# **Aviation Trends**

## **Quarter 4 2016**



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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.

The Aviation Trends series is available at <a href="www.caa.co.uk/aviationtrends">www.caa.co.uk/aviationtrends</a>, 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 adjustments.\(^1\) 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/data-and-analysis.

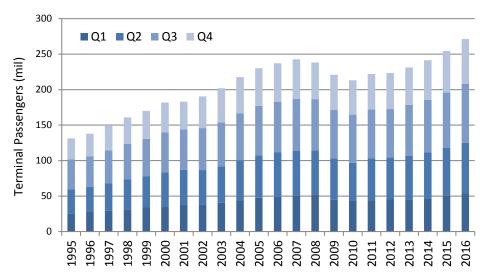
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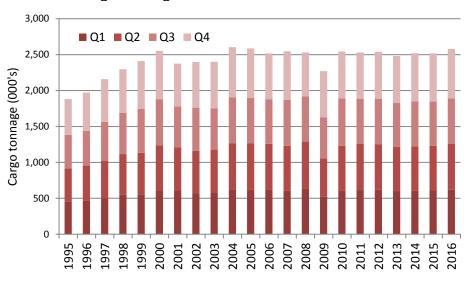
<sup>&</sup>lt;sup>1</sup> Also, in editions of Aviation Trends prior to quarter 4 2008, all figures included activity at Channel Islands and Isle of Man airports. These islands are not formally part of the UK, and as we wish to present only the trends at UK airports, their figures are now excluded from the UK reporting airports, although travel between the UK and these airports is treated as domestic.

### 1. Historical overview of traffic see note 5 on p.14

#### a. Terminal passengers



#### b. Cargo tonnage



#### c. Commercial flights



The three time-series charts on this page show both seasonal and annual trends in UK aviation activity for 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 Q4 2016, UK airports handled over 63 million terminal passengers, representing 7.8% growth against the same quarter in the previous year and a new high in terms of the number of passengers flown in Q4 of any previous year. On a rolling year basis, terminal passengers also hit a new record (271m pax) in 2016, surpassing the previous rolling 12-month high (267m pax) set in Q3 2016.

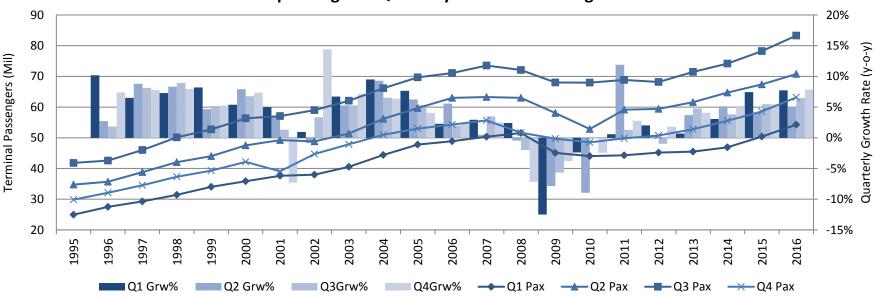
Q4 2016 saw 538 thousand commercial flights, representing 4.7% growth against the same quarter in the previous year. For 2016 as a whole, commercial flights totalled 2.26 million, up 4.2% on 2015.

Q4 2016 also saw 690 thousand tonnes of cargo pass through UK airports, representing 2.9% growth on Q4 2015. For 2016 as a whole, 2.58 million tonnes of cargo were handled at UK airports, up 2.5% on 2015.

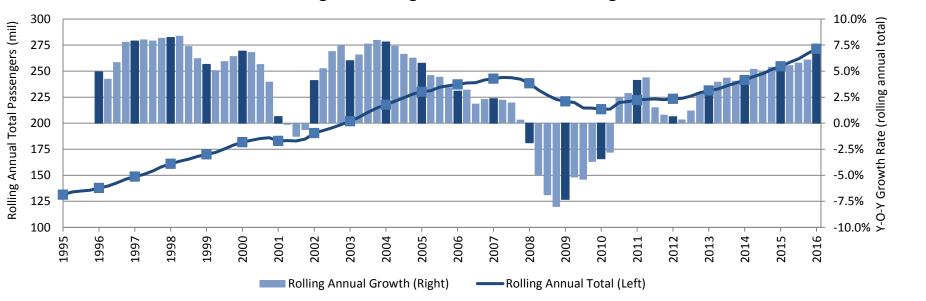
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#### a. Terminal passengers

**Terminal passengers - Quarterly totals and Y-O-Y growth rates** 

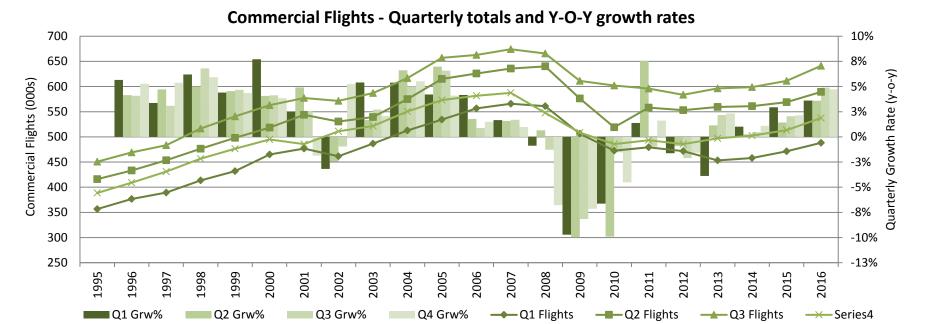


#### Terminal Passengers - Rolling annual totals and Y-O-Y growth rates

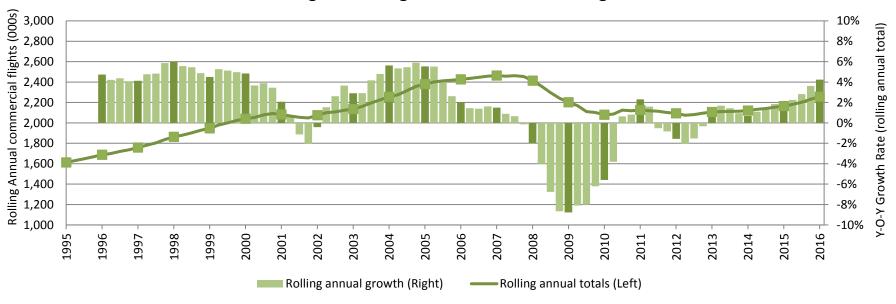


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#### b. Commercial flights



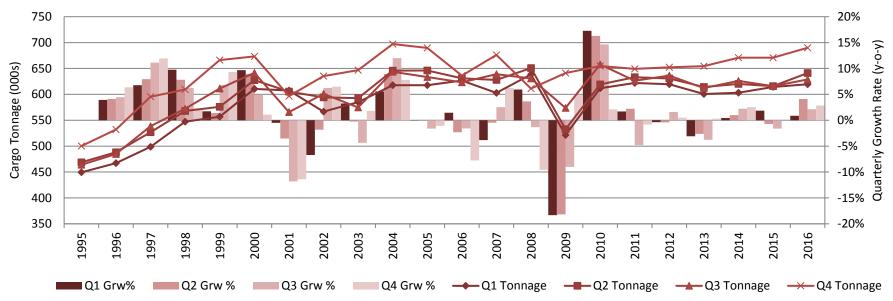
#### Commercial flights - Rolling annual totals and Y-O-Y growth rates



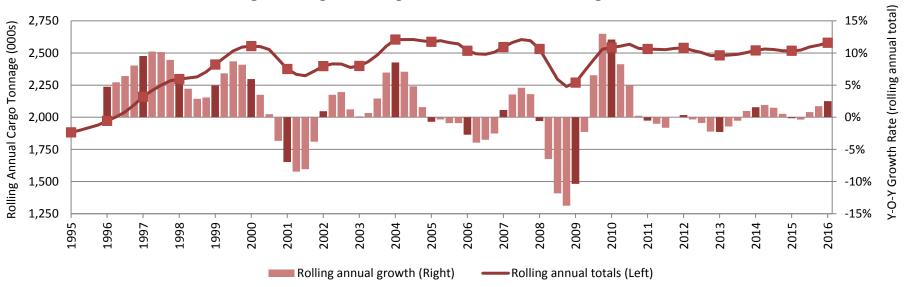
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#### c. Cargo tonnage

#### Cargo Tonnage Quarterly totals and Y-O-Y growth rates



#### Cargo tonnage - Rolling annual totals and Y-O-Y growth rates



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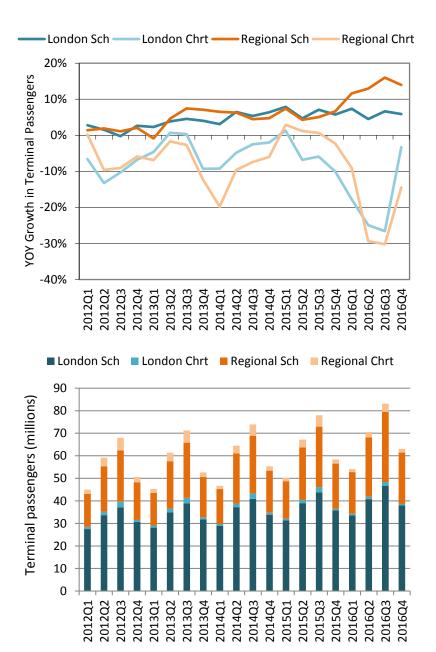
## 2. Terminal passengers at UK airports see note 5 on p.14

		CURR	ENT QL	JARTER			RC	LLING Y	EAR		
Pax	Q4 2	Q4 2016		Q4 2015		Q1 16	– Q4 16	Q1 15			
(millions)	Pax (Mil)	% of total	Pax (Mil)	% of total	% chg	Pax (Mill)	% of total	Pax (Mil)	% of total	% chg	
London Airports	38.7	61%	36.6	63%	5.7%	163.2	60%	155.2	61%	5.1%	
- Scheduled	37.9	60%	35.8	61%	5.9%	159.0	59%	149.9	59%	6.1%	
- Charter	0.8	1%	0.8	1%	1%	-3.3%	4.2	2%	5.3	2%	-21.3%
Regional Airports	24.3	39%	21.8	37%	11.5%	107.6	40%	98.5	39%	9.2%	
-Scheduled	22.7	36%	19.9	34%	14.0%	98.7	36%	86.7	34%	13.9%	
- Charter	1.6	3%	1.9	3%	-14.5%	8.9	3%	11.8	5%	-24.8%	
All Airports	63.0	100%	58.4	100%	7.9%	270.8	100%	253.7	100%	6.7%	
-Scheduled	60.6	96%	55.7	95%	8.8%	257.7	95%	236.6	93%	8.9%	
- Charter	2.4	4%	2.6	5%	-11.2%	13.1	5%	17.1	7%	-23.7%	

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

In Q4 2016, London airports handled nearly 6% more passengers, and regional airports 11.5% more than in the same quarter last year. Scheduled passengers grew by 8.8% overall. Charter traffic on the other hand declined by 11.2% overall, driven mainly larger capacity reductions at regional airports.

For 2016 as a whole, terminal passengers were 5.1% higher at London airports and 9.2% higher at regional airports, respectively compared to 2015. Overall for 2016, UK airports handled 271m passengers in total, up by 6.7% on 2015 and representing the strongest growth of any calendar year since 2004.



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## 3. Passenger flights to and from UK airports see note 5 on p.14

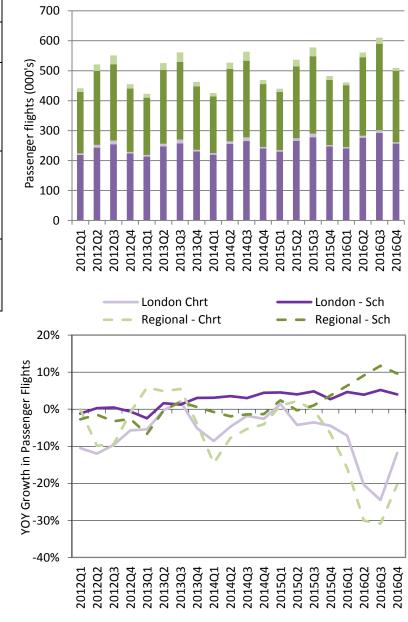
		CURF	RENT QU	ARTER		ROLLING YEAR							
	Q4 2	016	Q4 2	Q4 2015		Q1 16 –	Q4 16	Q1 15 –					
Flights (000's)	Flights (000s)	% of total	Flights (000s)	% of total	% chg	Flights (000s)	% of total	Flights (000s)	% of total	% chg			
London Airports	261.1	51%	251.9	52%	3.7%	1,090.4	51%	1,050.7	52%	3.8%			
- Scheduled	256.7	50%	246.9	51%	4.0%	1,066.0	50%	1,020.7	50%	4.4%			
- Charter	4.4	1%	5.0	1%	-11.8%	24.4 1%		29.9	-18.5%				
Regional Airports	248.4	49%	230.2	48%	7.9%	1,051.2	49%	986.0	48%	6.6%			
- Scheduled	238.2	47%	217.4	45%	9.6%	996.1	47%	910.9	45%	9.4%			
- Charter	10.2	2%	12.9	3%	-20.4%	55.1	3%	75.1	4%	-26.6%			
All Airports	509.6	100%	482.1	100%	5.7%	2,141.6	100%	2,036.6	100%	5.2%			
- Scheduled	494.9	97%	464.2	96%	6.6%	2,062.1	96%	1,931.6	95%	6.8%			
- Charter	14.6	3%	17.8	4%	-18.0%	79.5	4%	105.0	5%	-24.3%			

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

In Q4 2016, the number of total passenger flights handled at UK airports increased by 5.7% to 510 thousand. There were 6.6% more scheduled flights and 18.0% fewer charter flights compared to the same quarter last year.

For 2016 as a whole, the number of passenger flights handled by UK airports reached 2.14. The number of scheduled passenger flights was up by 6.8% whilst the number of charter passenger flights fell by 24.3% against the previous year.

Looking at the regional split, there were 3.7% more passenger flights at the London airports and 7.9% more passenger flights at regional airports when compared to the same quarter last year. In annual terms for 2016, the number of flights was up by 3.8% at London airports and up by 6.6% at regional airports.



■ London - Sch ■ London - Chrt ■ Regional - Sch ■ Regional - Chrt

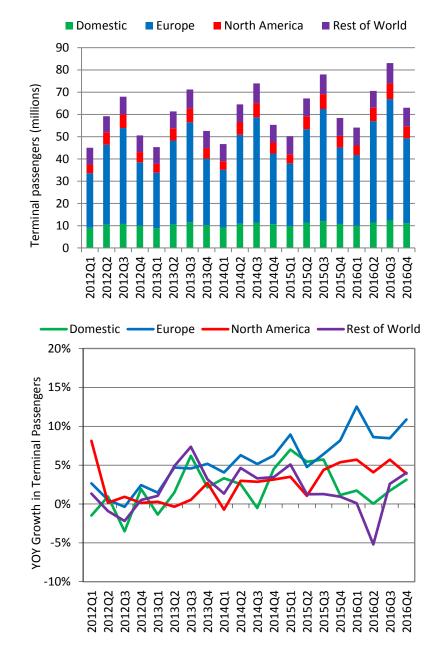
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## 4. Terminal passengers at UK airports by origin/destination see note 5 on p.14

		CURR	ENT QU	ARTER		ROLLING YEAR							
	Q4 2	2016	Q4 2	2015		Q1 16 -	- Q4 16	Q1 15 -	- Q4 15				
Passengers (millions)	Pax (Mill)	% of total	Pax (Mill)	% of total	% chg	Pax (Mill)	% of total	Pax (Mill)	% of total	% chg			
Domestic	11.12	18%	10.79	18%	3.1%	44.9	17%	44.2	17%	1.6%			
- Scheduled	11.07	18%	10.69	18%	3.6%	44.6	16%	43.7	17%	2.2%			
- Charter	0.06	0%	0.10	0%	-43.9%	0.2	0%	0.5	0%	-49.2%			
Europe	38.14	61%	34.40	59%	10.9%	170.0	63%	154.9	61%	9.8%			
- Scheduled	36.32	58%	32.36	55%	12.2%	158.9	59%	141.0	56%	12.7%			
- Charter	1.82	3%	2.04	3%	-10.9%	11.1	4%	13.9	5%	-20.2%			
North America	5.38	9%	5.18	9%	3.9%	22.7	8%	21.7	9%	4.8%			
- Scheduled	5.34	8%	5.15	9%	3.7%	22.5	8%	21.5	8%	4.8%			
- Charter	0.04	0%	0.03	0%	33.3%	0.2	0%	0.2	0%	11.6%			
Rest of World	8.36	13%	8.03	14%	4.0%	33.1	12%	33.0	13%	0.4%			
- Scheduled	7.92	13%	7.56	13%	4.8%	31.6	12%	30.4	12%	3.9%			
- Charter	0.43	1%	0.48	1%	-8.8%	1.5	1%	2.6	1%	-40.5%			
All Airports	63.00	100%	58.40	100%	7.9%	270.8	100%	253.7	100%	6.7%			
- Scheduled	60.65	96%	55.75	95%	8.8%	257.7	95%	5% 236.6 93°		8.9%			
- Charter	2.35	4%	2.65	5%	-11.2%	13.1	5%	17.1	7%	-23.8%			

Compared to the same quarter last year, total passengers increased by 7.9% across all UK reporting airports in Q4 2016. All regions experienced an increase in passenger numbers over the same period, with Europe being the best performing (+10.9%), while the Domestic market saw the weakest growth (+3.1%). There were 3.9% more passengers travelling to North American destinations and 4.0% more passengers travelling to the rest of the world.

For 2016 as a whole, the total number of passengers was also up by 6.7%. This was made up of an increase of 9.8%, 4.8% and 1.6% and 0.4% of passengers travelling to and from Europe, North America, domestic and rest of the world respectively.



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## 5. Air cargo tonnes carried to and from UK airports $^{\text{see note 5 on p.14}}$

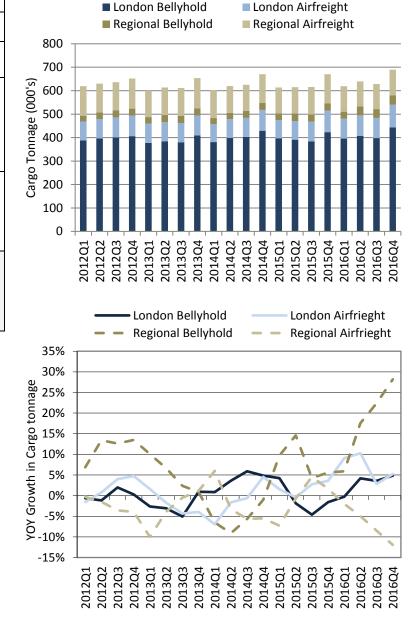
		CUR	RENT QUAR	TER		ROLLING YEAR						
Tonnes	Q4 2	016	Q4 2015			Q1 16 –	Q4 16	Q1 15 –				
(000's)	Tonnes (000's)	% of total	Tonnes (000's)	% of total	% chg	Tonnes (000's)	% of total	Tonnes (000's)	% of total	% chg		
Cargo only flights	206.4	30%	216.5	32%	-4.7%	810.9	33%	834.0	33%	-2.8%		
- London	96.4	14%	91.6	14%	5.3%	333.2	13%	333.0	13%	0.0%		
- Regional	109.9	16%	124.9	124.9	19%	-11.9%	477.8	19%	500.9	20%	-4.6%	
Bellyhold cargo	483.2	70%	453.9	68%	6.4%	1,667.2	67%	1,700.0	67%	-1.9%		
- London	443.4	64%	422.9	63%	4.9%	1,548.2	62%	1,589.8	63%	-2.6%		
- Regional	39.8	6%	31.1	5%	28.2%	118.9	5%	110.3	4%	7.9%		
Total cargo	689.6	100%	670.4	100%	2.9%	2,478.1	100%	2,534.0	100%	-2.2%		
- London	539.8	78%	514.5	77%	4.9%	1,881.4	76%	1,922.8	76%	-2.2%		
- Regional	(000's)   total		155.9	23%	-4.0%	596.7	24%	611.2	24%	-2.4%		

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

In Q4 2016, total cargo tonnage at UK airports grew by 2.9% compared with the same quarter last year. At London airports cargo tonnage grew by 4.9% while cargo tonnage at regional airports decreased by 4.0%. Air freighter tonnage decreased by 4.7% whilst bellyhold cargo tonnage increased by 6.4% over the same period.

The weak performance of the regional airports was driven by the 11.9% reduction in cargo tonnes transported by freighter in Q4 2016, although an increase of 28.2% in bellyhold cargo compensated for much of the reduction of air freighter cargo.

For 2016 as a whole, total cargo tonnage handled at UK airports fell by 2.2% compared with 2015, with similar declines at both London airports and regional airports.



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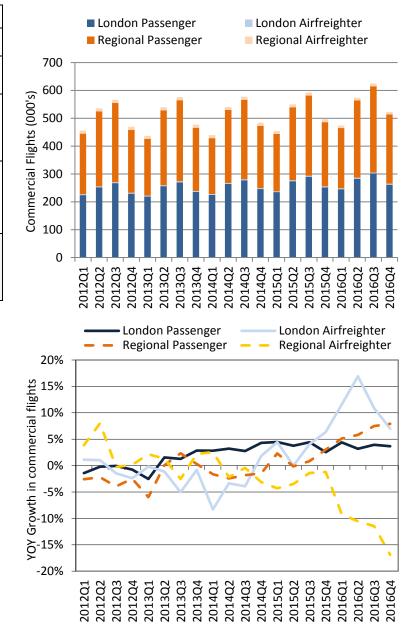
## 6. All commercial flights to and from UK airports see note 5 on p.14

		CURF	RENT QUAR	RTER		ROLLING YEAR						
Flights	Q4 2016 Q4 20			015		Q1 16 –	Q4 16	Q1 15 –				
(000s)	Flights (000's)	% of total	Flights (000's)	% of total	% chg	Flights (000's)	% of total	Flights (000's)	% of total	% chg		
Airfreighter	ighter 13.0 2% 14.5		3%	-10.7%	52.7	2%	56.3	3%	-6.3%			
- London	4.0	1%	3.7	1%	7.0%	15.5	1%	13.9	1%	11.5%		
- Regional	9.0	2% 10.8		2%	-16.9%	37.3 2%		42.4	2%	-12.1%		
Passenger flights	509.6	98%	482.1	97%	5.7%	2,142.0	98%	2,036.7	97%	5.2%		
- London	261.1	50%	251.9	51%	3.7%	1,090.4	50%	1,050.7	50%	3.8%		
- Regional	248.4	48%	230.2	46%	7.9%	1,051.7	48%	986.0	47%	6.7%		
Total flights	522.5	100%	496.6	100%	5.2%	2,194.8	100%	2,093.0	100%	4.9%		
- London	265.1	51%	255.6	51%	3.7%	1,105.9	50%	1,064.6	51%	3.9%		
- Regional	257.4	49%	241.0	49%	6.8%	1,088.9	50%	1,028.4	49%	5.9%		

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.

The total number of commercial flights in the UK was up 5.2% in Q4 2016 compared to the same quarter last year – the combined effect of a 5.7% increase in the number of passenger flights and a 10.7% decrease in the number of freighter flights. Overall for the same quarter, London airports and regional airports grew at 3.7% and 6.8% respectively.

For 2016 as a whole, the total number of commercial flights reached 2.19m, up by 4.9% compared with the year before. Commercial flights at London airports rose by 3.9% while at regional airports the increase was 5.9%.

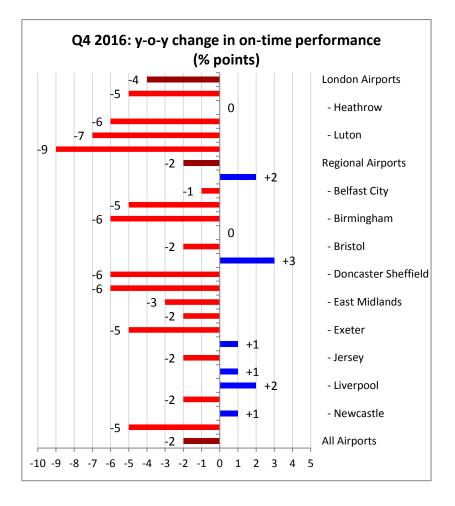


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## 7. Punctuality of scheduled passenger flights to and from UK airports see note 6 on p.14

#### a. On-time performance

Matched scheduled	Q4 2	2016	Q4 2	2015	Change
passenger flights (000s), % of flights on- time	Flights (000s)	% on- time	Flights (000s)	% on- time	(% points)
London Airports	254.0	73%	244.8	77%	-4
- Gatwick	60.8	67%	56.9	72%	-5
- Heathrow	115.0	78%	113.9	78%	0
- London City	19.3	77%	19.7	83%	-6
- Luton	23.2	67%	19.6	74%	-7
- Stansted	35.6	71%	34.7	80%	-9
Regional Airports	208.0	78%	188.4	80%	-2
- Aberdeen	11.6	81%	11.9	79%	+2
- Belfast City	9.6	83%	10.1	84%	-1
- Belfast International	9.2	76%	7.6	81%	-5
- Birmingham	23.9	77%	20.2	83%	-6
- Bournemouth	0.6	80%	1.5	80%	0
- Bristol	13.4	78%	11.5	80%	-2
- Cardiff	3.2	80%	2.8	77%	+3
- Doncaster Sheffield	1.7	76%	0.9	82%	-6
- Durham Tees Valley	0.8	80%	0.9	86%	-6
- East Midlands	6.2	80%	6.3	83%	-3
- Edinburgh	25.8	77%	23.6	79%	-2
- Exeter	2.5	80%	2.1	85%	-5
- Glasgow	19.2	78%	18.7	77%	+1
- Jersey	5.2	76%	5.1	78%	-2
- Leeds Bradford	6.8	84%	6.2	83%	+1
- Liverpool	8.4	80%	8.5	78%	+2
- Manchester	41.2	77%	35.0	79%	-2
- Newcastle	9.1	84%	7.9	83%	+1
- Southampton	9.5	79%	7.6	84%	-5
All Airports	462.0	76%	433.2	78%	-2



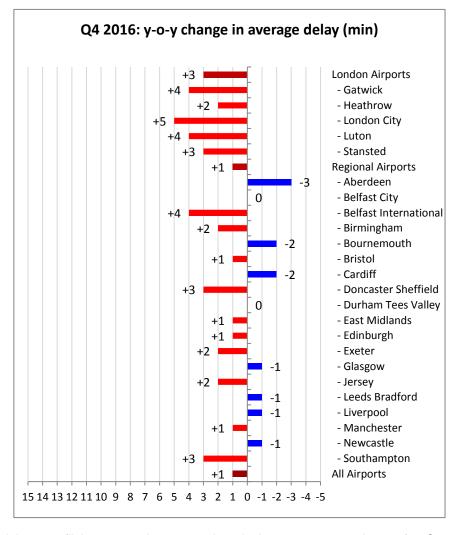
Punctuality of arriving and departing passenger flights is measured by comparing actual and planned times of operation. The data covers 24 airports.

On-time performance is defined as the proportion of flights arriving or departing early or up to and including 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.

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#### b. Average delay

Matched scheduled	Q4 2	016	Q4 2	Q4 2015			
passenger flights (000s), Average Delay (min)	Flights (000s)	Avg. Delay (min)	Flights (000s)	Avg. Delay (min)	in Avg. delay (min)		
London Airports	254.0	16	244.8	13	+3		
- Gatwick	60.8	20	56.9	16	+4		
- Heathrow	115.0	14	113.9	12	+2		
- London City	19.3	14	19.7	9	+5		
- Luton	23.2	18	19.6	14	+4		
- Stansted	35.6	15	34.7	12	+3		
Regional Airports	208.0	13	188.4	12	+1		
- Aberdeen	11.6	12	11.9	15	-3		
- Belfast City	9.6	10	10.1	10	0		
- Belfast International	9.2	15	7.6	11	+4		
- Birmingham	23.9	13	20.2	11	+2		
- Bournemouth	0.6	11	1.5	13	-2		
- Bristol	13.4	13	11.5	12	+1		
- Cardiff	3.2	12	2.8	14	-2		
- Doncaster Sheffield	1.7	14	0.9	11	+3		
- Durham Tees Valley	0.8	11	0.9	11	0		
- East Midlands	6.2	12	6.3	11	+1		
- Edinburgh	25.8	13	23.6	12	+1		
- Exeter*	2.5	12	2.1	10	+2		
- Glasgow	19.2	13	18.7	14	-1		
- Jersey	5.2	16	5.1	14	+2		
- Leeds Bradford	6.8	10	6.2	11	-1		
- Liverpool	8.4	12	8.5	13	-1		
- Manchester	41.2	13	35.0	12	+1		
- Newcastle	9.1	9	7.9	10	-1		
- Southampton	9.5	13	7.6	10	+3		
All Airports	462.0	14	433.2	13	+1		



Average delay per flight across the 24 monitored airports was 14 minutes for Q4 2016. This represented an increase in average delay by 1 minute against the same quarter last year.

Average delay at Belfast City and Durham airports remained unchanged. Seven airports experienced a decrease in average delay while 15 airports experienced an increase in average delay.

The airport with the shortest average delay in Q4 2016 was Newcastle (9 minutes), whilst Gatwick saw the longest average delay (20 minutes).

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#### **Explanatory notes**

- 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		Appl	icab	le to	Par	t
Notes	1	2	3	4	5	6
Tables and charts are generated from data in CAA Airport Statistics.	✓	✓	✓	✓	✓	<b>✓</b>
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, this						
category includes 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 oilrigs.		✓	✓	✓	✓	✓
Terminal passengers are those commencing their journey or connecting between flights at the airport, but exclude transit passengers who	<b>✓</b>	<b>✓</b>		<b>√</b>		
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 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.