

# Community Noise Report

## Slip End

## June 2017



London  
Luton  
Airport



# Introduction

London Luton Airport undertook unattended noise monitoring in Slip End as part of the ongoing noise monitoring programme. The purpose of the monitoring was to understand the typical noise levels created in this area by departing aircraft during westerly operations.

The noise monitor was located in Crawley Close, Slip End between the 7<sup>th</sup> June to 16<sup>th</sup> June 2017.

The monitor was located within the main westerly departure corridor for runway 26, approximately 4km from the runway. The altitude at the monitor was 560ft above mean sea level.

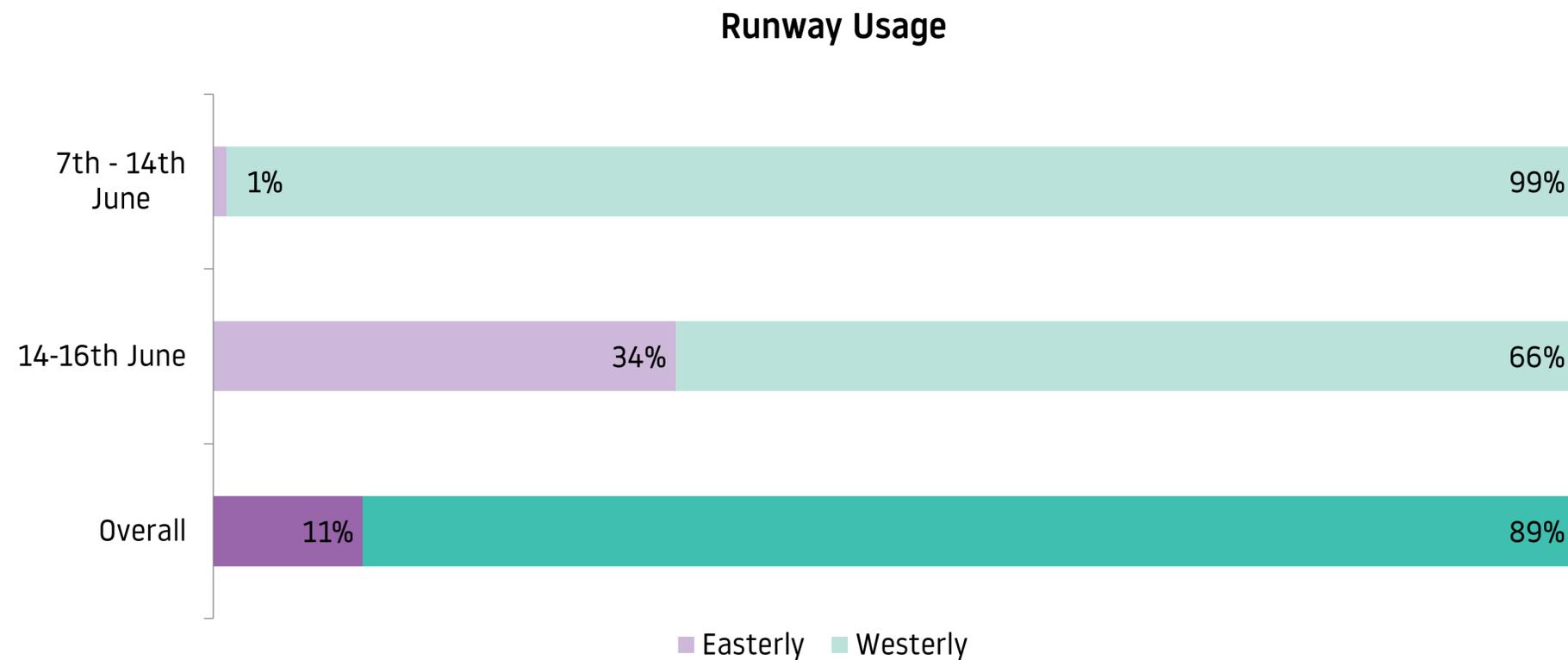
Aircraft data captured was extracted from LLA's noise and track-keeping system (TopSonic). Operations in the area was evaluated by drawing a 2km 'gate' perpendicular to the Noise Preferential Route corridor.



# LLA Operations During the Monitoring

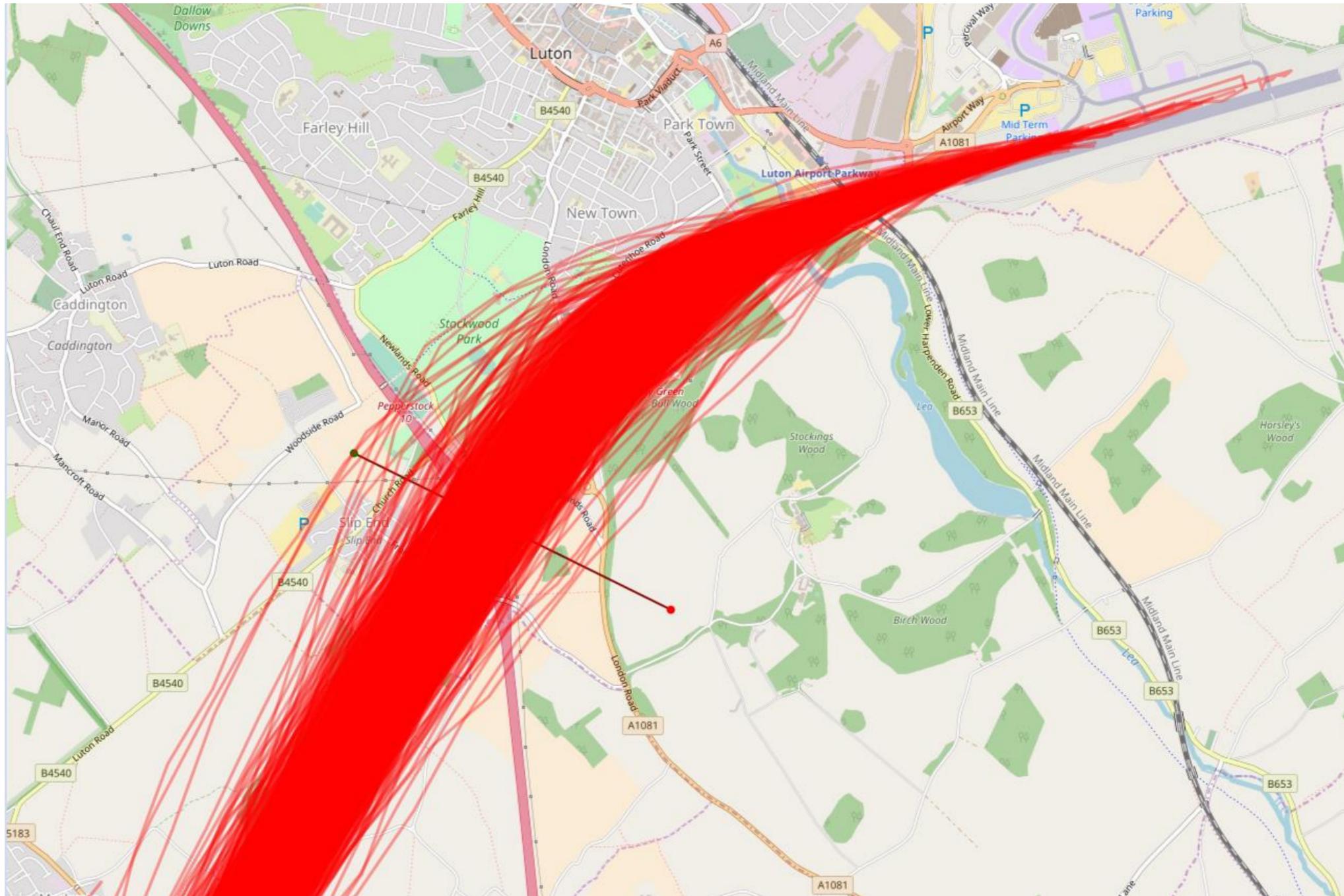
During the monitoring 4,220 air traffic movements were handled by LLA, there were no trials in place that could have affected the position of aircraft during this time.

During the period of monitoring the direction of operation was 11% easterly and 89% westerly and therefore during easterly operations no data was captured.



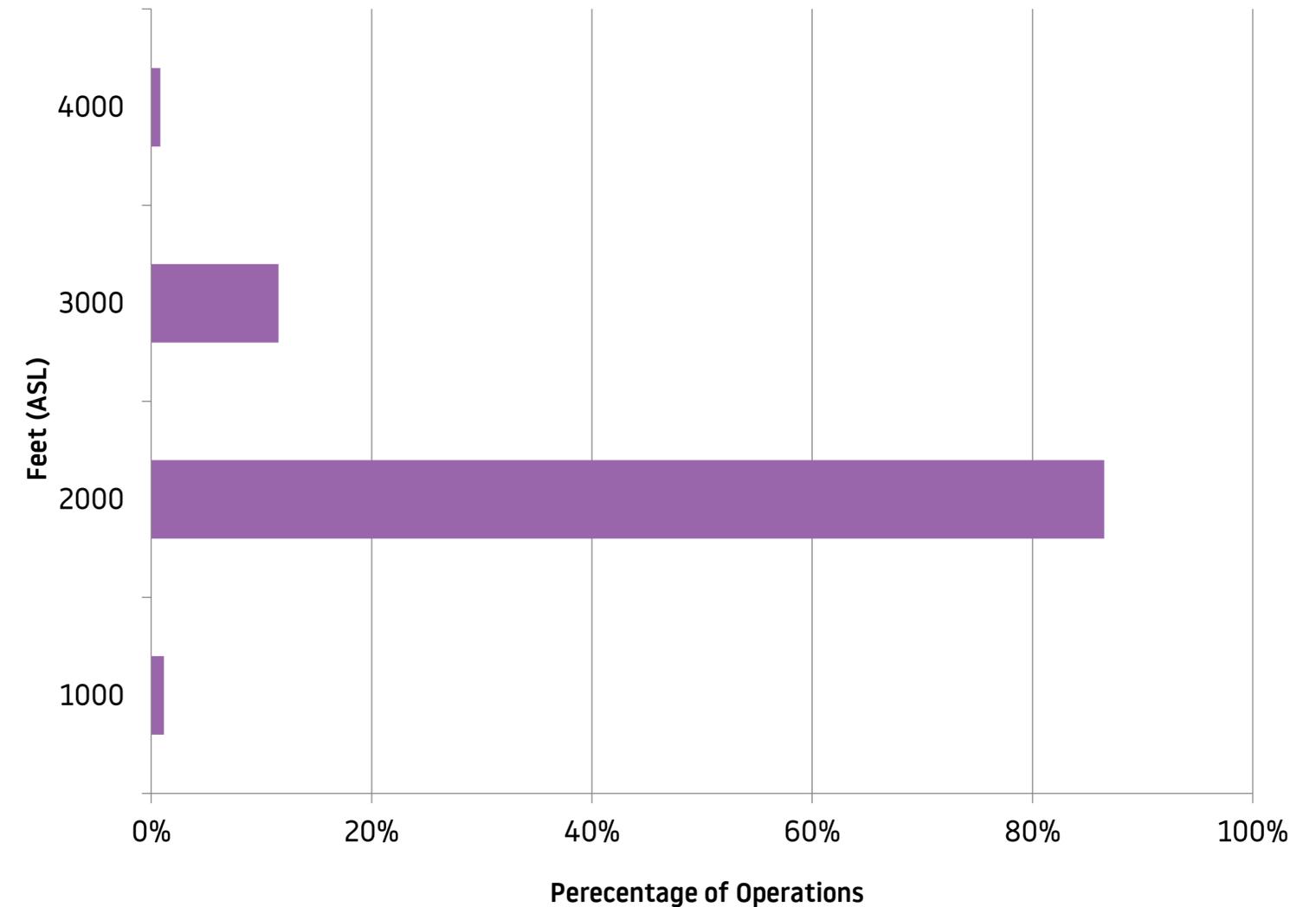
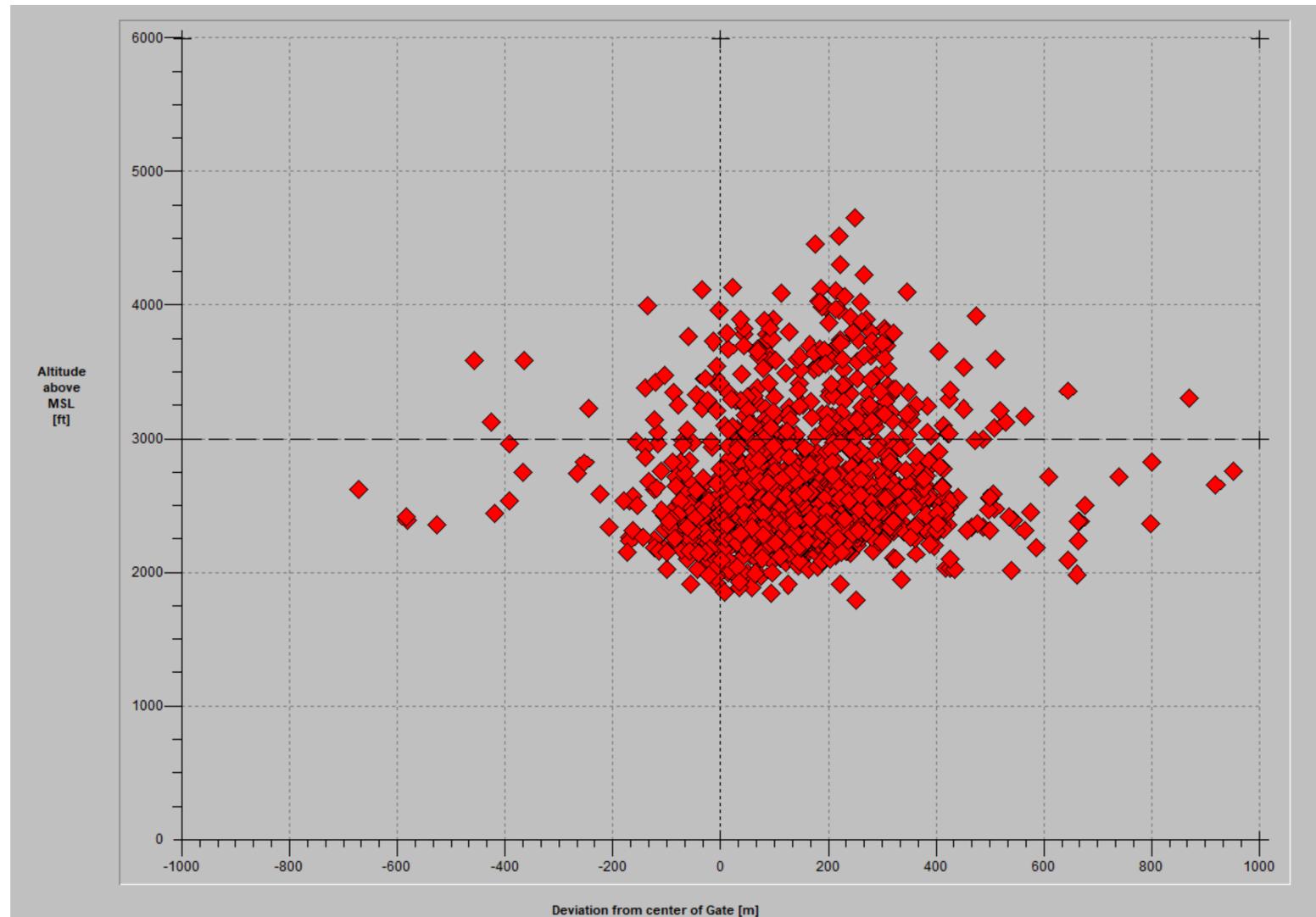
# Aircraft Tracks During the Monitoring Period

The sample below shows 1623 flight tracks that passed near the monitor during the monitoring period.



# Gate analysis During Monitoring Period

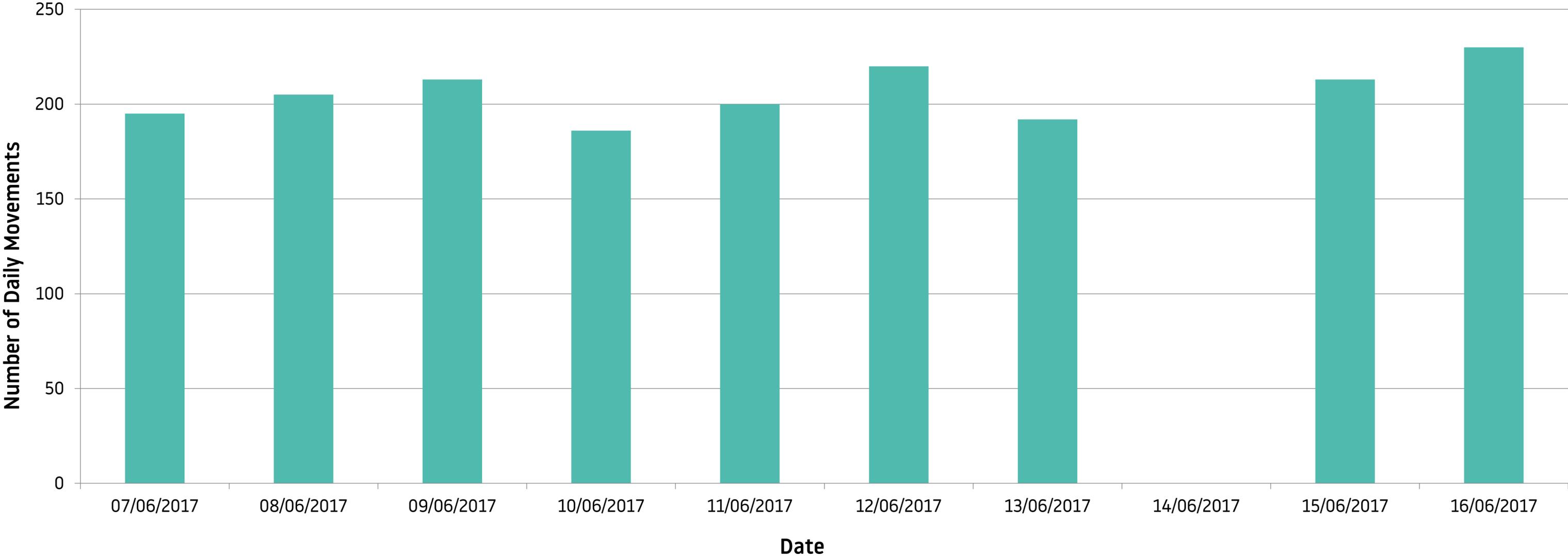
Gate analysis shows the altitude and lateral dispersion of aircraft at this point on the departure route. The chart below shows that 98% of flights were above 2000ft. The average altitude of aircraft in the area is 2600ft.



1854 aircraft shown on gate analysis

# Daily Movements During Monitoring Period

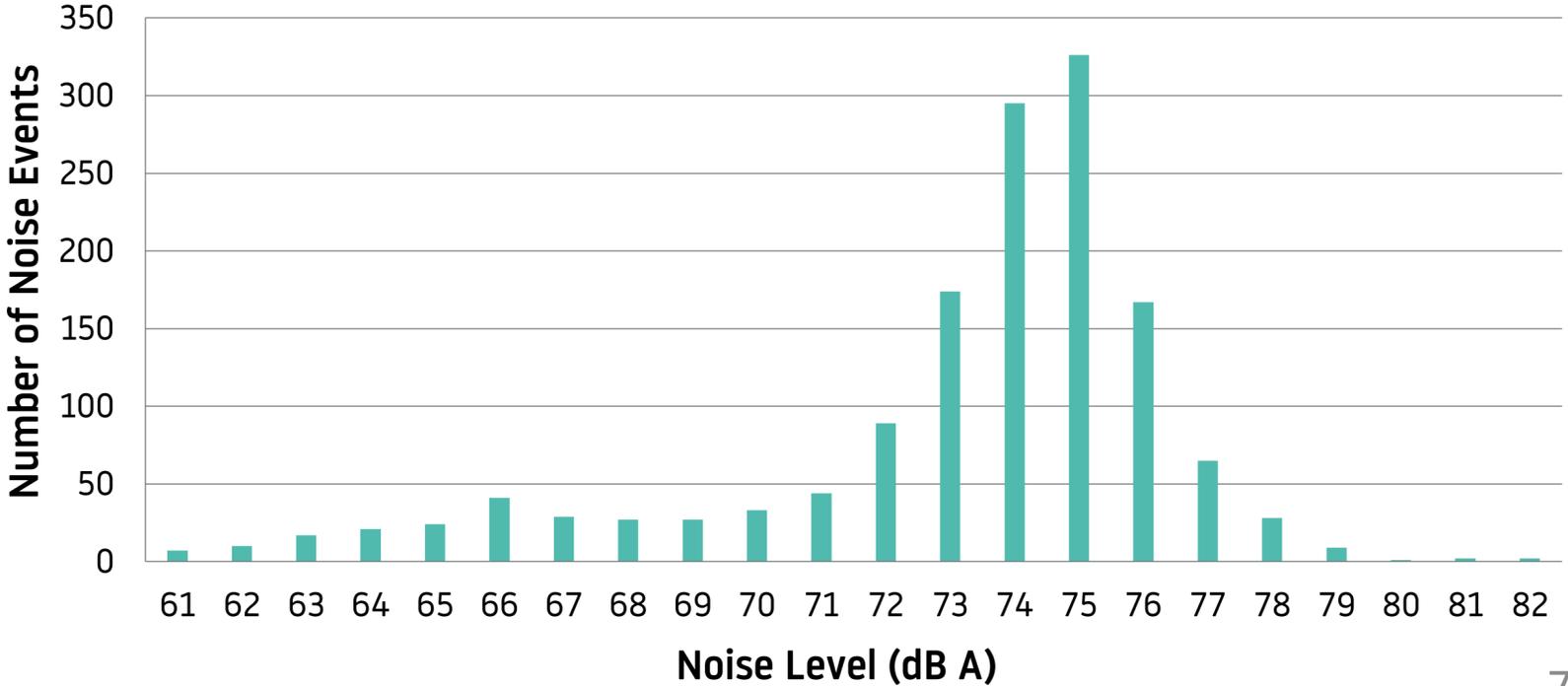
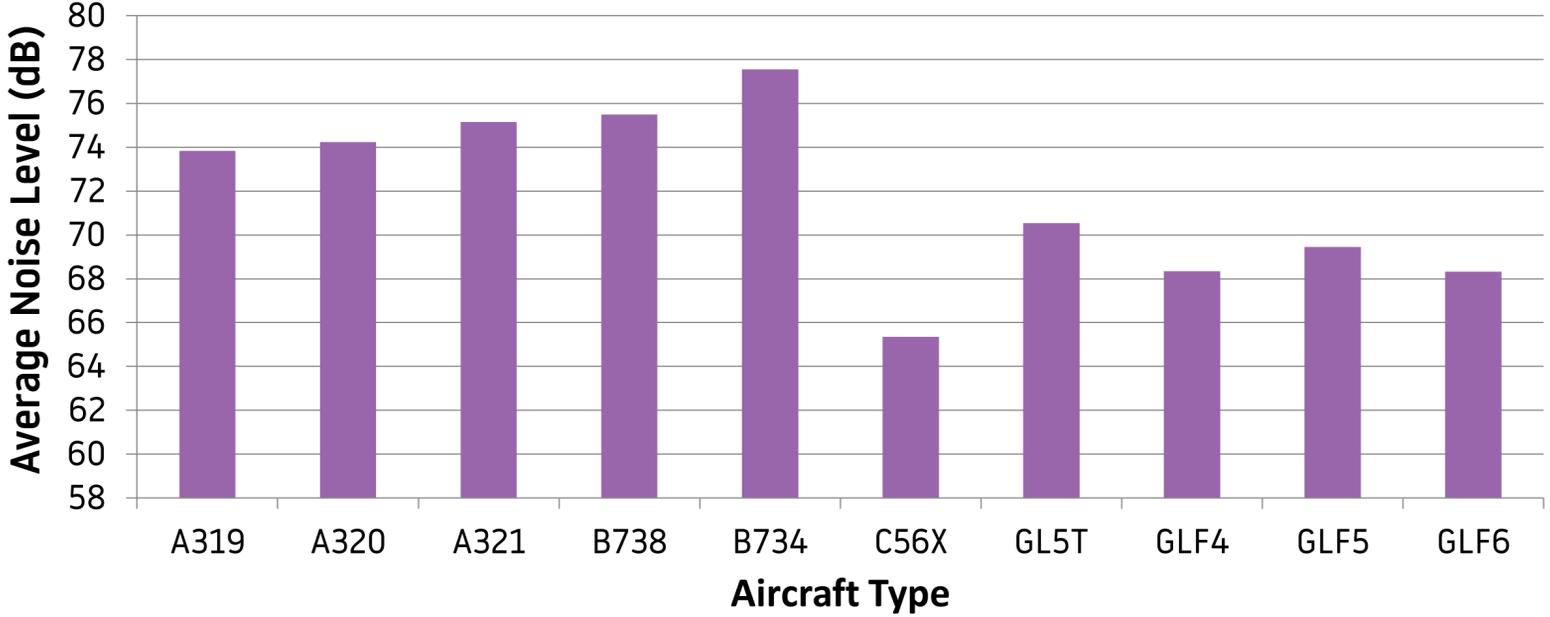
99% of westerly departures passed through the 'gate' during the monitoring period. The chart below shows the daily number of movements that passed through the 'gate' and over Slip End. On the 14<sup>th</sup> August, LLA was operating in an easterly direction meaning no flights passed through the gate on this day.



# Noise Results During Monitoring Period

During the monitoring period, noise results were gathered from various aircraft types, the most common aircraft types are shown in the table below.

Aircraft Type	Number of movements
A319	308
A320	532
A321	108
B738	154
B734	13
C56X	17
GL5T	31
GLF4	17
GLF5	26
GLF6	12



# Summary

- During the monitoring period, the airport was using westerly operations for 89% of the time, whereas annually the average for westerly operations is 70% of the time.
- The average altitude of aircraft in the area is 2,570ft above sea level, Slip End is already 560ft above sea level, therefore aircraft will typically be 2,010ft above the properties in this area.
- The main aircraft types operating at the airport are A320 and A319's therefore the aircraft types overflying Slip End are in line with this.
- These noise results produced an LAEQ (16hr day) value of 59dB which is consistent with the expected noise for the area, based on the annual noise contours produced.

# 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 routing in the direction of Slip End.

**SID:** Standard instrument departure, is the published route that an aircraft must follow on departure.

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

**Gate Analysis:** A 2km gate which is drawn across an area and will gather information 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 70dB 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.

**LAeq (16hr day):** the average noise level during the day (a 16-hour day) during the summer period. The measure of noise is given in decibels (dB). This averaged decibel measurement 'LAeq', is the most common international measure of aircraft noise, it means 'equivalent continuous noise level'.

