Quarterly Monitoring Report
Quarter 2 2022

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 April to June 2022.

KEY MONITORING INDICATORS – 2nd QUARTER 2022

Parameter		2nd Quarter 2022	2nd Quarter 2021
Total Passenger Number	↑	3,717,034	541,689
Total Aircraft Movements	↑	33,398	9,945
Night Movements (23.00 – 06.59)	↑	4,792	1,065
Early Morning Movements (06.00 – 06.59)	↑	1,437	329
Aircraft Movement and Quota Count limits (per rolling 12-month period)			
Night Quota Movements (*9,650 limit*)	↑	6,205	3,463
Night Quota Count (*3,500 limit)*	↑	2236.75	1371.00
Early Morning Shoulder (*7,000 movements*)	↑	4,206	2,073
24hr CDA (% achievement)	↑	93%	86%
Day CDA (% achievement)	↑	93%	86%
Night CDA (% achievement)	↑	93%	88%
Track Violations	↑	10	5
Departure Noise Infringements (Day)	-	0	0
Departure Noise Infringements (Night)	-	0	0
Noise Monitor Results*			
No. Day (Night) > 80 dB(A)	-	0 (0)	0 (0)
No. Day (Night) > 75 dB(A)	↑	1,014 (174)	241 (33)
No. Day (Night) > 70 dB(A)	↑	9,623 (1,498)	2,365 (307)
Night Noise Contour Area (48 dB $L_{Aeq, 8h}$)	↑	30.6 km^2	12.5 km^2
Noise Complaints	↓	1,293	2,213
Complainants	↑	230	81
Number of New Complainants	↑	114	19
Largest Source of Complaints	-	Arr. West	Deps. West
Origin of Concerns (>5 Complainants)	-	Harpenden St Albans Stevenage Luton Flamstead Sandy Potton Hitchin Cambridge Wheathampstead	Harpenden Hitchin St Albans
Westerly/Easterly Runway Split (%)	-	64/36	56/44

**It should be noted that due to the power failure at noise monitor NMT03, some data (6.5 days) was not collected for Quarter 2 2022.*

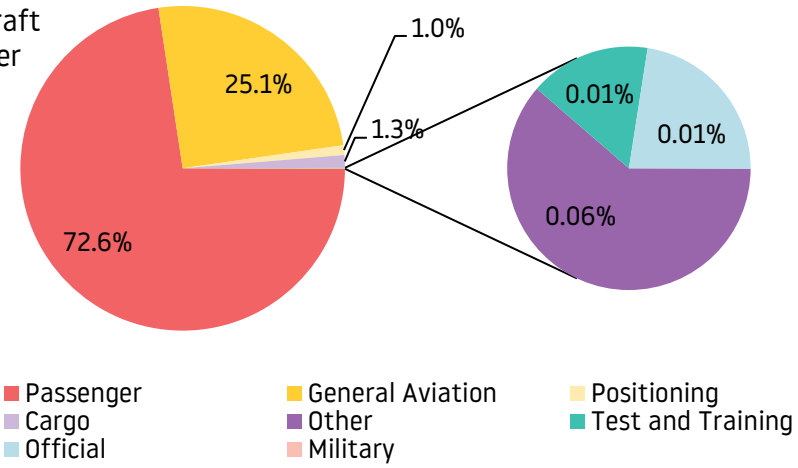
1 AIR TRAFFIC DATA

1.1 Aircraft Movements

There was a total of 33,398 aircraft movements during this quarter (compared with 9,945 for the same period in 2021), an increase of 236%.

This resulted in an average 367 movements per 24 hours (compared to 109 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*						
Apr 2022	136	7,617	114	9	0	3	3	2,281	0	**10,163**
May 2022	145	8,251	98	11	0	2	7	3,046	2	**11,562**
Jun 2022	141	8,367	87	3	0	2	9	3,061	3	**11,673**
QTR Total	**422**	**24,235**	**299**	**23**	**0**	**7**	**19**	**8,388**	**5**	**33,398**

1.2 Passenger Statistics

A total of 3,717,034 passengers passed through LLA during the period April to June 2022 (compared with 541,689 for the same period last year), 3,674,875 on scheduled flights (98.9%) and 42,159 on charter flights (1.1%). This represents an increase in passengers of 586% and equates to an average 40,847 passengers per 24 hours (compared to 5,952 during the same quarter last year).

	Domestic	EU	Non-EU	Total
Apr 2022	93,059	877,669	201,265	**1,171,993**
May 2022	87,401	930,360	193,576	**1,211,337**
Jun 2022	92,943	1,033,349	207,412	**1,333,704**
QTR Total	**273,403**	**2,841,378**	**602,253**	**3,717,034**

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

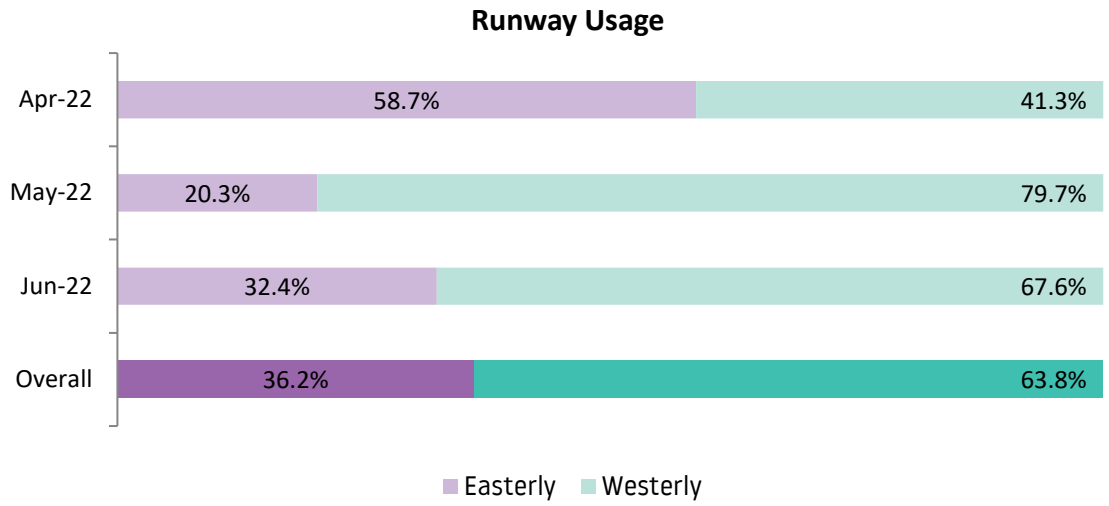
[1] *Other relates to flights coming for maintenance and or departing aircraft that has made an unscheduled return to base*

[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 36% easterly and 64% westerly (in comparison to a 44%/56% split in the same quarter last year). The monthly breakdown of these statistics 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, and to limit 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 points based system that allocates points to different aircraft types according to the noise they produce. 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 05:59 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.

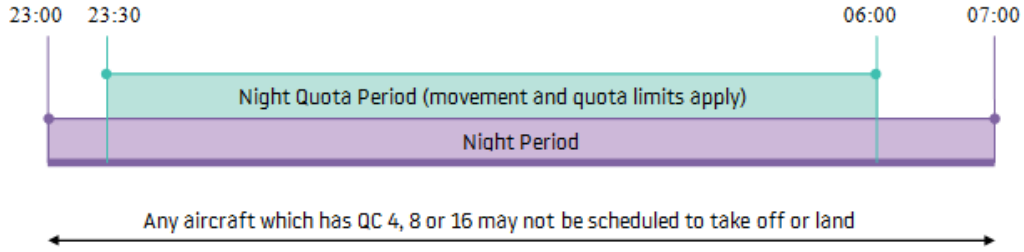
Aircraft are certified by the International Civil Aviation Organisation (ICAO) according to the noise they produce during specific certification tests conducted by the manufacturer. They are classified separately for both take-off and landing. The points are then allocated to different aircraft types 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
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 Dassault Falcon 7X/900/2000
81 to 83.9	QC 0.125	Airbus A320neo Global Express
Less than 81	QC 0	BAe ATP Challenger series (eg CL600) Cessna 525/550

The 'Early Morning Shoulder Period'

The 'Early Morning Shoulder Period' is 06:00 to 06:59 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 – 0559) 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 – 0659) 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 last rolling 12-month period. These can be compared with the limits set within the planning conditions.

	Night Quota Period (2330-0559)		Early Morning Shoulder (0600-0659)
	Movements Limited to 9,650 Annually	*Quota Count Limited to 3,500 Annually*	*Movements Limited to 7,000 Annually*
July 2021	242	107.500	200
August 2021	389	136.500	385
September 2021	358	123.375	362
October 2021	478	142.000	406
November 2021	374	118.625	285
December 2021	454	148.875	289
January 2022	325	123.750	238
February 2022	364	148.625	247
March 2022	426	176.250	354
April 2022	788	293.000	504
May 2022	984	319.625	494
June 2022	1,023	398.625	442
QTR Total	**2,795**	**1011.250**	**1,440**
Total for preceding 12 months	*6,205*	*2236.75*	*4,206*

1.5 Day/Night Ratio of Movements - Actual

There were 4,792 night operations during the quarter (compared to 1,065 for the same quarter last year), an average 53 movements per night (compared to 12 last year). Arriving aircraft accounted for 56% 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. 65% 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 86% day / 14% night (in comparison to 89% day / 11% night over the same quarter last year).

	Day Movements (0700-2259)			Night Movements (2300-0659)					Total
	Day movements			*Night Quota Period (2330-0559)*		*Early Morning Shoulder (0600-0659)*		*Total Night Movements (2300 – 0659)*	
	A	D	Total	A	D	A	D		
Jul 2021	2,600	2,511	5,111	147	95	2	198	532	**5,643**
Aug 2021	3,465	3,351	6,816	298	91	1	384	926	**7,742**
Sept 2021	3,767	3,711	7,478	280	78	2	360	862	**8,340**
Oct 2021	3,914	3,854	7,767	340	138	31	375	1,045	**8,812**
Nov 2021	3,092	3,096	6,188	253	121	23	262	791	**6,979**
Dec 2021	3,538	3,610	7,148	344	110	10	279	904	**8,052**
Jan 2022	2,630	2,605	5,235	237	88	15	223	645	**5,880**
Feb 2022	2,946	2,958	5,904	266	98	13	234	740	**6,644**
Mar 2022	3,770	3,835	7,605	332	94	23	331	925	**8,530**
Apr 2022	4,305	4,413	8,718	643	145	25	476	1,445	**10,163**
May 2022	4,842	5,040	9,882	796	188	22	472	1,680	**11,562**
Jun 2022	4,898	5,108	10,006	801	222	10	432	1,667	**11,673**
QTR Total	**14,045**	**14,561**	**28,606**	**2,240**	**555**	**57**	**1,380**	**4,792**	**33,398**
Total for preceding 12 months	*43,767*	*44,092*	*87,858*	*4,737*	*1,468*	*177*	*4,026*	*12,162*	*100,020*

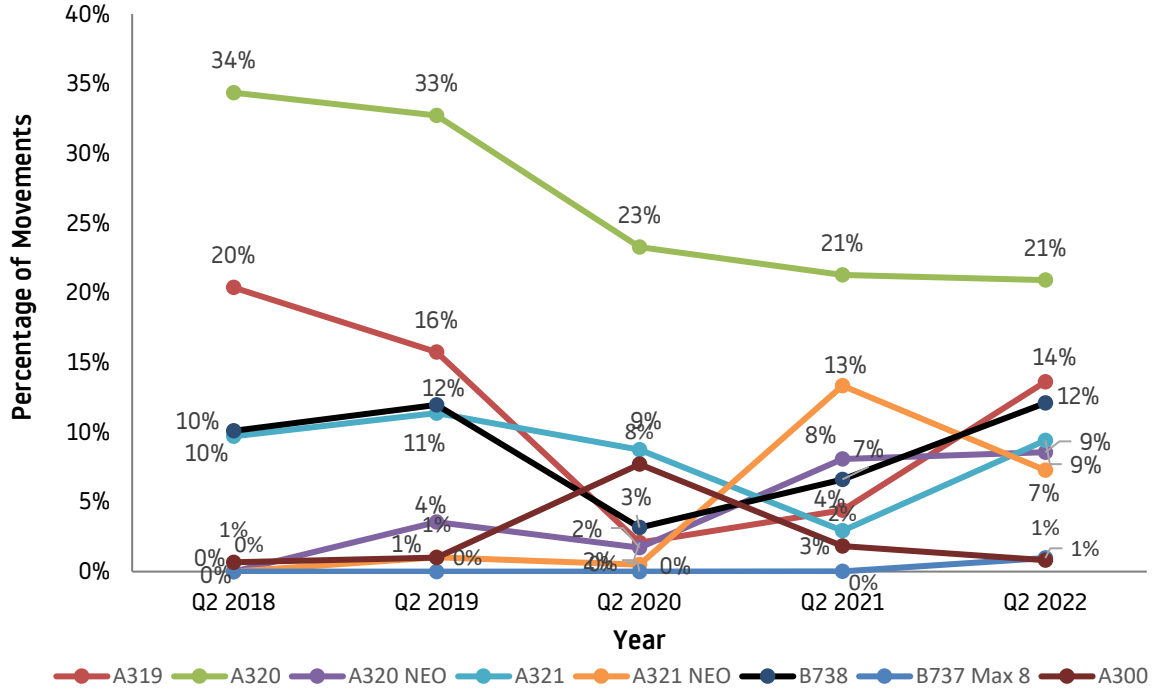
1.6 Day/Night Ratio of Movements – Forecast

As a result of the pandemic, forecasts are uncertain and can change based on the number of COVID cases in other countries and UK Foreign and Commonwealth Office advice.

*Rounded number	2022/2023 Forecast of Aircraft Movements				
	Day Movements (0700 – 2259hrs)	*Night Quota Period (2330-0559) Limited to 9,650*	*Early Morning Shoulder (0600-0659) Limited to 7,000*	*Total Night Movements (2300-0659hrs)*	*Total*
July 2022	11,414	1,073	639	1,969	13,383
August 2022	10,870	1,069	606	1,925	12,795
September 2022	11,078	868	538	1,664	12,742
October 2022	11,190	879	512	1,613	12,803
November 2022	8,834	435	269	822	9,656
December 2022	10,284	575	337	1,083	11,367
January 2023	8,965	493	413	1,049	10,014
February 2023	8,485	478	375	996	9,481
March 2023	10,215	467	327	933	11,148
April 2023	11,121	786	552	1,515	12,636
May 2023	12,071	902	615	1,748	13,819
June 2023	11,651	897	591	1,737	13,388
*Total for following 12 months**	*126,178*	*8,922*	*5,774*	*17,054*	*132,232*

1.7 Aircraft Movements by Type

The graph below shows the percentage of aircraft movements for the main aircraft types that operated at LLA. The data goes back 5 years for data comparison purposes. During Q2 2022, there was a drop in the utilisation of the newer generation aircraft type, NEO, when compared with the same period last year. This was mainly due to the lower number of air transport movement last year. The operators utilitised and made the most use of their NEO fleet on a larger share of flights versus their non-NEO (CEO) type aircraft in 2021 so we see a larger share of NEO movement in 2021.



2 DEPARTING AIRCRAFT

2.1 Departure Route Analysis

The following table reports the average and total number of departures for each flight route, differentiating between easterly (07) and westerly (25) operations. Night movements quoted below departed between 23:00 hrs and 06:59 hrs.

		Departures										Total
		MATCH/ DETLING			*COMPTON*		*OLNEY*		*Other**		*Helicopter*	
		07	25 Conv	25 RNAV	07	25	07	25	07	25	HELI	
Apr 2022	Daytime	1,229	2	872	779	562	361	235	12	5	8	**4,065**
	Night-time	260	0	197	270	181	56	54	2	0	0	**1,020**
May 2022	Daytime	527	4	1,898	308	1,265	105	512	4	20	16	**4,659**
	Night-time	97	2	439	83	367	17	94	1	4	0	**1,104**
Jun 2022	Daytime	824	3	1,640	486	1,095	197	450	3	33	16	**4,747**
	Night-time	175	1	376	127	317	28	61	0	1	1	**1,087**
QTR	**Total**	**3,112**	**12**	**5,422**	**2,053**	**3,787**	**764**	**1,406**	**22**	**63**	**41**	**16,682**
	Daily Average	*34*	*<1*	*60*	*23*	*42*	*8*	*15*	*<1*	*<1*	*<1*	*183*

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). 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.

The obligations of NPRs for conventional departure routes (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 06:59hrs 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.

We are working hard to reduce the noise and environmental impact on the neighbouring areas. In April 2015 London Luton Airport implemented a Track Violation Penalty Scheme resulting in fines for aircraft that leave the corridor before reaching the required altitude. Using the current Aircraft Noise and Track Monitoring System the Airport's specialist Flight Operations Department evaluates and investigate the radar tracks 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, the operator in question 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 98.2%. This calculation includes deviations for weather, traffic avoidance, as well as deviations classed as violations. The breakdown of these violations is shown in the table below.

	Number of Violations	Total Penalties Collected
April 2022	3	£4,000
May 2022	5	£6,000
June 2022	2	£3,000
QTR	**10**	**£13,000**

	Airline or Aircraft Operator	Aircraft Type/Occurrence
April 2022	Privately owned aircraft	C550/1; GLEX/1; GLF6/1
May 2022	Privately owned aircraft	C550/1; C56X/1; CRJ2/1; GLF5/1; GLF6/1
June 2022	Privately owned aircraft	C650/1; CL60/1

3 ARRIVING AIRCRAFT

3.1 Arrivals Route Analysis

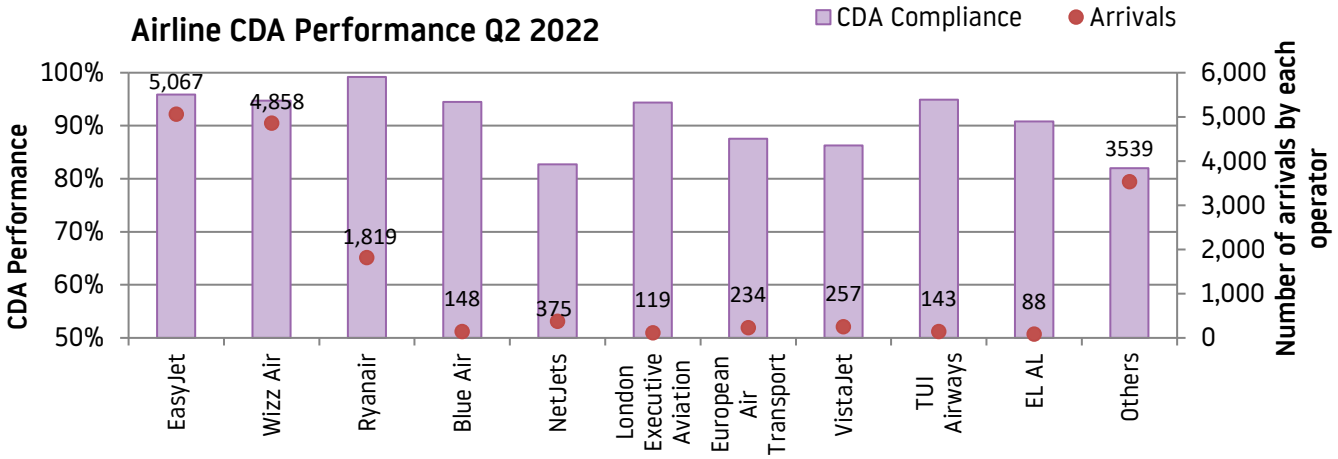
The following table reports the total number of arrivals differentiating between easterly (07), westerly (25) operations and helicopters.

		Arrivals			Total
		07	25	Heli	
April 2022	Daytime	2,466	1,736	7	**4,209**
	Night-time	512	357	0	**869**
May 2022	Daytime	971	3,737	12	**4,720**
	Night-time	216	863	0	**1,079**
June 2022	Daytime	1,579	3,233	9	**4,821**
	Night-time	340	678	0	**1,018**
QTR	**Total**	**6,084**	**10,604**	**28**	**16,716**
	Daily Average	*67*	*117*	*<1*	*184*

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.

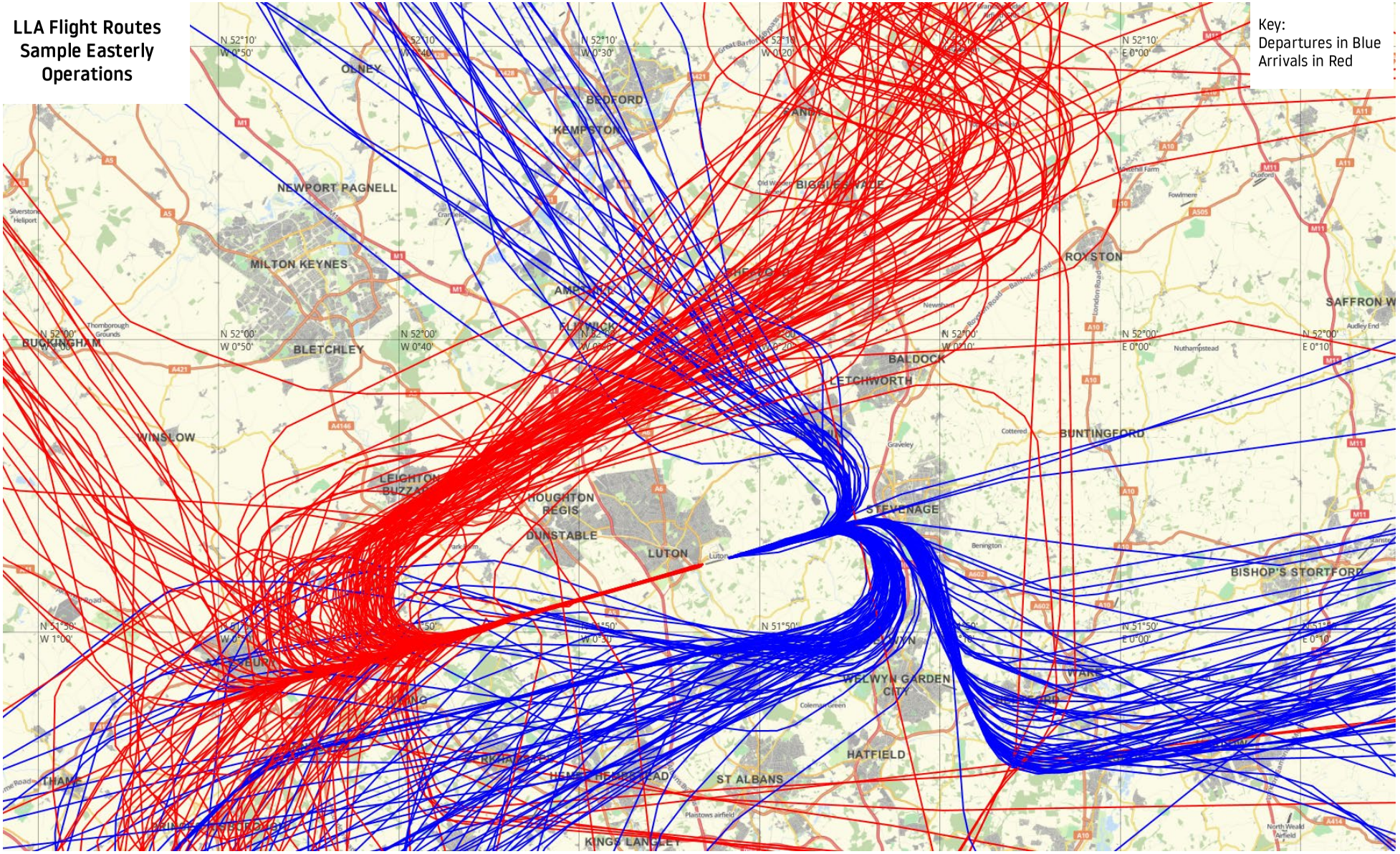
	All Arrivals			07 Easterly Arrivals			25 Westerly Arrivals		
	% CDA			*% CDA*			*% CDA*		
	Total	*Day*	*Night*	*Total*	*Day*	*Night*	*Total*	*Day*	*Night*
April 2022	**93%**	93%	90%	**94%**	95%	91%	**91%**	91%	90%
May 2022	**92%**	92%	92%	**95%**	96%	93%	**91%**	91%	91%
June 2022	**93%**	93%	93%	**96%**	97%	91%	**92%**	92%	94%
QTR Total	**93%**	93%	93%	**95%**	96%	91%	**91%**	91%	92%

The overall CDA achievement was 93% with several major LLA operators achieving high performance.

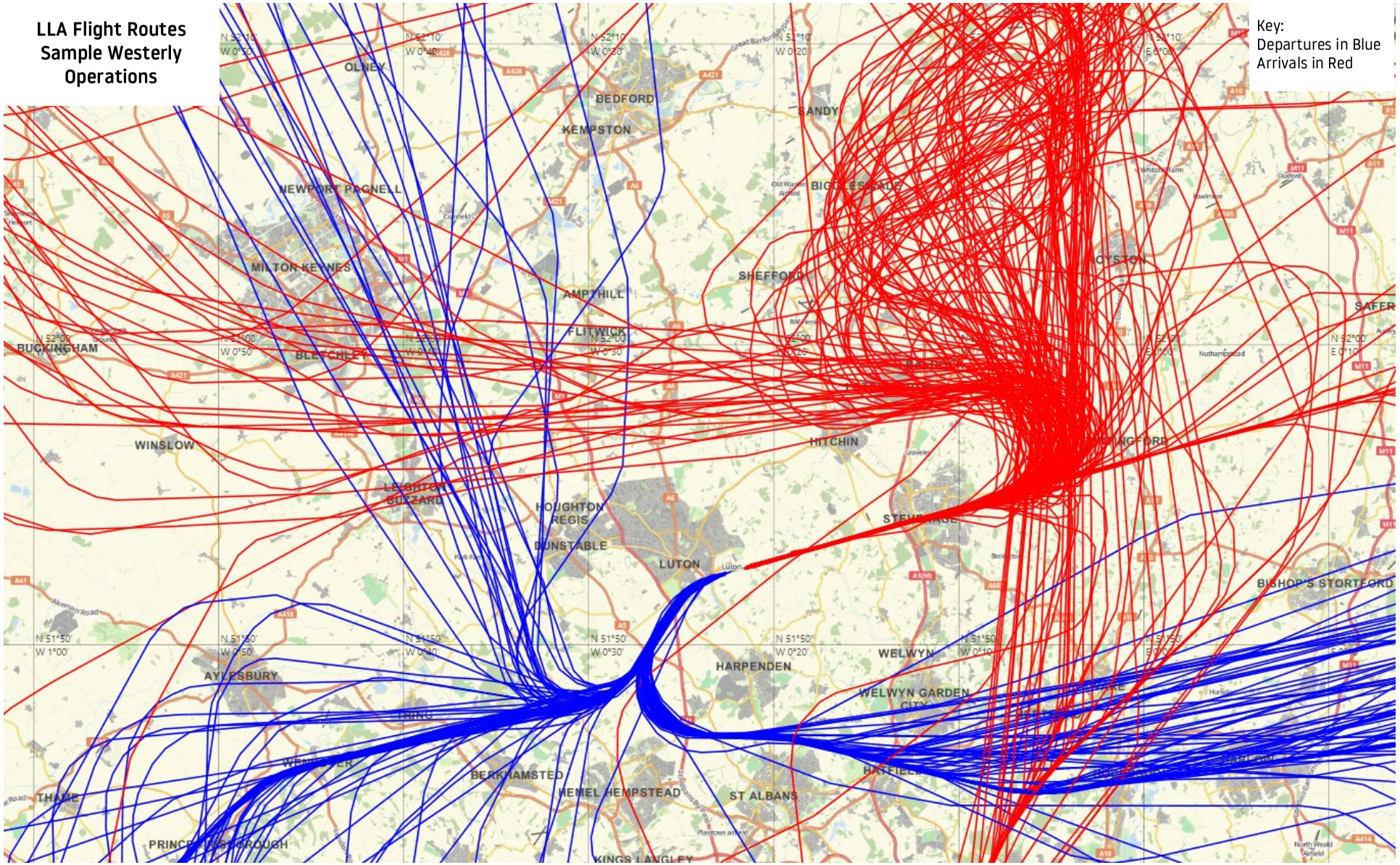


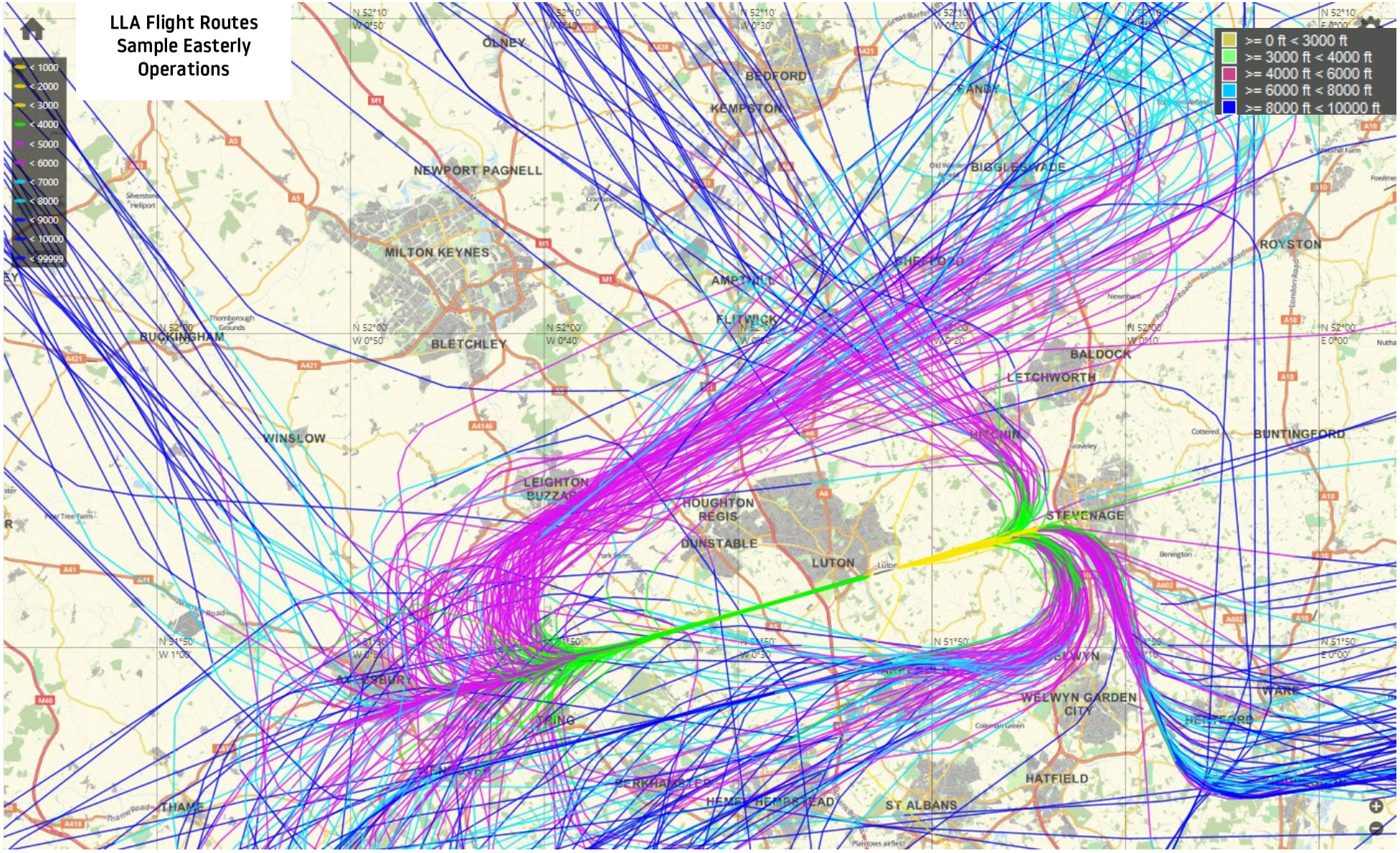
The maps overleaf, produced from the Topsonic Aircraft Noise & Track Monitoring System, identify samples of actual flown aircraft tracks operating from LLA (arrivals and departures during both easterly and westerly operations) over a typical 24-hour period within the second quarter of 2022.

LLA Flight Routes Sample Easterly Operations



LLA Flight Routes Sample Westerly Operations




LLA Flight Routes
Sample Easterly
Operations
< 1000
< 2000
< 3000
< 4000
< 5000
< 6000
< 7000
< 8000
< 9000
< 10000
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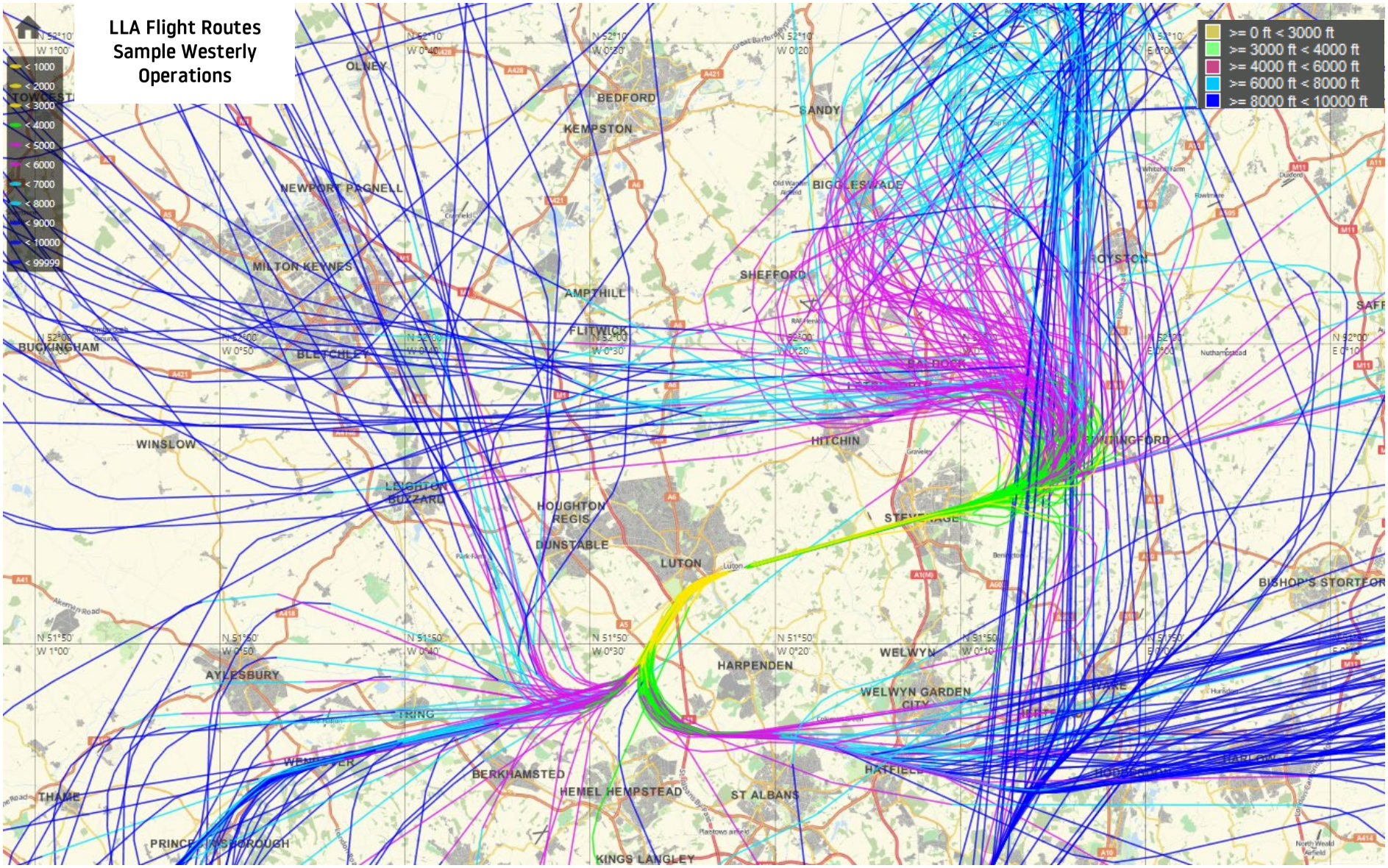
>= 0 ft < 3000 ft
>= 3000 ft < 4000 ft
>= 4000 ft < 6000 ft
>= 6000 ft < 8000 ft
>= 8000 ft < 10000 ft
OLNEY
BEDFORD
KEMPSTON
NEWPORT PAGNELL
MILTON KEYNES
BIGGLESWADE
ROYSTON
BUCKINGHAM
BLETCHLEY
BALDOCK
LETCHWORTH
WINSLOW
BUNTINGFORD
LEIGHTON BUZZARD
HOUGHTON REGIS
DUNSTABLE
LUTON
STEVENAGE
WELWYN GARDEN CITY
HATFIELD
ST ALBANS
BERKHAMSTED
THAME


LLA Flight Routes
Sample Westerly
Operations
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OLNEY
BEDFORD
KEMPSTON
SANDY
NEWPORT PAGNELL
BIGGLESWADE
MILTON KEYNES
SHEFFORD
AMPTHILL
FLITWICK
BUCKINGHAM
BLETCHLEY
WINSLOW
HITCHIN
LEIGHTON BUZZARD
HOUGHTON REGIS
DUNSTABLE
LUTON
AYLESBURY
HARPENDEN
WELWYN
WELWYN GARDEN CITY
TRING
BERKHAMSTED
HEMEL HEMPSTEAD
ST ALBANS
KINGS LANGLEY
PRINCES RISBOROUGH

4 AIRCRAFT NOISE

During the 2nd Quarter of 2022, the maximum noise levels less than 79 dB(A) was recorded by 99.9% of correlated departing aircraft.

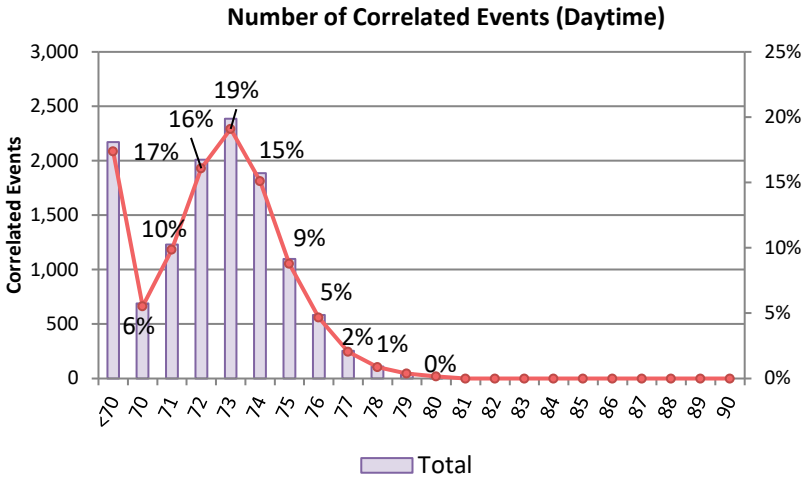
The maximum noise level of less than 76 dB(A) was recorded by 96.5% of correlated departing aircraft.

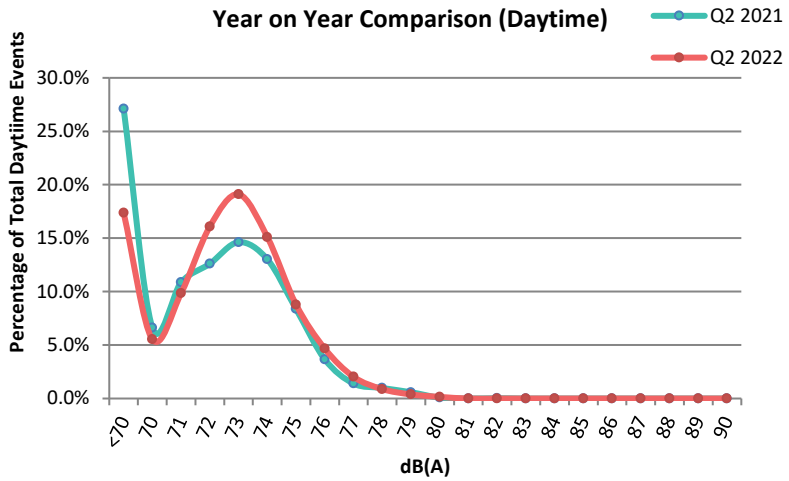
There were no noise violations in Q2 2022.

4.1 Daytime Noise Levels – April to June 2022

The following table identifies daytime noise levels correlated to departing aircraft at the fixed noise monitoring terminals*. (*Any aircraft exceeding the Daytime Noise Violation Limit of 80dB(A), between 07:00 hrs and 22:59 hrs, is fined accordingly*)

	db (A)	Apr	May	Jun	QTR
Number of Correlated Events (Daytime)	<70	692	663	815	**2,170**
	70	226	218	247	**691**
	71	342	360	528	**1,230**
	72	552	680	777	**2,009**
	73	771	856	758	**2,385**
	74	652	708	527	**1,887**
	75	365	393	340	**1,098**
	76	209	200	174	**583**
	77	97	76	81	**254**
	78	34	38	38	**110**
	79	12	26	10	**48**
	80	6	7	6	**19**
	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		**3,958**	**4,225**	**4,301**	**12,484**

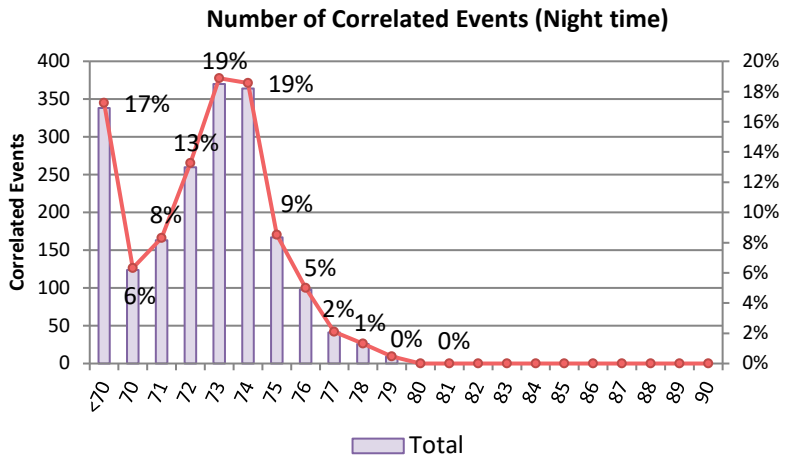


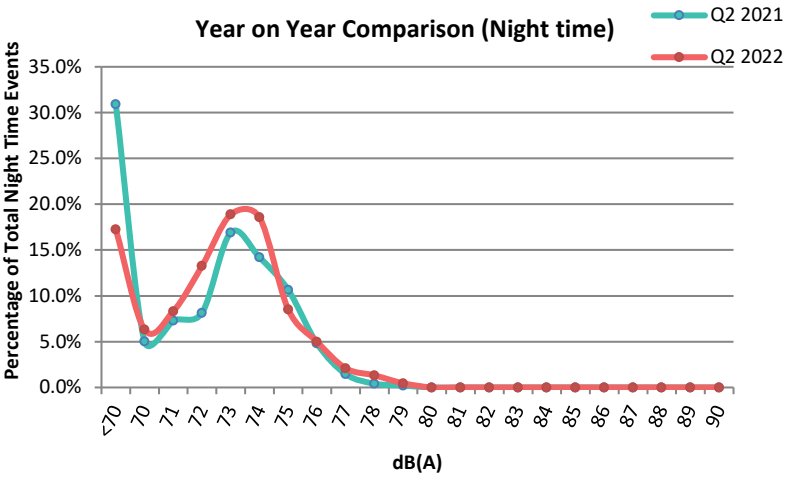


4.2 Night Noise Levels – April to June 2022

The following table identifies the night noise levels correlated to departing aircraft at the fixed noise monitor terminals*. *(Any aircraft exceeding the Night Noise Violation Limit of 79dB(A), between 23:00 hrs and 06:59 hrs, is fined accordingly)*

	db (A)	Apr	May	Jun	QTR
Number of Correlated Events (Night time)	<70	109	117	112	**338**
	70	41	33	50	**124**
	71	45	57	61	**163**
	72	86	88	86	**260**
	73	101	136	133	**370**
	74	125	116	123	**364**
	75	67	46	54	**167**
	76	29	41	28	**98**
	77	15	12	14	**41**
	78	5	11	10	**26**
	79	1	7	1	**9**
	80	0	0	0	**0**
	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		**624**	**664**	**672**	**1,960**





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. A number of smaller aircraft types, such as business jets and propeller aircraft, get very close to but do not reach the detection threshold.

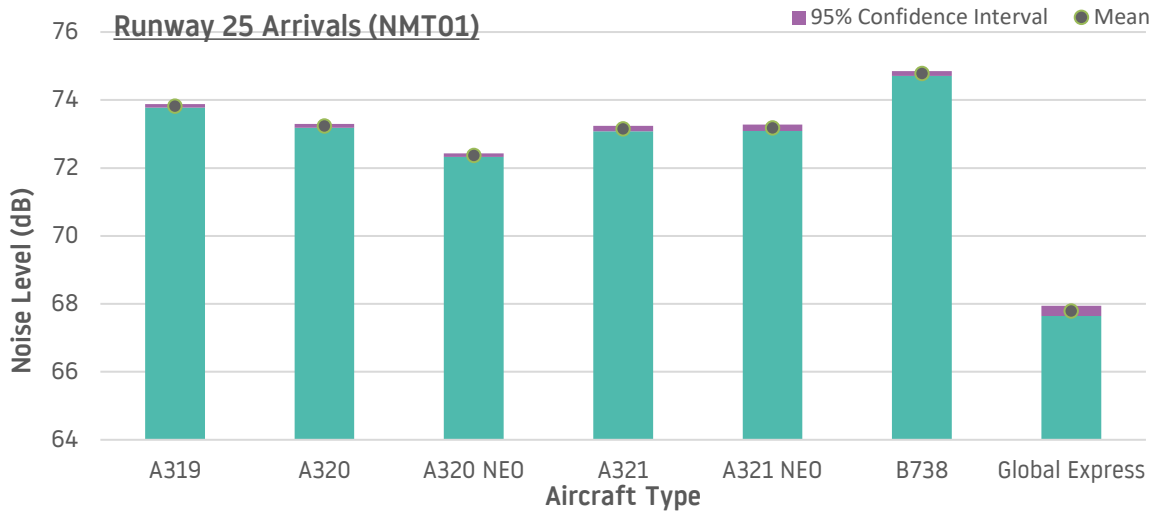
Ambient background noise is also an important factor as specific incidents such as loud road traffic, emergency vehicle sirens, lawn mowers, drills etc. can register noise levels louder than an aircraft overhead. This results in not all aircraft movements being correlated to noise events. Generally, the louder noise events have more certainty of being correlated with aircraft movements.

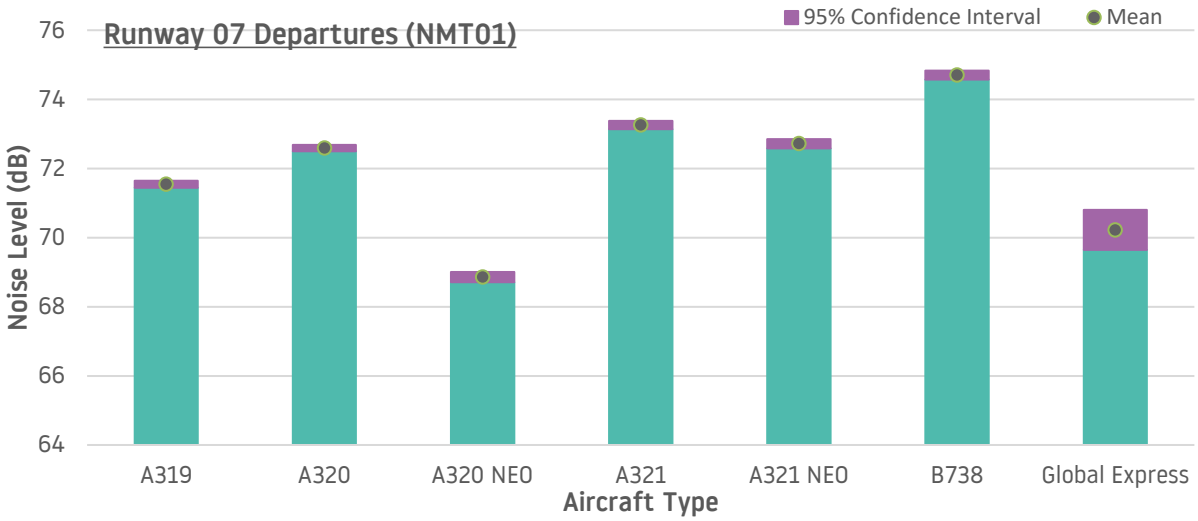
Weather conditions can also affect the number of noise monitoring events recorded in the table; for example, if winds are greater than 10m/s, results from noise monitors will be invalid and therefore will not be considered.

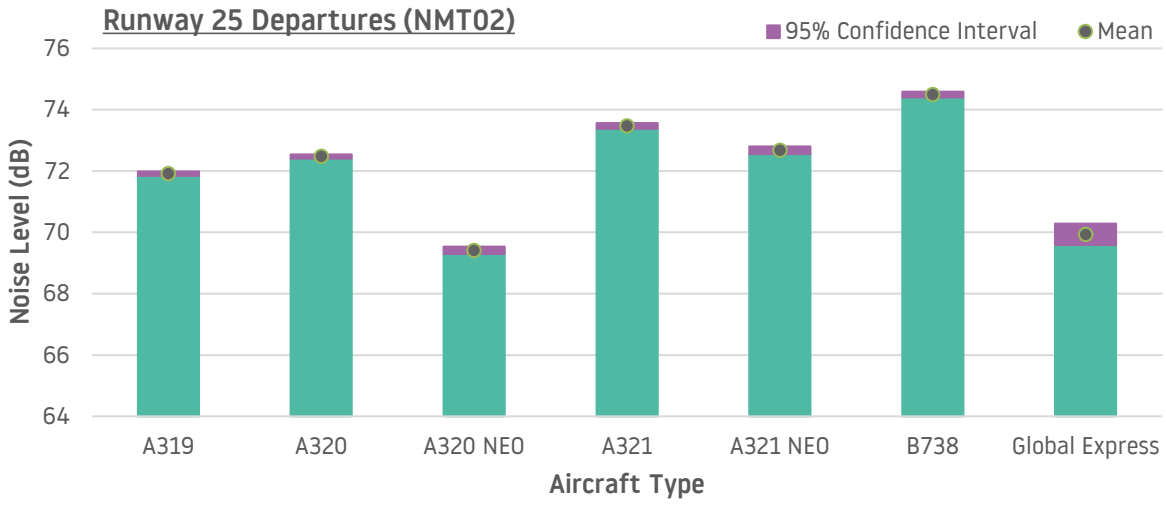
**One of the three fixed noise monitors, NMT3 at Pepsal End, was out of service for maintenance for 6.5 days in Q2 2022. Therefore, no noise data was captured from this noise monitor during this period.*

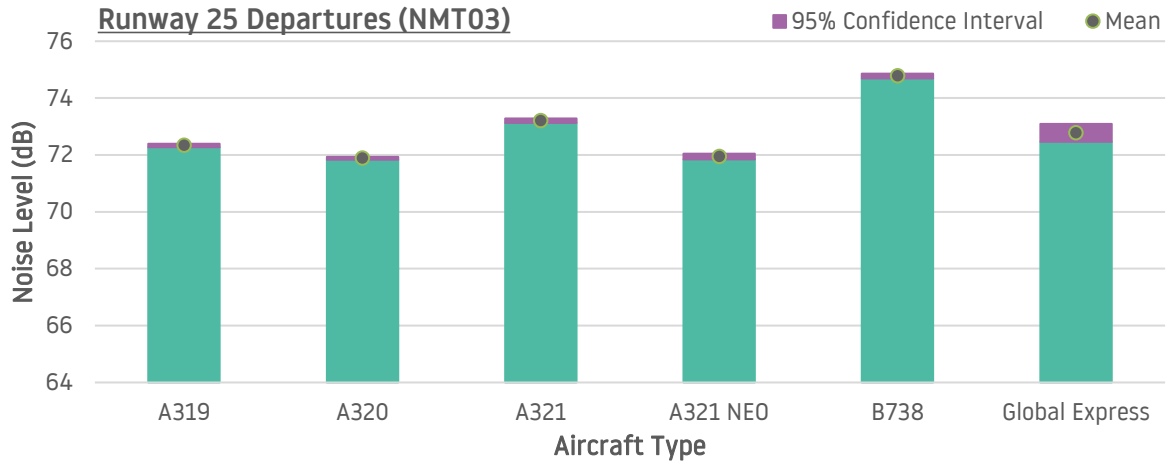
4.3 Average Noise Monitor results by Aircraft Type (Q2 2022)

The following graphs show the average noise and confidence level (95%) for the three fixed noise monitors for the period April to June 2022. These are also split by the main aircraft types operating at LLA.









The table below shows the sample sizes used for the graphs in this section. For comparative purposes, we recommend a sample size of over 100 results are used. Therefore, only aircraft types with a sample size of over 100 have been shown.

	A306	A319	A320	A320 NEO	A321	A321 NEO	B738	B737 Max 8	Global Express
NMT01 (Arr)	85	1,426	2,143	903	989	773	1,238	97	387
NMT01 (Dep)	41	787	1,310	472	576	427	722	62	169
NMT02 (Dep)	84	1,428	2,063	904	941	731	1,230	96	266
NMT03* (Dep)	66	1,121	1,569	36	789	476	1,081	30	101

**One of the three fixed noise monitors, NMT3 at Pepsal End, was out of service for maintenance for 6.5 days in Q2 2022. Therefore, no noise data was captured from this noise monitor during this period.*

4.4 Noise Violations during Quarter 2 (April to June 2022)

There were no noise violations in Quarter 2.

4.5 Noise Insulation Scheme Update

In Quarter 2, LLAOL was informed that Newview Homes Ltd (one of the two contractors delivering the scheme) had entered into liquidation. LLA immediately transferred 103 properties initially assigned to Newview Homes Ltd to Granville Noise Insulators, the remaining contractor for the scheme, to be reassessed and re-quoted. Therefore, no new properties were contacted in Q2 2022.

A total of 17 properties have had work fully completed this quarter and a further 38 properties have accepted the quotation. The NIS scheme will continue to gather pace during 2022 and further eligible properties will be contacted.

Our Noise Insulation Scheme 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 and loft insulation can be provided. Rooms eligible for insulation include living rooms, dining rooms, kitchen-diners and bedrooms.

5 NOISE CONTOURS

5.1 Night Noise Contours – Q2 2022

5.1.1 Contour Production

Aircraft movement data for use in the contour production has been supplied by LLAOL. The contour production methodology has been updated from that used for the 2021 contours. The contours were produced using the INM software (Version 7.0d) with terrain data allowed for. However, the methodology has been updated. The validation is now based on measured results from the fixed noise monitors in 2021, and the departure profiles for key aircraft types have been updated based on radar data.

5.1.2 Noise Contour Results

The resulting noise contours are shown in the attached Figure A11060-NN22-Q2 at values from 48 to 66 dB LAeq,8h. Contours at 69 and 72 dB LAeq,8h have also been produced but are not individually distinguishable when plotted at the scale of the figure. The area of each noise contour is given in Table 1 below and compared with the values for the previous quarter (January – March 2022), and the equivalent quarter for the previous year (April – June 2021).

Contour Value (dB $L_{Aeq,8h}$)	Contour Area (km^2)		
	Apr – Jun 2021	Jan – Mar 2022	Apr – Jun 2022
48	12.5	17.4	30.6
51	7.3	9.2	17.3
54	3.9	5.3	9.1
57	1.9	2.9	5.2
60	1.2	1.5	2.8
63	0.7	0.9	1.4
66	0.5	0.5	0.8
69	0.3	0.3	0.5
72	0.2	0.2	0.3
W/E Split (%)	56/44	68/32	61/39

Table 1: Area of Night Noise Contours

5.1.3 Aircraft Movements

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

INM Aircraft Type	Apr – Jun 2021	Jan – Mar 2022	Apr – Jun 2022
1900D	17	17	16
737400	72	n/a	n/a
737800	52	355	702
757RR	155	228	238
A300-622R	84	101	78
A319-131	27	92	593
A320-211 (ceo)	93	380	1,016
A320-211 (neo)	116	218	653
A321-232 (ceo)	15	189	470
A321-232 (neo)	225	244	389
A330-301	n/a	n/a	18
BEC58P	13	n/a	n/a
CL600	n/a	15	19
CL601	10	45	56
CNA525C	11	22	22
CNA55B	n/a	n/a	15
CNA560XL	14	28	23
CNA680	n/a	15	15
CNA750	n/a	n/a	13
EMB145	n/a	32	31
F10062	17	46	44
GIV	n/a	15	20
GV	67	212	272
LEAR35	11	n/a	19
Other	64	56	67
Total	**1,063**	**2,310**	**4,789**

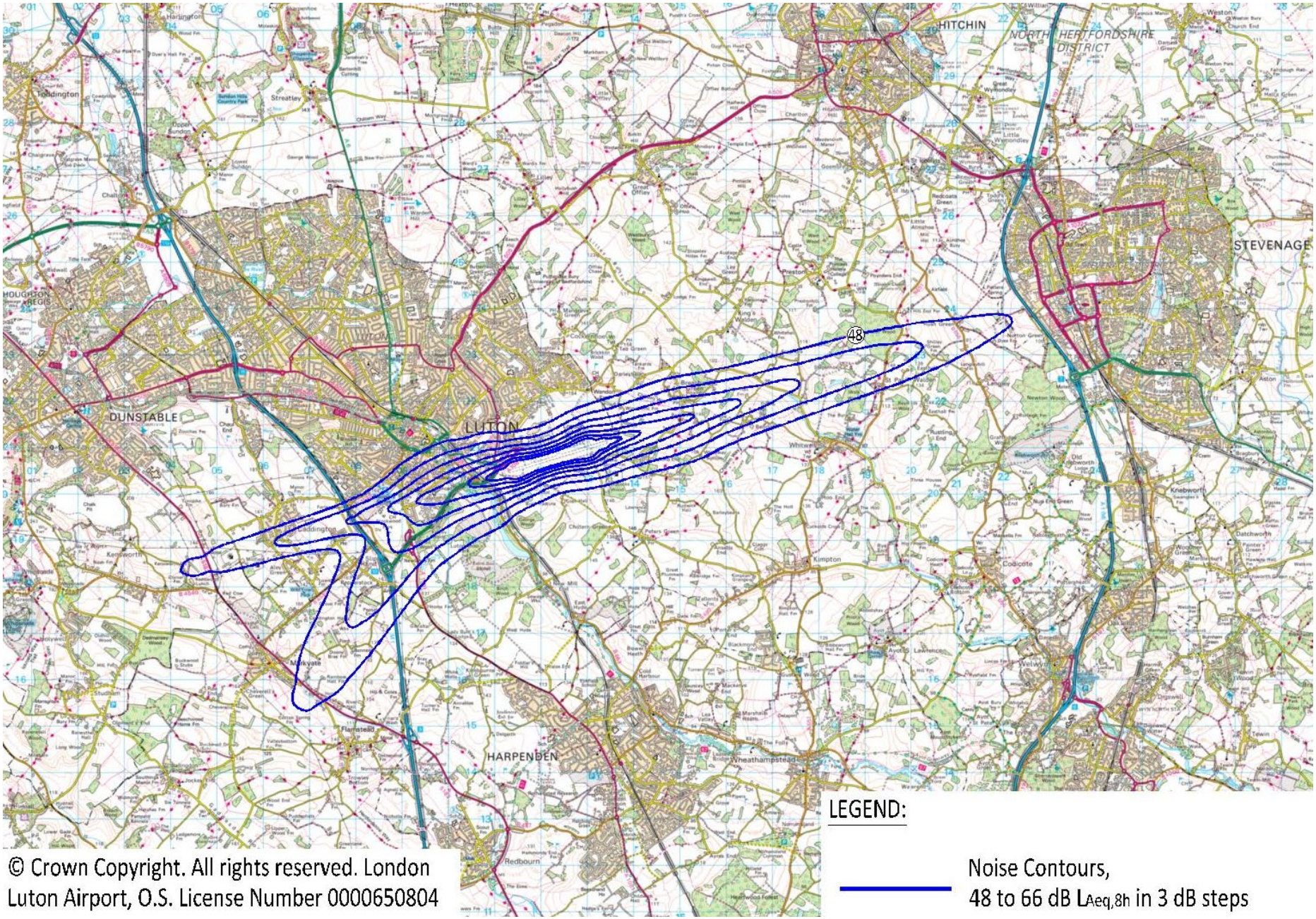
Table 2: Night-time Aircraft Movement Numbers by Aircraft Type

5.1.4 Noise Contour Comparison

With the ongoing recovery from the COVID-19 pandemic, and the easing of travel restrictions, there has been a large increase in the total number of movements when compared with the same quarter in 2021.

The area of the 48 dB(A) noise contour has also increased when compared to the same quarter last year. This is a result of the increase in movements, although this remains below the pre-pandemic level.

The number of movements, and therefore the area of the noise contours, has increased compared to the previous quarter.



LEGEND:

Noise Contours,
48 to 66 dB $L_{Aeq,8h}$ in 3 dB steps

6 COMPLAINTS

6.1 Total Complaints relating to LLA aircraft operations

	2nd QTR 2022	2nd QTR 2021
Total No. of Complaints relating to LLA aircraft operations	1,293	2,213
No. of Complainants	230	81
No. of General Complaints	289	52
No. of Specific Complaints	1,004	2,161
Average No. of Complaints per Complainant	5.6	27.3
No. of Aircraft Movements per Complaint	25.8	4.5

In line with the recovery of aviation and increase in aircraft movements, a total of 1,293 complaints relating to LLA aircraft operations were received by the Flight Operations Department during the last quarter. This is compared to the 2,213 complaints which were received for the same period last year. It should be noted that during the second quarter of 2022, 55% of complaints were received from 10 individuals and 10% from one individual.

The monthly breakdown of total complaints relating to LLA aircraft operations is as follows:

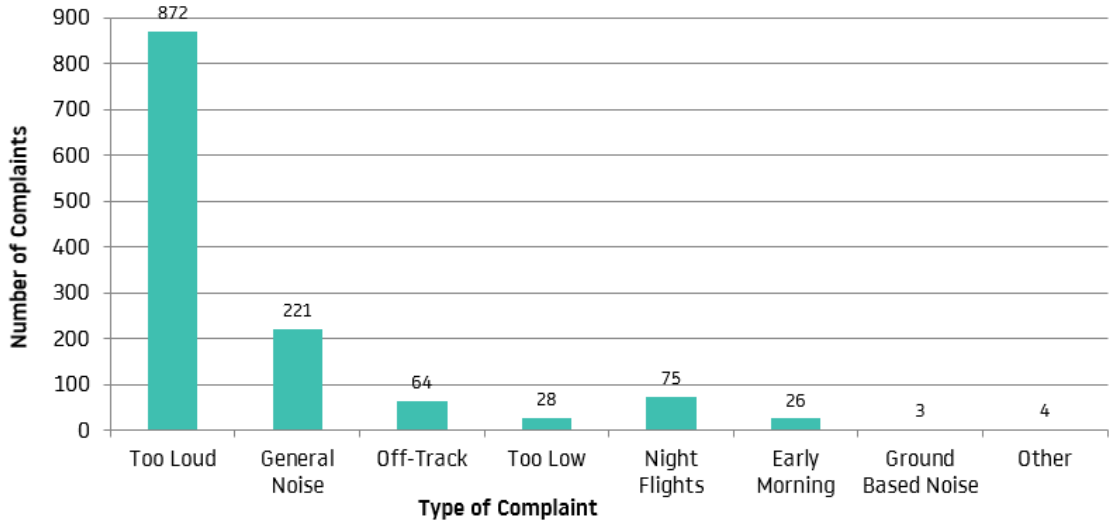
Apr 2022 223 complaints (163 Specific Complaints, 60 General Complaints)
May 2022 309 complaints (218 Specific Complaints, 91 General Complaints)
Jun 2022 761 complaints (623 Specific Complaints, 138 General Complaints)

A further 55 complaints not attributable to LLA traffic were received throughout the quarter, compared to 44 complaints for the period April to June last year.

Out of 230 total complainants, there were 121 that contacted the airport only once meaning that 109 complainants generated 1,172 complaints.

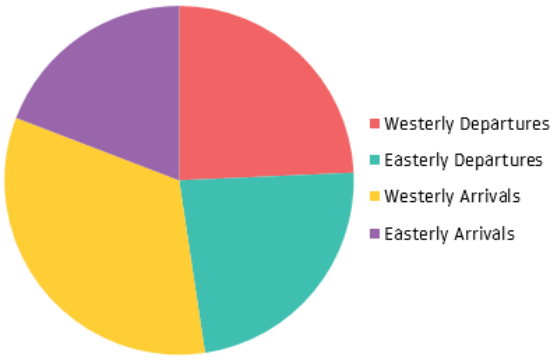
6.2 Type of Complaint

The types of complaint received by the Flight Operations Department from April to June 2022 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 April to June 2022.



Within the 251 specific aircraft complaints concerning westerly departures, 229 complaints involved aircraft on the Match/Detling heading, 19 related to aircraft following Compton flight route, 3 related to aircraft using the Olney route and no complaints were recorded about aircraft following an off-airways routing.

With regard to the 241 complaints attributed to easterly departures, 186 related to aircraft following the Compton flight route and 38 aircraft on the Match route. There were 17 specific complaints relating to the easterly Olney departure route and no complaints were recorded about aircraft following an off-airways routing.

In total the Flight Operations Department received 541 specific complaints regarding arrivals. 343 of these complaints were about westerly arrivals and a further 198 concerning easterly arrivals.

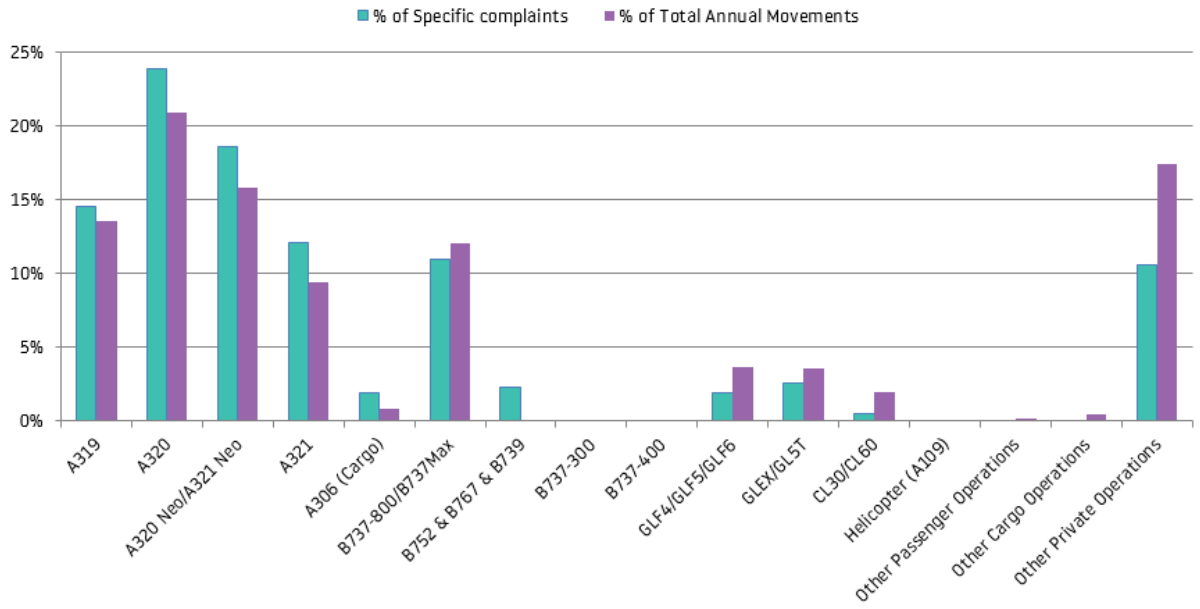
75 Complainants reported noise disturbance at night (compared to **17 Complainants** for the same Quarter last year)

Departing aircraft accounted for 58% of the 36 specific night complaints and 42% involved arrivals. Cargo flights, involving A306 and B752 aircraft were reported in 6% of night complaints, whilst passenger aircraft accounted for 86% of night complaints. Furthermore, 8% of night complaints correlated to executive aircraft.

40 (53%) Complaints concerning night noise disturbance from LLA operations

6.4 Complaints by aircraft type

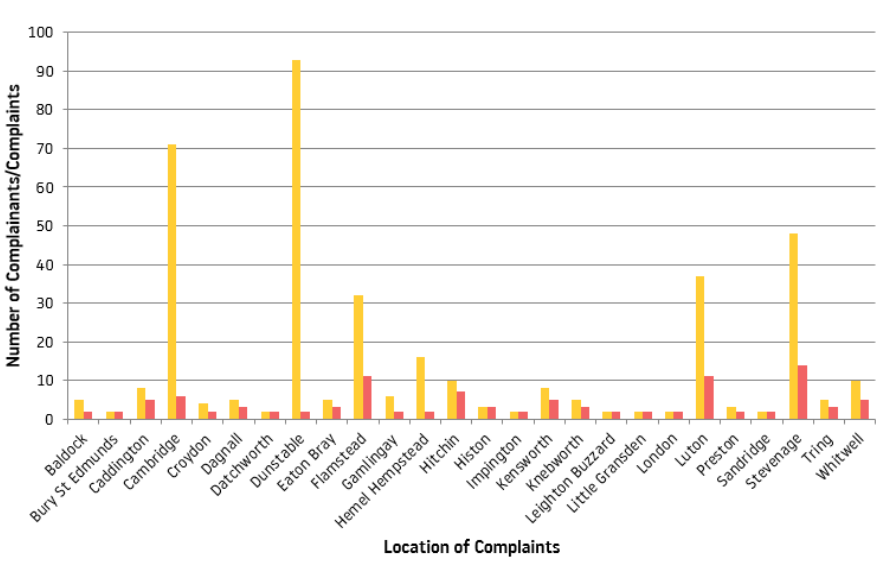
The diagram below shows aircraft types generating specific complaints.

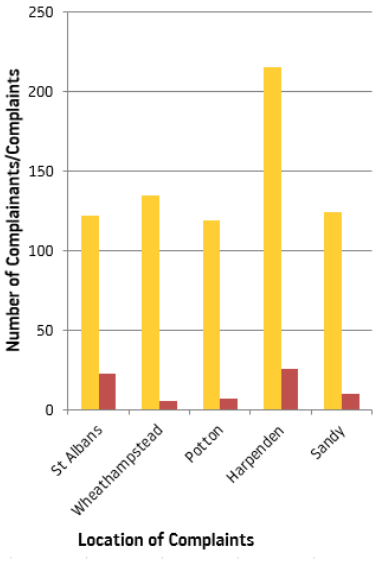


6.5 Origin of Complaints

The chart below identifies the areas around the Airport from which more than one complainant submitted concerns relating to LLA aircraft operations during the period April to June 2022.

The communities with one complainant include: Ayot St Lawrence, Berkhamsted, Biggleswade, Bramfield, Breachwood Green, Bushey, Chevington, Cockayne Hatley, Codicote, Colchester, Dalham, Dry Drayton, Essex, Eynesbusy, Gaddesden Row, Girton, Great Paxton, Gustard Wood, Hatfield, Henlow, Hertford, Hoddesdon, Lolworth. Lower Cambourne, Markyate, Papworth Everard, Pepperstock, Redbourn, Ringshall, Slip End, St Pauls Walden, Tadlow, Ware, Welwyn Garden City.





6.6 Complaints Analysis

During Quarter 2 there has been a decrease in complaints compared to the same quarter last year however, the number of complainants has increased, compared to the same quarter last year. this is thought to be due to a number of reasons:

- The number of complainants has increased which is significantly higher than the same period last year and this is thought to be related to the recent implementation of the arrival's airspace change.
- Similar to previous quarters in 2021, a few individuals are making many complaints, in Q2 55% of complaints were received from 10 individuals and 10% from one individual.
- The wind direction was predominantly westerly (64%) and therefore 52% of complaints were made from residents effected by westerly routes.

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
Phone	1%
Email	34%
Travis	65%

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
Percival House, Percival Way
Luton
Bedfordshire
LU2 9NU

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 92% of concerns within 8 days and 99% 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	35.6%
1	13.5%
2	7.4%
3	9.0%
4	6.4%
5	3.5%
6	2.6%
7	6.0%
8	2.7%
9	3.4%
10	2.2%
11	2.6%
12	1.2%
13	1.4%
14	1.0%
15	0.2%
16	0.6%
16+	0.8%

7 COMMUNITY RELATIONS

7.1 Community Visits to Airport

Invitations are often extended to local residents to visit or meet with 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 Quarter 2 there was no community visit to the airport, there were a number of community visits to the airport offered although these were declined by residents and as below preferred a visit to their home address.

7.2 Airport Visits to the Community

The Flight Operations Team held a Public Surgery on the 12th May in Potton. This provided residents who are impacted by the new arrival's airspace change to attend and speak with members of the Flight Operations team as well as the Sustainability team. This Public Surgery was the first one in 2022 arranged by an appointment only basis and there was a good uptake on appointments booked by residents and local councillors.

The Flight Operations team have also arranged further Public Surgeries for later in the year; details of which can be found on our website, which is updated accordingly. (https://www.london-luton.co.uk/corporate/community/noise/noise-surgeries)

During Quarter 2 The Flight Operations Team also visited a resident in Hemel Hempstead regarding how aircraft were causing him a disturbance. We discussed with the resident about our future airspace change FASI-S (Future Airspace Implementation South), but they were aware this would be some time before it was implemented.