Community Noise Report

Potton

November 2025 – January 2026

London Luton Airport

Introduction

As part of the ongoing noise monitoring programme, London Luton Airport deployed a portable noise monitoring terminal in Potton

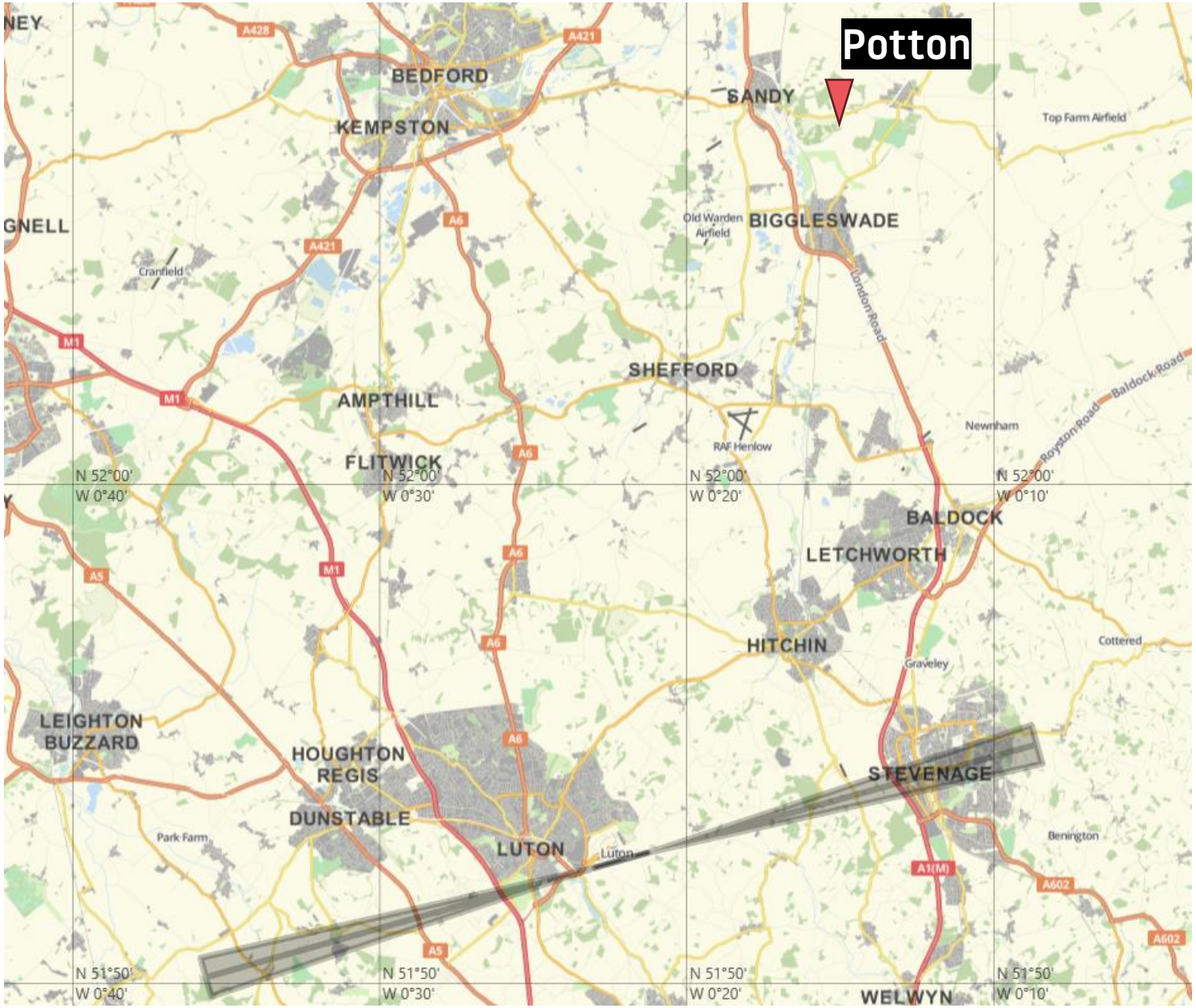
The purpose of the monitoring programme is to understand the typical noise levels created in the local community. **For Potton it specifically related to Easterly and Westerly Arrival operations. The flight paths easterly and westerly are shown on the map.**

The noise monitor was located at a residential property on Carthagena Road, at an altitude of 180 feet above sea level. The red triangle on the map shows the noise monitor location.

The noise monitor in Potton was in place between the 4th November 2025 to 27th January 2026.

Aircraft noise and tracks recorded were extracted from LLA's noise and track-keeping system.

This document evaluates the lateral and vertical positioning of aircraft near the monitor as well as the noise recorded at ground level.

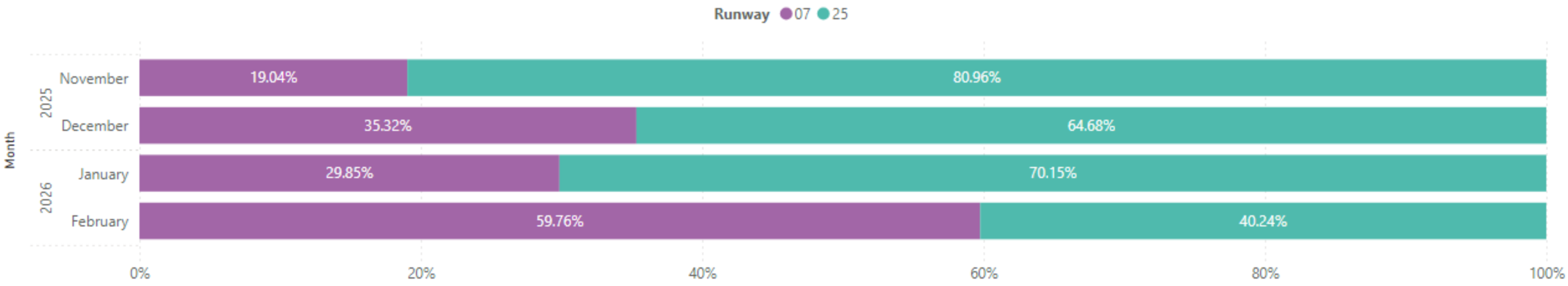


LLA operations during the monitoring period

There are two operating directions at LLA. The operating direction depends on the wind direction as aircraft are required to take off and land into the wind for aircraft performance and safety reasons. These are known as easterly operations (Runway 07- Purple) and westerly operations (Runway 25- Green) and can change the aircraft tracks nearby specific areas. The split in operating direction varies from year to year and month to month. The amount of time that the runway operates in one direction depends on the wind direction.

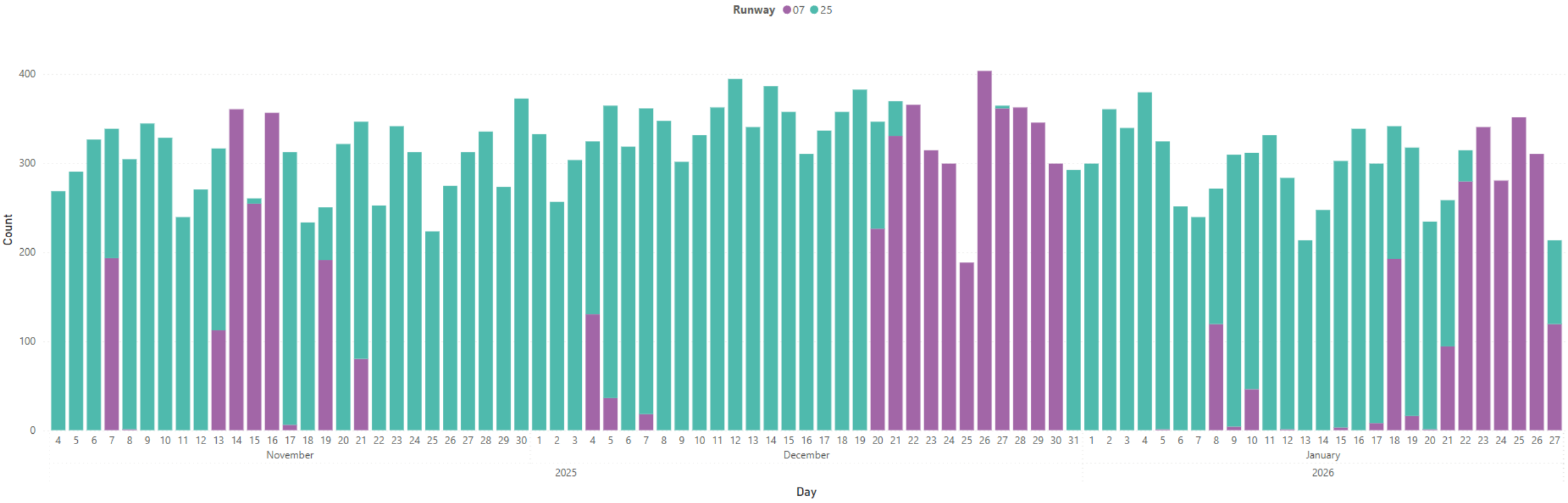
During the period of monitoring, the direction of operation was 28% Easterly and 72% Westerly. The 5-year average for this time of year is 22% easterly vs 78% westerly.

There were 13,313 aircraft arriving during the monitoring period.



Daily Movements during monitoring period

The chart below shows the number of daily easterly and westerly operations. Due to the location, most arriving flights travelling from north to south would have flown nearby. The graph shows the easterly operations (Runway 07- Purple) as well as westerly operations (Runway 25- Green) on the other side.

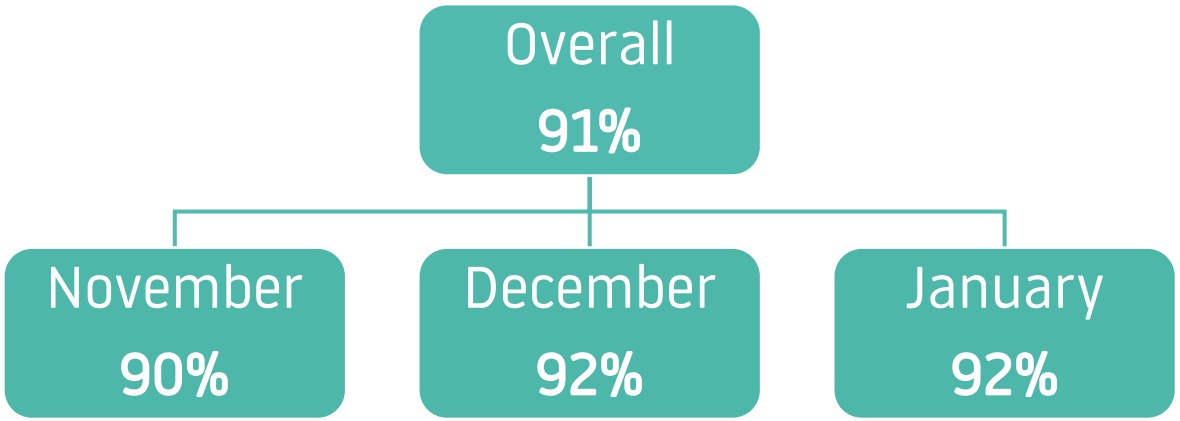


Continuous Descent Operations (CDO)

Continuous Descent Operations (CDO) is an operational technique for arriving aircraft. This form of operation targets noise, fuel and emission reduction. Each time a plane performs level flight it involves increased thrust therefore an increase in fuel consumption and higher noise. A CDO approach is measured from 5,000ft and has no level flight of more than 2.5nm (nautical miles) using minimal thrust.

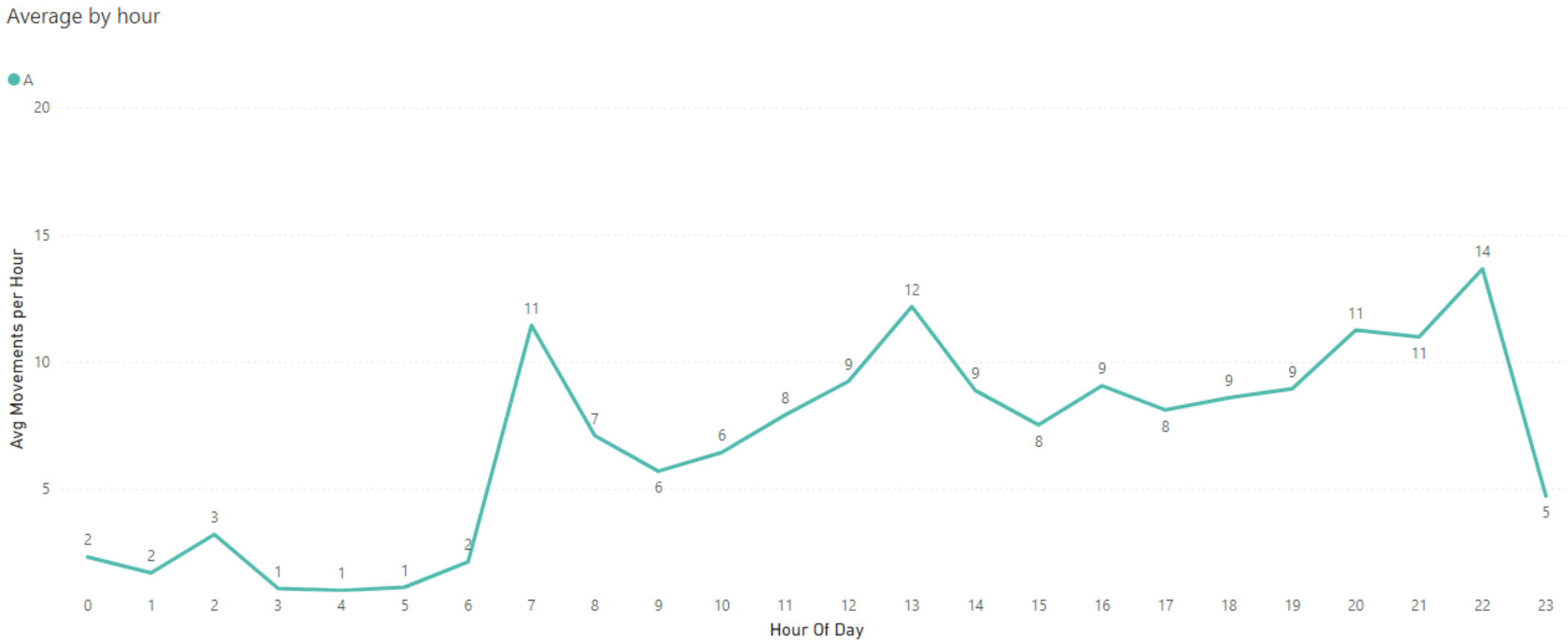
We continuously monitor this and aim to increase these operations for benefit to all, our target for CDO is 95%. CDO is not always possible for every flight as there are factors that would affect this such as- safe operations of the aircraft, ATC instruction, weather, compliance with procedures etc.

The percentages below detail the CDO achieved during the monitoring period.



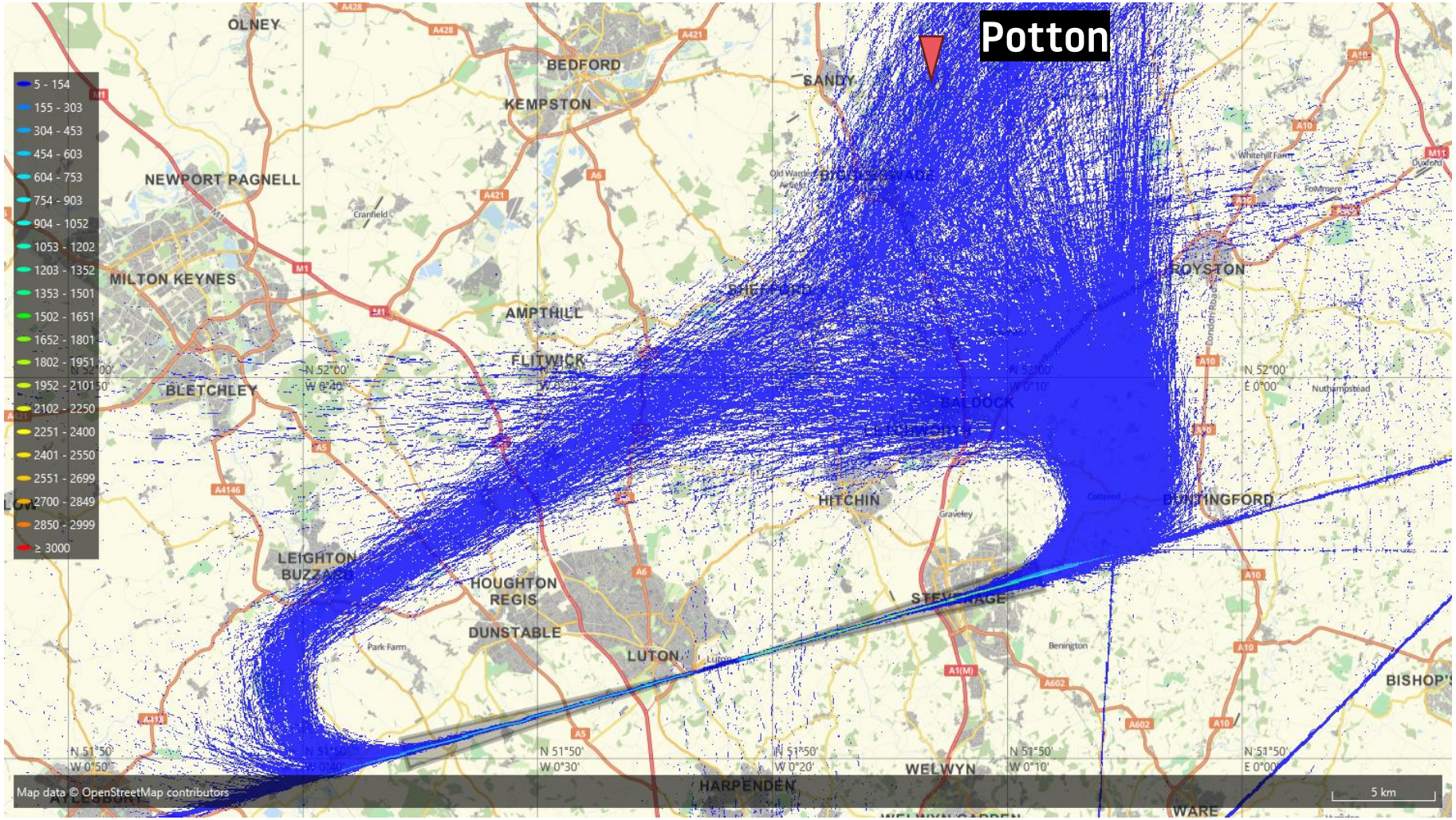
Operations during monitoring period

The graph below represents the average aircraft movement by hours during the monitoring period. Depending on the operating direction on the day, residents in Potton may experience different flight patterns. During the peak periods, residents of Potton may notice more frequent aircraft movements. In general, the morning peak starts at 7 am for arrival operations (A- Green line) these aircraft can be more noticeable as the dwellings at this location are below the arriving aircraft. During the night period of 23:00 – 06:00 in the monitoring period, there were average of 15 arrivals for both easterly and westerly operations.



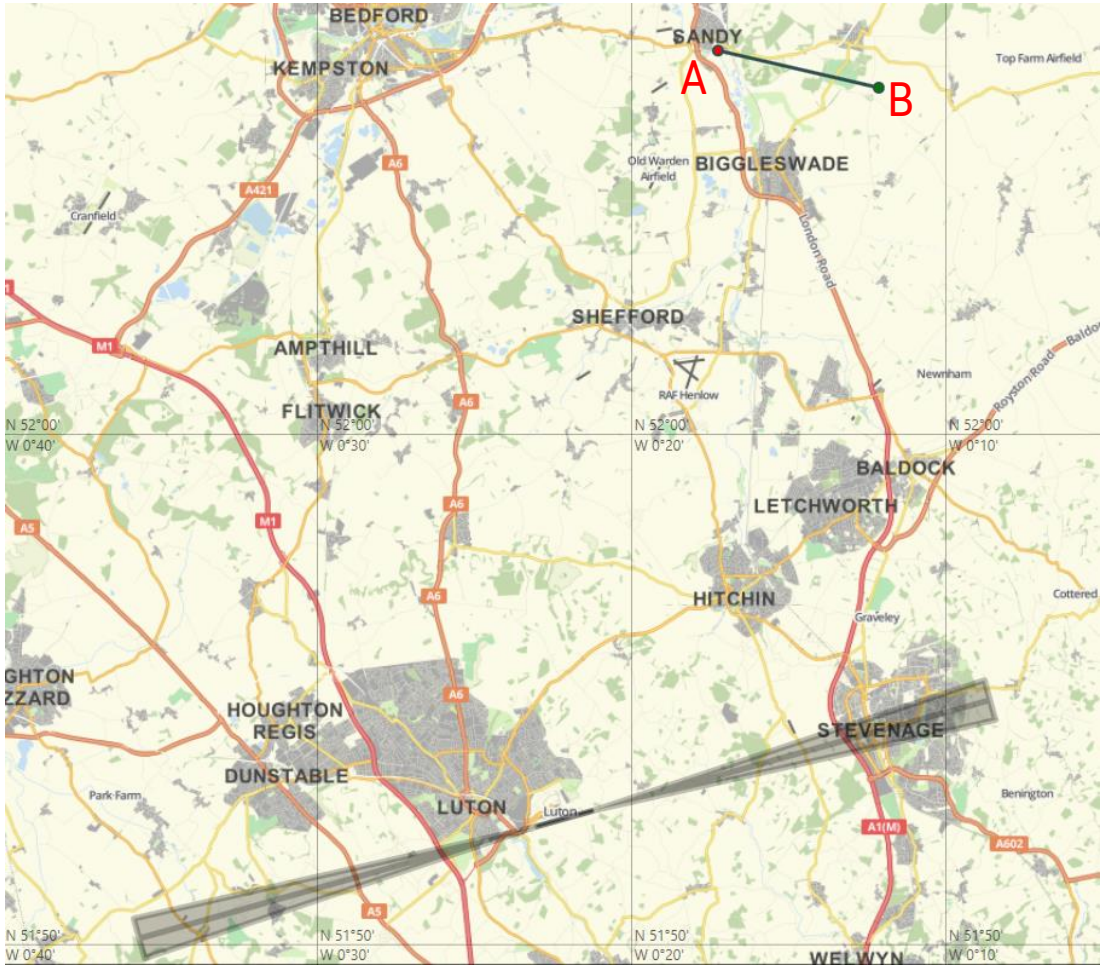
Aircraft Tracks- Arrivals

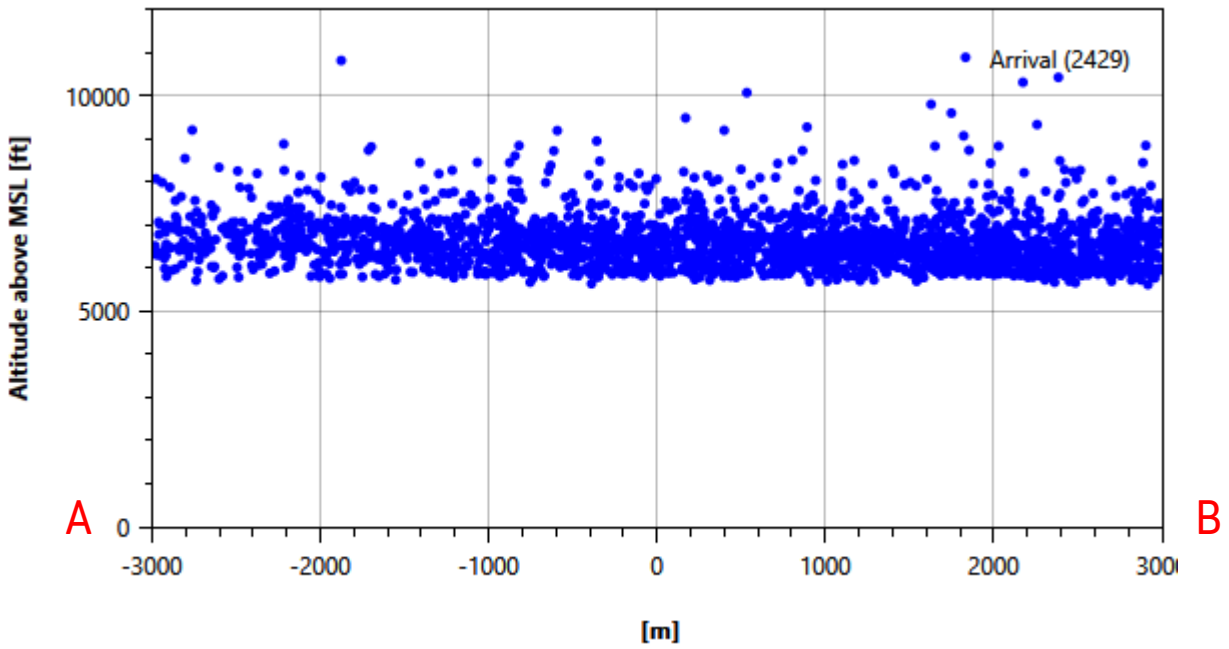
The heat map below show the representative flight tracks that passed near the noise monitor terminals during the monitoring period. The red triangle indicates the location of the noise monitor in Potton. This map shows the path of arrivals.



Altitude Gate- Arrivals

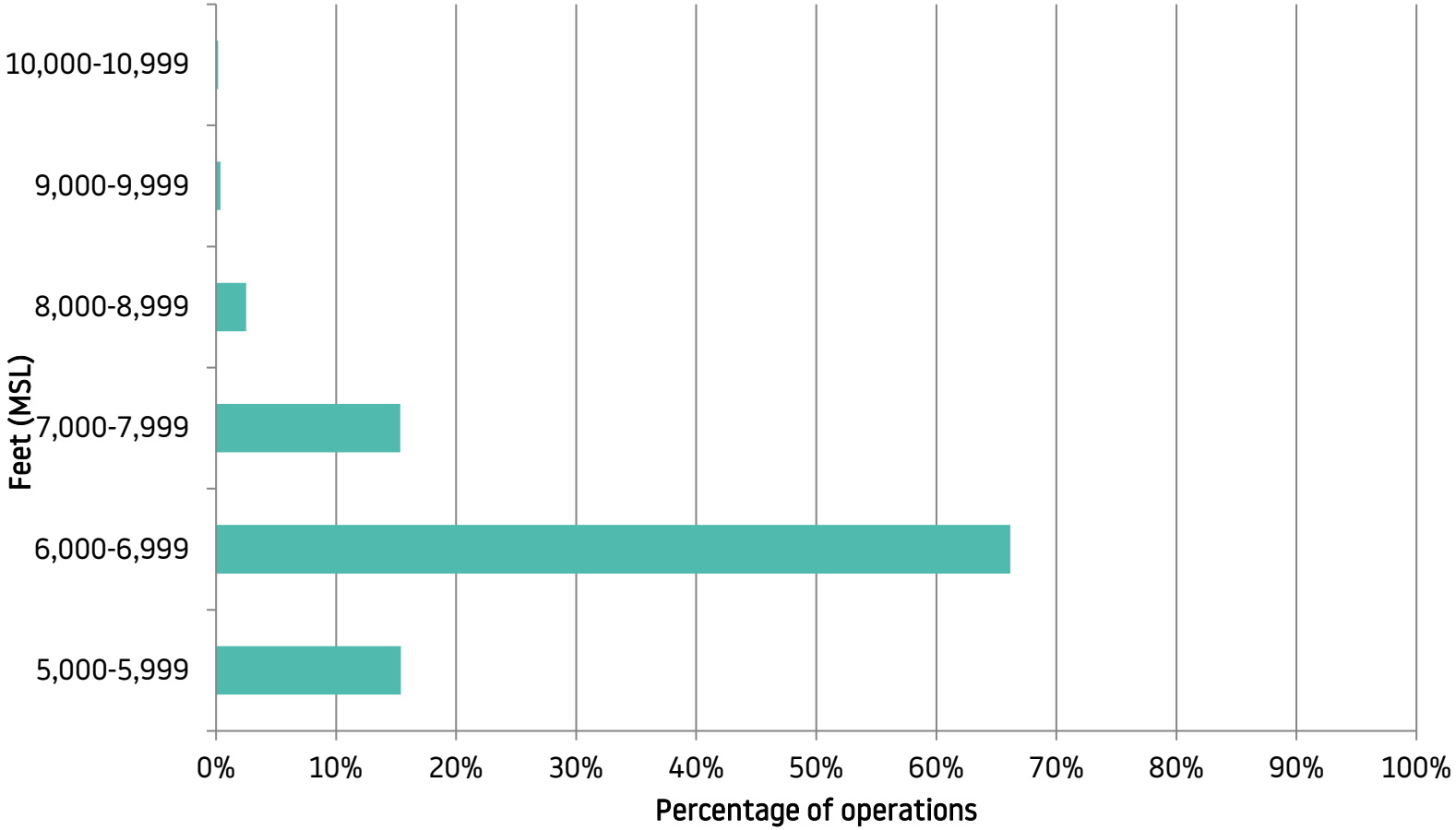
The altitude analysis for Potton, shows the vertical and lateral dispersion of aircraft 3km either side of the noise monitor. The map below shows the 6km gate (Black line) which is drawn perpendicular to the NPR from northwest to southeast and it gathered information of every aircraft passing through the gate area. The scatter graph below shows the distance and altitude of aircraft from the noise monitor during the monitoring period. Residents in Potton will see arriving aircraft on easterly and westerly operations.





Altitude Gate Analysis – Arrivals

The average altitude of aircraft was 6,593 feet AMSL (6,413 feet AGL) when they reached the arrival gate. The bar chart on the below shows the percentage rate and altitude of aircraft arriving.



Aircraft Type	Number of movements detected	Average Altitude (AMSL in ft)
A306	33	6,601
A319	131	6,483
A320 CEO	312	6,592
A320 NEO (A20N)	214	6,643
A321 CEO	150	6,747
A321 NEO (A21N)	1,031	6,598
B737-800 NG (B738)	105	6,577
B737 Max 8 (B38M)	116	6,639
Global Express (GLEX)	34	6,606
Cessna 560X (C56X)	27	6,446
All	2,153	6,593

Conclusion

- A mobile noise monitor was installed at a residential property on Carthagena Road from 4th November 2025 to 27th January 2026. For Potton, it specifically related to easterly and westerly arrivals. During the monitoring period, the airport operated in the direction of easterly and westerly for 28% and 72% of the time, respectively. Generally, over the year, LLA operate in the westerly direction for 70% of the time due to the prevailing wind.
- The noise events captured during the monitoring period were too few to generate results. Many aircraft types were not captured during the operating period. This is due to the ambient noise being higher than the aircraft noise in the location of the noise monitor and so noise events captured by the noise monitor are not correlated to aircraft.
- During the monitoring period, 22 aircraft were investigated as part of the Noise and Track violation scheme. Of these, 6 aircraft were fined. All fines generated by this scheme go directly into the community trust fund, more information on the community trust fund can be found on https://www.london-luton.co.uk/corporate/community/community-trust-fund.
- LLA publish other monitoring reports on a regular basis. These reports can be viewed and downloaded from the Noise webpage on the LLA website - https://www.london-luton.co.uk/corporate/community/noise.

Glossary of Terms

Westerly Operations: As aircraft take off and land into the wind, westerly operations refers to the time when the wind is blowing from the west and aircraft follow the departure route in the direction of South Luton.

Easterly Operations: Easterly operations refers to the time when the wind is blowing from the east and aircraft land on the easterly runway and would fly above South Luton.

Standard Instrument Departure (SID): Published route that an aircraft must follow on departure.

Noise Preferential Route (NPR): All aircraft except propeller aircraft leaving London Luton Airport should follow flight paths known as Noise Preferential Routes (NPRs) up to an altitude of 3,000 feet or 4,000 feet depending on the route. They lead from the runway to the main UK air traffic routes and form the first part of the Standard Instrument Departure routes (SIDs).

Aircraft Movement: A single aircraft departing or arriving at the airport.

Altitude Gate Analysis: A gate which is drawn across an area and will gather flight date about every aircraft passing through the gate area.

Noise Event: A single event is the period from when an aircraft approaches the monitor until when the aircraft is leaving the area.

Decibel (dB): The unit used to measure noise (typically 50-60dB is equivalent to a normal conversation level).

LasMax: A unit of measure and is the maximum noise level from a single aircraft passing over the noise monitor.

95% Confidence Interval: A range of values that you can be 95% certain contains the population mean.