# Quarterly Monitoring Report
# **Quarter 1 2021**

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 Jan to Mar 2021.

## KEY MONITORING INDICATORS – 1st QUARTER 2021

| Parameter | | 1st Quarter 2021 | 1st Quarter 2020 |
|---|---|---|---|
| Total Passenger Number | ↓ | 309,280 | 2,919,221 |
| Total Aircraft Movements | ↓ | 6,047 | 26,285 |
| Night Movements (23.00 – 06.59) | ↓ | 788 | 2,727 |
| Early Morning Movements (06.00 – 06.59) | ↓ | 167 | 896 |
| Aircraft Movement and Quota Count limits (per rolling 12-month period) | | | |
| Night Quota Movements (*9,650 limit*) | ↓ | 3,403 | 8,823 |
| Night Quota Count (*3,500 limit)* | ↓ | 1411.50 | 2995.00 |
| Early Morning Shoulder (*7,000 movements*) | ↓ | 1,796 | 5,686 |
| 24hr CDA (% achievement) | ↓ | 79% | 88% |
| Day CDA (% achievement) | ↓ | 79% | 88% |
| Night CDA (% achievement) | ↓ | 80% | 82% |
| Track Violations | - | 2 | 2 |
| 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) | ↓ | 68 (9) | 661 (83) |
| No. Day (Night) > 70 dB(A) | ↓ | 744 (98) | 7,031 (864) |
| Night Noise Contour Area (48 dB $L_{Aeq, 8h}$) | ↓ | 9.1km$^2$ | 28.1 km$^2$ |
| Noise Complaints | ↓ | 1,075 | 1,368 |
| Complainants | ↓ | 54 | 117 |
| Number of New Complainants | ↓ | 13 | 20 |
| Largest Source of Complaints | - | Deps. West | Deps. West |
| Origin of Concerns (>5 Complainants) | - | Harpenden<br>Luton<br>St Albans | St Albans<br>Harpenden<br>Wheathampstead<br>Luton<br>Hitchin |
| Westerly/Easterly Runway Split (%) | - | 63/37 | 91/9 |

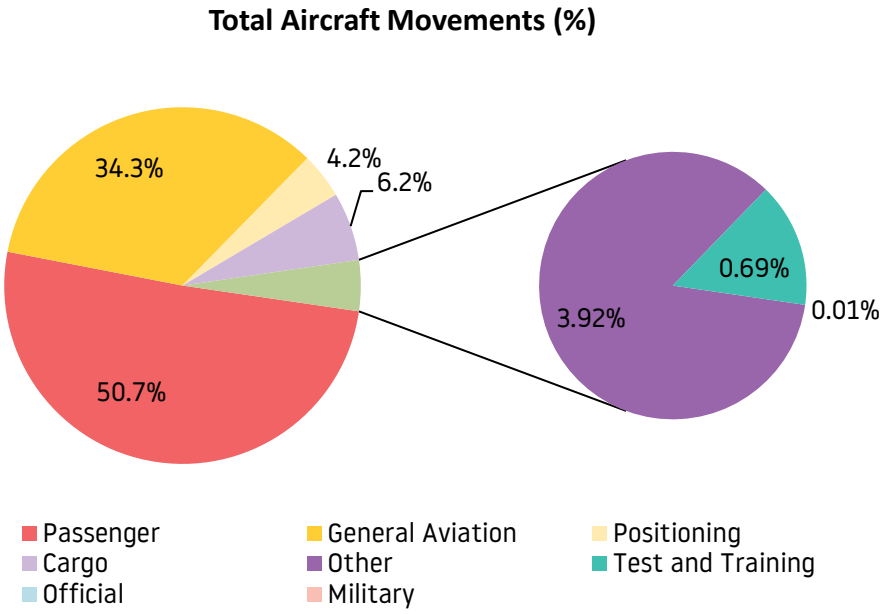
**It should be noted that due to the power failure at NMT02, some data was not collected in Quarter 1.*

# 1 AIR TRAFFIC DATA

## 1.1 Aircraft Movements

There was a total of 6,047 aircraft movements during this quarter (compared with 26,285 for the same period in 2020), decrease of 77%.

This resulted in an average 67 movements per 24 hours (compared to 289 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 2021** | 139 | 1,121 | 143 | 0 | 0 | 0 | 65 | 680 | 2 | **2,150** |
| **Feb 2021** | 122 | 857 | 51 | 1 | 0 | 0 | 75 | 623 | 10 | **1,739** |
| **Mar 2021** | 114 | 1,090 | 54 | 2 | 0 | 0 | 97 | 771 | 30 | **2,158** |
| **QTR Total** | **375** | **3,068** | **248** | **3** | **0** | **0** | **237** | **2,074** | **42** | **6,047** |

## 1.2 Passenger Statistics

A total of 309,280 passengers passed through LLA during the period January to March 2021 (compared with 2,919,261 for the same period last year), 309,045 on scheduled flights (99.9%) and 235 on charter flights (0.1%). This represents a decrease in passengers of 89.4% and equates to an average 3,436 passengers per 24 hours (compared to 32,080 during the same quarter last year).

| | Domestic | EU | Non-EU | Total |
|---|---|---|---|---|
| **Jan 2021** | 2,101 | 37,902 | 75,363 | **115,346** |
| **Feb 2021** | 2,861 | 29,135 | 62,373 | **94,369** |
| **Mar 2021** | 6,668 | 37,388 | 55,509 | **99,565** |
| **QTR Total** | **11,630** | **104,425** | **193,225** | **309,280** |

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

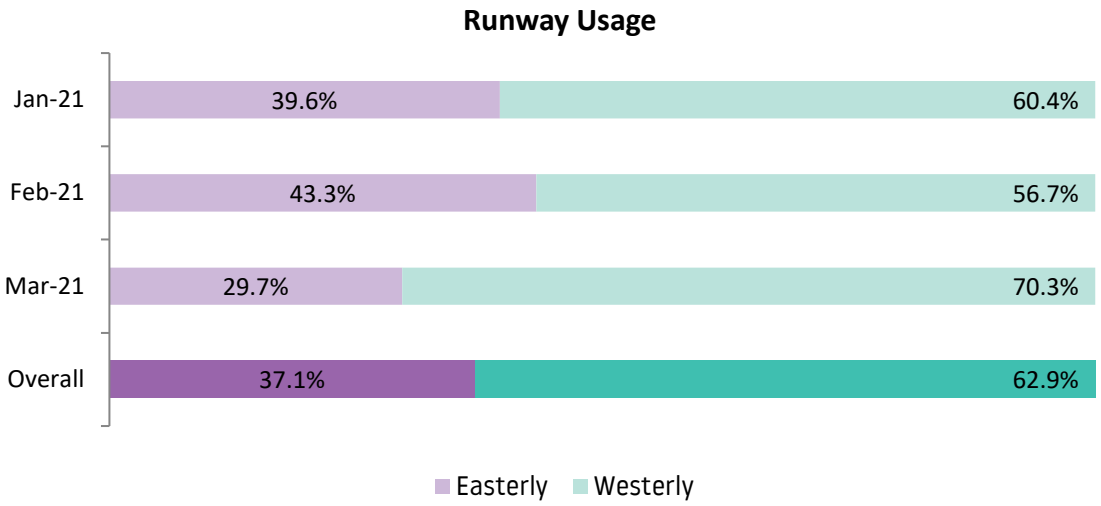
[1] *Other relates to flights coming for maintenance and or departing aircraft that has made an unscheduled return to base*

[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 37% easterly and 63% westerly (compared to 9.5% / 90.5% 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 points 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 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.

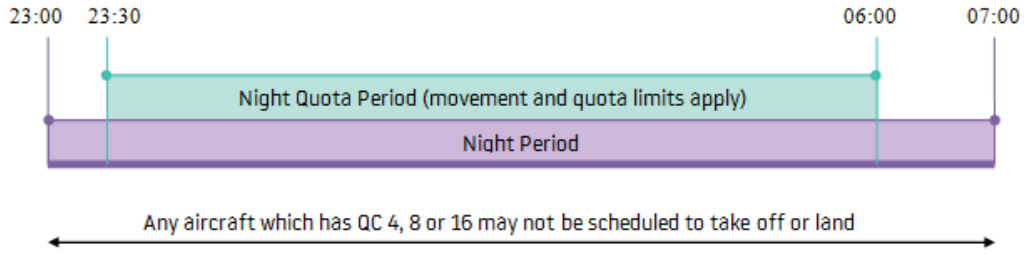
Aircraft are certified by the International Civil Aviation Organisation (ICAO) according to the noise they produce during specific certification tests conducted by the manufacturer. They are classified separately for both take-off and landing. The points are then allocated to different aircraft types 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<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>Global Express<br>Dassault Falcon 7X/900/2000 |
| **Less than 84** | QC 0 | Airbus A320neo<br>BAe ATP<br>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 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 period January to March 2021, 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 (2330-0559) | | 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 2020** | 144 | 98.00 | 3 |
| **May 2020** | 175 | 97.75 | 19 |
| **June 2020** | 238 | 110.25 | 30 |
| **July 2020** | 405 | 152.25 | 268 |
| **August 2020** | 565 | 191.50 | 511 |
| **September 2020** | 494 | 163.25 | 416 |
| **October 2020** | 327 | 126.50 | 242 |
| **November 2020** | 205 | 92.25 | 66 |
| **December 2020** | 283 | 113.50 | 74 |
| **January 2021** | 224 | 96.00 | 66 |
| **February 2021** | 150 | 78.50 | 45 |
| **March 2021** | 193 | 91.75 | 56 |
| **QTR Total** | **567** | **266.25** | **167** |
| *Total for preceding 12 months* | *3,403* | *1411.50* | *1,796* |

## 1.5 Day/Night Ratio of Movements - Actual

There were 788 night operations during the quarter (compared to 2,727 for the same quarter last year), an average 9 movements per night (compared to 30 last year). Arriving aircraft accounted for 53% 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. 39% 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 87% day / 13% night (in line with 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 2020** | 276 | 306 | 582 | 83 | 61 | 2 | 1 | 151 | **733** |
| **May 2020** | 520 | 565 | 1,085 | 118 | 57 | 8 | 11 | 197 | **1,282** |
| **Jun 2020** | 760 | 849 | 1,609 | 169 | 69 | 11 | 19 | 274 | **1,883** |
| **July 2020** | 2,710 | 2,712 | 5,422 | 293 | 112 | 6 | 262 | 759 | **6,181** |
| **Aug 2020** | 3,928 | 3,852 | 7,780 | 440 | 125 | 1 | 510 | 1,219 | **8,999** |
| **Sept 2020** | 3,260 | 3,184 | 6,444 | 368 | 126 | 7 | 409 | 1,000 | **7,444** |
| **Oct 2020** | 2,315 | 2,253 | 4,568 | 229 | 98 | 5 | 237 | 654 | **5,222** |
| **Nov 2020** | 936 | 957 | 1,893 | 129 | 76 | 5 | 61 | 289 | **2,182** |
| **Dec 2020** | 1,476 | 1,512 | 2,988 | 185 | 98 | 4 | 70 | 394 | **3,382** |
| **Jan 2021** | 917 | 924 | 1,841 | 140 | 84 | 4 | 62 | 309 | **2,150** |
| **Feb 2021** | 767 | 761 | 1,528 | 95 | 55 | 10 | 35 | 211 | **1,739** |
| **Mar 2021** | 928 | 962 | 1,890 | 127 | 66 | 7 | 49 | 268 | **2,158** |
| **QTR Total** | **2,612** | **2,647** | **5,259** | **362** | **205** | **21** | **146** | **788** | **6,047** |
| *Total for preceding 12 months* | *18,793* | *18,837* | *37,630* | *2,376* | *1,027* | *70* | *1,726* | *5,725* | *43,355* |

## 1.6 Day/Night Ratio of Movements – Forecast

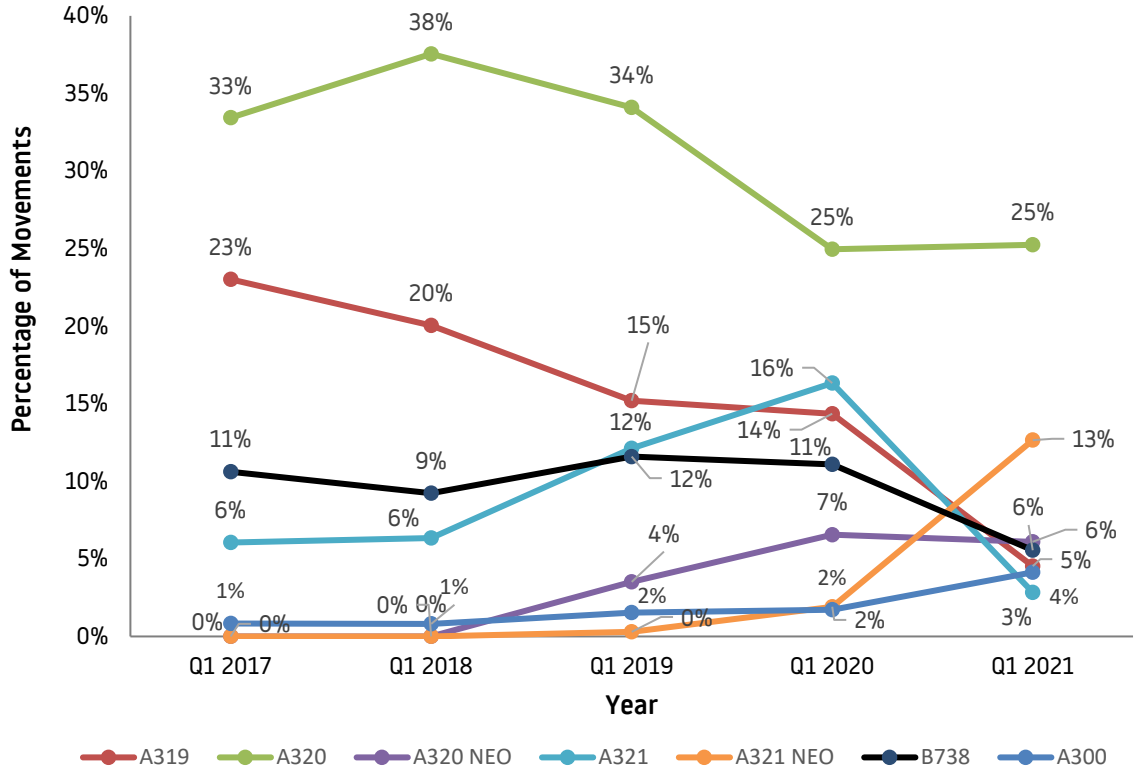
As a result of COVID-19 forecasts are uncertain and forecasts change based on the number of COVID cases in other countries and the UK Foreign and Commonwealth Office's advice.

| | 2020 / 2021 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* |
| **April 2021** | 10,958 | 772 | 550 | 1,497 | 12,455 |
| **May 2021** | 11,859 | 889 | 614 | 1,731 | 13,590 |
| **June 2021** | 11,424 | 894 | 589 | 1,732 | 13,156 |
| **July 2021** | 11,307 | 1,074 | 637 | 1,967 | 13,274 |
| **August 2021** | 10,786 | 1,069 | 604 | 1,925 | 12,711 |
| **September 2021** | 10,978 | 867 | 538 | 1,663 | 12,641 |
| **October 2021** | 11,095 | 873 | 512 | 1,605 | 12,700 |
| **November 2021** | 8,748 | 430 | 268 | 816 | 9,564 |
| **December 2021** | 10,199 | 569 | 335 | 1,071 | 11,270 |
| **January 2022** | 8,890 | 489 | 413 | 1,044 | 9,934 |
| **February 2022** | 8,402 | 472 | 374 | 988 | 9,390 |
| **March 2022** | 10,123 | 463 | 327 | 929 | 11,052 |
| *Total for following 12 months** | *124,769* | *8,861* | *5,761* | *16,968* | *141,737* |

**Rounded number*

## 1.7 Aircraft Movements by Type

The graph below shows the percentage of aircraft movements for our 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 (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 | |
| **Jan 2021** | Daytime | 232 | 12 | 344 | 87 | 137 | 37 | 44 | 4 | 9 | 0 | **906** |
| | Night-time | 36 | 2 | 63 | 15 | 15 | 6 | 24 | 0 | 1 | 0 | **162** |
| **Feb 2021** | Daytime | 230 | 4 | 283 | 68 | 70 | 27 | 57 | 7 | 7 | 0 | **753** |
| | Night-time | 31 | 1 | 36 | 5 | 8 | 6 | 22 | 0 | 0 | 0 | **109** |
| **Mar 2021** | Daytime | 160 | 0 | 361 | 78 | 189 | 41 | 77 | 11 | 21 | 1 | **939** |
| | Night-time | 20 | 0 | 63 | 4 | 21 | 9 | 22 | 0 | 1 | 0 | **140** |
| **QTR** | **Total** | **709** | **19** | **1,150** | **257** | **440** | **126** | **246** | **22** | **39** | **1** | **3,009** |
| | *Daily Average* | *8* | *<1* | *13* | *3* | *5* | *1* | *3* | *<1* | *<1* | *<1* | *33* |

## 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 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. 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 97.5%. 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 |
|---|---|---|
| **Jan 2021** | 1 | £1,000 |
| **Feb 2021** | 0 | - |
| **Mar 2021** | 1 | £1,000 |
| **QTR** | **2** | **£2,000** |

| | Airline or Aircraft Operator | Aircraft Type/Occurrence |
|---|---|---|
| **Jan 2021** | Privately owned aircraft | H25+ |
| **Feb 2021** | - | - |
| **Mar 2021** | Privately owned aircraft | LJ60 |

# 3 ARRIVING AIRCRAFT

## 3.1 Arrivals Route Analysis

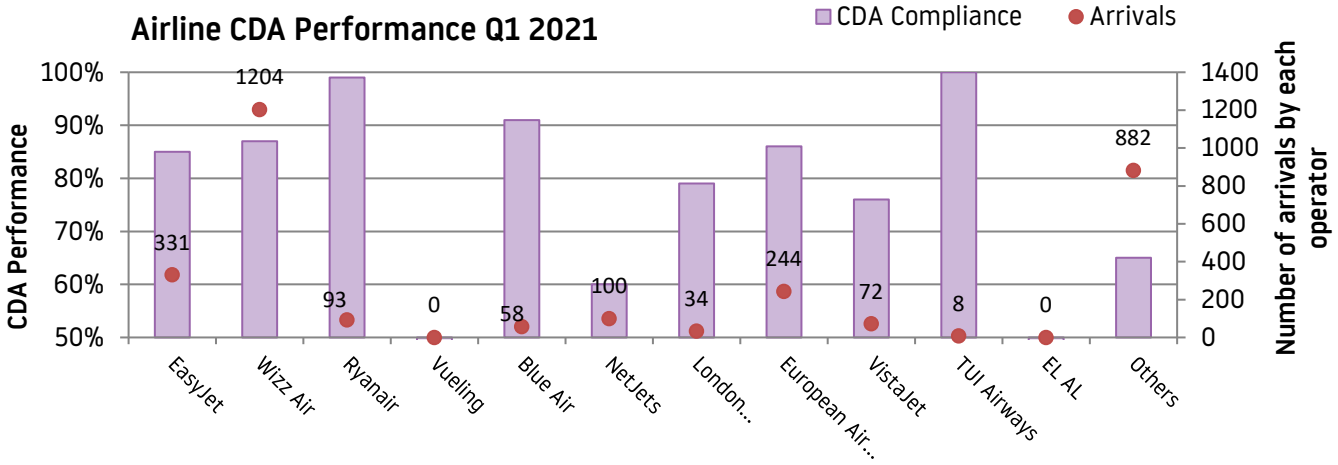
The following table reports the total number of arrivals differentiating between easterly (07), westerly (25) operations and helicopters between 23:00 hrs and 06:59 hrs.

| | | Arrivals | | | Total |
|---|---|---|---|---|---|
| | | 07 | 25 | Heli | |
| **Jan 2021** | Daytime | 379 | 537 | 0 | **916** |
| | Night-time | 53 | 106 | 0 | **159** |
| **Feb 2021** | Daytime | 335 | 429 | 0 | **764** |
| | Night-time | 41 | 67 | 0 | **108** |
| **Mar 2021** | Daytime | 281 | 634 | 2 | **917** |
| | Night-time | 36 | 128 | 0 | **164** |
| **QTR** | **Total** | **1,125** | **1,901** | **2** | **3,028** |
| | *Daily Average* | *12* | *21* | *<1* | *34* |

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.

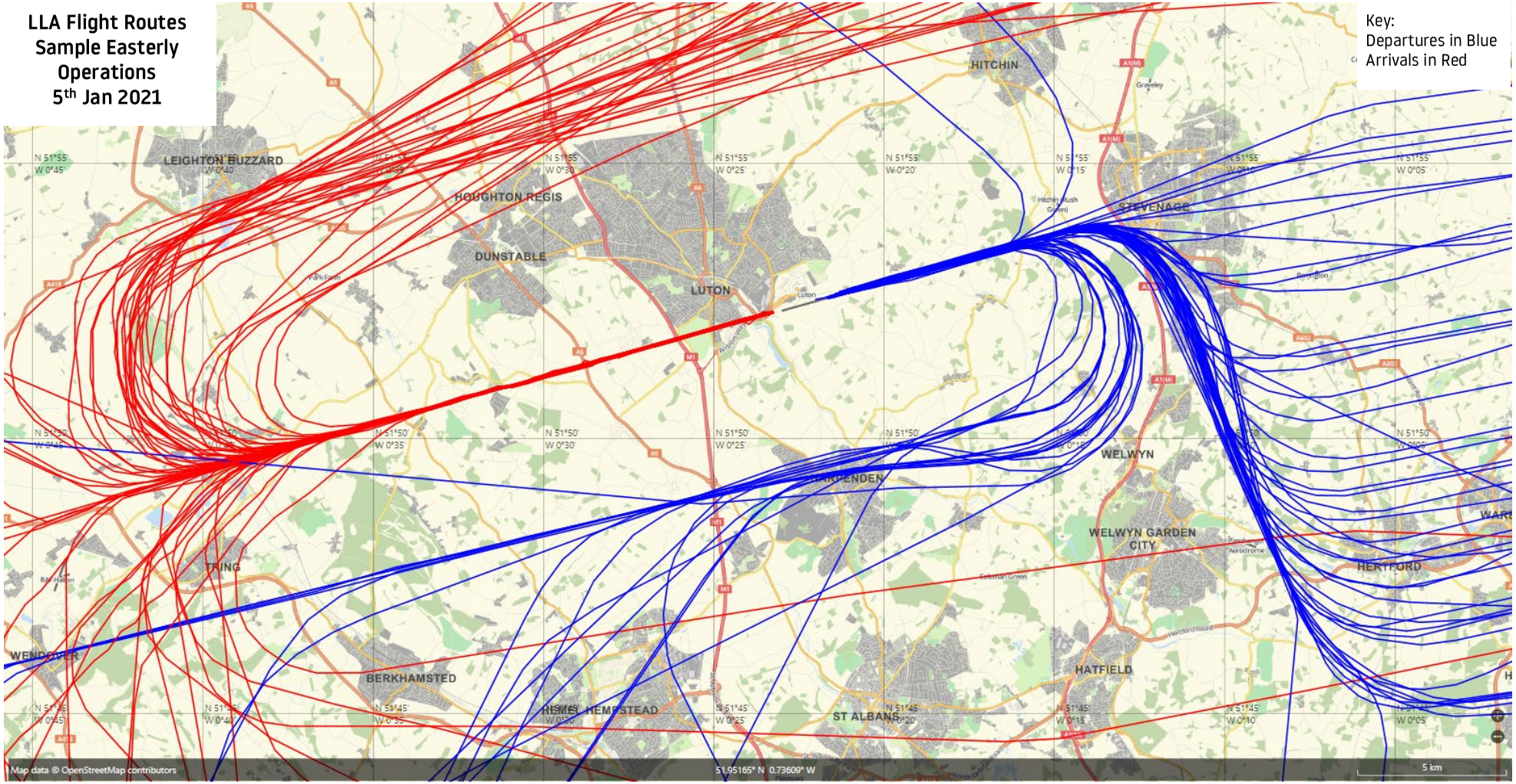
| | All Arrivals | | | 07 Easterly Arrivals | | | 25 Westerly Arrivals | | |
|---|---|---|---|---|---|---|---|---|---|
| | *% CDA* | | | *% CDA* | | | *% CDA* | | |
| | *Total* | *Day* | *Night* | *Total* | *Day* | *Night* | *Total* | *Day* | *Night* |
| **Jan 2021** | **82%** | 83% | 77% | **82%** | 84% | 75% | **81%** | 82% | 78% |
| **Feb 2021** | **81%** | 80% | 85% | **78%** | 79% | 73% | **83%** | 81% | 94% |
| **Mar 2021** | **75%** | 75% | 79% | **73%** | 76% | 58% | **76%** | 74% | 87% |
| **QTR Total** | **79%** | 79% | 80% | **79%** | 80% | 70% | **80%** | 79% | 85% |

The overall CDA achievement was 79% with several major LLA operators achieving high performance.

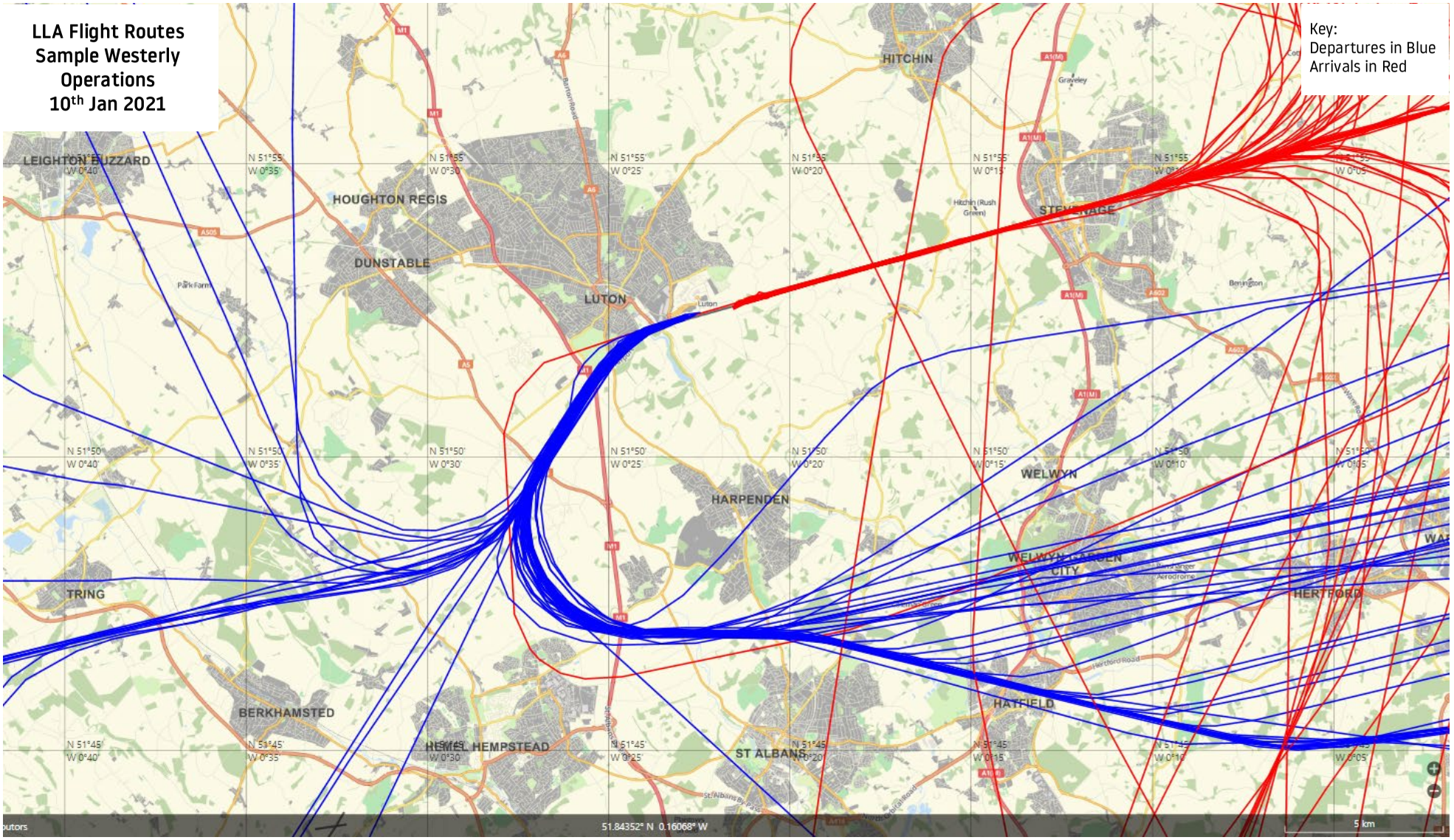


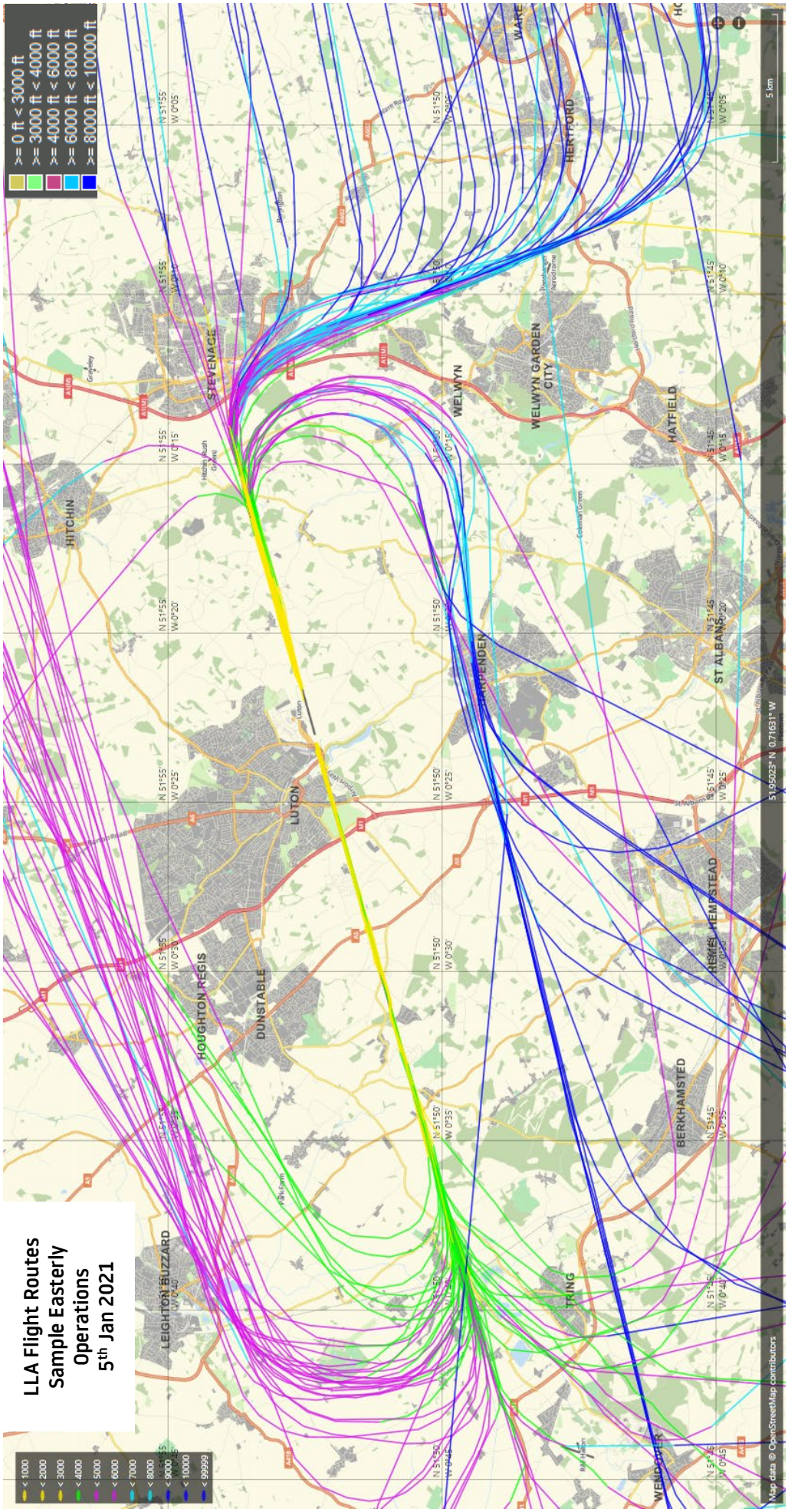

The maps overleaf, produced from the Topsonic Aircraft Noise & Track Monitoring System, identify samples of actual flown aircraft tracks operating from LLA (arrivals and departures during both easterly and westerly operations) for a typical 24-hour period within the first quarter of 2021.

**LLA Flight Routes**
**Sample Easterly**
**Operations**
**5th Jan 2021**

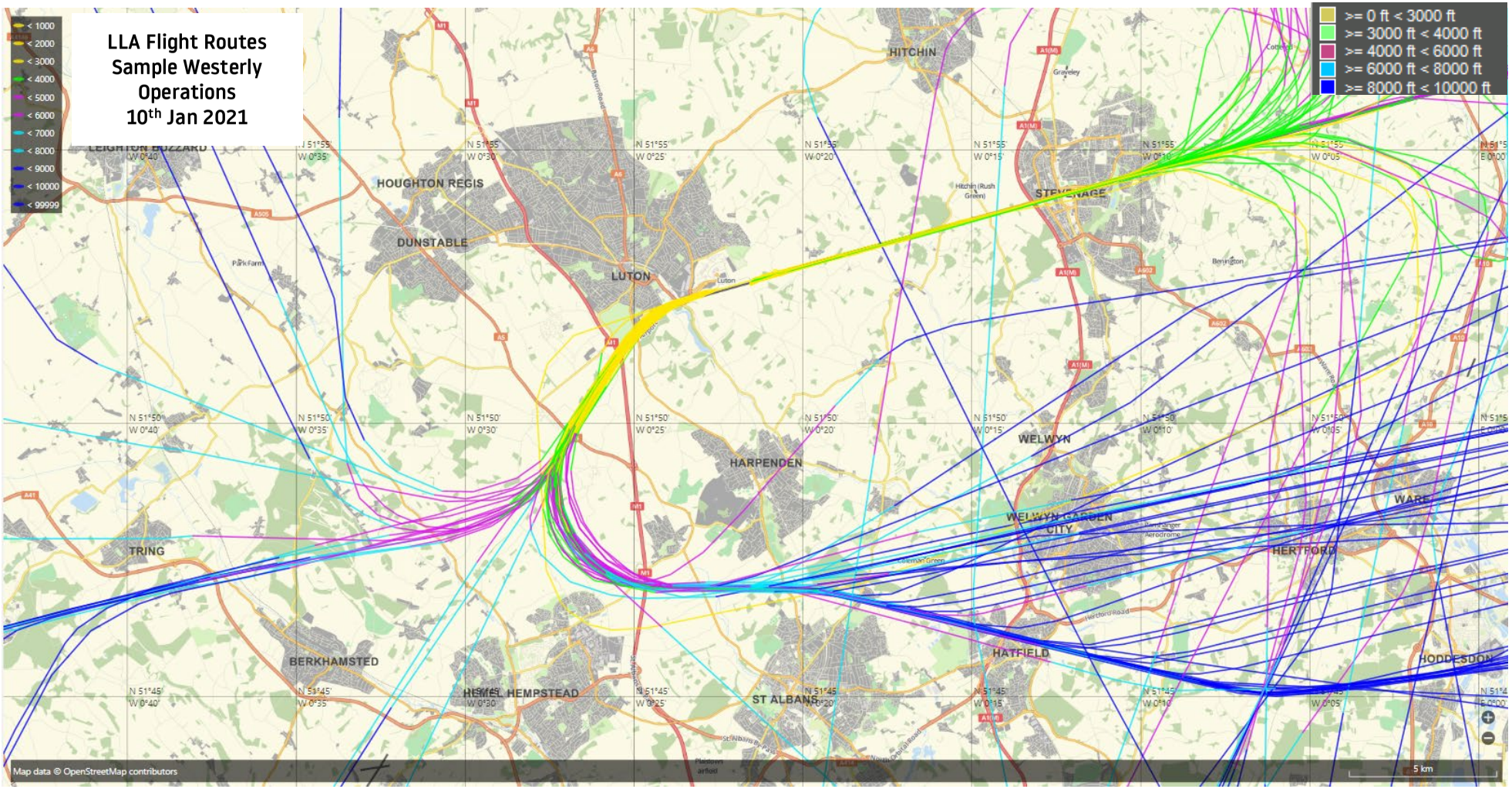


**LLA Flight Routes**
**Sample Westerly**
**Operations**
**10th Jan 2021**






**LLA Flight Routes**
**Sample Easterly**
**Operations**
**5th Jan 2021**


LLA Flight Routes
Sample Westerly
Operations
10th Jan 2021
>= 0 ft < 3000 ft
>= 3000 ft < 4000 ft
>= 4000 ft < 6000 ft
>= 6000 ft < 8000 ft
>= 8000 ft < 10000 ft
< 1000
< 2000
< 3000
< 4000
< 5000
< 6000
< 7000
< 8000
< 9000
< 10000
< 99999
HITCHIN
HOUGHTON REGIS
DUNSTABLE
LUTON
STEVENAGE
HARPENDEN
WELWYN
WELWYN GARDEN CITY
HERTFORD
WARE
TRING
BERKHAMSTED
HEMEL HEMPSTEAD
ST ALBANS
HATFIELD
HODDESDON
Map data © OpenStreetMap contributors
5 km

# 4 AIRCRAFT NOISE

During the 1st Quarter of 2021, the maximum noise levels less than 79 dB(A) was recorded by 99.9% of correlated departing aircraft.

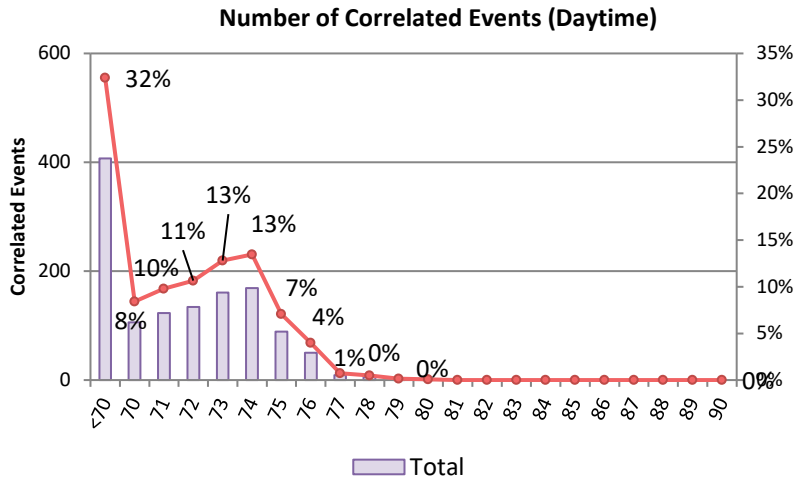
The maximum noise level less than 76 dB(A) was recorded by 98.2% of correlated departing aircraft.

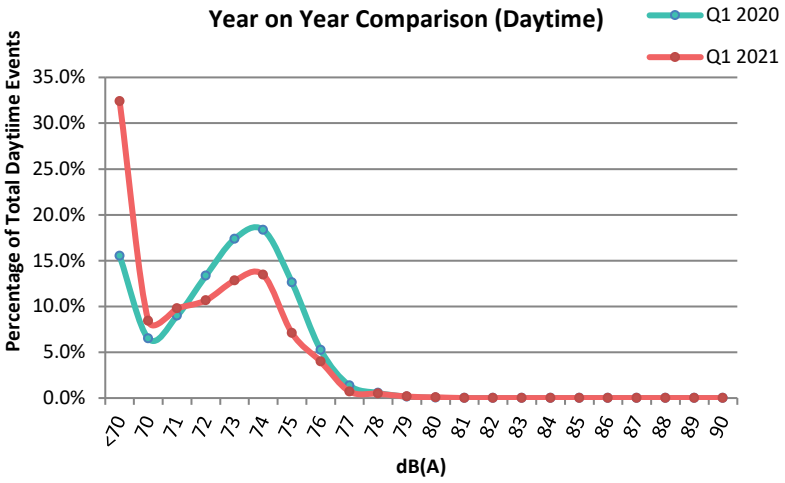
There was no noise violation in this quarter.

## 4.1 Daytime Noise Levels – January to March 2021

The following table identifies daytime noise levels correlated to departing aircraft at the fixed noise monitoring terminals. It should be noted that due to the power failure at NMT02, some data were not collected in Quarter 1. (*Any aircraft exceeding the Daytime Noise Violation Limit of 80dB(A), between 07:00 hrs and 22:59 hrs, is fined accordingly*)

| | *db (A)* | Jan | Feb | Mar | QTR |
|---|---|---|---|---|---|
| Number of Correlated Events (Daytime) | <70 | 100 | 88 | 219 | 407 |
| | 70 | 31 | 28 | 47 | **106** |
| | 71 | 34 | 25 | 64 | **123** |
| | 72 | 30 | 31 | 73 | **134** |
| | 73 | 41 | 45 | 75 | **161** |
| | 74 | 52 | 46 | 71 | **169** |
| | 75 | 26 | 26 | 37 | **89** |
| | 76 | 18 | 13 | 19 | **50** |
| | 77 | 4 | 2 | 3 | **9** |
| | 78 | 2 | 1 | 3 | **6** |
| | 79 | 1 | 0 | 1 | **2** |
| | 80 | 0 | 0 | 1 | **1** |
| | 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** | | **339** | **305** | **613** | **1,257** |

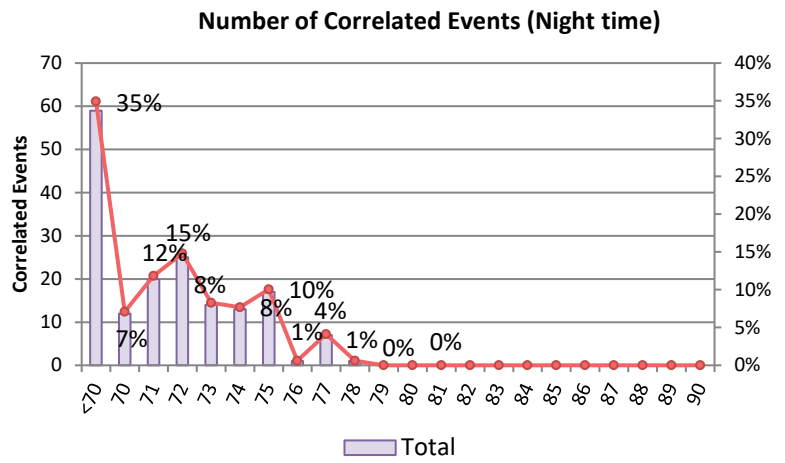


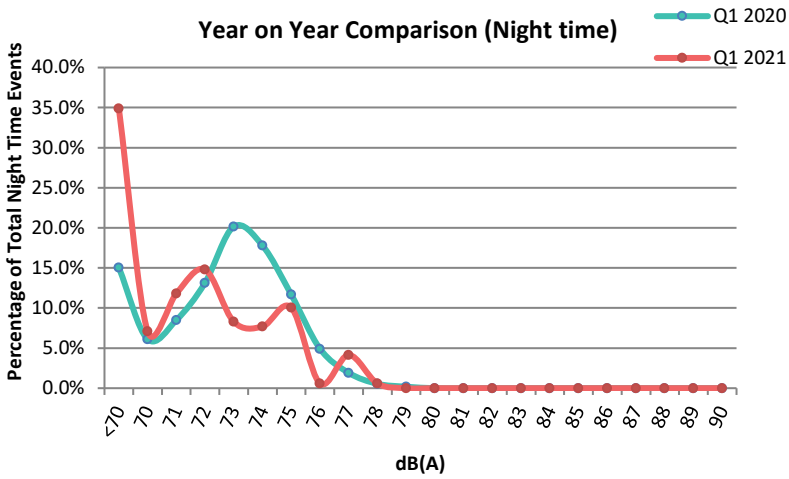



## 4.2 Night Noise Levels – January to March 2021

The following table identifies the night noise levels correlated to departing aircraft at the fixed noise monitor terminals. It should be noted that due to the power failure at NMT02, some data were not collected in Quarter 1. *(Any aircraft exceeding the Night Noise Violation Limit of 79dB(A), between 23:00 hrs and 06:59 hrs, is fined accordingly)*

| | *db (A)* | Jan | Feb | Mar | QTR |
|---|---|---|---|---|---|
| Number of Correlated Events (Night time) | <70 | 20 | 6 | 33 | **59** |
| | 70 | 6 | 1 | 5 | **12** |
| | 71 | 4 | 5 | 11 | **20** |
| | 72 | 9 | 6 | 10 | **25** |
| | 73 | 4 | 5 | 5 | **14** |
| | 74 | 1 | 6 | 6 | **13** |
| | 75 | 9 | 3 | 5 | **17** |
| | 76 | 0 | 0 | 1 | **1** |
| | 77 | 2 | 3 | 2 | **7** |
| | 78 | 0 | 0 | 1 | **1** |
| | 79 | 0 | 0 | 0 | **0** |
| | 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** | | **55** | **35** | **79** | **169** |



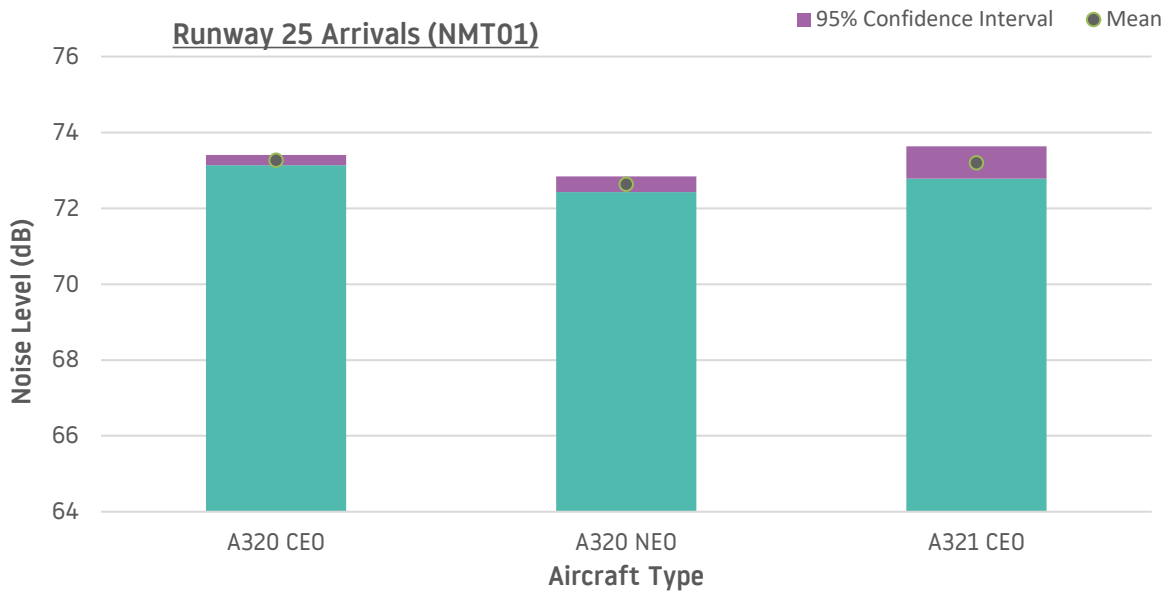



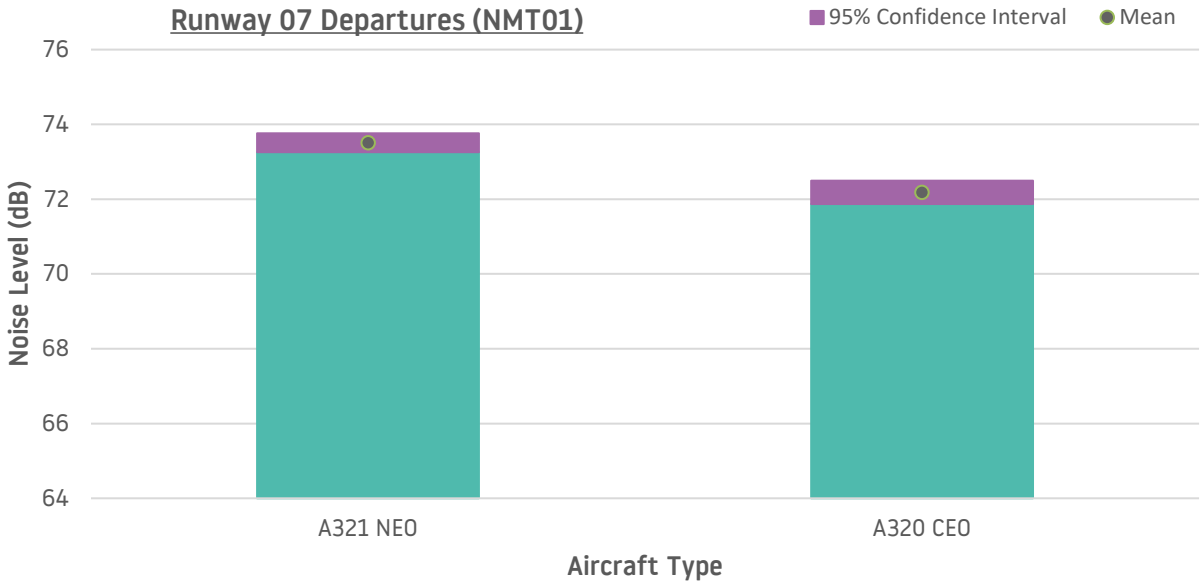

*N.B It should be noted that the detection thresholds for the noise monitoring terminals are set at the lowest level to record the maximum number of aircraft noise events. However, a number of smaller aircraft types, such as business jets and propeller aircraft, get very close to but do not reach the 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.*

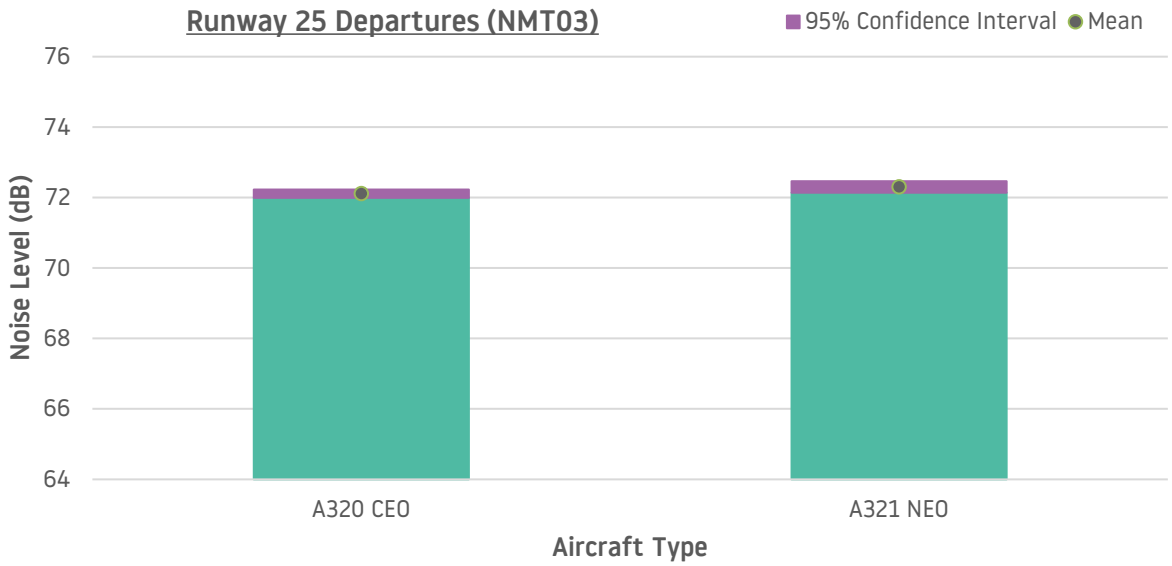
*Weather conditions can also effect the number of noise monitoring events recorded in the table; for example, if winds are greater than 10m/s, results from noise monitors will be invalid and therefore will not been taken into account.*

## 4.3 Average Noise Monitor results by Aircraft Type (January to March 2021)

The following graphs show the average noise and 95% confidence level for the three fixed noise monitors for the period January - March 2021. These are also split by the main aircraft types operating at LLA. It should be noted, that due to the power failure at NMT02, some data was not collected in Quarter 1.






The table below shows the sample sizes used for the graphs in this section. We recommend a sample size of over 100 results to be compared. Therefore only aircraft types with a sample size of over 100 have been shown. Please note, there was a power failure at NMT2 during the quarter and therefore was not sufficient results from any aircraft types to be provided in a graph.

| | A320 NEO | A321 NEO | A320 |
|---|---|---|---|
| **NMT01 (Arr)** | 107 | 242 | 453 |
| **NMT01 (Dep)** | 55 | 129 | 276 |
| **NMT03 (Dep)** | 12 | 176 | 330 |

## 4.4 Noise Violations during Quarter (January to March 2021)

There was no noise violation during the period.

## 4.5 Noise Insulation Scheme Update

In Quarter 1, the noise insulation scheme was paused due to COVID-19 and government restrictions. Therefore no properties were contacted or insulated during these months.

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 can be provided. Rooms eligible for insulation include living rooms, dining rooms, kitchen-diners and bedrooms.

# 5 NOISE CONTOURS

## 5.1 Night Noise Contours – January to March 2021

### 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 2020 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 2019 at the fixed noise monitors.

### 5.1.2 Noise Contour Results

The resulting noise contours are shown on page 22 at values from 48 to 63 dB LAeq,8h. Contours at 66, 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 2020), and the equivalent quarter during the previous year (January – March 2020).

| Contour Value (dB $L_{Aeq,8h}$) | Contour Area ($km^2$) | | |
|---|---|---|---|
| | Jan - Mar 2020 | Oct – Dec 2020 | Jan – Mar 2021 |
| 48 | 28.1 | 15.8 | 9.1 |
| 51 | 16.0 | 9.0 | 5.1 |
| 54 | 9.1 | 5.2 | 2.6 |
| 57 | 5.4 | 2.6 | 1.4 |
| 60 | 2.7 | 1.5 | 0.9 |
| 63 | 1.5 | 0.9 | 0.6 |
| 66 | 0.9 | 0.6 | 0.4 |
| 69 | 0.6 | 0.4 | 0.2 |
| 72 | 0.4 | 0.2 | 0.1 |
| W/E Split (%) | 90/10 | 80/20 | 68/32 |

**Table 1: Area of Night Noise Contours**

** The 69 and 72 dB $L_{Aeq,8h}$ contours are not shown on the Figure on page 21 as they are too small to individually distinguish, and both contours are fully contained within the boundaries of the airport site.*

### 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 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 | Jan - Mar 2020 | Oct – Dec 2020 | Jan - Mar 2021 |
|---|---|---|---|
| 1900D | 29 | 12 | 15 |
| 737400 | 99 | 38 | 105 |
| 737800 | 275 | 130 | 17 |
| 757RR | 133 | 209 | 126 |
| A300-622R | 170 | 154 | 108 |
| A319-131 | 163 | 35 | 12 |
| A320-211 (ceo) | 621 | 222 | 114 |
| A320-211 (neo) | 149 | 86 | 20 |
| A321-232 (ceo) | 594 | 156 | 34 |
| A321-232 (neo) | n/a | n/a | 26 |
| CL600 | 12 | 11 | 12 |
| CL601 | 45 | 27 | 11 |
| CNA525C | 15 | n/a | 10 |
| CNA560XL | 24 | 20 | 10 |
| CNA750 | n/a | 10 | n/a |
| EMB145 | 32 | 20 | 18 |
| F10062 | 49 | 15 | 23 |
| GIV | 29 | n/a | n/a |
| GV | 221 | 116 | 76 |
| LEAR35 | 14 | 11 | n/a |
| Other | 50 | 65 | 51 |
| **Total** | **2,724** | **1,337** | **788** |

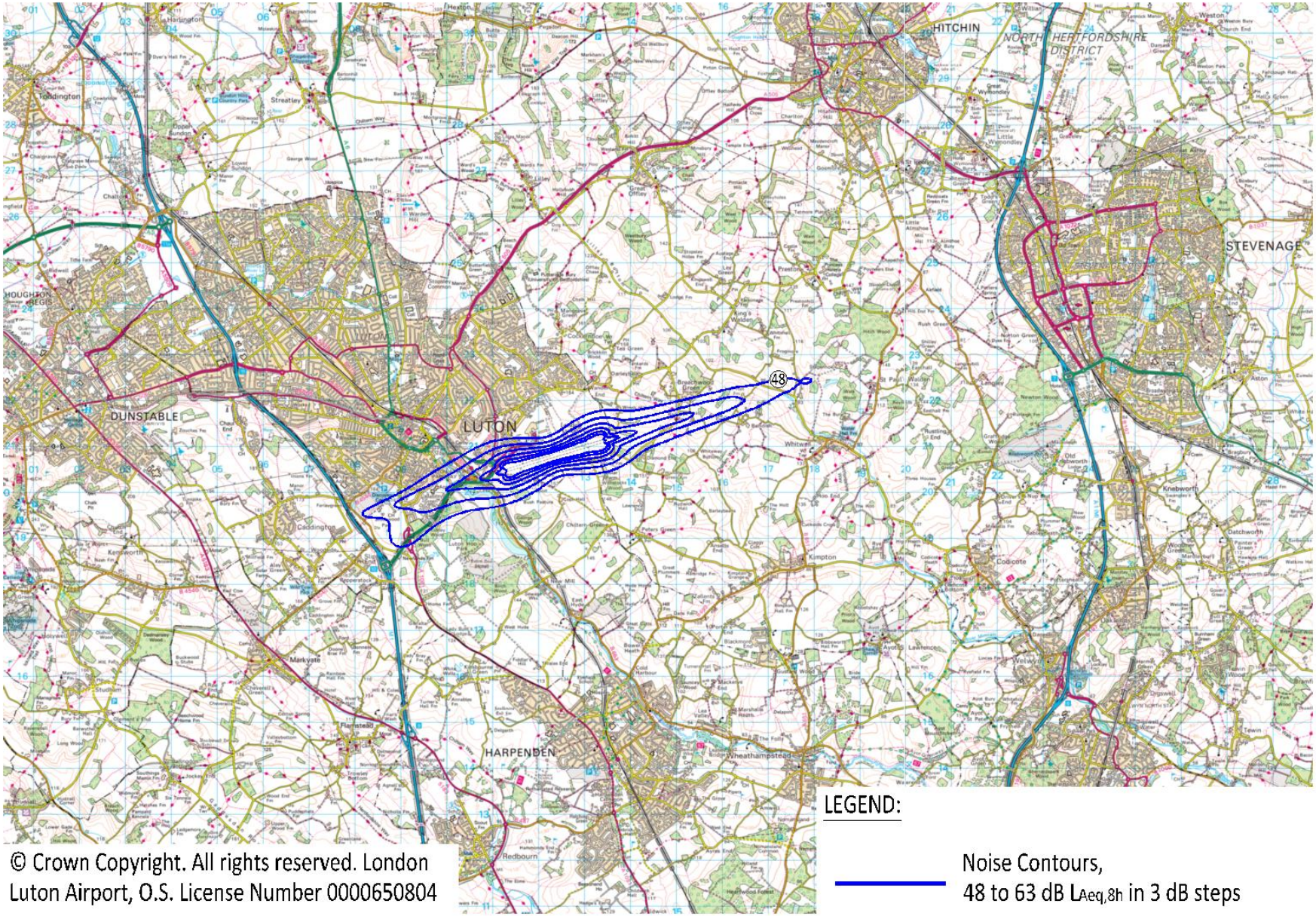
**Table 2: Night-time Aircraft Movement Numbers by Aircraft Type**

### 5.1.4 Noise Contour Comparison

Due to the COVID-19 pandemic, there has been a 71% decrease in the total number of movements compared with the same quarter in 2020.

The area of the 48 dB(A) noise contour has decreased by 68% compared to the same quarter last year, as a result of the decrease in movements.

The number of movements, and therefore the contour areas, has also decreased compared to the previous quarter (October - December 2020).






LEGEND:

Noise Contours,
48 to 63 dB $L_{Aeq,8h}$ in 3 dB steps

# 6 COMPLAINTS

## 6.1 Total Complaints relating to LLA aircraft operations

| | 1st QTR 2021 | 1st QTR 2020 |
|---|---|---|
| Total No. of Complaints relating to LLA aircraft operations | 1,075 | 2,793 |
| No. of Complainants | 54 | 121 |
| No. of General Complaints | 31 | 251 |
| No. of Specific Complaints | 1,044 | 2,542 |
| Average No. of Complaints per Complainant | 19.9 | 23.1 |
| No. of Aircraft Movements per Complaint | 5.6 | 10.9 |

In line with the decrease in aircraft movements, a total of 1,075 complaints relating to LLA aircraft operations (on average 12 complaints per 24 hours) were received by the Flight Operations Department during the last quarter. This is compared to the 2,793 complaints which were received for the same period last year. It should be noted that in the first quarter of 2020, 94% of complaints were received from 10 individuals and 90% from two individuals.

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

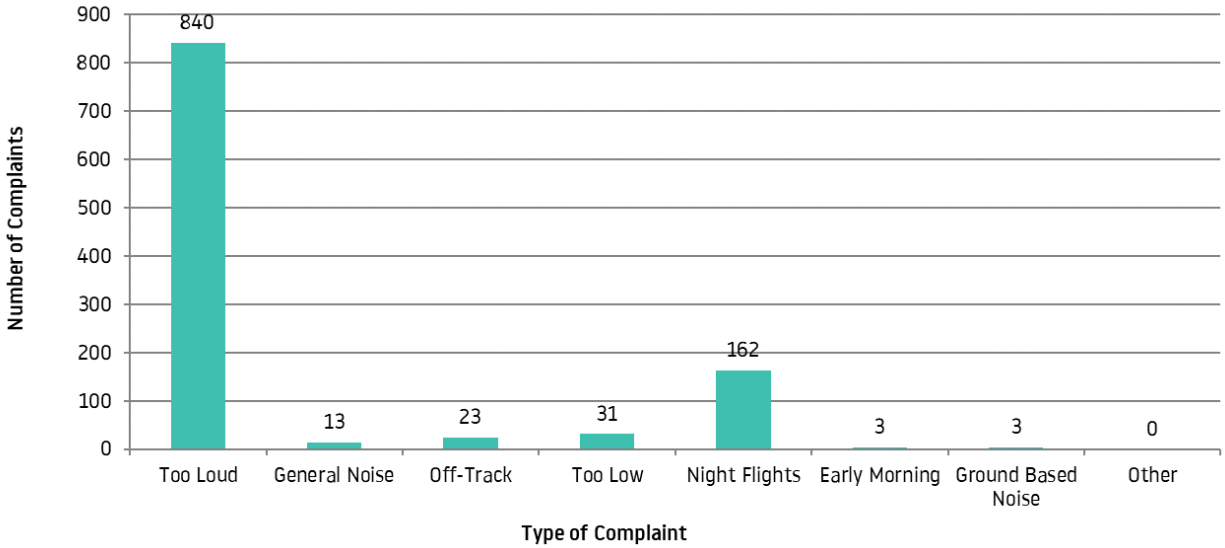
Jan 2021 234 complaints (226 Specific Complaints, 8 General Complaints)
Feb 2021 267 complaints (258 Specific Complaints, 9 General Complaints)
Mar 2021 574 complaints (560 Specific Complaints, 14 General Complaints)

A further 130 complaints not attributable to LLA traffic were received throughout the quarter, compared to 149 complaints for the period January to March last year.


Out of 54 total complainants, there were 30 that contacted the airport only once meaning that 24 complainants generated 1,045 complaints.

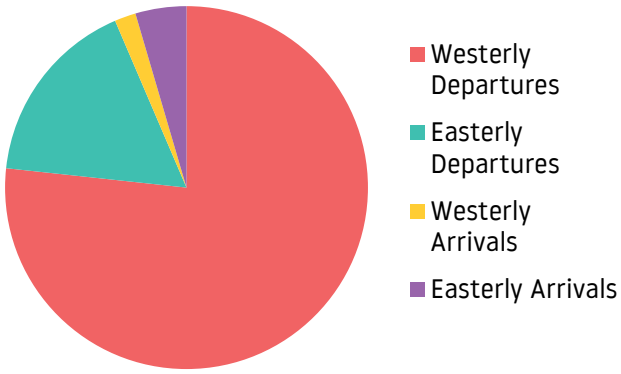
## 6.2 Type of Complaint

The types of complaint received by the Flight Operations Department from January to March 2021 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 Jan to Mar 2021.



Within the 810 specific aircraft complaints concerning westerly departures, 769 complaints involved aircraft on the Match/Detling heading, 15 related to aircraft following Compton flight route, 14 related to aircraft using the Olney route and 12 complaints were recorded about aircraft following an off-airways routing.

With regard to the 178 complaints attributed to easterly departures, 162 related to aircraft following the Compton flight route and 3 aircraft on the Match route. There were 2 specific complaints relating to the easterly Olney departure route and 11 complaints were recorded about aircraft following an off-airways routing.

In total the Flight Operations Department received 68 specific complaints regarding arrivals. 20 of these complaints were about westerly arrivals and a further 48 concerning easterly arrivals.

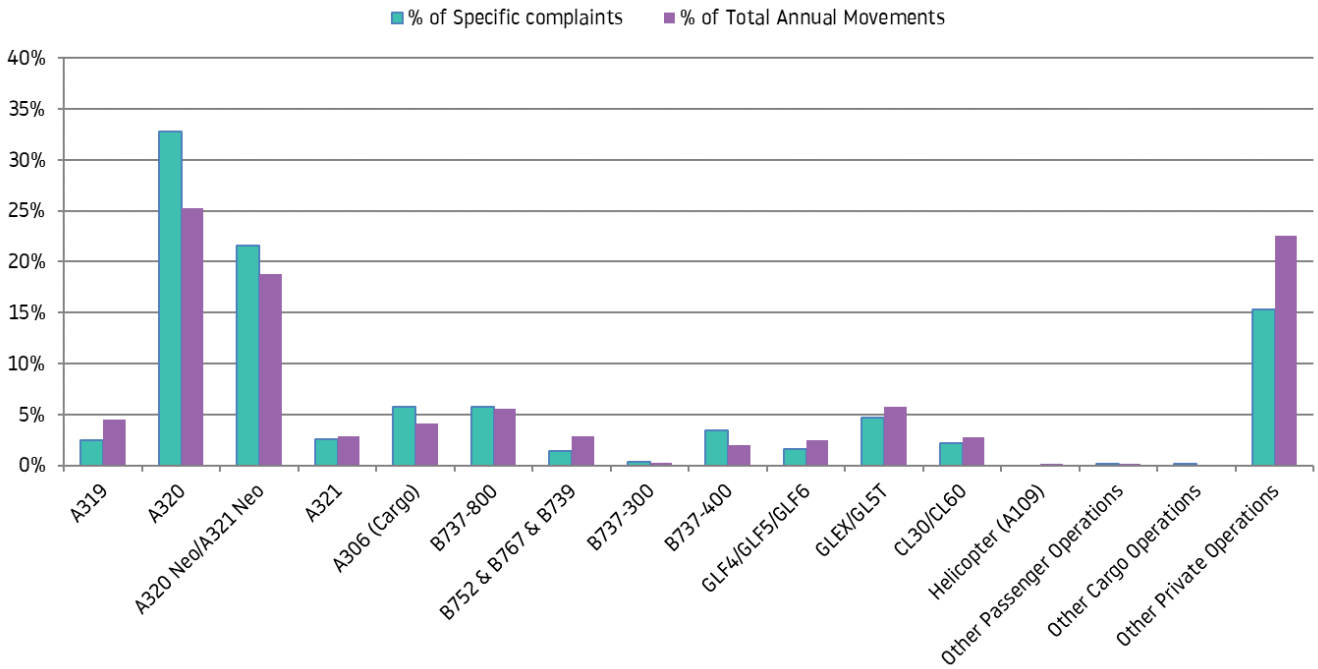
**22**
**Complainants**
reported noise disturbance at night (compared to **13 Complainants** for the same Quarter last year)

Departing aircraft accounted for 91% of the 148 specific night complaints and 9% involved arrivals. Cargo flights, involving A306 and B752 aircraft were reported in 33% of night complaints, whilst passenger aircraft accounted for 56% of night complaints. Furthermore, 11% of night complaints correlated to executive aircraft.

**162 (15%)**
**Complaints**
concerning night noise disturbance from LLA operations

## 6.4 Complaints by aircraft type

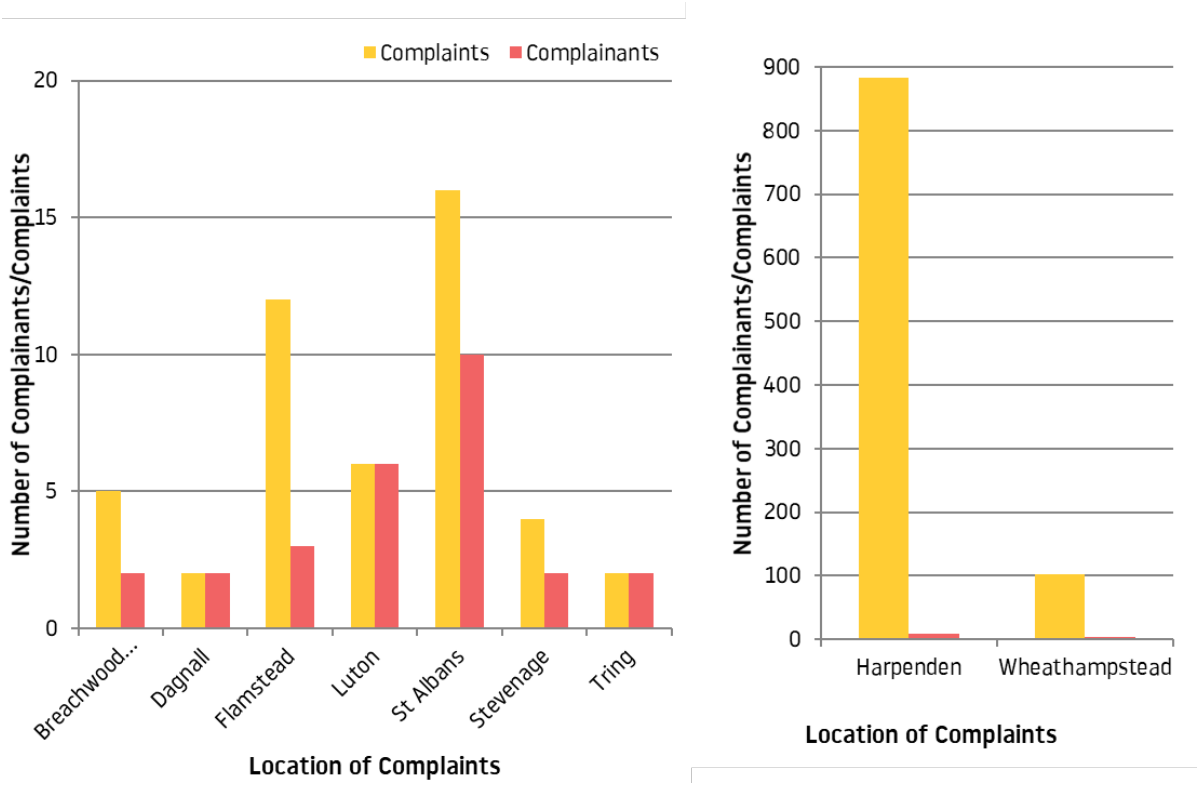
The diagram below shows aircraft types generating specific complaints.



## 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 Jan to Mar 2021.

The communities with one complainant include Ayot St Lawrence, Berkhamsted, Chesham, Datchworth, Eaton Bray, Essex, Hatfield, Hemel Hempstead, Hitchin, Kensworth, Knebworth, Pepperstock, Pitsone, Redbourn and Tadworth.




## 6.6 Complaints Analysis

During Quarter 1 there has been a decrease in complaints and complainants compared to the same quarter last year, this is thought to be due to a number of reasons:

- The number of movements significantly decreased due to the impact of COVID-19, and the number of complaints reduced in line with this.
- Similar to previous quarters, a few people are making many complaints, in Q1 94% of complaints were received from 10 individuals and 90% from two individuals.
- The wind direction was predominantly westerly (63%) and therefore 81% 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** | 0.8% |
| **Email** | 65.7% |
| **Travis** | 33.5% |

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 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** | 52.7% |
| **1** | 21.2% |
| **2** | 13.4% |
| **3** | 4.6% |
| **4** | 1.1% |
| **5** | 4.8% |
| **6** | 0.4% |
| **7** | 0.1% |
| **8** | 0.5% |
| **9** | 0.1% |
| **10** | 0.0% |
| **11** | 0.3% |
| **12** | 0.6% |
| **13** | 0.2% |
| **14** | 0.0% |
| **15** | 0.0% |
| **16** | 0.0% |
| **16+** | 0.0% |

# 7 COMMUNITY RELATIONS

## 7.1 Community Visits to Airport

Invitations are often extended to local residents and LLACC members 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, there were no community visits due to COVID-19.

## 7.2 Airport Visits to the Community

In light of COVID-19 and the need to continue social distancing measures, the Flight Operations team took the decision to cancel all public surgeries in 2020 and rearrange these for 2021. Details will be published on our website when available. (https://www.london-luton.co.uk/corporate/community/noise/noise-surgeries)