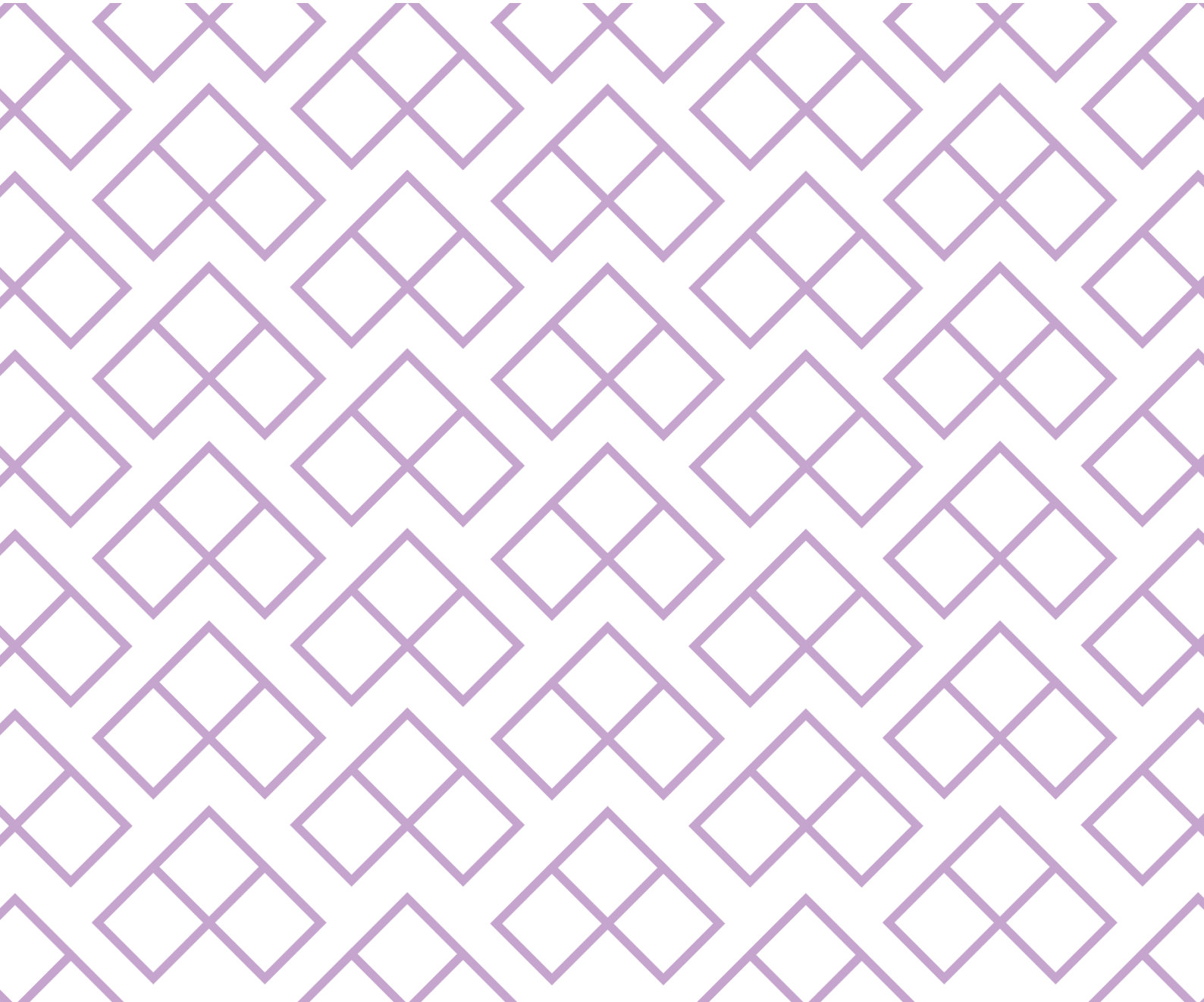
London Luton Airport

# Quarterly Monitoring Report

## QUARTER 1 2023



# *INTRODUCTION*

This report provides statistics on aircraft operations at London Luton Airport (LLA) during the period January to March 2023.

## KEY MONITORING INDICATORS – 1st QUARTER 2023

| Parameter | | 1st Quarter 2023 | 1st Quarter 2022 |
|---|---|---|---|
| Total Passenger Number | ↑ | 3,265,061 | 1,882,072 |
| Total Aircraft Movements | ↑ | 27,347 | 21,054 |
| Night Movements (23.00 – 06.59) | ↑ | 3,176 | 2,310 |
| Early Morning Movements (06.00 – 06.59) | ↑ | 1,035 | 839 |
| Aircraft Movement and Quota Count limits (per rolling 12-month period) | | | |
| Night Quota Movements (*9,650 limit*) | ↑ | 9,608 | 4,027 |
| Night Quota Count (*3,500 limit)* | ↑ | 2,955.625 | 1497.75 |
| Early Morning Shoulder (*7,000 movements*) | ↑ | 4,835 | 3,095 |
| 24hr CDA (% achievement) | ↑ | 91% | 88% |
| Day CDA (% achievement) | ↑ | 92% | 88% |
| Night CDA (% achievement) | ↑ | 88% | 85% |
| Track Violations | ↑ | 14 | 11 |
| Departure Noise Infringements (Day) | ↑ | 3 | 1 |
| Departure Noise Infringements (Night) | ↑ | 3 | 0 |
| Noise Monitor Results* | | | |
| No. Day (Night) > 80 dB(A) | ↑ | 3 (1) | 1 (0) |
| No. Day (Night) > 75 dB(A) | ↑ | 1,709 (185) | 396 (73) |
| No. Day (Night) > 70 dB(A) | ↑ | 8,518 (946) | 4,443 (546) |
| Night Noise Contour Area (48 dB $L_{Aeq, 8h}$) | ↑ | 21.8 $km^2$ | 17.4 $km^2$ |
| Noise Complaints | ↑ | 3,340 | 839 |
| Complainants | ↑ | 169 | 91 |
| Number of New Complainants | ↑ | 73 | 21 |
| Largest Source of Complaints | - | Arrivals. West | Deps. East |
| Origin of Concerns (>5 Complainants) | - | Cambridge<br>Sandy<br>St Albans<br>Harpenden<br>Luton | St Albans<br>Luton<br>Harpenden/<br>Wheathampstead |
| Westerly/Easterly Runway Split (%) | - | 76/24 | 67/33 |

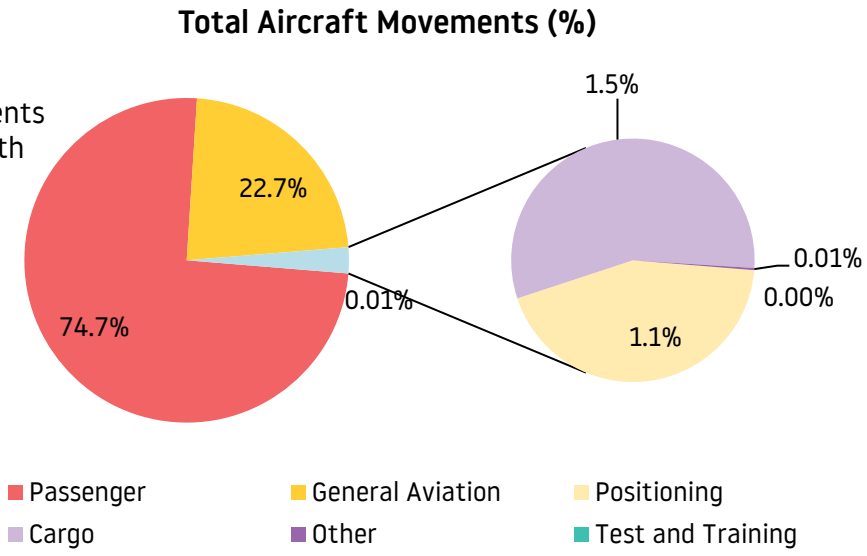
**A fixed noise monitor (NMT10) had power failure between 3rd and 6th February. No noise data was captured from this fixed noise monitor point during this period.*

# 1 AIR TRAFFIC DATA

## 1.1 Aircraft Movements

There were 27,347 aircraft movements during this quarter (compared with 21,054 for the same period in 2022), an increase of 30%.

This resulted in an average 304 movements per 24 hours (compared to 234 last year).




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* | | | | | | |
| **Jan 2023** | 129 | 6,382 | 101 | 11 | 0 | 0 | 27 | 1,870 | 0 | **8,520** |
| **Feb 2023** | 123 | 6,499 | 108 | 6 | 0 | 0 | 44 | 1,995 | 0 | **8,775** |
| **Mar 2023** | 145 | 7,553 | 80 | 5 | 0 | 0 | 16 | 2,253 | 0 | **10,052** |
| **QTR Total** | **397** | **20,434** | **289** | **22** | **0** | **0** | **87** | **6,118** | **0** | **27,347** |

## 1.2 Passenger Statistics

A total of 3,265,061 passengers passed through LLA during the period January to March 2023 (compared with 1,882,072 for the same period last year); 3,246,371 on scheduled flights (99%) and 18,690 on charter flights (1%). This represents 73% increase in passengers and equates to an average 36,278 passengers per 24 hours (compared to 20,939 during the same quarter last year).

| | Domestic | EU | Non-EU | Total |
|---|---|---|---|---|
| **Jan 2023** | 66,859 | 665,762 | 244,011 | **976,632** |
| **Feb 2023** | 86,050 | 721,104 | 251,129 | **1,058,283** |
| **Mar 2023** | 99,376 | 862,971 | 267,799 | **1,230,146** |
| **QTR Total** | **252,285** | **2,249,837** | **762,939** | **3,265,061** |

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

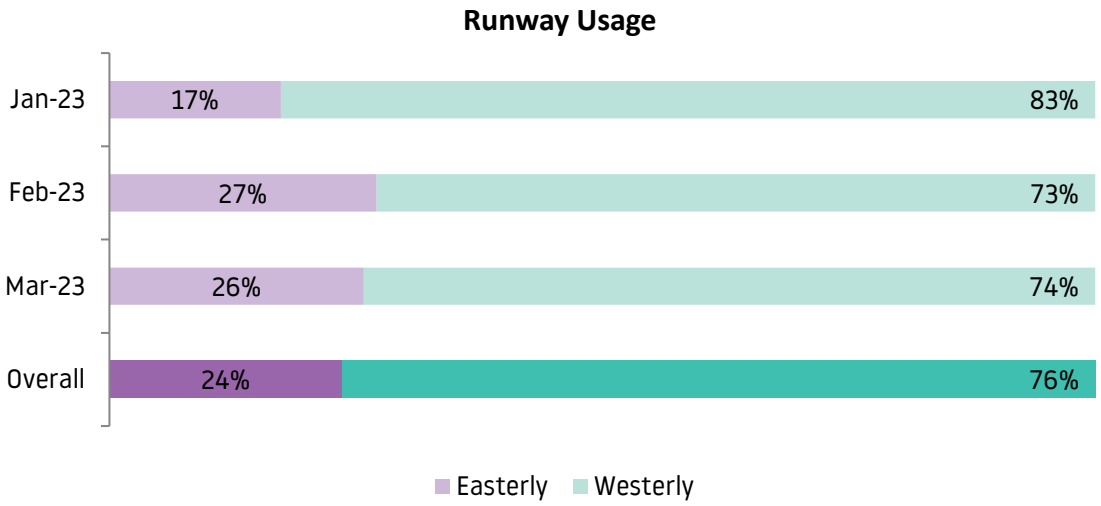
[1] *Other relates to flights coming for maintenance and or departing aircraft that have made an unscheduled return to base*

[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 24% easterly and 76% westerly (in comparison to a 33%/67% split in the same quarter last year). The monthly breakdown of these statistics is as follows:




## 1.4 Night Flying Restrictions

On 1st April 2015 London Luton Airport introduced Night Restrictions as part of planning conditions.

These restrictions are 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 level of 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 this period the number of aircraft movements (take-off or landing) is restricted, as well as an additional limit on the number of noise QC points.

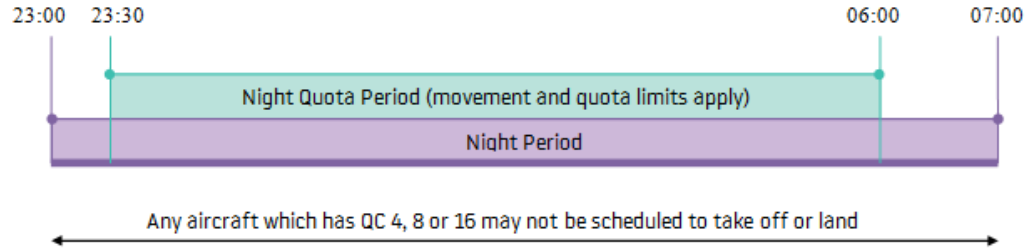
Aircraft are certified by the International Civil Aviation Organisation (ICAO) according to the noise they produce during specific certification tests conducted by the manufacturer. They are classified separately for both take-off and landing. The points are allocated to different aircraft types according to the sound level they produce. 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<br>Airbus A300-600<br>Airbus A330 |
| **90 to 92.9** | QC 1 | Airbus A320/A321<br>Some Boeing 737-800<br>Boeing 757-200<br>Boeing 787-8 |
| **87 to 89.9** | QC 0.5 | Airbus A319/A320<br>Boeing 737-400<br>Boeing 737-800<br>Boeing 787-8 |
| **84 to 86.9** | QC 0.25 | Airbus A319/A320<br>Airbus A321neo<br>Boeing 737-800 Max<br>Dassault Falcon 7X/900/2000 |
| **81 to 83.9** | QC 0.125 | Airbus A320neo<br>Global Express |
| **Less than 81** | QC 0 | Challenger series (eg CL600)<br>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 the following limits shall not be exceeded for the Night Quota Period (2330 – 0559 hours local):

(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 the total number of movements by aircraft in any 12-month period shall be limited to 7,000 for the Early Morning Shoulder Period (0600 – 0659 hours local).

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* |
| **April 2022** | 788 | 237.000 | 504 |
| **May 2022** | 984 | 264.125 | 494 |
| **June 2022** | 1,023 | 325.000 | 442 |
| **July 2022** | 1,101 | 366.000 | 415 |
| **August 2022** | 989 | 327.125 | 442 |
| **September 2022** | 981 | 319.500 | 419 |
| **October 2022** | 1,059 | 319.375 | 503 |
| **November 2022** | 447 | 140.250 | 303 |
| **December 2022** | 670 | 207.750 | 308 |
| **January 2023** | 533 | 156.125 | 317 |
| **February 2023** | 508 | 148.625 | 333 |
| **March 2023** | 525 | 144.750 | 355 |
| **QTR Total** | **1,566** | **449.500** | **1,005** |
| *Total for preceding 12 months* | *9,608* | *2955.625* | *4,835* |

### 1.4.4 Dispensations

In March 2023, LLA started to dispense movements in line with the Section 106 agreement. LLA submitted a Dispensation Policy to the Local Planning Authority to dispense (remove) movements from the night time movement limit, night time QC limit and early morning movement limit.

The table below shows the number of movements dispensed in March 2023, there were no movements dispensed in January and February 2023. These have not been reported in the table in section 1.4.3.

| | Night Dispensations |
|---|---|
| **January 2023** | 0 |
| **February 2023** | 0 |
| **March 2023** | 143 |
| **Total** | **143** |

The table below also show the reasons for the dispensation, in line with the S106 list of acceptable reasons for dispensation. In March, weather (snow) and Air Traffic Disruption (ATC strikes in France) were reasons for dispensations.

| Reason for Dispensation | Number of Dispensations |
|---|---|
| **Weather** | 18 |
| **Passenger Hardship** | 118 |
| **Air Traffic Disruption** | 5 |
| **Diversions** | 0 |
| **Emergencies** | 2 |
| **Total** | **143** |

## 1.5 Day/Night Ratio of Movements - Actual

There were 3,176 night operations during the quarter (compared to 2,310 for the same quarter last year), an average 35 movements per night (compared to 26 last year). Arriving aircraft accounted for 55% of total night movements, relating primarily to the last rotation of Luton based passenger aircraft scheduled to land between 23:00 and midnight local. 66% of total night departures took off between 06:00 – 07:00 hours local. The average ratio of total aircraft operations during the quarter was 88% day / 12% night (in comparison to 89% day / 11% night over the same quarter last year).

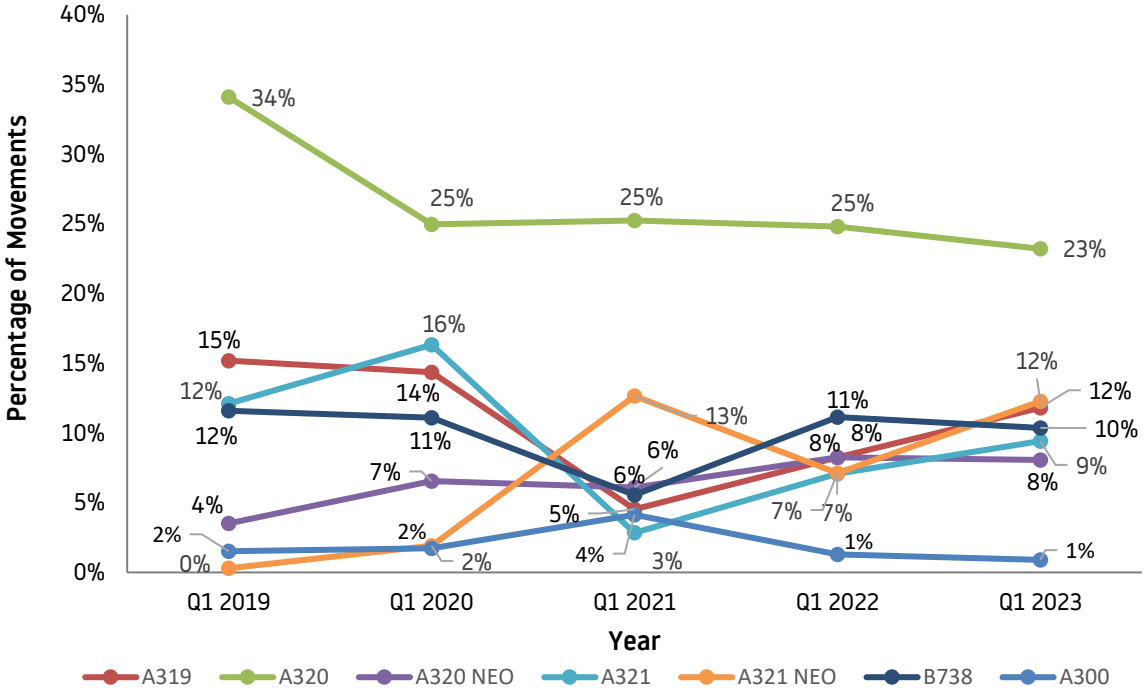
| | **Day Movements (0700-2259)** | | | **Night Movements (2300-0659)** | | | | | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| | Day movements | | | Night Quota Period (2330-0559) | | Early Morning Shoulder (0600-0659) | | Total Night Movements (2300 – 0659) | |
| | A | D | Total | A | D | A | D | | |
| **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** |
| **Jul 2022** | 5,031 | 5,290 | 10,321 | 851 | 250 | 4 | 411 | 1,718 | **12,039** |
| **Aug 2022** | 4,816 | 5,077 | 9,893 | 796 | 193 | 2 | 440 | 1,651 | **11,544** |
| **Sept 2022** | 4,728 | 5,043 | 9,771 | 788 | 193 | 14 | 405 | 1,636 | **11,407** |
| **Oct 2022** | 4,739 | 4,893 | 9,632 | 808 | 251 | 14 | 489 | 1,772 | **11,404** |
| **Nov 2022** | 3,499 | 3,561 | 7,060 | 336 | 111 | 30 | 273 | 914 | **7,974** |
| **Dec 2022** | 3,971 | 4,105 | 8,076 | 483 | 187 | 28 | 280 | 1,166 | **9,242** |
| **Jan 2023** | 3,716 | 3,812 | 7,528 | 411 | 122 | 27 | 290 | 992 | **8,520** |
| **Feb 2023** | 3,863 | 3,919 | 7,782 | 384 | 124 | 28 | 305 | 993 | **8,775** |
| **Mar 2023** | 4,340 | 4,521 | 8,861 | 518 | 150 | 15 | 340 | 1,191 | **10,052** |
| **QTR Total** | **11,919** | **12,252** | **24,171** | **1,313** | **396** | **70** | **935** | **3,176** | **27,347** |
| *Total for preceding 12 months* | *52,748* | *54,782* | *107,530* | *7,615* | *2,136* | *219* | *4,613* | *16,825* | *124,355* |

## 1.6 Day/Night Ratio of Movements – Forecast

| **2023/2024 Forecast of Aircraft Movements** | | | | | |
|---|---|---|---|---|---|
| ***Rounded number** | **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** |
| **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 |
| **July 2023** | 11,524 | 1,078 | 639 | 1,972 | 13,496 |
| **August 2023** | 10,957 | 1,069 | 605 | 1,925 | 12,882 |
| **September 2023** | 11,185 | 868 | 537 | 1,661 | 12,846 |
| **October 2023** | 11,293 | 882 | 512 | 1,617 | 12,910 |
| **November 2023** | 9,123 | 440 | 272 | 831 | 9,954 |
| **December 2023** | 10,655 | 580 | 337 | 1,087 | 11,742 |
| **January 2024** | 9,274 | 496 | 414 | 1,054 | 10,328 |
| **February 2024** | 8,794 | 482 | 376 | 1,001 | 9,795 |
| **March 2024** | 10,600 | 471 | 328 | 938 | 11,538 |
| *Total for following 12 months** | 128,248 | 8,951 | 5,778 | 17,086 | 145,334 |

## 1.7 Aircraft Movements by Type

The graph below shows the percentage of aircraft movements for the main aircraft types that operated at LLA. For data comparison, the data covers the last five years. During Q1 2023, there was an increase in the utilisation of the newer generation aircraft type, NEO, compared with the same period last year.



# 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. The night movements quoted below departed between 23:00 and 06:59 hours local.

| | | Departures | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *MATCH/DETLING* | | | *COMPTON/RODNI* | | *OLNEY* | | *Other** | | *Helicopter* | |
| | | 07 | 25 Conv | 25 RNAV | 07 | 25 | 07 | 25 | 07 | 25 | HELI | |
| **Jan 2023** | Daytime | 330 | 3 | 1,686 | 218 | 1,040 | 90 | 404 | 8 | 27 | 6 | **3,812** |
| | Night-time | 57 | 0 | 240 | 23 | 80 | 9 | 33 | 1 | 2 | 0 | **445** |
| **Feb 2023** | Daytime | 543 | 7 | 1,508 | 361 | 967 | 127 | 374 | 3 | 19 | 10 | **3,919** |
| | Night-time | 70 | 1 | 238 | 22 | 86 | 13 | 31 | 2 | 2 | 1 | **466** |
| **Mar 2023** | Daytime | 613 | 6 | 1,770 | 380 | 1,062 | 154 | 495 | 6 | 24 | 11 | **4,521** |
| | Night-time | 87 | 0 | 248 | 42 | 90 | 11 | 44 | 0 | 2 | 2 | **526** |
| **QTR** | **Total** | **1,700** | **17** | **5,690** | **1,046** | **3,325** | **404** | **1,381** | **20** | **76** | **30** | **13,689** |
| | *Daily Average* | *19* | *<1* | *63* | *12* | *37* | *5* | *15* | *<1* | *<1* | *<1* | *152* |

## 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 three kilometres wide (2km for the RNAV route), within which aircraft are deemed to be flying on track. Once an aircraft has 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, 23:00 to 06:59 hours 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 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 Flight Operations Department evaluates and investigates radar tracks with required input from Air Traffic Control (ATC) and airlines. When 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. When there is valid justification for a 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 three-month period. The on-track performance for the quarter was 98.3%. This calculation includes deviations for weather and 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 |
|---|---|---|
| **January 2023** | 3 | £4,000 |
| **February 2023** | 4 | £5,000 |
| **March 2023** | 7 | £9,000 |
| **QTR** | **14** | **£18,000** |

| | Airline or Aircraft Operator | Aircraft Type/Occurrence |
|---|---|---|
| **January 2023** | Airline and privately owned aircraft | B737/1; B738/1 and B752/1 |
| **February 2023** | Privately owned aircraft | C56X/1; GLF3/1 and GLF6/2 |
| **March 2023** | Airline and privately owned aircraft | A306/1; B738/2; B752/1; CL60/1; GLEX/1; PC24/1 |

# 3 ARRIVING AIRCRAFT

## 3.1 Arrivals Route Analysis

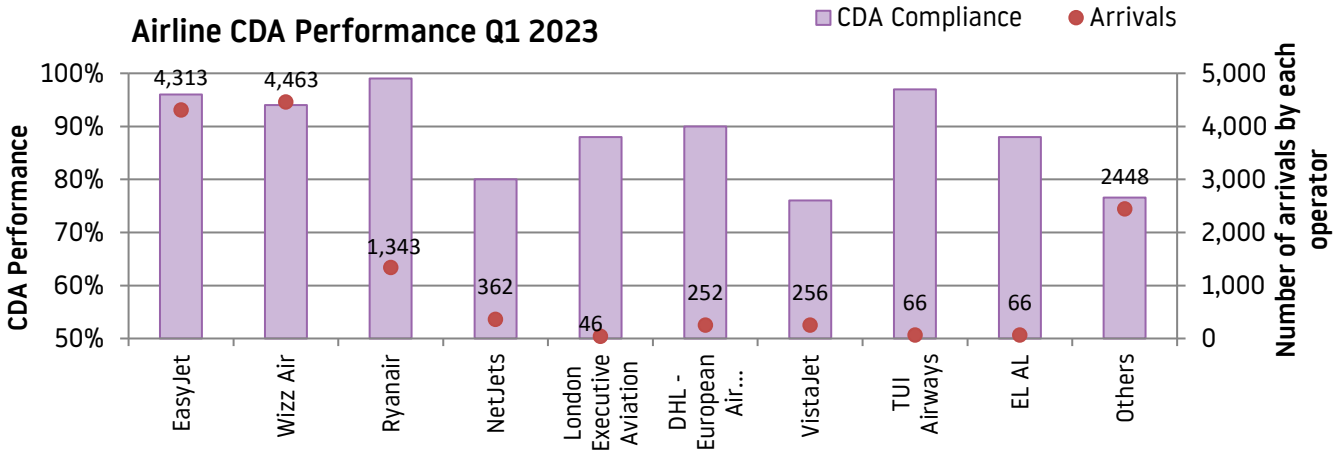
The following table reports the total number of arrivals differentiating between easterly (07), westerly (25) operations and helicopters.

| | | Arrivals | | | Total |
|---|---|---|---|---|---|
| | | 07 | 25 | Heli | |
| **January 2023** | Daytime | 640 | 3,071 | 5 | **3,716** |
| | Night-time | 102 | 444 | 1 | **547** |
| **February 2023** | Daytime | 1,082 | 2,773 | 8 | **3,863** |
| | Night-time | 127 | 399 | 1 | **527** |
| **March 2023** | Daytime | 1,137 | 3,197 | 6 | **4,340** |
| | Night-time | 176 | 489 | 0 | **665** |
| **QTR** | **Total** | **3,264** | **10,373** | **21** | **13,658** |
| | *Daily Average* | *35* | *115* | *<1* | *151* |

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 5,000ft.

| | All Arrivals | | | 07 Easterly Arrivals | | | 25 Westerly Arrivals | | |
|---|---|---|---|---|---|---|---|---|---|
| | *% CDA* | | | *% CDA* | | | *% CDA* | | |
| | *Total* | *Day* | *Night* | *Total* | *Day* | *Night* | *Total* | *Day* | *Night* |
| **January 2023** | **91%** | 91% | 88% | **96%** | 96% | 90% | **90%** | 90% | 88% |
| **February 2023** | **92%** | 92% | 88% | **93%** | 94% | 83% | **91%** | 92% | 89% |
| **March 2023** | **92%** | 92% | 87% | **95%** | 95% | 93% | **90%** | 91% | 85% |
| **QTR Total** | **91%** | 92% | 88% | **94%** | 95% | 89% | **91%** | 91% | 87% |

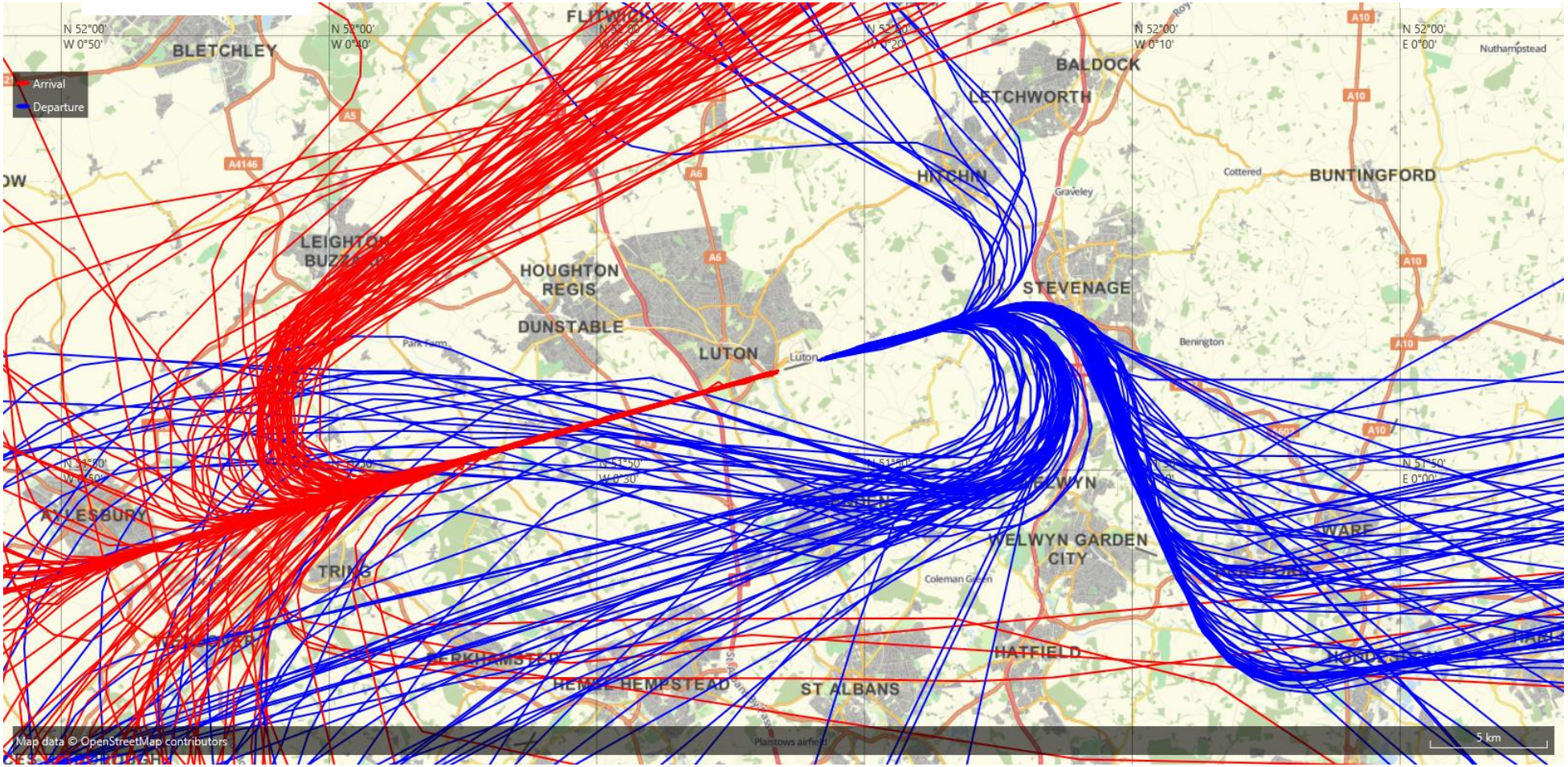
The overall CDA achievement was 91% with several major LLA operators achieving high performance.




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 first quarter of 2023.

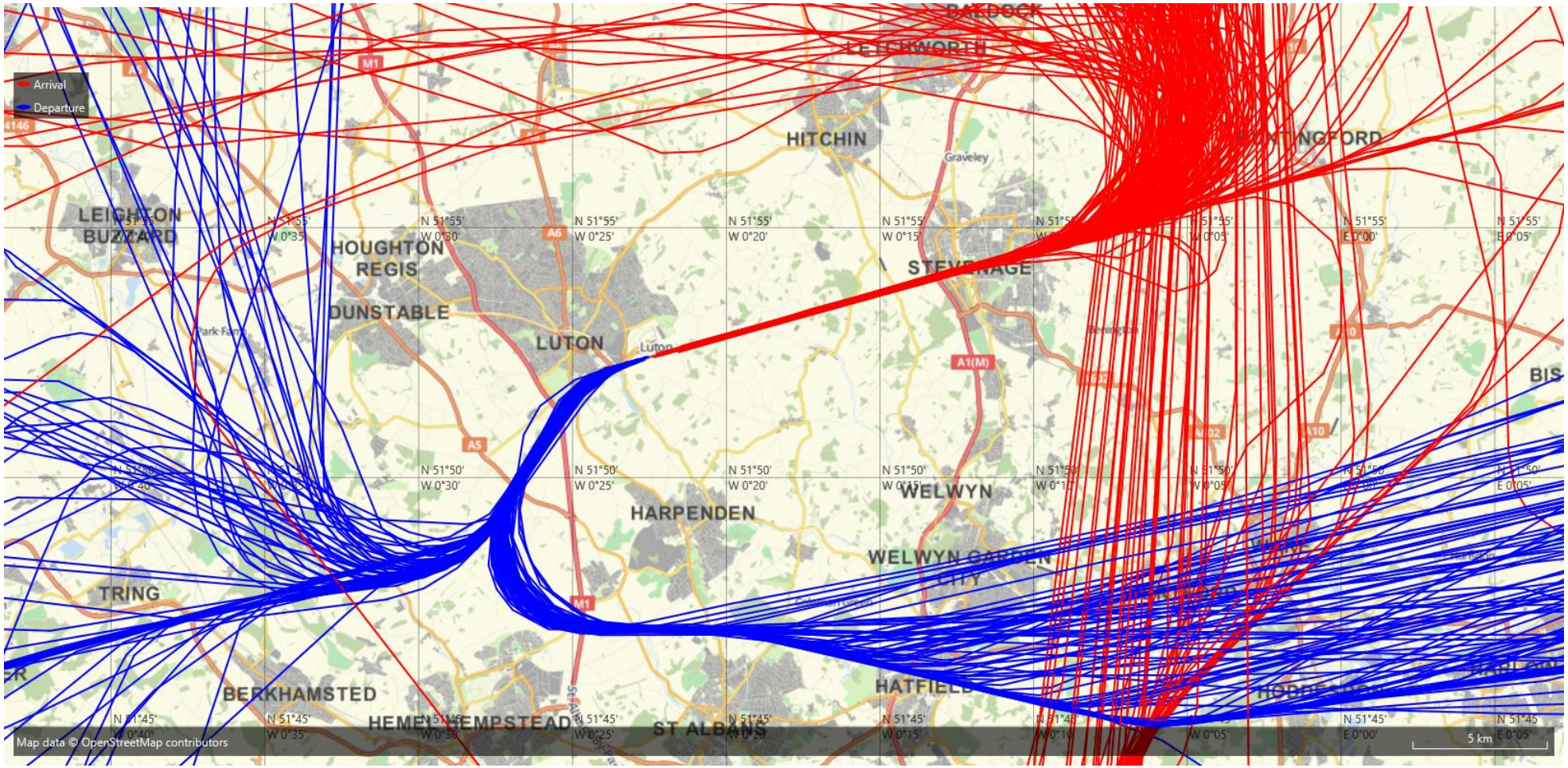
**LLA Flight Routes**
**Sample Easterly**
**Operations**

Key:
Departures in Blue
Arrivals in Red

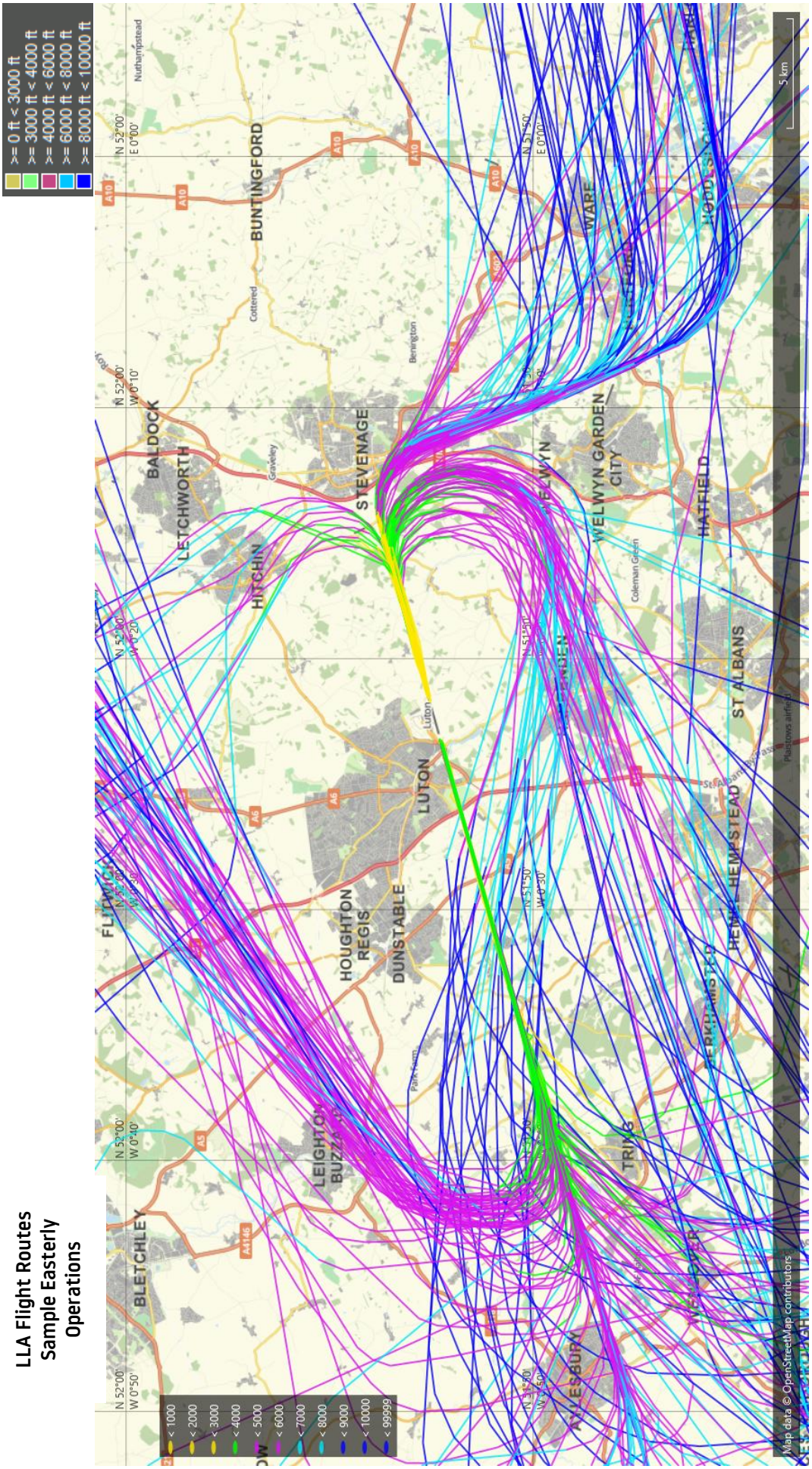


**LLA Flight Routes**
**Sample Westerly**
**Operations**

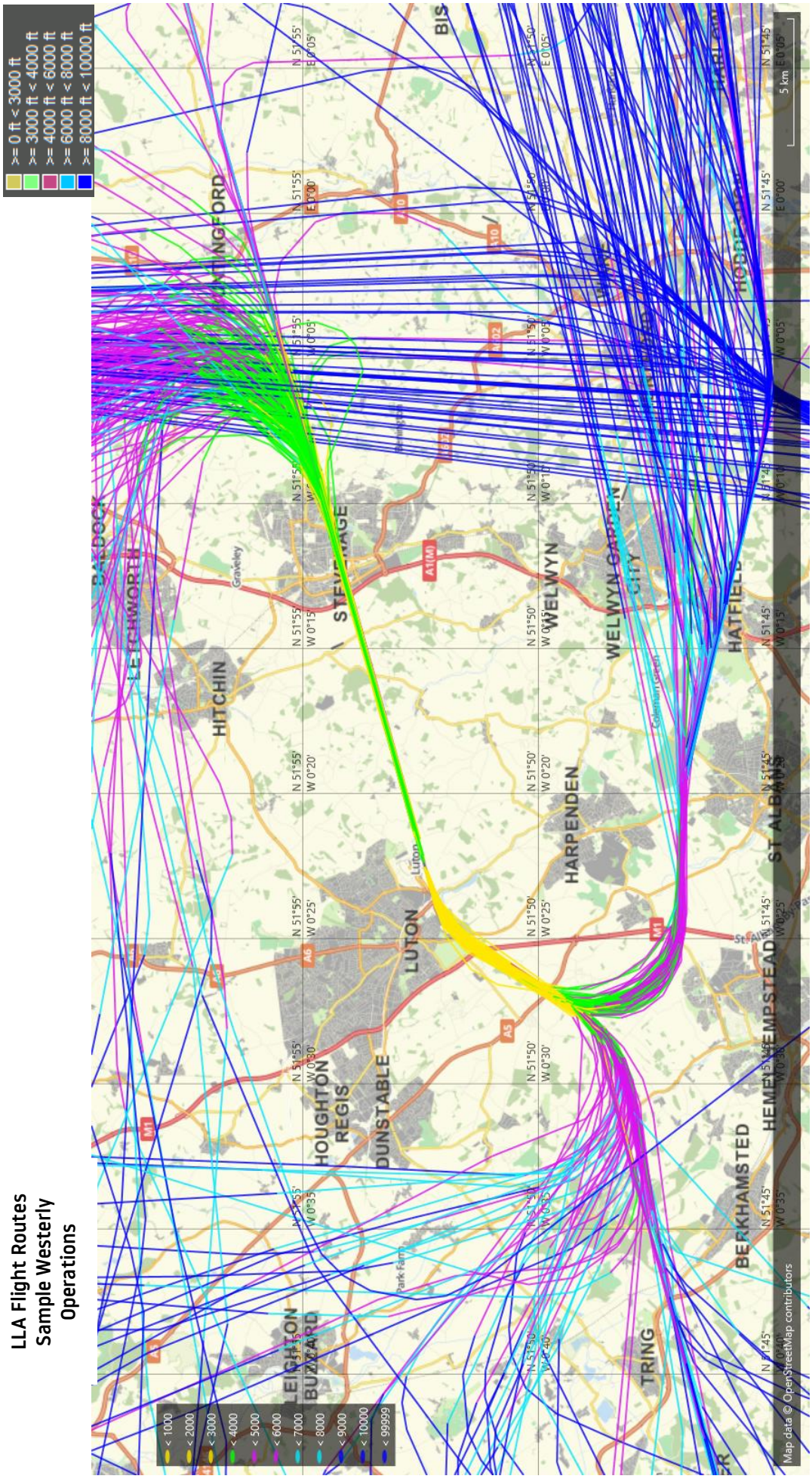
Key:
Departures in Blue
Arrivals in Red



**LLA Flight Routes**
**Sample Easterly**
**Operations**



**LLA Flight Routes**
**Sample Westerly**
**Operations**



# 4 AIRCRAFT NOISE

During the 1st Quarter of 2023, the maximum noise levels less than 79 dB(A) was recorded by 99.7% of correlated departing aircraft.

The maximum noise level of less than 76 dB(A) was recorded by 92.5% of correlated departing aircraft.

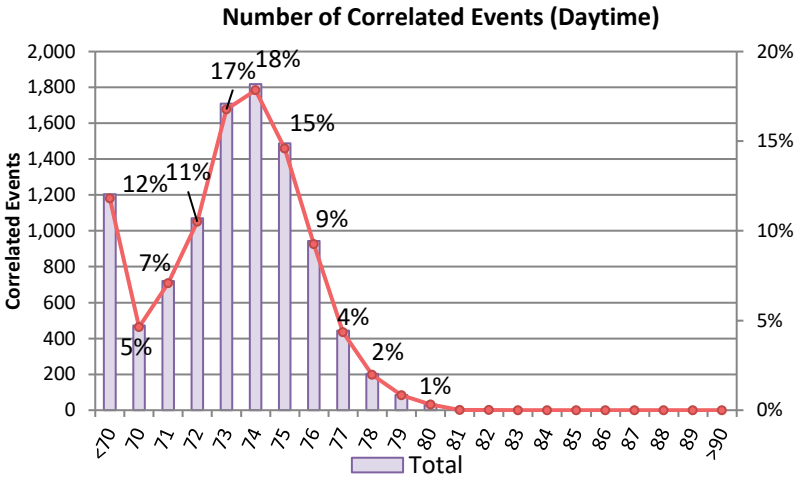
There were six noise violations in Q1 2023. Details of these violations are outlined in Section 4.4.

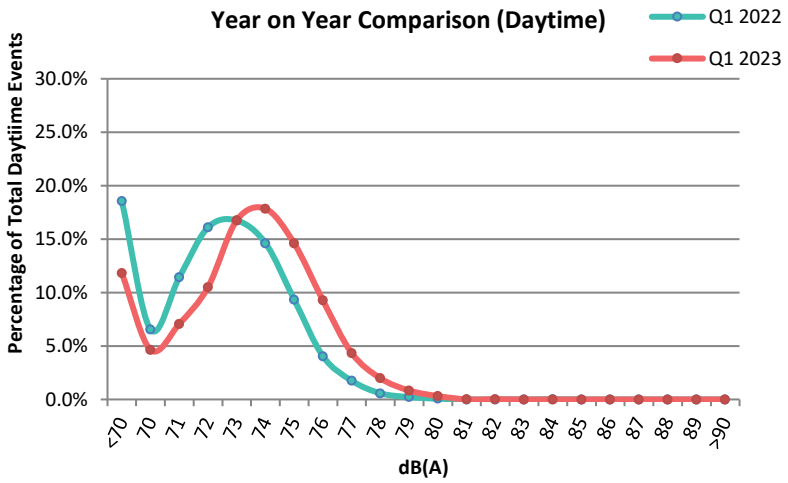
## 4.1 Daytime Noise Levels – January to March 2023

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 and 22:59 hours local, is fined accordingly*)

| | *db (A)* # | Jan | Feb | Mar | QTR |
|---|---|---|---|---|---|
| Number of Correlated Events (Daytime) | <70 | 371 | 400 | 433 | **1,204** |
| | 70 | 134 | 161 | 178 | **473** |
| | 71 | 200 | 254 | 267 | **721** |
| | 72 | 308 | 401 | 362 | **1,071** |
| | 73 | 456 | 594 | 660 | **1,710** |
| | 74 | 455 | 637 | 727 | **1,819** |
| | 75 | 397 | 466 | 625 | **1,488** |
| | 76 | 241 | 276 | 427 | **944** |
| | 77 | 151 | 123 | 169 | **443** |
| | 78 | 71 | 45 | 86 | **202** |
| | 79 | 36 | 16 | 33 | **85** |
| | 80 | 15 | 5 | 12 | **32** |
| | 81 | 0 | 0 | 1 | **1** |
| | 82 | 0 | 0 | 2 | **2** |
| | 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** | | **2,835** | **3,378** | **3,982** | **10,195** |

*# Rounded Result*



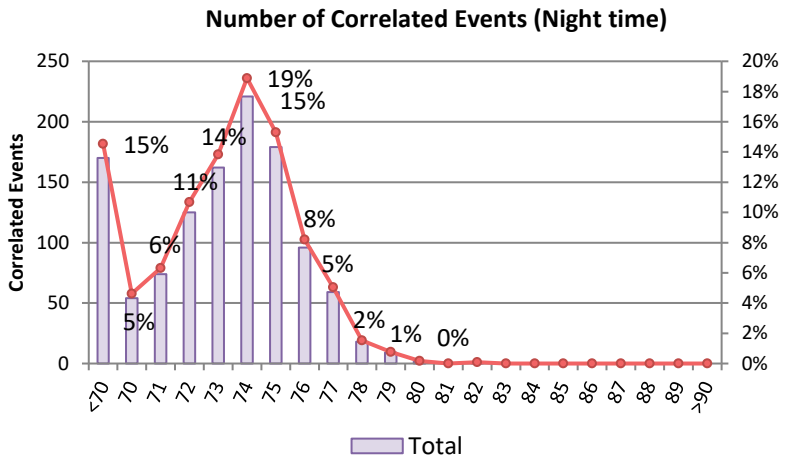



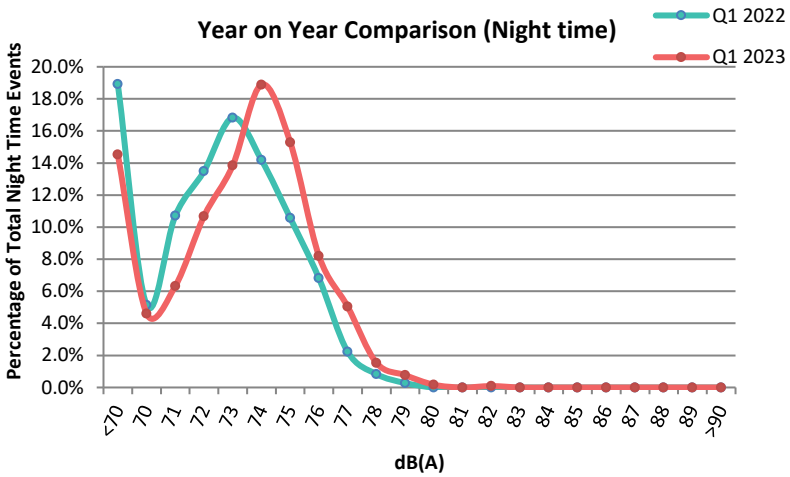
## 4.2 Night Noise Levels – January to March 2023

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 hours local, is fined accordingly)*

| | *db (A)* #* | Jan | Feb | Mar | QTR |
|---|---|---|---|---|---|
| Number of Correlated Events (Night time) | <70 | 58 | 54 | 58 | **170** |
| | 70 | 10 | 19 | 25 | **54** |
| | 71 | 22 | 27 | 25 | **74** |
| | 72 | 32 | 41 | 52 | **125** |
| | 73 | 47 | 63 | 52 | **162** |
| | 74 | 70 | 77 | 74 | **221** |
| | 75 | 46 | 54 | 79 | **179** |
| | 76 | 23 | 27 | 46 | **96** |
| | 77 | 18 | 20 | 21 | **59** |
| | 78 | 7 | 1 | 10 | **18** |
| | 79 | 3 | 1 | 5 | **9** |
| | 80 | 0 | 0 | 2 | **2** |
| | 81 | 0 | 0 | 0 | **0** |
| | 82 | 0 | 1 | 0 | **1** |
| | 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** | | **336** | **385** | **449** | **1,170** |

*# Rounded Result*




*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.*

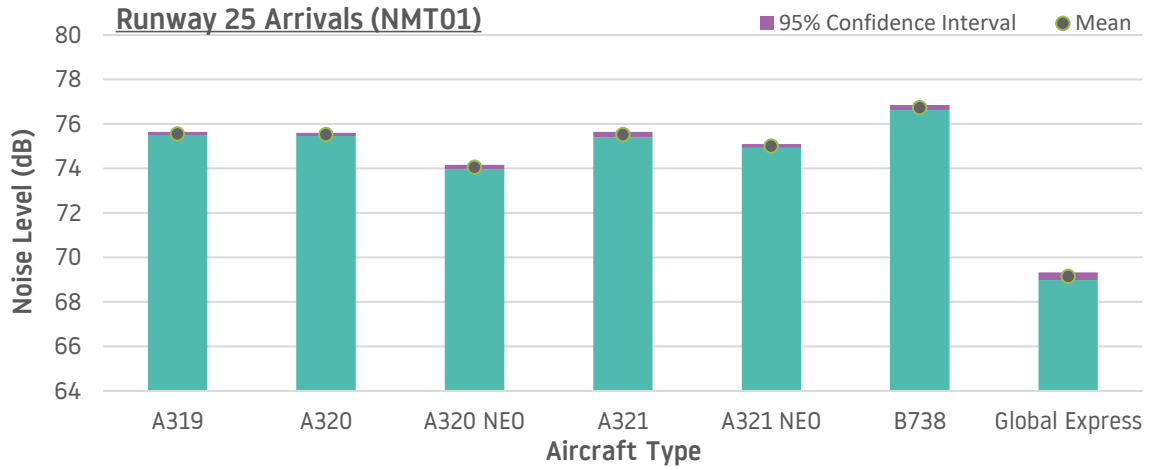
*Ambient background noise is also an important factor as specific incidents such as loud road traffic, emergency vehicle sirens, lawn mowers, drills etc. can register noise levels louder than an aircraft overhead. This results in not all aircraft movements being correlated to noise events. Generally,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

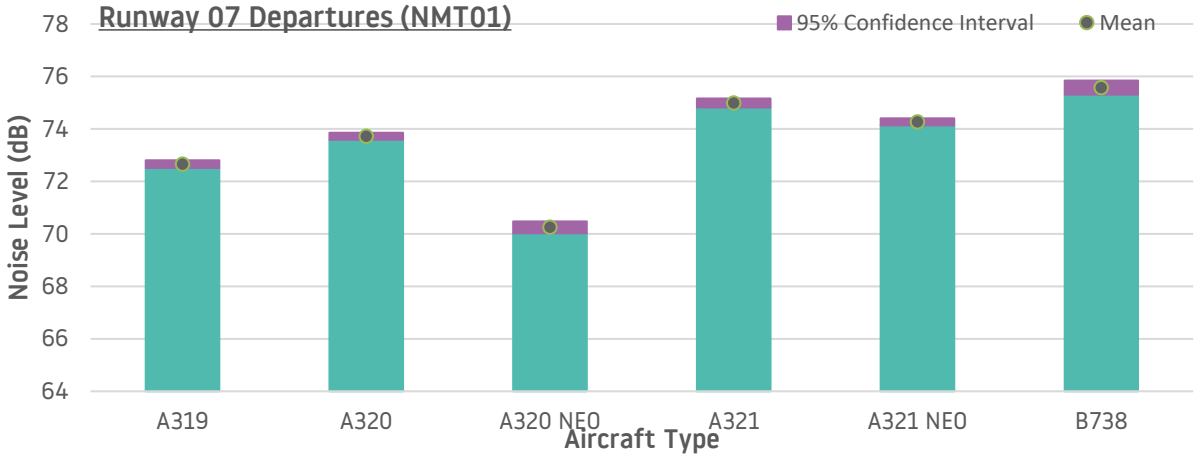
*Weather conditions can also affect the number of noise monitoring events recorded in the table; for example, if winds are greater than 10m/s, results from noise monitors will be invalid and therefore will not be considered.*

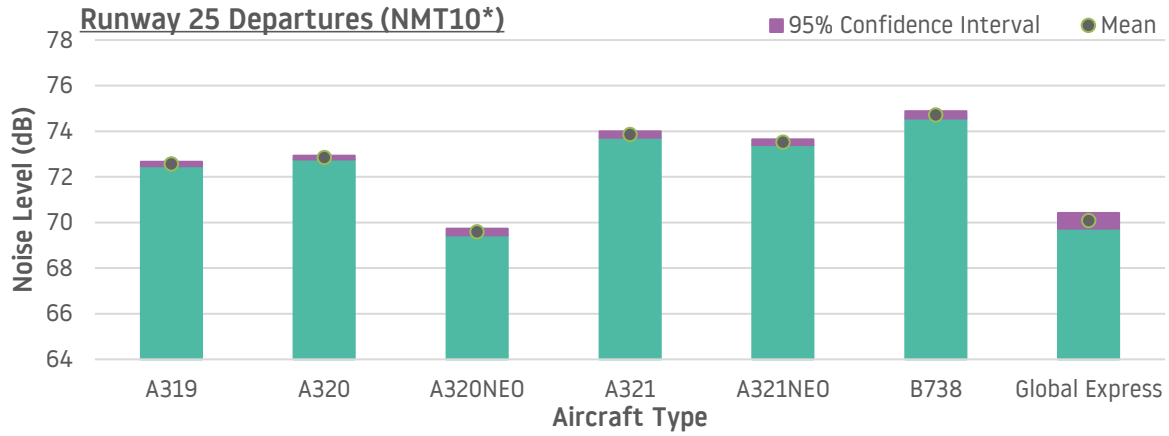
**A fixed noise monitor (NMT10) had power failure between 3rd and 6th February. No noise data was captured from this fixed noise monitor point during this period.*

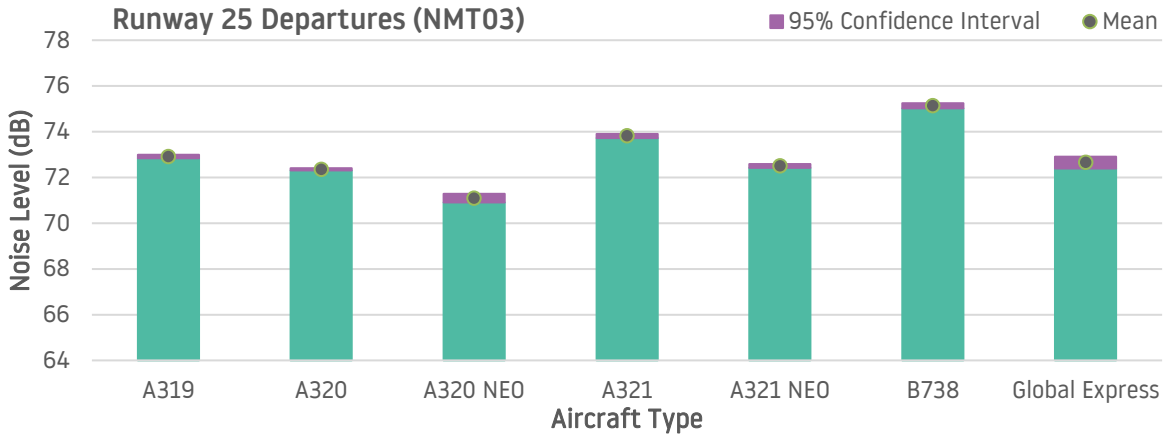
## 4.3 Average Noise Monitor results by Aircraft Type (Q1 2023)

The following graphs show the average noise and confidence level (95%) for the three fixed noise monitors for the period January to March 2023. 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)** | 86 | 1,123 | 2,232 | 792 | 932 | 1,201 | 972 | 34 | 313 |
| **NMT01 (Dep)** | 28 | 394 | 711 | 231 | 285 | 370 | 327 | 9 | 84 |
| **NMT10* (Dep)** | 73 | 1,040 | 2,037 | 672 | 846 | 1,091 | 877 | 35 | 218 |
| **NMT03 (Dep)** | 72 | 1,021 | 1,917 | 131 | 834 | 956 | 907 | 29 | 158 |

**The fixed noise monitor NMT02 has been replaced with NMT10.*
*NMT10 had power failure between 3rd and 6th February. No noise data was captured from this fixed noise monitor point during this period.*

## 4.4 Noise Violations during Quarter 1 (January to March 2023)

There were six noise violations during the period. Each violation was fined £1,000 at daytime and £2,000 for night period.

| | Date/Time (Local) | Aircraft Type | Noise Level |
|---|---|---|---|
| **Night** | 16/02/2023 03:00 hrs | GLF3 (Executive Jet) | 81.6 dB(A) |
| **Night** | 01/03/2023 23:30 hrs | FA7X (Executive Jet) | 80.1 dB(A) |
| **Day** | 03/03/2023 10:37 hrs | C130 (Executive Jet) | 81.7 dB(A) |
| **Night** | 09/03/2023 23:03 hrs | GLF4 (Executive Jet) | 79.7 dB(A) |
| **Day** | 14/03/2023 08:33 hrs | B738 (Commercial Jet) | 81.2 dB(A) |
| **Day** | 26/03/2023 08:02 hrs | B738 (Commercial Jet) | 81.6 dB(A) |
| **Total Penalties Collected** | | | **£9,000** |

## 4.5 Noise Insulation Scheme Update

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.

In 2022 a total of 932 properties were contacted, 270 properties accepted, and 116 properties were insulated.

It is a requirement of the scheme that we re-contact those who declined or did not accept noise insulation every five years. In Q1 we have contacted 98 properties that were first contacted in 2018.

In March 2023, the Noise Insulation Sub-Committee met to discuss further eligible properties for 2023 taking into consideration the 2023 forecast contour provided by Bickerdike Allen Partners. The decision was made to contact all residential properties in LU1 – a total of 694 households.

In Q1 we have contacted 200 properties and we have received responses from 25.

# 5 NOISE CONTOURS

## 5.1 Night Noise Contours – Q1 2023

### 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 2022 contours, with terrain data allowed for and the contours produced using the INM software (Version 7.0d) with user-defined profiles for the most common aircraft. The validation is based on measured results in 2021 at the fixed noise monitors.

### 5.1.2 Noise Contour Results

The resulting noise contours are shown in on page 23 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 (October - December 2022), and the equivalent quarter during the previous year (January – March 2022).

| Contour Value (dB $L_{Aeq,8h}$) | Contour Area ($km^2$) | | |
|---|---|---|---|
| | Jan – Mar 2022 | Oct – Dec 2022 | Jan – Mar 2023 |
| 48 | 17.4 | 26.2 | 21.8 |
| 51 | 9.2 | 14.7 | 12.0 |
| 54 | 5.3 | 7.7 | 6.6 |
| 57 | 2.9 | 4.5 | 3.8 |
| 60 | 1.5 | 2.4 | 1.9 |
| 63 | 0.9 | 1.2 | 1.1 |
| 66 | 0.5 | 0.7 | 0.6 |
| 69 | 0.3 | 0.5 | 0.4 |
| 72 | 0.2 | 0.3 | 0.3 |
| W/E Split (%) | 68/32 | 80/20 | 76/24 |

**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 in the previous year. Only aircraft types with at least ten movements have been presented. For aircraft types with less than ten movements in a period or types that were not explicitly presented in previous periods, 'n/a' is shown.

| INM Aircraft Type | Jan – Mar 2022 | Oct – Dec 2022 | Jan – Mar 2023 |
|---|---|---|---|
| **1900D** | 17 | n/a | n/a |
| **737800** | 355 | 504 | 362 |
| **757RR** | 228 | 234 | 288 |
| **A300-622R** | 101 | 94 | 91 |
| **A319-131** | 92 | 256 | 163 |
| **A320-211 (ceo)** | 380 | 806 | 516 |
| **A320-211 (neo)** | 218 | 380 | 274 |
| **A321-232 (ceo)** | 189 | 577 | 296 |
| **A321-232 (neo)** | 244 | 361 | 575 |
| **A330-301** | n/a | 13 | n/a |
| **BEC58P** | n/a | 14 | n/a |
| **CL600** | 15 | 17 | 10 |
| **CL601** | 45 | 38 | 30 |
| **CNA208** | n/a | 16 | 23 |
| **CNA525C** | 22 | 19 | 25 |
| **CNA55B** | n/a | 14 | n/a |
| **CNA560XL** | 28 | 19 | 25 |
| **CNA680** | 15 | n/a | n/a |
| **CNA750** | n/a | 11 | 14 |
| **EMB145** | 32 | 30 | 33 |
| **F10062** | 46 | 63 | 53 |
| **GIV** | 15 | 13 | 18 |
| **GV** | 212 | 312 | 276 |
| **LEAR35** | n/a | 10 | 40 |
| **Other** | 56 | 47 | 55 |
| **Total** | **2,310** | **3,848** | **3,167** |

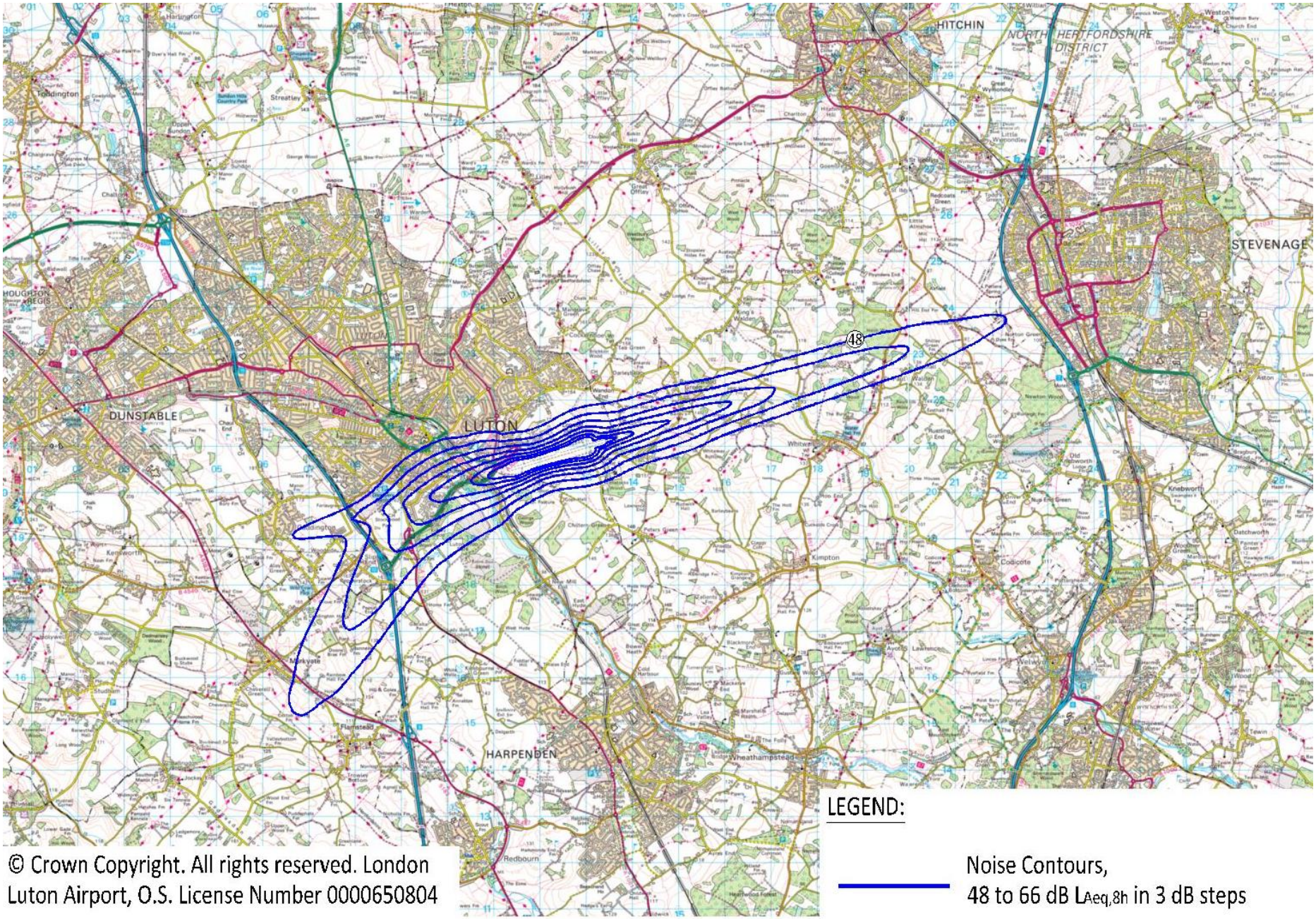
**Table 2: Night-time Aircraft Movement Numbers by Aircraft Type**

### 5.1.4 Noise Contour Comparison

With the ongoing recovery from the COVID-19 pandemic, there has been a 37% increase in the total number of movements compared with the same quarter in 2022. The number of arrivals has increased by 47%, whereas departures have only increased by 26%. The overall fleet mix has remained broadly similar, but the proportion of flights by quieter modernised aircraft types has increased from 20% in 2022 Q1 to 27% in 2023 Q1.

The area of the 48 dB(A) noise contour has increased by 25% compared to the same quarter last year, as a result of the increase in movements which is partially offset by the greater use of quieter modernised aircraft.

The number of movements, and therefore the area of the noise contours, has decreased compared to the previous quarter (October - December 2022).






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

| | 1st QTR 2023 | 1st QTR 2022 |
|---|---|---|
| Total No. of Complaints relating to LLA aircraft operations | 3,430 | 839 |
| No. of Complainants | 169 | 91 |
| No. of General Complaints | 210 | 98 |
| No. of Specific Complaints | 3,220 | 741 |
| Average No. of Complaints per Complainant | 20.3 | 9.2 |
| No. of Aircraft Movements per Complaint | 7.9 | 25.1 |

A total of 3,430 complaints relating to LLA aircraft operations were received by the Flight Operations Department during the first quarter of 2023. This is compared to 839 complaints received for the same period in 2022. It should be noted that during the first quarter of 2023, 79% of complaints were received from 10 individuals and 24% from one individual.

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

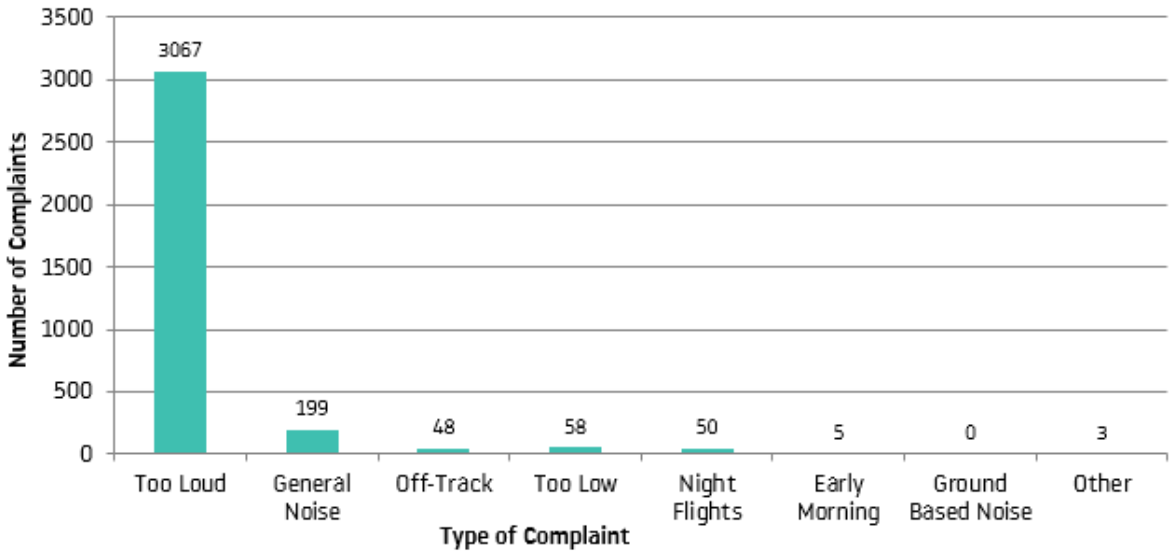
Jan 2023 717 complaints (652 Specific Complaints, 65 General Complaints)
Feb 2023 1,010 complaints (950 Specific Complaints, 60 General Complaints)
Mar 2023 1,703 complaints (1,618 Specific Complaints, 85 General Complaints)

A further 59 complaints not attributable to LLA traffic were received throughout the quarter, compared to 3 complaints for the period January to March 2022.


Out of 169 total complainants, 90 contacted the airport only once meaning, 79 complainants generated 3,340 complaints.

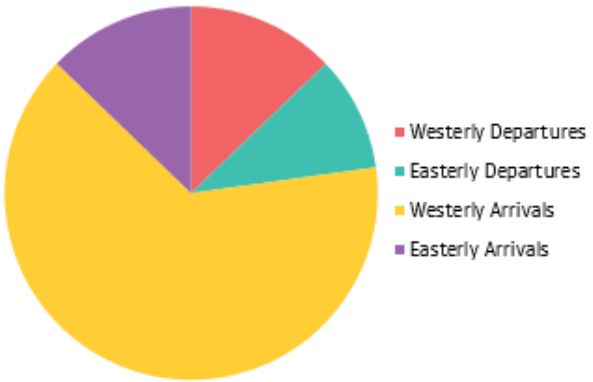
## 6.2 Type of Complaint

The types of complaint received by the Flight Operations Department from January to March 2023 are listed below.




## 6.3 Nature of Disturbance

The chart represents the areas of concern reported from specific complaints were regarding aircraft activity during the period January to March 2023.



Within the 408 specific aircraft complaints concerning westerly departures, 397 complaints involved aircraft on the Match/Detling heading, six related to aircraft following Compton/Rodni flight route, five related to aircraft using the Olney route and no complaints were recorded about aircraft following an off-airways routing.

Of the 317 complaints attributed to easterly departures, 307 related to aircraft following the Compton/Rodni flight route and seven aircraft on the Match route. There were three specific complaints relating to the easterly Olney departure. No complaints were recorded about aircraft following an off-airways routing.

In total the Flight Operations Department received 2,456 specific complaints regarding arrivals. 2,049 of these complaints were about westerly arrivals and a further 407 concerning easterly arrivals. These complaints were mostly regarding the new arrivals airspace change implemented in February 2022.

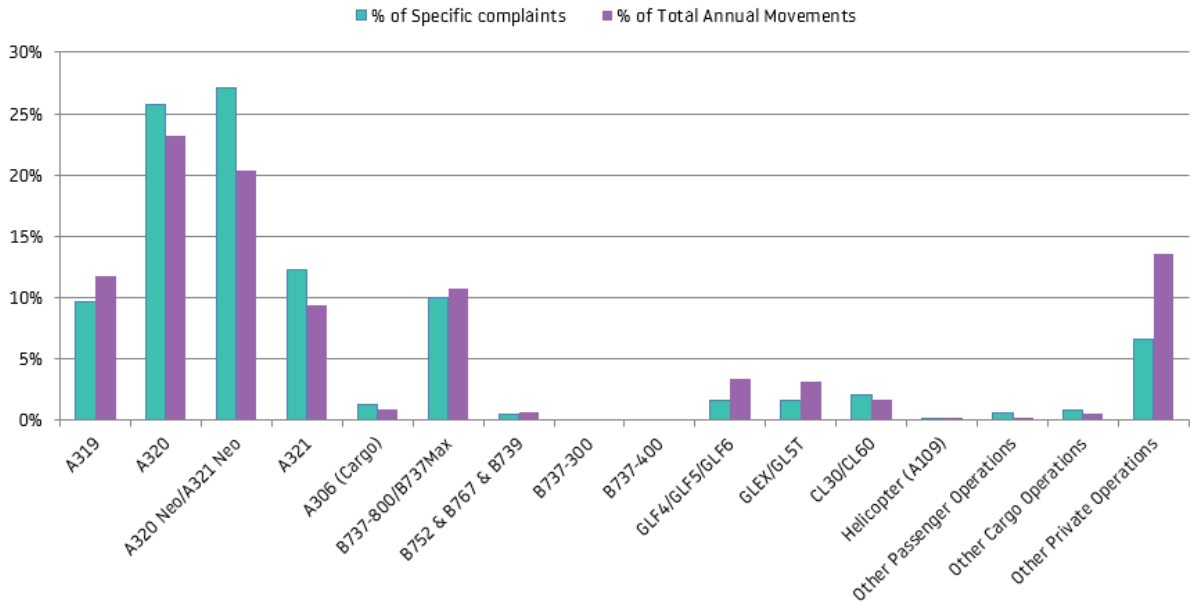
**5**
**Complainants**
reported noise disturbance at night (compared to **13 Complainants** for the same Quarter last year)

Departing aircraft accounted for 17% of the specific night complaints and 83% involved arrivals. Cargo flights, involving A306 and B752 aircraft were reported in none of the night complaints, whilst passenger aircraft accounted for 94% of night complaints. Furthermore, 6% of night complaints correlated to executive aircraft.

**47 (1%)**
**Complaints**
concerning night noise disturbance from LLA operations

## 6.4 Complaints by aircraft type

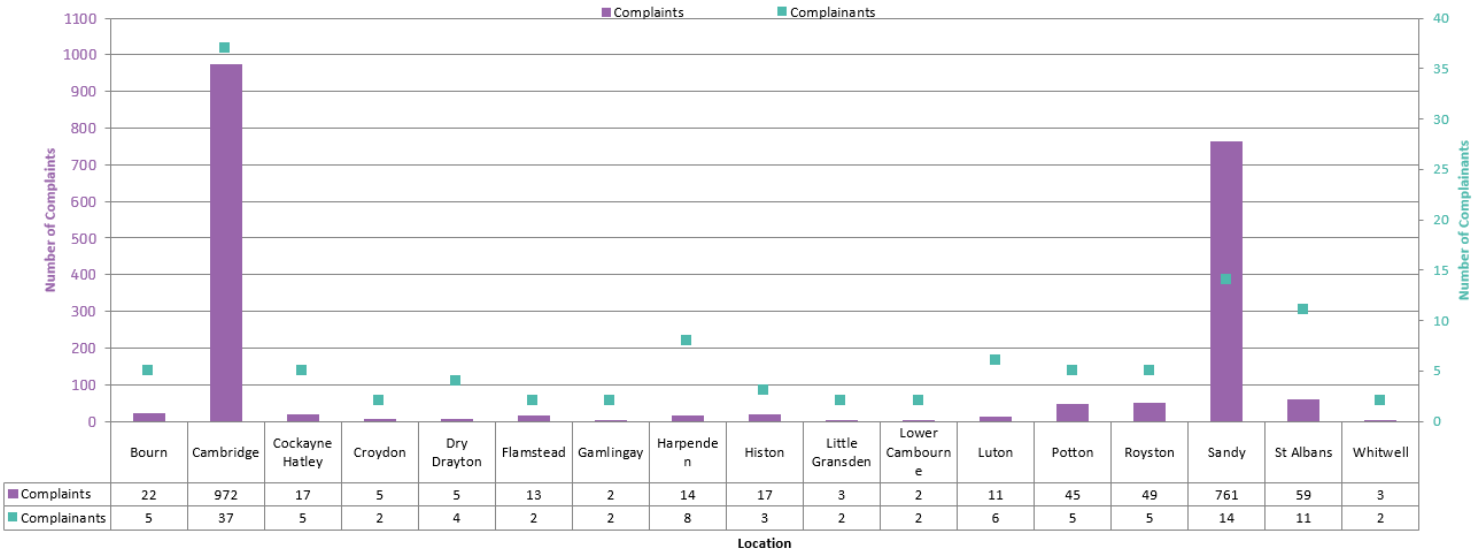
The diagram below shows aircraft types generating specific complaints.



## 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 January to March 2023.

The communities with one complainant include: Ayot St Lawrence, Baldock, Berkhamsted, Biggleswade, Buntingford, Caxton, Chevington. Dunstable, Essex, Girton, Great Cambourne, Hemel Hempstead, Henlow, Highfields Caldecote, Impington, Kimpton, Lolworth, London, Lower Dean, Oakington, Papworth Everard, Perry, Redbourn, Sandridge, Stevenage, Tadlow, Upper Cambourne, Waresley, Wheathampstead, Woolmer Green.




| | Bourn | Cambridge | Cockayne Hatley | Croydon | Dry Drayton | Flamstead | Gamlingay | Harpenden | Histon | Little Gransden | Lower Cambourne | Luton | Potton | Royston | Sandy | St Albans | Whitwell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Complaints | 22 | 972 | 17 | 5 | 5 | 13 | 2 | 14 | 17 | 3 | 2 | 11 | 45 | 49 | 761 | 59 | 3 |
| Complainants | 5 | 37 | 5 | 2 | 4 | 2 | 2 | 8 | 3 | 2 | 2 | 6 | 5 | 5 | 14 | 11 | 2 |

## 6.6 Complaints Analysis

During Quarter 1 there has been an increase in complaints compared to the same quarter last year along with an increase in complainants 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 implementation of the arrivals airspace change which has been the focus of a number of local campaign groups and local media interest.
- Similar to previous quarters in 2022, some individuals are making multiple complaints. In Q1 79% of complaints were received from 10 individuals and 24% from one individual. These particular complainants differ from previous quarters.

## 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** | 0.3% |
| **Email** | 40.7% |
| **Travis** | 59.0% |

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

**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 97% of concerns within eight days and 98% 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** | 60.1% |
| **1** | 17.7% |
| **2** | 11.6% |
| **3** | 7.0% |
| **4** | 2.7% |
| **5** | 0.3% |
| **6** | 0.1% |
| **7** | 0.1% |
| **8** | 0.0% |
| **9** | 0.0% |
| **10** | 0.0% |
| **11** | 0.0% |
| **12** | 0.0% |
| **13** | 0.0% |
| **14** | 0.0% |
| **15** | 0.0% |
| **16** | 0.0% |
| **16+** | 0.1% |

# 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 1 of 2023 two community groups from Harpenden were invited to the airport in order to provide an update on airspace change including FASI-S.

## 7.2 Airport Visits to the Community

The Flight Operations Team held two Public Surgeries during quarter 1 which were; Redbourn in February and Potton in March.

Public surgeries provide residents who are impacted airport operations to speak with members of the Flight Operations team on an appointment basis There was a good uptake on appointments booked by residents and local councillors.

The Flight Operations team will continue to hold Public Surgeries during 2023. 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 1 the Flight Operations team also visited one resident in Luton who wanted to discuss the Noise Insulation Scheme and was also concerned about the increase in air traffic.