation industry meets the highest safety standards to preventing holidaymakers from being stranded abroad because of tour operator insolvency.
5. Explanatory notes for Parts 1 to 6:

Notes	Applicable to Part					
	1	2	3	4	5	6
Tables and charts are generated from data in CAA Airport Statistics.	✓	✓	✓	✓	✓	✓
All data excludes the activity of Air Taxis – those aircraft with maximum take-off weights of less than 15 tonnes flying non-scheduled services.	✓	✓	✓	✓	✓	✓
London airports are Heathrow, Gatwick, Stansted, Luton, London City and Southend. Regional Airports are all other UK airports, a category which excludes the Channel Island Airports – Jersey, Guernsey, and Alderney – and the Isle of Man, which are not formally part of the UK.	✓	✓	✓	✓	✓	✓
Exclude traffic to and from North Sea oil rigs.		✓	✓	✓	✓	✓
Terminal passengers are those commencing their journey or connecting between flights at the airport, but exclude transit passengers who do not disembark.	✓	✓		✓		
Cargo comprises mail and freight.	✓				✓	✓
For the purposes of this report, World Areas are defined as follows: Domestic - the United Kingdom, the Channel Islands and the Isle of Man (these numbers are not adjusted for the double counting which occurs when both airports report arriving and departing passengers to the CAA); Europe - geographical Europe including Turkey and the former Soviet Union states; North America - USA, Canada and Puerto Rico; Rest of World - all other countries.				✓		
A destination is defined to be where a passenger boards or alights the aircraft on which they arrived or departed from the reporting airport; it is not necessarily the first or last stop of a multi-sector flight.				✓		

6. Explanatory notes for Part 4

- Other Balkan Region: Albania, Croatia, Bulgaria, Macedonia.
- Eastern Europe: Austria, Belarus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Moldova, Romania, Russia, Slovakia, Slovenia, Ukraine, Yugoslavia.

7. Explanatory notes for Part 7

- In these punctuality data, 'delay' is recorded as the difference between an aircraft's scheduled and actual arrival or departure time at the airport terminal. It does not therefore measure any delay, such as that due to congestion, which has already been allowed for in the planned flight times of the service.
- Average delay is the total minutes of delay recorded by all flights (with early arriving flights counted as zero delay) divided by the total number of flights monitored.
- On-time performance and delay is calculated from the scheduled on-stand time (provided by Airport Co-ordination Ltd.), the reported runway time (provided by the airport) and the expected time an aircraft takes to travel between a stand and the runway (taxiing time – calculated from historic data). The use of average taxi times is sufficient for calculating an aggregate level of on-time performance, but would not be suitable for reviewing the punctuality of an individual flight.
- The statistics cover only those flights which were operated and do not cover those flights which were cancelled.