Quarterly Monitoring Report
Qtr 4 2017

London
Luton
Airport

INTRODUCTION

The purpose of this report is to advise the community of statistics concerning aircraft operations at London Luton Airport (LLA) during the period October to December 2017.

KEY MONITORING INDICATORS – 4th QUARTER 2017

Parameter		4th Quarter 2017	4th Quarter 2016
Total Passenger Number	↑	3,475,718	3,399,831
Total Aircraft Movements	↓	30,676	31,554
Night Movements (23.00 – 07.00)	↑	3,192	3,167
Early Morning Movements (06.00 – 07.00)	↑	1,232	1,130
Aircraft Movement and Quota Count limits (per rolling 12-month period)			
Night Quota Movements (*9,650 limit*)	↑	7,982	7,503
Night Quota Count (*3,500 limit*)	↑	2,723.00	2,663.75
Early Morning Shoulder (*7,000 movements*)	↑	5,962	5,161
24hr CDA (% achievement)	-	89%	89%
Day CDA (% achievement)	-	89%	89%
Night CDA (% achievement)	↑	88%	85%
Track Violations	↑	23	16
Departure Noise Infringements (Day)	↓	0	3
Departure Noise Infringements (Night)	↓	0	1
Noise Monitor Results			
No. Day (Night) > 80 dB(A)	-	23 (0)	29 (1)
No. Day (Night) > 75 dB(A)	-	1,816 (285)	1,626 (206)
No. Day (Night) > 70 dB(A)	-	10,323 (1,077)	9,916 (898)
Night Noise Contour Area (48 dB $L_{Aeq, 8h}$)	↑	25.6km^2	25.5km^2
Noise Complaints	↑	2,446	1,136
Complainants	↓	144	218
Number of New Complainants	↓	56	143
Largest Source of Complaints	-	Deps. West	Deps. West
Origin of Concerns (>5 Complainants)	-	Flamstead Harpenden Markyate Sandridge St Albans Wheathampstead	Harpenden Knebworth Sandridge St Albans Stevenage Wheathampstead
Westerly/Easterly Runway Split (%)	-	95/5	60/40

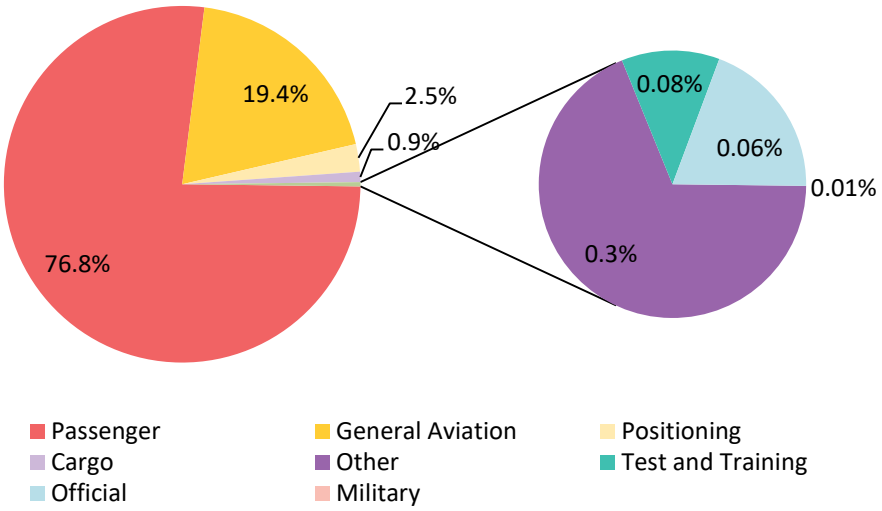
1 AIR TRAFFIC DATA

1.1 Aircraft Movements

There were a total of 30,676 aircraft movements during this quarter (compared with 31,554 for the same period in 2016), a decrease of 2.5%.

This resulted in an average 333 movements per 24 hours (compared to 307 last year).

Total Aircraft Movements (%)



A breakdown of these movements is shown below:

	Commercial				Non-Commercial*					Total
	Cargo	*Passenger*	*Positioning*		*Military*	*Official*	*Other*[1]	*General Aviation*[2]	*Test & Training*	
			Other	*STN*						
Oct 2017	131	9,412	340	20	0	13	25	2,110	4	**12,057**
Nov 2017	34	6,837	161	10	0	6	32	1,922	10	**9,012**
Dec 2017	121	7,310	228	6	0	4	24	1,194	0	**9,607**
QTR Total	**286**	**23,559**	**729**	**36**	**0**	**23**	**81**	**5,946**	**14**	**30,676**

1.2 Passenger Statistics

A total of 3,475,718 passengers passed through LLA during the period October to December 2017 (compared with 3,399,831 for the same period last year), 3,396,169 on scheduled flights (98%) and 79,549 on charter flights (2%). This represents an increase in passengers of 2% year on year and equates to an average 37,779 passengers per 24 hours (compared to 36,995 during the fourth quater last year).

	Domestic	EU	Non-EU	Total
Oct 2017	105,775	932,943	368,201	**1,406,919**
Nov 2017	89,060	640,434	278,667	**1,008,161**
Dec 2017	85,389	678,771	296,478	**1,060,638**
QTR Total	**280,224**	**2,252,148**	**943,346**	**3,475,718**

** Non-Commercial relates to aircraft not operating for hire or reward.*

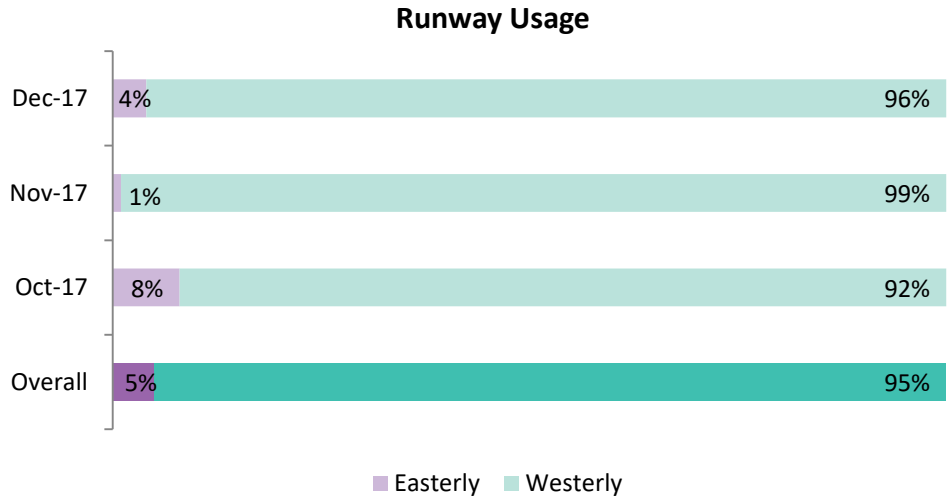
[1] Other relates to flights coming for maintenance and or departing aircraft that has made an unscheduled return to base

[2] General Aviation incorporates Private Aircraft, Helicopters and Business Jets

1.3 Runway Usage

The direction of operation is determined by wind direction. Aircraft operating in a westerly direction take off towards the west and land from the east. Aircraft operating in an easterly direction take off towards the east and land from the west.

The runway usage split during this period was 5% easterly and 95% westerly (compared to 40% / 60% for the same quarter last year). The breakdown of these statistics, on a monthly basis, is as follows:



1.4 Night Flying Restrictions

As from 1st April 2015 London Luton Airport introduced new Night Restrictions as part of the planning conditions.

These restrictions have been put in place to limit and mitigate noise disturbance from aircraft operating at night, to prohibit aircraft of certain types from operating, as well as limiting the number of occasions on which aircraft may take off or land.

The night flying restrictions contain a 12 month period aircraft movement limit and a 12 month period quota count limit. The quota count (QC) is a point based system that allocates points to different aircraft types according to how noisy they are. The noisier the aircraft type, the higher the points allocated.

1.4.1 Definitions

The 'Night Quota Period'

The 'Night Quota Period' is from 23:30 to 06:00 hours local, during which period the number of aircraft movements (take-off or landing) is restricted, as well as an additional limit on number of noise QC points.

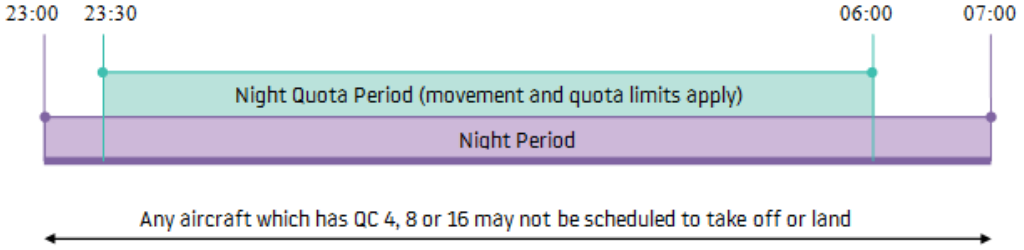
Aircraft are certified by the International Civil Aviation Organisation (ICAO) according to the noise they produce during specific certification tests conducted by the manufacturer. They are classified separately for both take-off and landing. The points are then allocated to different aircraft types according to how noisy they are. The table overleaf details the QC bands identified by the certified noise levels, and gives some typical example aircraft, some of which operate from LLA:

Certificated noise level (EPNdB)	Quota count	Typical aircraft
Greater than 101.9	QC 16	Some Boeing 747-100/200 Antonov 124/225
99 to 101.9	QC 8	Some Boeing 747-400 McDonnell Douglas DC-8
96 to 98.9	QC 4	Boeing 737-200ADV McDonnell Douglas DC-10
93 to 95.9	QC 2	Boeing 777-200 Airbus A300-600 Airbus A330
90 to 92.9	QC 1	Airbus A320/A321 Some Boeing 737-800 Boeing 757-200 Boeing 787-8
87 to 89.9	QC 0.5	Airbus A319/A320 Boeing 737-400 Boeing 737-800 Boeing 787-8
84 to 86.9	QC 0.25	Airbus A319/A320 Global Express Dassault Falcon 7X/900/2000
Less than 84	QC 0	Airbus A320neo BAe ATP Challenger series (eg CL600) Cessna 525/550

The 'Early Morning Shoulder Period'

The 'Early Morning Shoulder Period' is 06:00 to 07:00 hours local. During this period the number of aircraft movements (take-off or landing) is also restricted in a similar way to the Night Quota Period.

1.4.2 Restrictions at London Luton Airport



1.4.3 Aircraft movement and quota count limits (per 12 month period)

Condition 11(f) requires that for the Night Quota Period (2330 - 0600) the following limits shall not be exceeded:

(i) Total annual movements by aircraft per 12 month period shall be limited to 9,650;
(ii) The total annual noise quota in any 12 month period shall be limited to 3,500.

Condition 11(h) requires that for the Early Morning Shoulder Period (0600 – 0700) the total number of movements by aircraft in any 12 month period shall be limited to 7,000.

The table overleaf provides the aircraft movement and quota count for the period October to December 2017, and shows total movements and noise quota per 12 month period and compares those against the limits set within the planning conditions.

	Night Quota Period (2330-0600)		Early Morning Shoulder (0600-0700)
	Movements Limited to 9,650 Annually	*Quota Count Limited to 3,500 Annually*	*Movements Limited to 7,000 Annually*
Jan 2017	318	127.25	331
Feb 2017	363	141.50	301
Mar 2017	388	147.50	393
Apr 2017	638	224.75	563
May 2017	850	285.75	636
Jun 2017	958	318.50	610
Jul 2017	1,063	338.75	622
Aug 2017	989	332.25	637
Sep 2017	898	284.50	637
Oct 2017	832	272.00	593
Nov 2017	204	59.25	336
Dec 2017	481	198.50	303
QTR Total	**1,517**	**529.75**	**1,232**
Total for preceding 12 months	*7,982*	*2723.00*	*5,962*

1.5 Day/Night Ratio of Movements - Actual

There were 3,192 night operations during the quarter (compared to 3,167 for the fourth quarter 2016), an average 35 movements per night (compared to 34 last year). Arriving aircraft accounted for 51% of total night movements, relating primarily to the last rotation of Luton based passenger aircraft scheduled to land between 23:00 hours local and midnight. 60% of total night departures took off between 06:00 – 07:00 hours local in the morning. The average ratio of total aircraft operations during the quarter was 89% day / 11% night (compared to 90% / 10% for the same quarter last year).

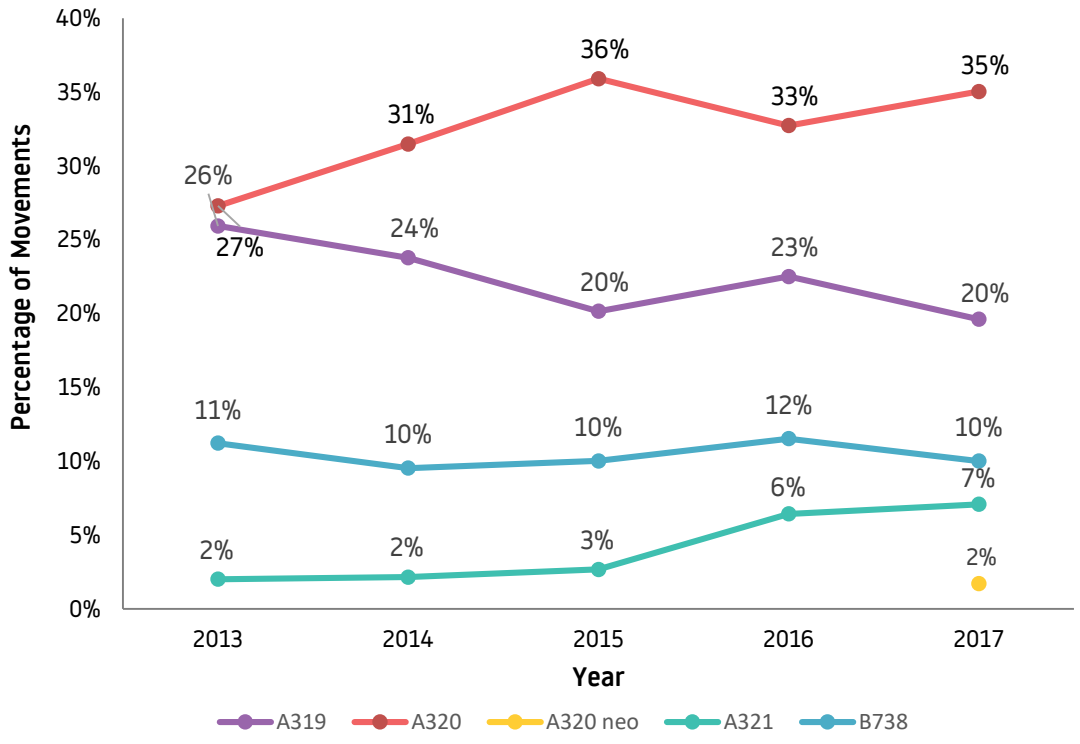
	Day Movements (0700-2300)			Night Movements (2300-0700)					Total
	Day movements			*Night Quota Period (2330-0600)*		*Early Morning Shoulder (0600-0700)*		*Total Night Movements (2300 – 0700)*	
	A	D	Total	A	D	A	D		
Jan 2017	4,356	4,380	8,736	201	117	103	228	776	9,512
Feb 2017	4,329	4,388	8,717	241	122	91	210	770	9,487
Mar 2017	4,965	4,999	9,964	253	135	119	274	924	10,888
Apr 2017	4,920	5,004	9,924	468	170	107	456	1,380	11,304
May 2017	5,382	5,637	11,019	646	204	154	482	1,680	12,699
Jun 2017	5,305	5,571	10,876	726	232	120	490	1,785	12,661
Jul 2017	5,426	5,809	11,235	836	227	126	496	1,903	13,138
Aug 2017	5,227	5,549	10,776	768	221	118	519	1,886	12,662
Sep 2017	5,226	5,505	10,731	710	188	127	510	1,760	12,491
Oct 2017	5,153	5,269	10,422	603	229	110	483	1,635	**12,057**
Nov 2017	4,186	4,191	8,377	121	83	127	209	635	**9,012**
Dec 2017	4,299	4,386	8,685	296	185	89	214	922	**9,607**
QTR Total	**13,638**	**13,846**	**27,484**	**1,020**	**497**	**326**	**906**	**3,192**	**30,676**
Total for preceding 12 months	*58,774*	*60,688*	*119,462*	*5,869*	*2,113*	*1,391*	*4,571*	*16,056*	*135,518*

1.6 Day/Night Ratio of Movements – Forecast

	2017/2018 Forecast of Aircraft Movements				
	Day Movements (0700 – 2300hrs)	*Night Quota Period (2330-0600) Limited to 9,650*	*Early Morning Shoulder (0600-0700) Limited to 7,000*	*Total Night Movements (2300-0700hrs)*	*Total*
January 2018	8,876	358	388	894	9,770
February 2018	9,118	396	357	871	9,989
March 2018	10,217	406	444	1,014	11,231
April 2018	10,288	667	650	1,527	11,815
May 2018	11,316	877	723	1,813	13,129
June 2018	11,267	1,014	694	1,965	13,232
July 2018	11,735	1,132	719	2,099	13,834
August 2018	11,025	1,051	724	2,075	13,100
September 2018	11,118	972	726	1,951	13,069
October 2018	10,788	830	665	1,732	12,520
November 2018	8,760	387	366	867	9,627
December 2018	9,007	205	333	992	9,999
Total for following 12 months	123,513	8,598	6,789	17,801	141,314

1.7 Aircraft Movements by Type

The graph below shows the percentage of aircraft movements for our four main aircraft types. The data goes back 5 years for data comparison purposes.



2 DEPARTING AIRCRAFT

2.1 Departure Route Analysis

The following table reports the average and total number of departures on each flight route, differentiating between easterly (08) and westerly (26) operations. Night movements quoted below departed between 23:00 hrs and 07:00 hrs.

		Departures											Total
		MATCH/ DETLING			*COMPTON*		*OLNEY*		*Other**		*Helicopter*		
		08	26 Conv	26 RNAV	08	26	08	26	08	26	08	26	
Oct 2017	Daytime	236	20	2,493	128	1,669	55	586	4	57	0	21	**5,269**
	Night-time	17	2	300	9	318	3	92	0	10	0	0	**751**
Nov 2017	Daytime	27	10	2,248	17	1,271	5	555	1	41	0	16	**4,191**
	Night-time	6	0	168	2	100	2	30	0	4	0	1	**313**
Dec 2017	Daytime	107	8	2,193	63	1,422	28	505	3	41	0	16	**4,386**
	Night-time	8	4	214	4	151	1	45	1	3	0	4	**435**
QTR	**Total**	**401**	**44**	**7,616**	**223**	**4,931**	**94**	**1,813**	**9**	**156**	**0**	**58**	**15,345**
	Daily Average	*4*	*<1*	*83*	*2*	*54*	*1*	*20*	*<1*	*2*	*0*	*<1*	*134*

2.2 Departure – Track Keeping

All propeller-driven aircraft with Maximum Take Off Mass (MTOM) over 5,700kg and all jet aircraft leaving London Luton Airport are required to follow specific departure routes known as Noise Preferential Routes (NPRs). The obligations of NPRs for conventional SIDs cease when a height of 3,000ft AMSL (between 07:00hrs to 23:00hrs local time) and 4,000ft AMSL (during night time, 23:00hrs to 07:00hrs local time) has been reached. The obligations of the RNAV1 NPR ceases when a height of 4,000ft AMSL has been reached at all times. An NPR is a corridor 3 kilometres wide (2km for the RNAV route), within which aircraft are deemed to be flying on track.

Once aircraft have cleared the designated NPR zone Air Traffic Control (ATC) can instruct the pilots to fly a more direct heading towards their destination. This is known as vectoring.

In April 2015 London Luton Airport implemented a Track Violation Penalty Scheme in connection with the planning conditions. Using the current Aircraft Noise and Track Monitoring System the Airport's specialist Flight Operations Department evaluates the radar tracks and investigates with required input from ATC and airlines. Where the aircraft is clearly flying outside the corridor the aircraft is identified as causing a "possible" track violation.

As always, safety prevails and there may be cases which involve vectoring an aircraft sooner than at the NPR height restriction. If there is valid justification that could explain the deviation from the track, then the operator causing it will be exempt from the fine. Valid justifications include:

- Safety or operational reasons
- Weather avoidance
- Emergencies

* *This category relates to Test/Training flights or short positioning flights.*

The table below shows track keeping violations over the previous 3 month period. The on track performance for the quarter was 99.55%. This calculation includes deviations for weather, traffic avoidance and those classed as violations. The breakdown of the violations is shown in the table below.

	Number of Violations	Total Penalties Collected
Oct 2017	6	£4,500
Nov 2017	8	£6,500
Dec 2017	9	£7,250
QTR	**23**	**£18,250**

	Airline or Aircraft Operator	Aircraft Type/Occurrence
Oct 2017	Air Alliance	LJ35/1
	Privately owned aircraft	GLF5T/2; C25A/1; CL30/1; GLF6/1;
Nov 2017	Ryanair	B738/1
	Wizz Air	A320/1
	Tarom	B733/1
	Global Jet Luxembourg	E145/1
	North Flying	SW4/1
	Privately owned aircraft	H25B/1; C525/1; GL5T/1
Dec 2017	Gama Aviation	GLF6/1
	Vista Jet	CL60/1
	Blue Air	B734/1
	Privately owned aircraft	GLF4/1; GLF6/3; H25B/1; H25C/1;

3 ARRIVING AIRCRAFT

3.1 Arrivals Route Analysis

The following table reports the total number of arrivals differentiating between easterly (08), westerly (26) operations and helicopters.

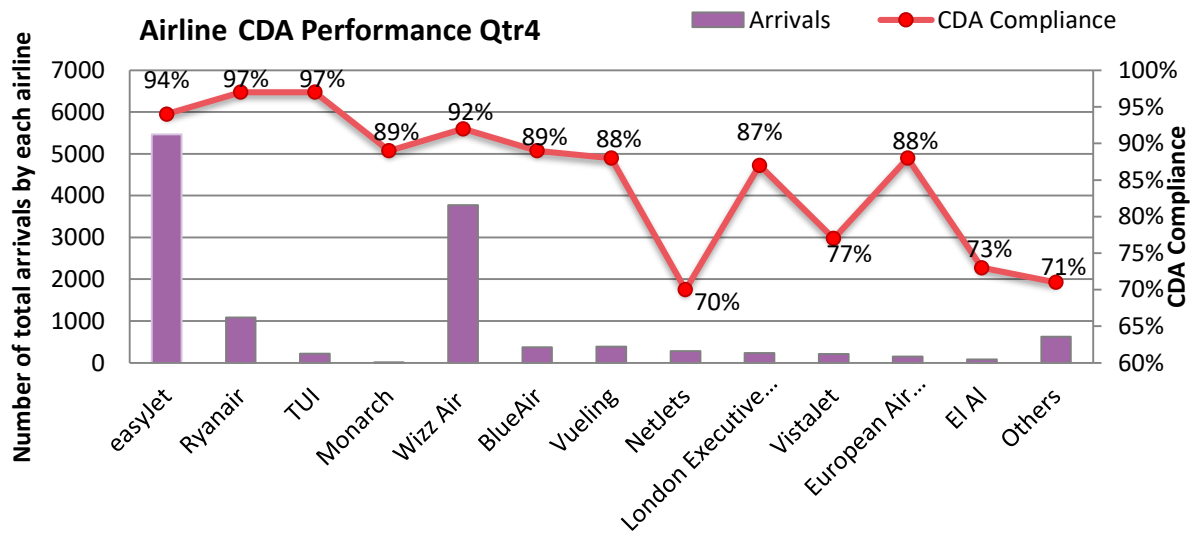
		Arrivals			Total
		08	26	Heli	
Oct 2017	Daytime	409	4,723	21	**5,153**
	Night-time	60	824	0	**884**
Nov 2017	Daytime	36	4,135	15	**4,186**
	Night-time	7	313	2	**322**
Dec 2017	Daytime	182	4,098	19	**4,299**
	Night-time	28	458	1	**487**
QTR	**Total**	**722**	**14,551**	**58**	**15,331**
	Daily Average	*8*	*158*	*<1*	*166*

The table below shows the percentage of flights that achieved a Continuous Descent Approach (CDA), which involves continuous descent with no more than one section of level flight greater than 2.5Nm in length following descent from an altitude of 5000ft.

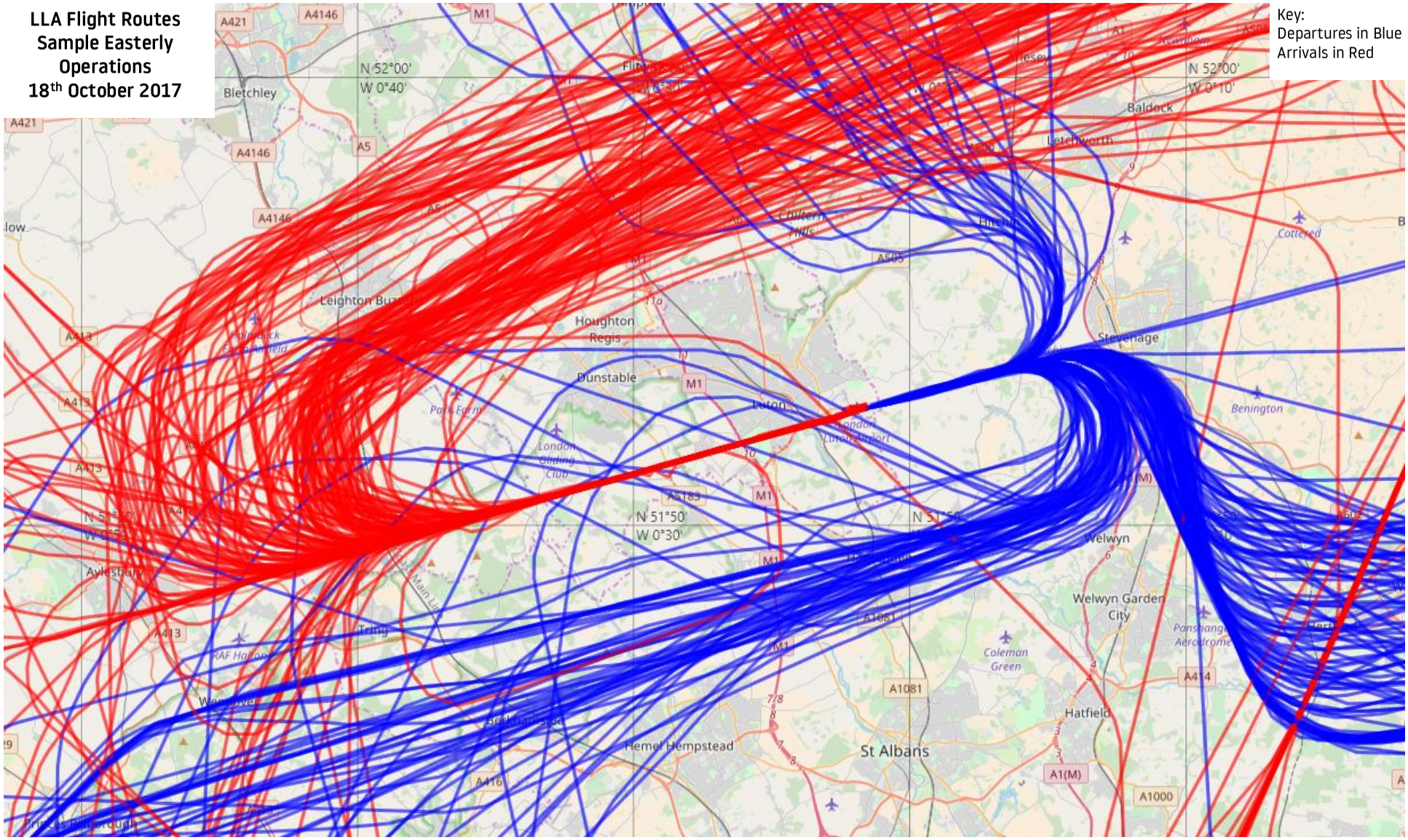
	All Arrivals			08 Easterly Arrivals			26 Westerly Arrivals		
	% CDA			*% CDA*			*% CDA*		
	Total	*Day*	*Night*	*Total*	*Day*	*Night*	*Total*	*Day*	*Night*
Oct 2017	**90%**	90%	89%	**93%**	94%	86%	**90%**	90%	89%
Nov 2017	**88%**	89%	83%	**95%**	97%	83%	**88%**	89%	83%
Dec 2017	**88%**	87%	88%	**95%**	92%	85%	**87%**	87%	88%
QTR Total	**89%**	89%	88%	**92%**	93%	85%	**88%**	88%	88%

The overall CDA achievement was 89% with several major LLA operators achieving high performance – easyJet, Wizz Air, Ryanair, Monarch, TUI Airways and Blue Air.

The maps overleaf, extracted from the Topsonic Aircraft Noise & Track Monitoring System, identify samples of actual flown aircraft tracks operating from LLA (arrivals and departures during both easterly and westerly operations) for a typical 24 hour period within the third quarter of 2017.

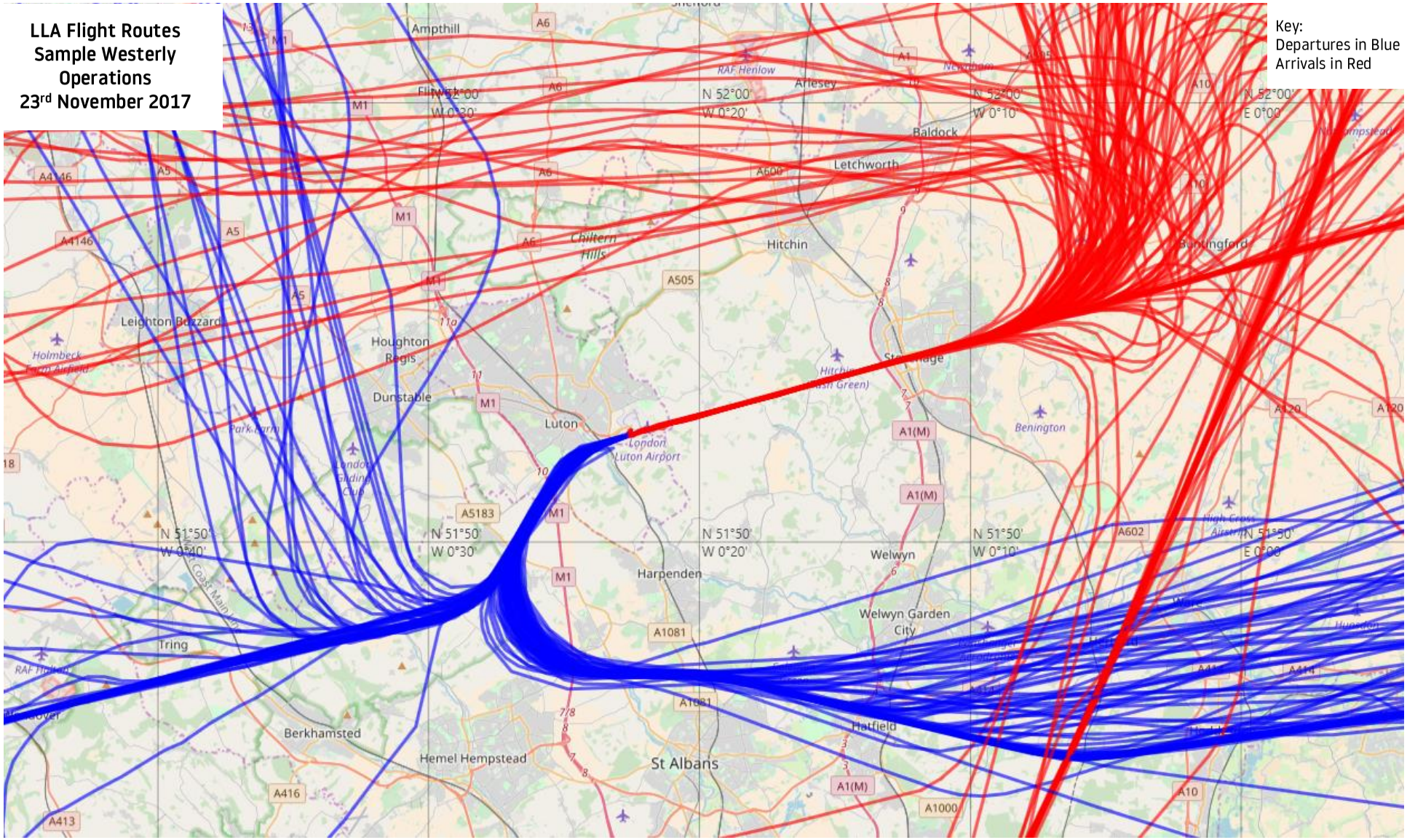


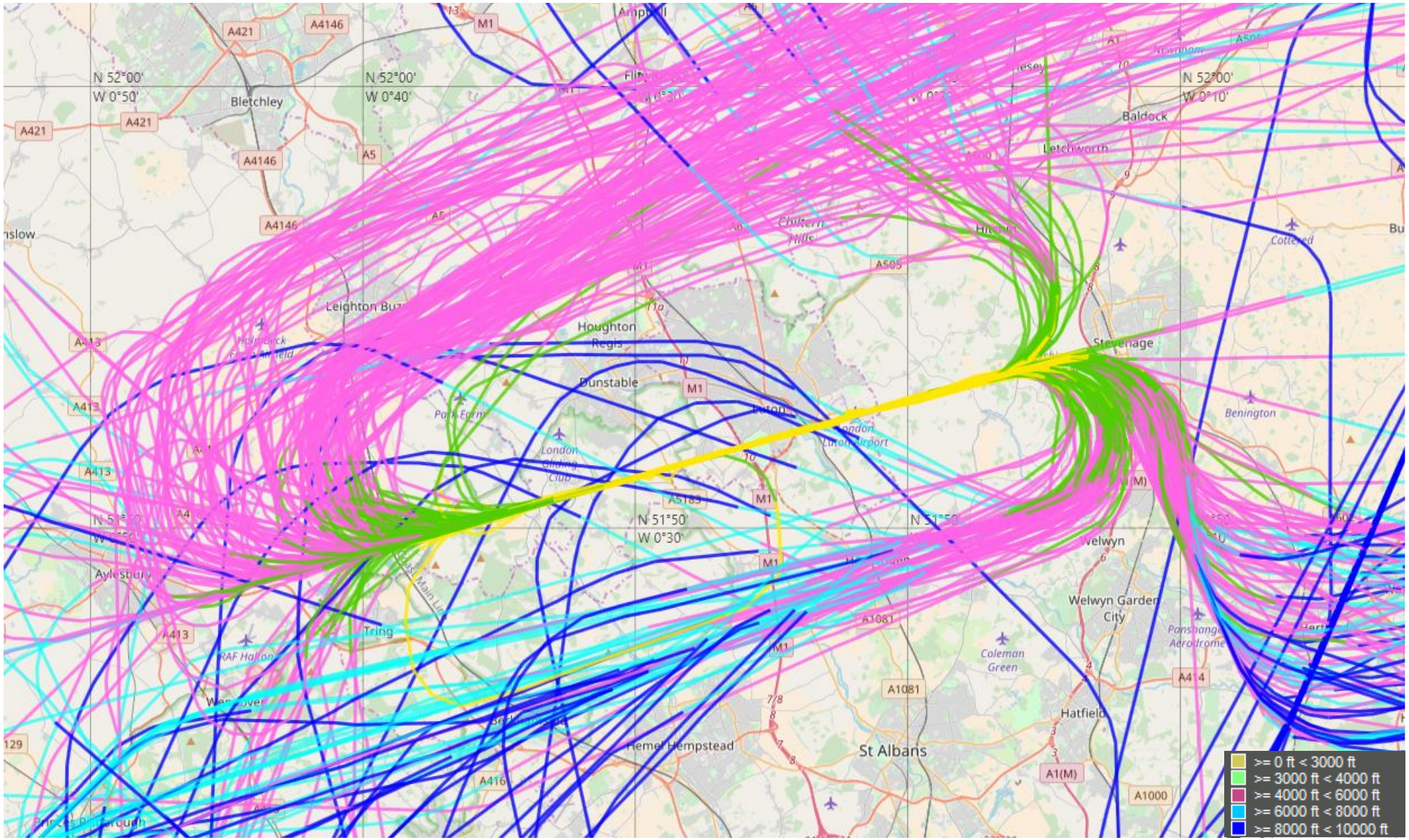
LLA Flight Routes
Sample Easterly
Operations
18th October 2017

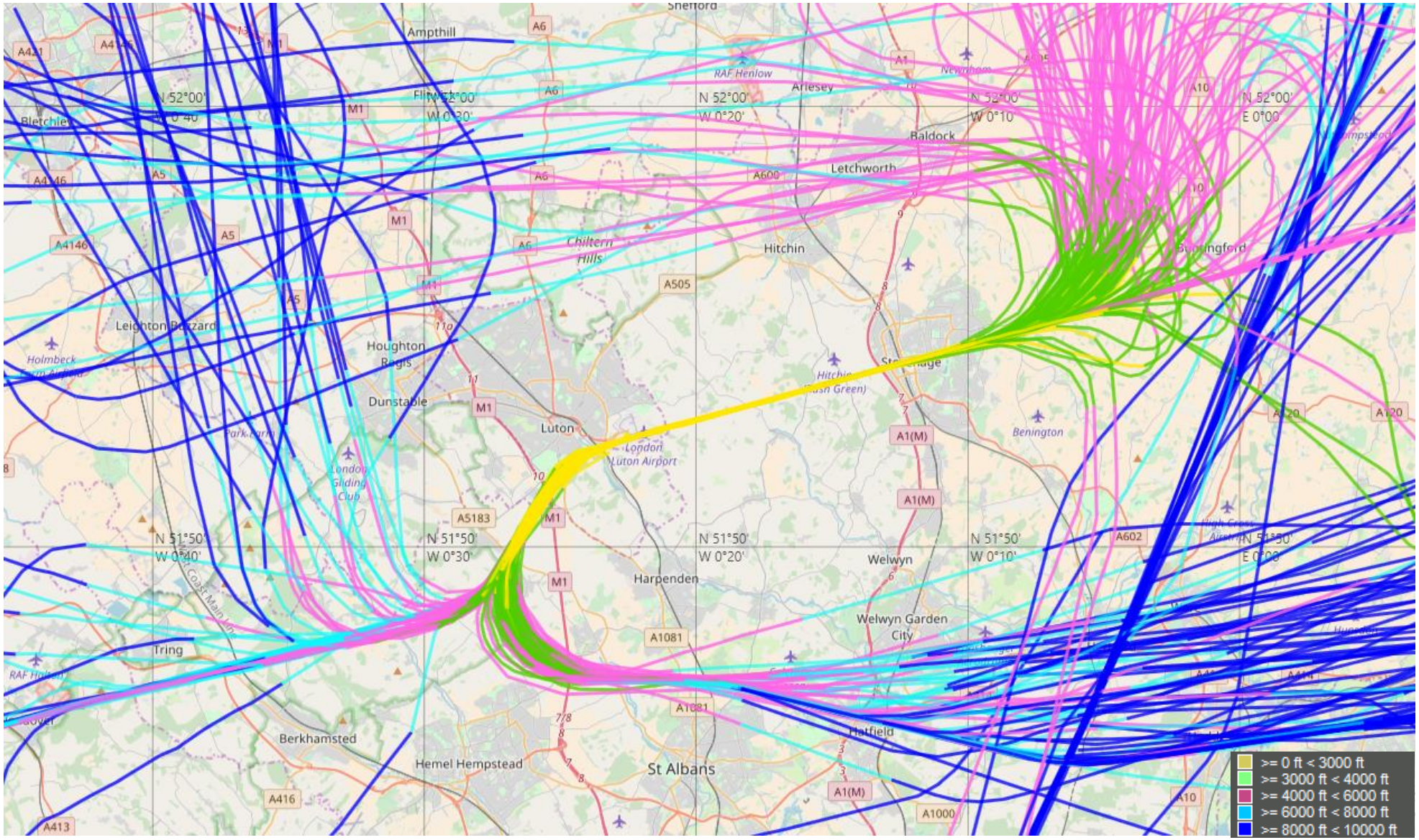


LLA Flight Routes
Sample Westerly Operations
23rd November 2017

Key:
Departures in Blue
Arrivals in Red







4 AIRCRAFT NOISE

During the 4th quarter of 2017, the maximum noise levels less than 79 dB(A) was recorded by 99% of correlated departing aircraft compared to 98% for the same quarter last year.

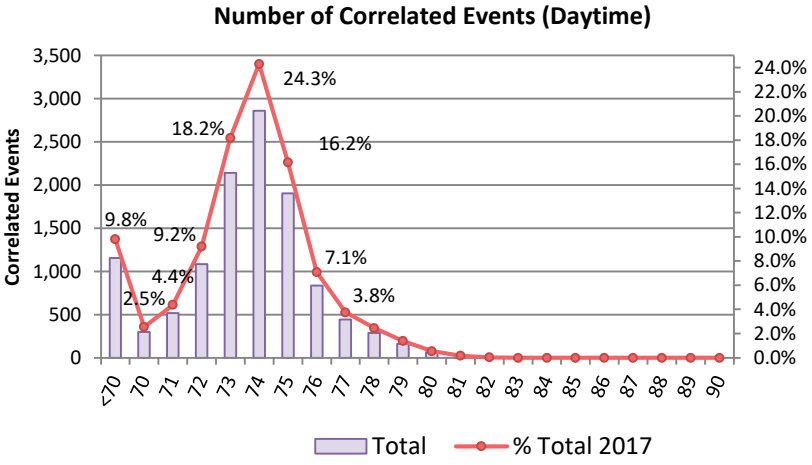
The maximum noise level less than 76 dB(A) recorded by 84% of correlated departing aircraft decreased compared to 85% for the same period last year.

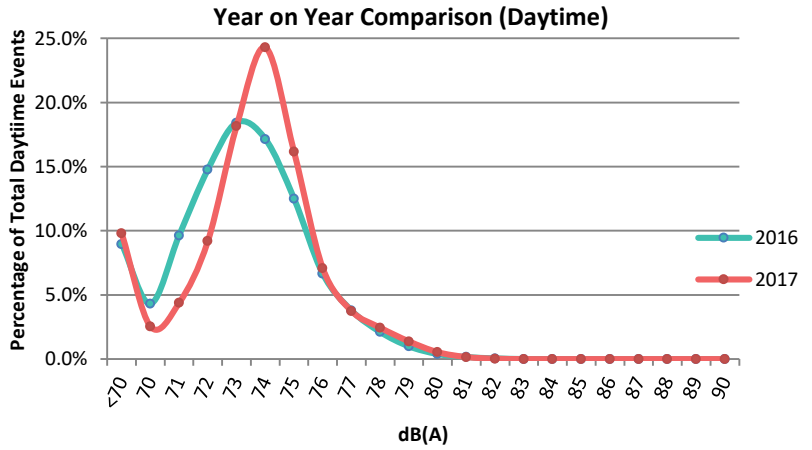
There were no noise violations this quarter, however during the 4th quarter of 2016 there were three daytime noise violations and two night time noise violations.

4.1 Daytime Noise Levels – October to December 2017

The following table identifies daytime noise levels correlated to departing aircraft at the fixed noise monitoring terminals; these are rounded to the nearest decibel. In the case of westerly departures, where the noise is monitored from two noise monitor terminals, the table will show the highest value. (*Any aircraft exceeding the Daytime Noise Violation Limit of 82dB(A), between 07:00 hrs and 23:00 hrs, is fined accordingly*).

	db (A)	Oct	Nov	Dec	QTR
Number of Correlated Events (Daytime)	<70	473	318	363	**1154**
	70	125	77	98	**300**
	71	205	150	161	**516**
	72	483	272	329	**1084**
	73	961	547	632	**2140**
	74	1060	923	879	**2862**
	75	630	657	618	**1905**
	76	255	278	302	**835**
	77	145	147	150	**442**
	78	98	99	92	**289**
	79	45	56	62	**163**
	80	15	24	25	**64**
	81	7	5	7	**19**
	82	1	0	3	**4**
	83	0	0	0	**0**
	84	0	0	0	**0**
	85	0	0	0	**0**
	86	0	0	0	**0**
	87	0	0	0	**0**
	88	0	0	0	**0**
	89	0	0	0	**0**
	90	0	0	0	**0**
Total		**4,503**	**3,553**	**3,721**	**11,777**

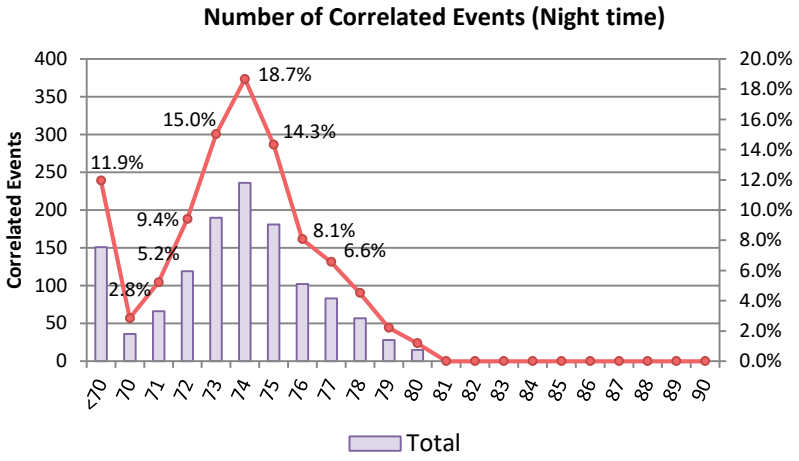


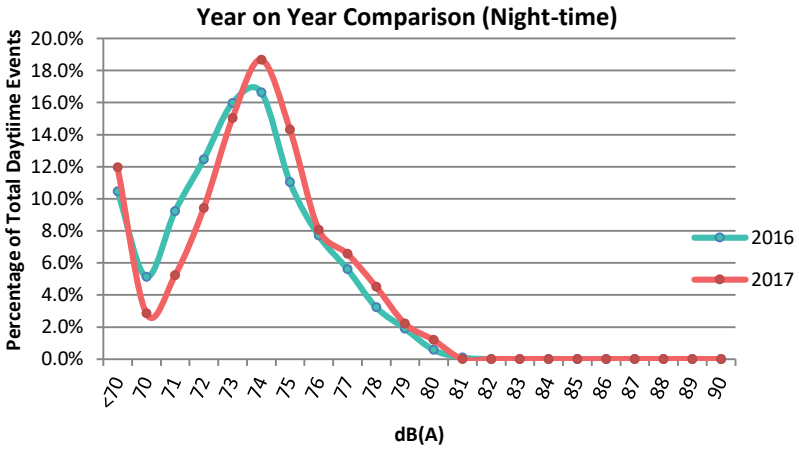


4.2 Night Noise Levels – October to December 2017

The following table identifies the night noise levels correlated to departing aircraft at the fixed noise monitor terminals; these are rounded to the nearest decibel. In the case of westerly departures, where the noise is monitored from two noise monitor terminals, the table will show the highest value. *(Any aircraft exceeding the Night Noise Violation Limit of 80dB(A), between 23:00 hrs and 07:00 hrs, is fined accordingly).*

Number of Correlated Events (Night time)	*db (A)*	Oct	Nov	Dec	QTR
	<70	71	28	52	**151**
	70	24	7	5	**36**
	71	30	14	22	**66**
	72	58	22	39	**119**
	73	102	38	50	**190**
	74	134	39	63	**236**
	75	97	39	45	**181**
	76	58	20	24	**102**
	77	42	18	23	**83**
	78	21	18	18	**57**
	79	10	7	11	**28**
	80	6	6	3	**15**
	81	0	0	0	**0**
	82	0	0	0	**0**
	83	0	0	0	**0**
	84	0	0	0	**0**
	85	0	0	0	**0**
	86	0	0	0	**0**
	87	0	0	0	**0**
	88	0	0	0	**0**
	89	0	0	0	**0**
	90	0	0	0	**0**
Total		**653**	**256**	**355**	**1264**





N.B It should be noted that the detection thresholds for the noise monitoring terminals are set at the lowest level to record the maximum number of aircraft noise events. However, a number of smaller aircraft types, such as business jets and propeller aircraft, get very close to but do not reach the detection threshold. Ambient background noise is also an important factor as specific incidents such as loud road traffic, emergency vehicle sirens, lawn mowers, drills etc. can register noise levels louder than an aircraft overhead, which results in not all aircraft movements being correlated to noise events. Generally, the louder noise events have more certainty of being correlated with aircraft movements.

Weather conditions can also effect the number of noise monitoring events recorded in the table; for example, if winds are greater than 10m/s and temperature is either higher than 25°C or below -10°C, results from noise monitors will be invalid and therefore will not been taken into account.

4.3 Noise Violations during Quarter 4 (October to December 2017)

There were no noise violations during the quarter.

4.4 Noise Insulation Scheme update

In 2016 we began our Noise Insulation Scheme, which aims to assist in reducing the noise for properties in our local communities. The scheme covers both residential and non-residential properties. Depending on any existing insulation in the property, double glazing, secondary glazing and ventilation units can be provided. Rooms eligible for insulation include living rooms, dining rooms, kitchen-diners and bedrooms.

During the final quarter o 2017, all insulation had been installed on the 38 properties which accepted the offer. This included 30 flats and 8 houses.

5 NOISE CONTOURS

5.1 Night Noise Contours – October to December 2017

5.1.1 Contour Production

Aircraft movement data for use in the contour production has been supplied by LLAOL. The contour production methodology is the same as that used for the 2017 Q3 contours. It includes terrain data, and was produced using INM software Version 7.0d. The validation is based on measured results in 2016 at the fixed noise monitors, and user-defined profiles for the most common aircraft have been used, as for the 2016 contours.

5.1.2 Noise Contour Results

The resulting noise contours are shown in the attached Figure A11060-NN17-Q4 and presented at values from 48 to 72 dB $L_{Aeq,8h}$. The area of each noise contour is given in Table 1 below and compared with the values for the previous quarter (July – September 2017) and the equivalent quarter during the previous year (October – December 2016).

Contour Value (dB $L_{Aeq,8h}$)	Contour Area (km^2)		
	Oct– Dec 2016	*Jul - Sep 2017*	*Oct – Dec 2017*
48	25.5	38.4	25.6
51	14.3	22.1	14.2
54	7.5	12.0	7.5
57	4.2	6.3	4.1
60	2.1	3.4	2.1
63	1.3	1.8	1.3
66	0.8	1.1	0.8
69	0.5	0.7	0.5
72	0.3	0.4	0.3
W/E Split (%)	55/45	82/18	95/5

Table 1: Area of Night Noise Contours

N.B. The runway split percentage in Table 1 is based only on night time (2300 – 0700) movements, and as a result there might be discrepancies between the figures quoted in a Runway Usage diagram and this Table.

5.1.3 Aircraft Movements

The aircraft movements for the night noise contours as supplied by LLA are summarised in Table 2 below, and compared with the movements from the previous quarter and the equivalent quarter in the previous year. Only aircraft types with at least 10 movements have been presented. For aircraft types with less than 10 movements in a period or types that were not explicitly presented in previous periods, 'n/a' is shown.

INM Aircraft Type	Oct – Dec 2016	Jul – Sep 2017	Oct – Dec 2017
B733	44	47	23
B734	65	n/a	14
B738	467	817	469
B752	136	215	162
A306	145	133	93
A319	422	1,075	392
A320 (ceo)	924	2,054	1104
A320 (neo)	n/a	122	41
A321	120	139	42
A333	14	20	30
CL600	67	72	67
CL601	42	46	44
C441	20	75	34
C500	14	13	11
C510	20	n/a	13
C525	31	46	40
C56X	38	51	50
C680	n/a	n/a	10
D328	74	102	16
E145	53	57	42
F100	57	45	71
GLF4	43	47	45
GLF5	254	248	298
LJ35	37	24	20
MU3001 (BE40)	n/a	14	n/a
Other	51	75	53
Total	**3,138**	**5,537**	**3,184**

Table 2: Night-time Aircraft Movement Numbers by Aircraft Type

5.1.4 Noise Contour Comparison

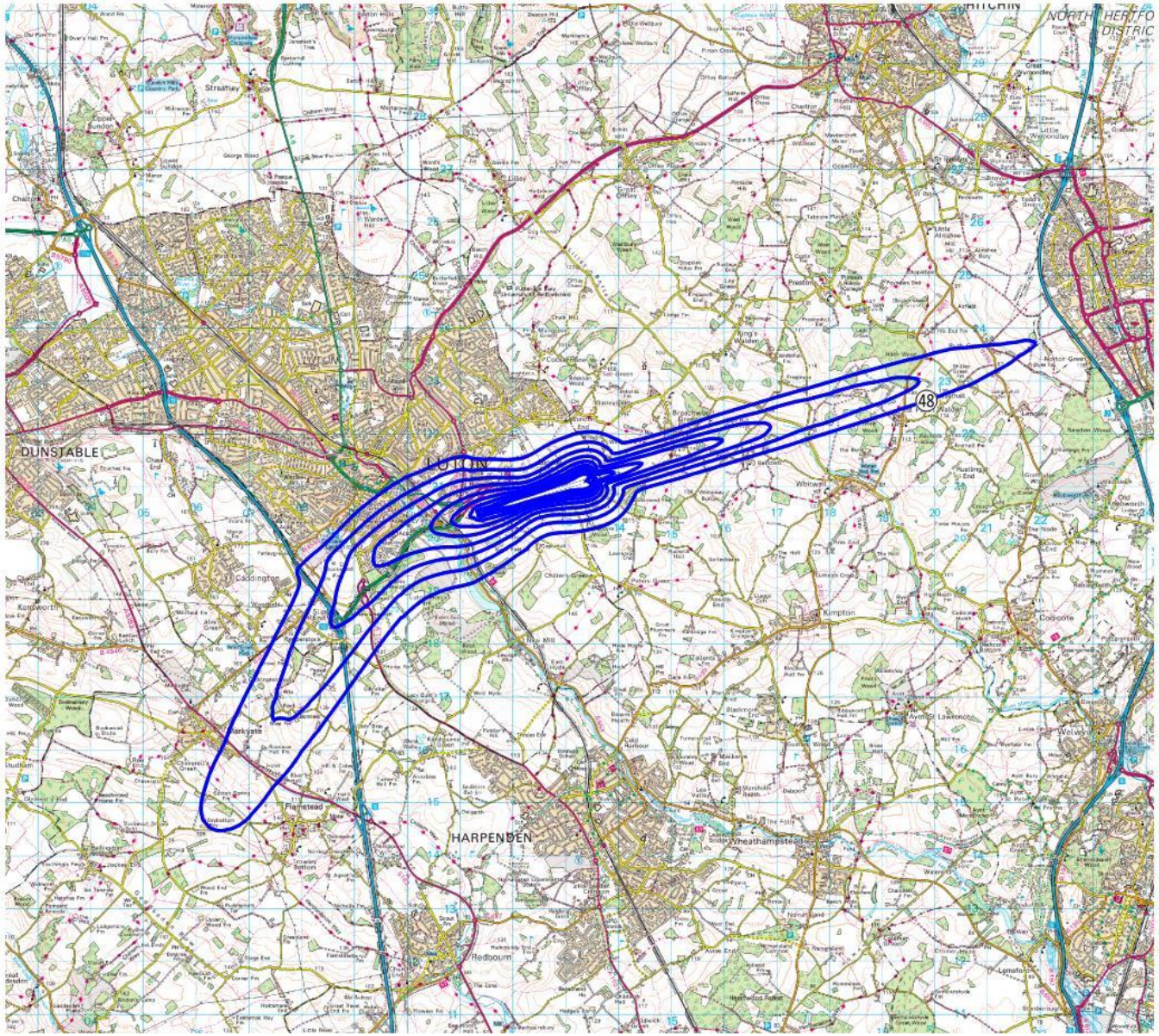
Compared with the same quarter in 2016, there has been an increase of 1% in the total number of movements. The overall aircraft mix has changed slightly, with turbofan operations comprising 75% of the total operations in 2017 Q4, compared to 79% the same quarter in 2016. There has also been a change in that the proportions of single aisle Airbus aircraft with increased A320s, but decreased A319s and A321s.

The modal split has changed significantly compared to the same quarter in 2016, with 95% of movements in 2017 Q4 using runway 26, compared to 55% in 2016 Q4.

The area within the 48 dB(A) noise contour has remained very similar to the same quarter last year (an increase of less than 1%). Across the other contour bands the areas are the same or very similar. This is largely unsurprising as the total movement numbers have also remained similar.

The contour shape is however significantly different when compared to the same quarter last year, as in 2017 it extends further to the east towards Stevenage and to the south west towards Markyate and Flamstead, but does not extend as far to the west towards Caddington. This is due to the significant change in modal split.

The number of movements, and therefore the contour area, has decreased compared to the previous quarter (July - September 2017).



LEGEND:

Noise Contours,
48 to 72 dB $L_{Aeq,8h}$ in 3 dB steps

REVISIONS

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Acoustics
Technology

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London Luton Airport
Regular Contouring

Airborne Aircraft Noise Contours
Oct-Dec 2017 Average Night time

DRAWN: CT CHECKED: NW

DATE: February 2018 SCALE: 1:100000@A4

FIGURE No:

A11060/NN17/Q4

6 COMPLAINTS

6.1 Total Complaints relating to LLA aircraft operations

	4th QTR 2017	4th QTR 2016
Total No. of Complaints relating to LLA aircraft operations	2,446	1,136
No. of Complainants	144	218
No. of General Complaints	218	251
No. of Specific Complaints	2,228	885
Average No. of Complaints per Complainant	17.0	5.2
No. of Aircraft Movements per Complaint	12.5	28

During the last quarter a total of 2,446 complaints relating to LLA aircraft operations (on average just over 26 complaints per 24 hours) were received by the Flight Operations Department. This is compared to the 1,136 complaints which were received for the same period last year. It should be noted that 80% were received by 10 individuals.

The monthly breakdown of total complaints and events eliciting a complaint relating to LLA aircraft operations is as follows:

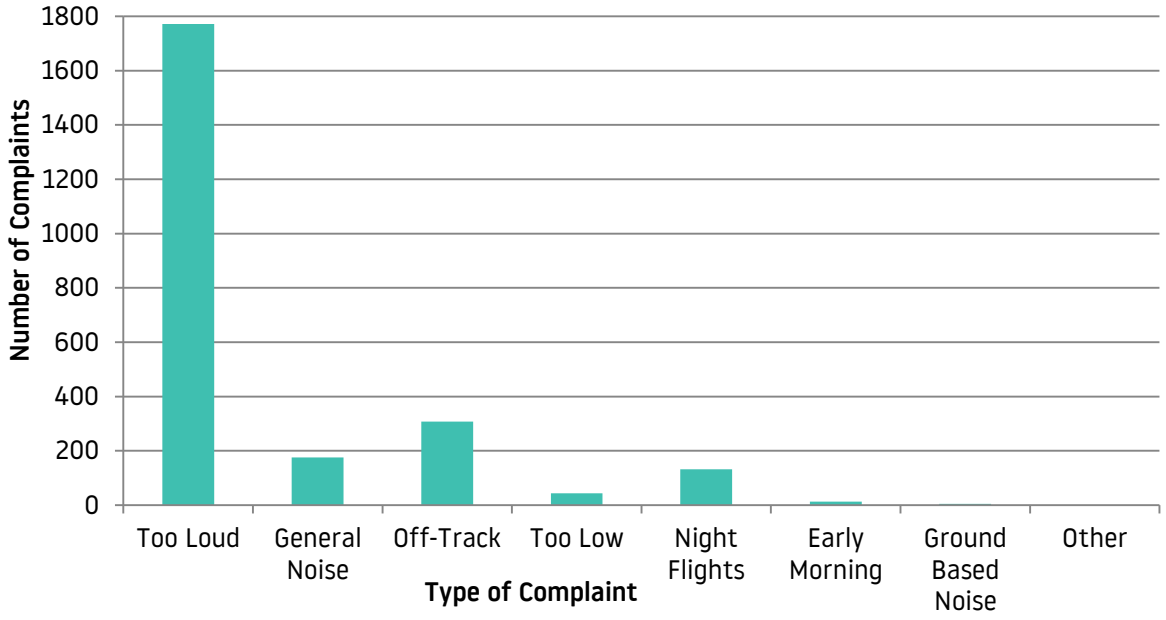
Oct 2017	1104 complaints	(983 Specific Complaints, 121 General Complaints)
Nov 2017	917 complaints	(859 Specific Complaints, 58 General Complaints)
Dec 2017	425 complaints	(386 Specific Complaints, 39 General Complaints)

A further 77 complaints not attributable to LLA traffic were received throughout the quarter, compared to 31 complaints for the period October to December last year.

Out of 144 total complainants, there were 80 that contacted the airport only once meaning that 64 complainants generated 2,382 complaints.

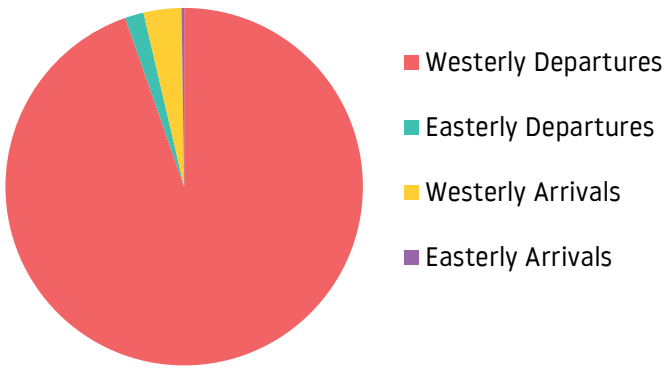
6.2 Type of Complaint

The types of complaint received by the Flight Operations Department from October to December 2017 are listed below.



6.3 Nature of Disturbance

The chart represents the areas of concern reported from specific complaints with regard to aircraft activity during the period October to December 2017.



Within the 2,017 specific aircraft complaints concerning westerly departures, 1,991 complaints involved aircraft on the Match/Detling heading, 11 related to aircraft following Compton flight route, 5 related to aircraft using the Olney route and 10 complaints were recorded about aircraft following an off-airways routing.

With regard to the 36 complaints attributed to easterly departures, these all related to aircraft following the Compton flight route.

In total the Flight Operations Department received a total of 78 specific complaints regarding arrivals. 73 of these complaints were about westerly arrivals and a further 5 concerning easterly arrivals.

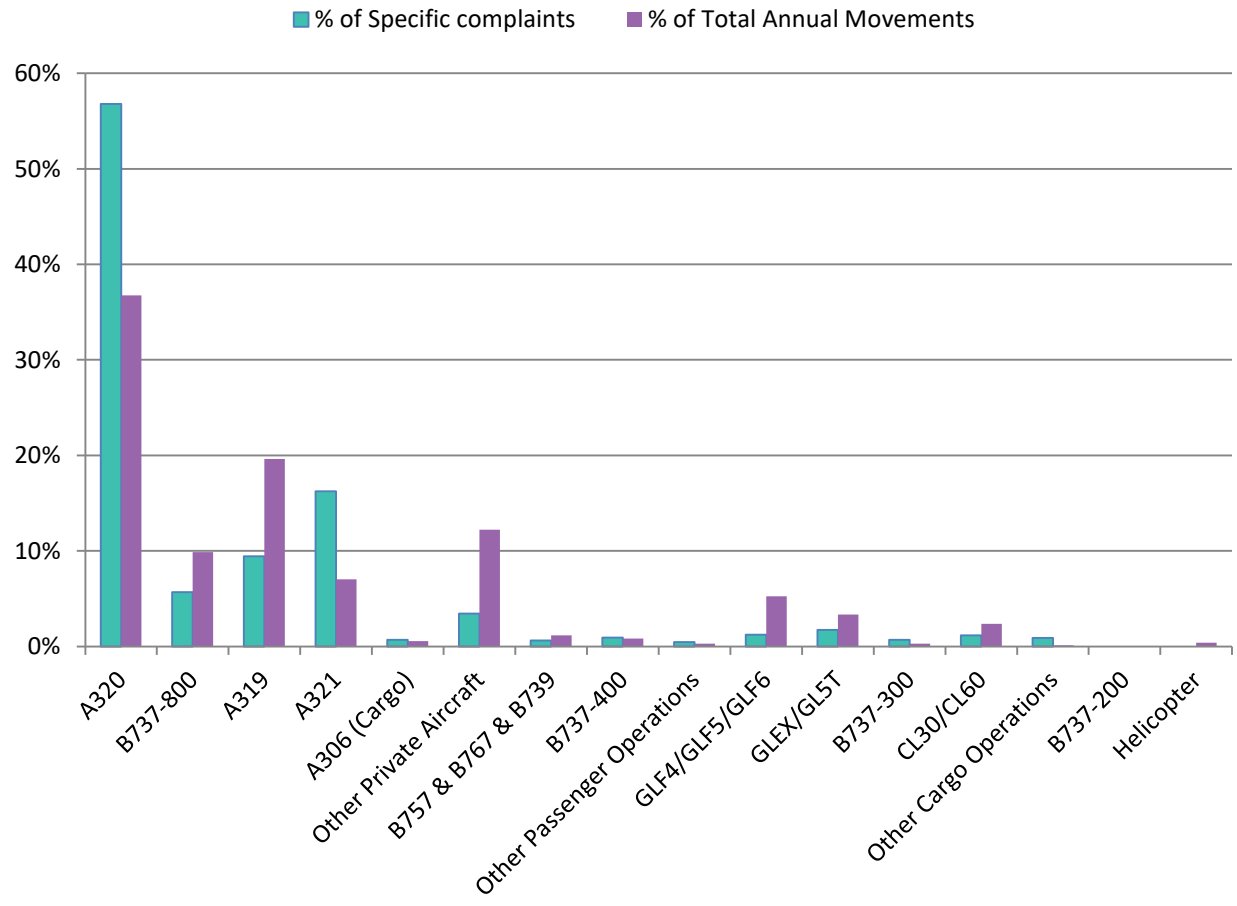
38
Complainants
reported noise disturbance at night (compared to **44 Complainants** for the same Quarter last year)

Departing aircraft accounted for 76% of the 106 specific night complaints and 24% involved arrivals. Cargo flights, involving A306 and B752 aircraft were reported in 14% of night complaints, whilst passenger aircraft accounted for 75% of night complaints and executive aircraft were correlated to 11% of night complaints.

132 (5%)
Complaints
concerning night noise disturbance from LLA operations

6.4 Complaints by aircraft type

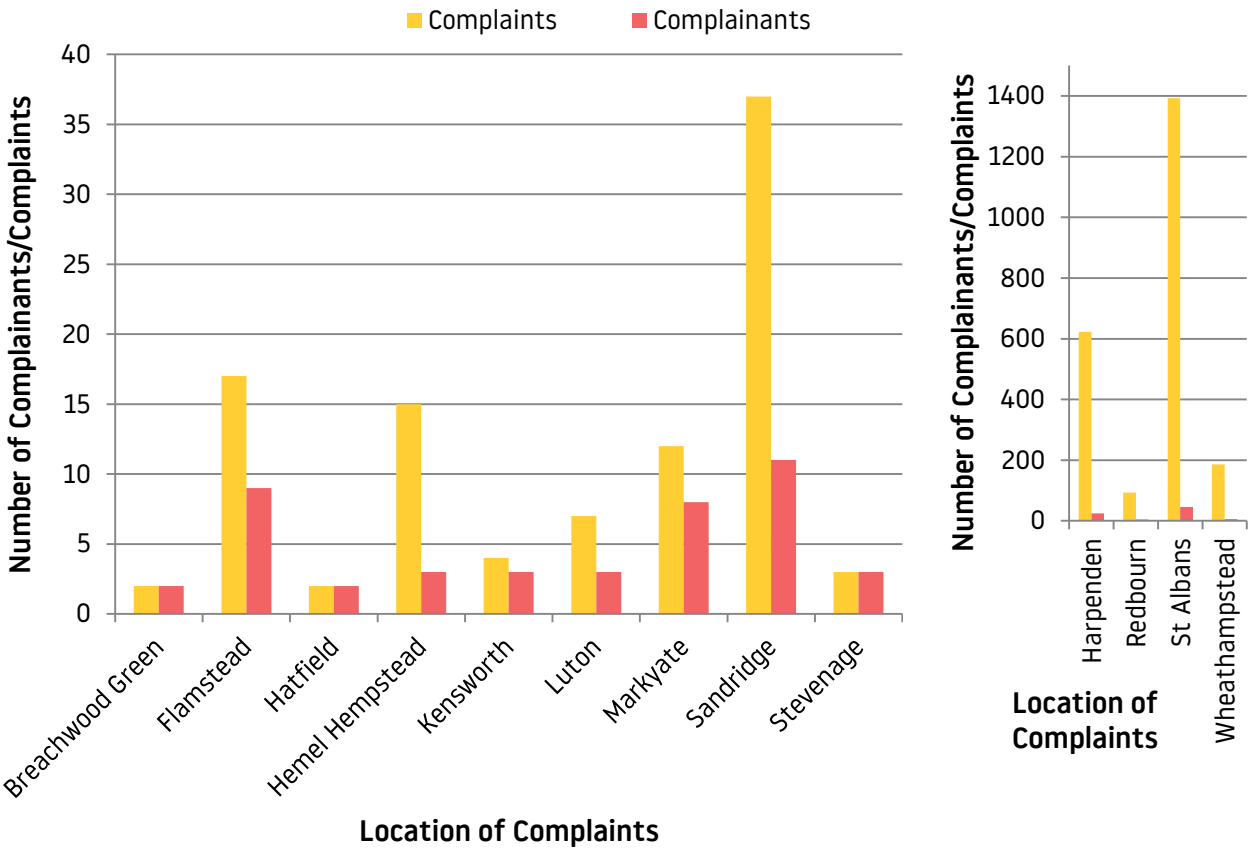
The diagram below shows aircraft types generating specific complaints.



6.5 Origin of Complaints

The chart below identifies the areas around the Airport from which more than one complaint relating to LLA aircraft operations was received during the period October to December 2017.

The communities with one complainant include Ayot St. Lawrence, Bellingdon, Blackmore End, Box Hill, Caddington, Eaton Bray, Essex, Hertford, Hitchin, Knebworth, Linslade, Little Gaddesden, Pepperstock, Slip End, Tring, Ware and Welwyn Garden City.



6.6 Complaints Analysis

During Quarter 4 there was an increase in complaints and a decrease in complainants compared to the same quarter last year; this is thought to be due to a number of reasons:

- The number of movements decreased compared to the previous year, however the number of complaints increased by 115%.
- 80% of complaints were generated by ten individuals located in; Wheathampstead, Harpenden, Redbourn and St Albans.
- As winds dictated westerly operations for 95% of the time communities disturbed by westerly operations experienced very little natural respite during the quarter. Therefore, the largest percentage of complaints related to aircraft using our westerly routes, particularly westerly departures on the Match/Detling route.

6.7 Communication Method

The following table shows the mode of communication used to contact London Luton Airport regarding noise.

Communication Method	% of Total Complaints
E-mail	15%
TraVis	84%
Telephone	1%

Any concerns relating to aircraft operations associated with London Luton Airport can also be reported to the Flight Operations Department by the following means:

Postal Address Flight Operations Department
London Luton Airport
Navigation House
Airport Way
Luton, Bedfordshire
LU2 9LY

Direct Telephone (01582) 395382 (24 hours)

6.8 Response Time

The following table shows the time taken to respond to complaints submitted by our local communities. We aim to respond to 80% of concerns within 8 days and 100% of concerns within 15 days.

Those complaints with longer response times are usually those requiring further investigation with the help of Air Traffic Control. If this is the case, the individual's complaint will be acknowledged and will state that additional investigation is required which may lengthen the response time.

Number of days	% of Total Complaints
0	65%
1	15%
2	6%
3	5%
4	1%
5	1%
6	2%
7	0%
8	0%
9	0%
10	0%
11	1%
12+	2%

7 COMMUNITY RELATIONS

7.1 Community Visits to Airport

Invitations are often extended to local residents and LLACC members to visit the Flight Operations Team for a demonstration of the Aircraft Noise & Track Monitoring System, to discuss specific concerns and to view the specific tracks of LLA aircraft operations in their area.

During the quarter the team met with the residents in Childwickbury and Redbournbury to discuss the operation and the aircraft overflying these areas, this meeting was held on the 18th December 2017.

7.2 Airport Visits to the Community

The Flight Operations team held a Public Surgery in Baldock on the 14th November 2017 for those residents in Baldcok, Letchworth and the surrounding villages. Just one person attended despite extensive social media advertising which reached more than 23,000 people in the area. This is in addition to notices distributed to the local media, 18 local councillors, the local MP and complainants from this area on our database.

The objective of the Public Surgeries is to ensure that the communities have an opportunity to meet face to face with the Flight Operations Department and that everyone who attends is better informed about aircraft operations on their area. More public surgeries are scheduled; details of which can be found at the following website: https://www.london-luton.co.uk/corporate/community/noise/noise-surgeries which is updated accordingly.

Furthermore, during the quarter a member of the Flight Operations team also presented to Wheathampstead Parish Council and the team also conducted some visual monitoring with three different residents; one in Harpenden and two nearby Markyate.