Community Noise Report South Luton March 2017

London Luton Airport

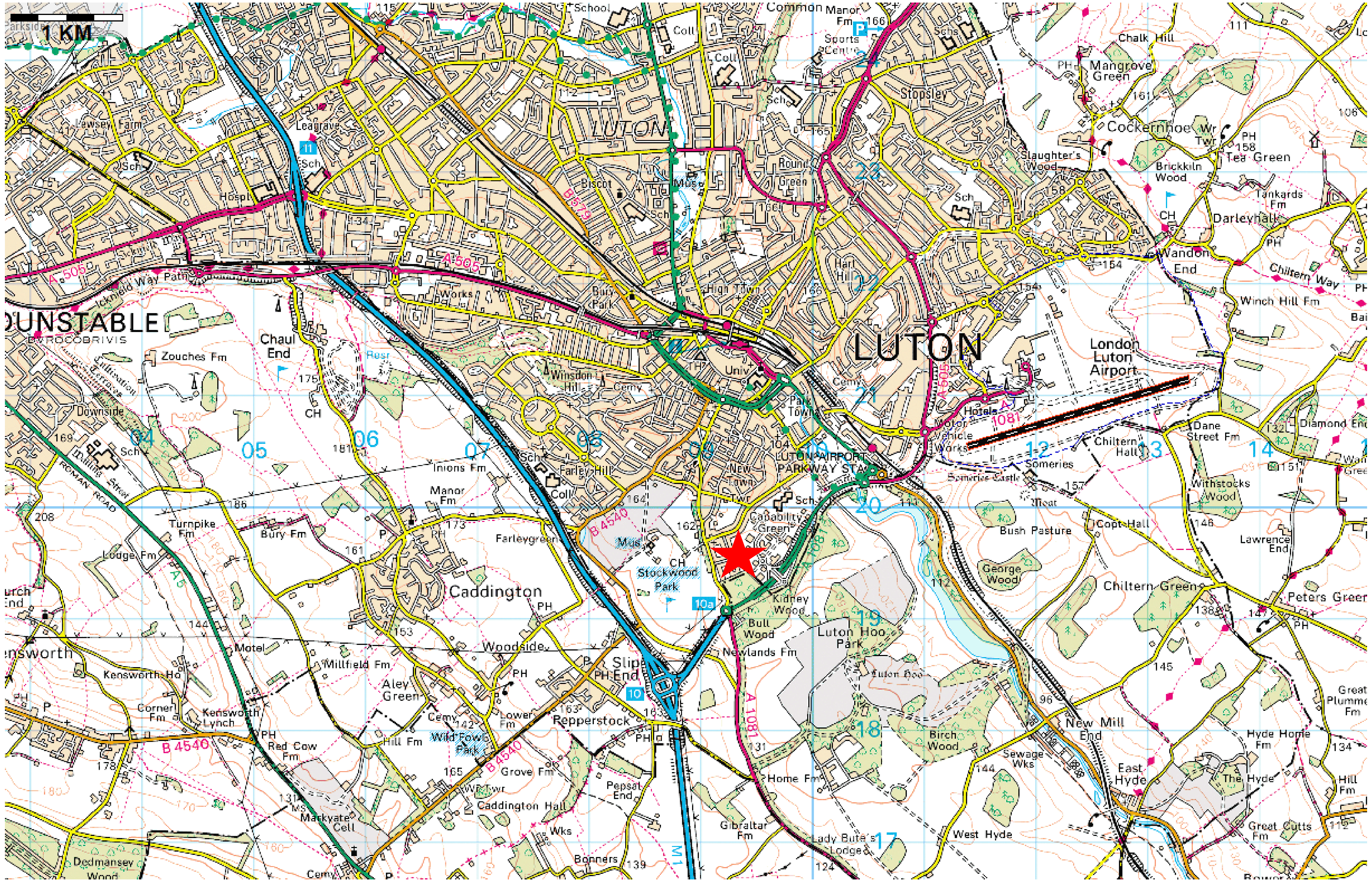
Introduction

London Luton Airport undertook unattended noise monitoring in South Luton 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 Ludlow Avenue, Luton between the 3rd March and 17th March 2017.

The monitor was located directly under the main westerly departure centreline for runway 26, approximately 2.5km from the runway. The altitude at the monitor was 170m above sea level.

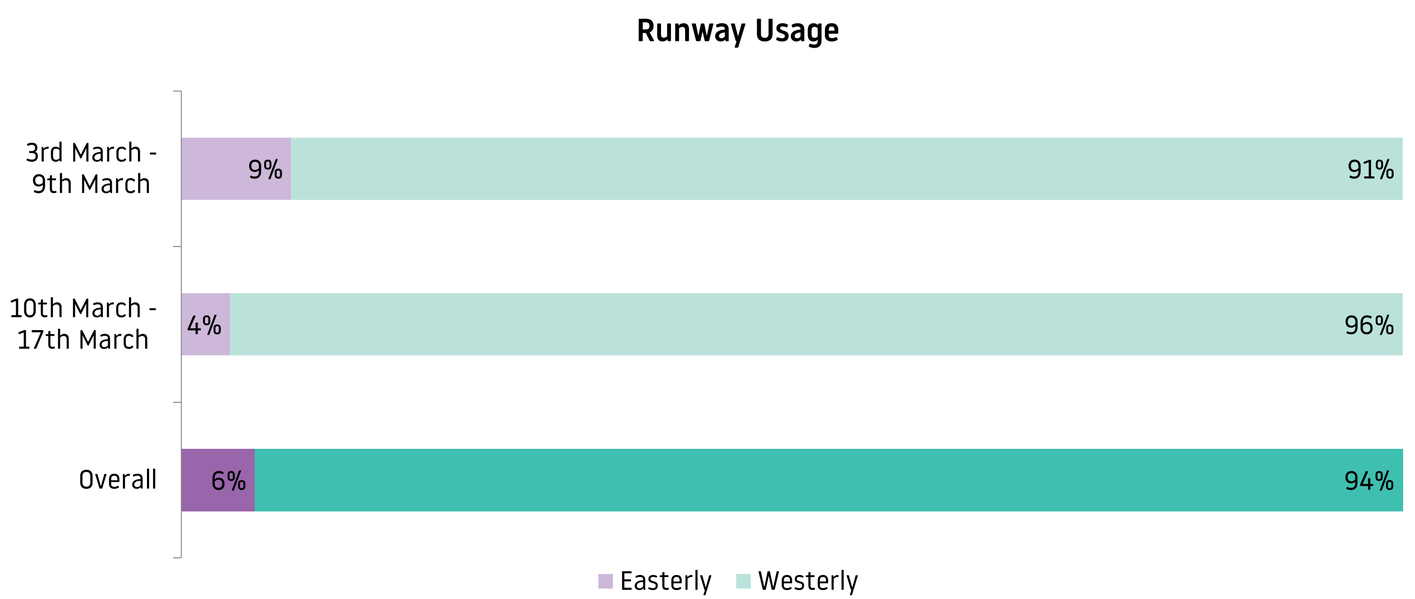
Aircraft data captured was extracted from LLA's noise and track-keeping system (TopSonic). Operations in the area was evaluated by drawing a 2km 'gate' perpendicular to the Noise Preferential Route corridor.



LLA Operations During the Monitoring

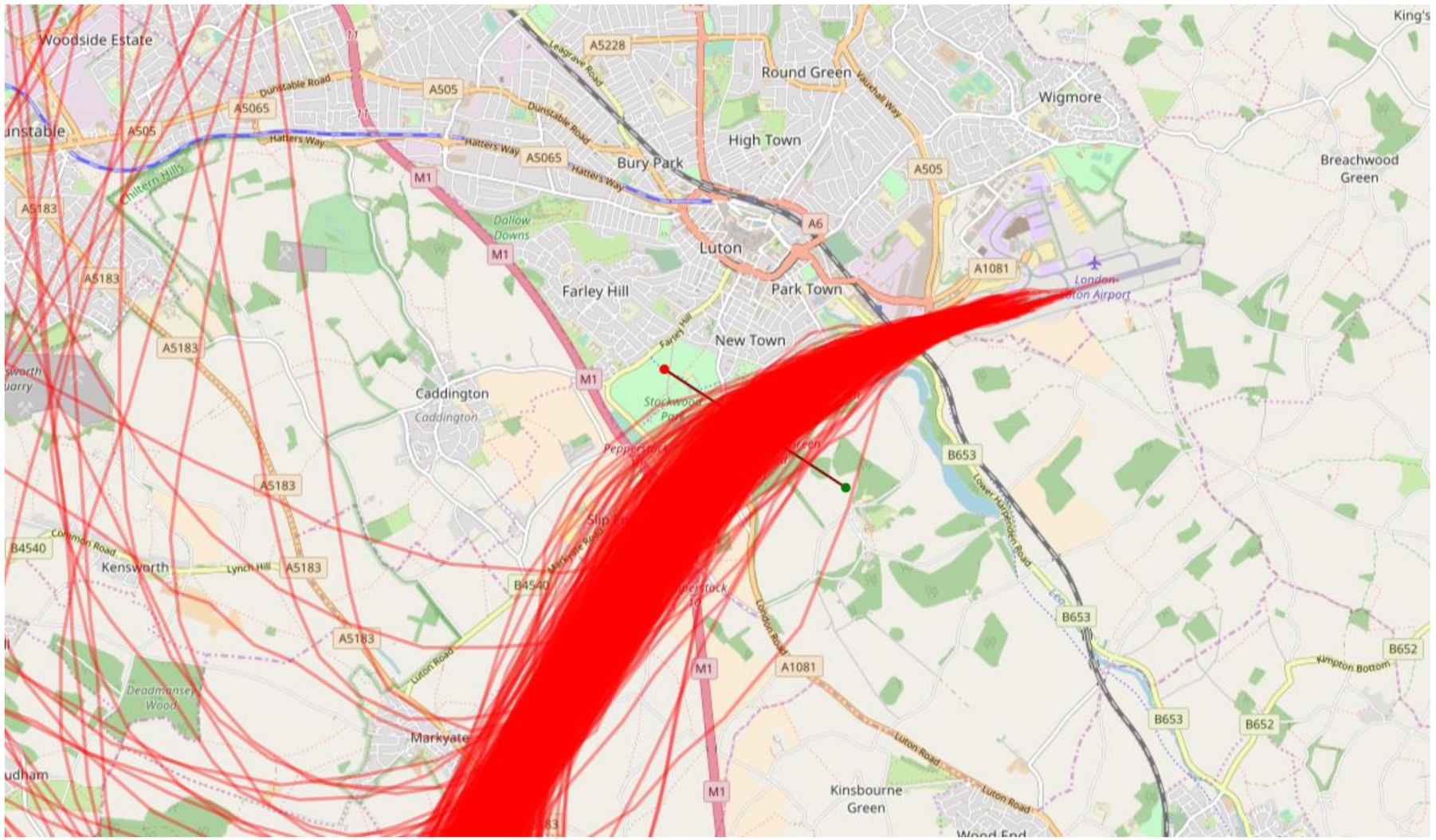
During the monitoring 4,384 air traffic movements were handled by LLA, there were no trials in place that could have affected the position of aircraft during this time.

During the period of monitoring the direction of operation was 6% easterly and 94% Westerly and therefore during easterly operations no data was captured.



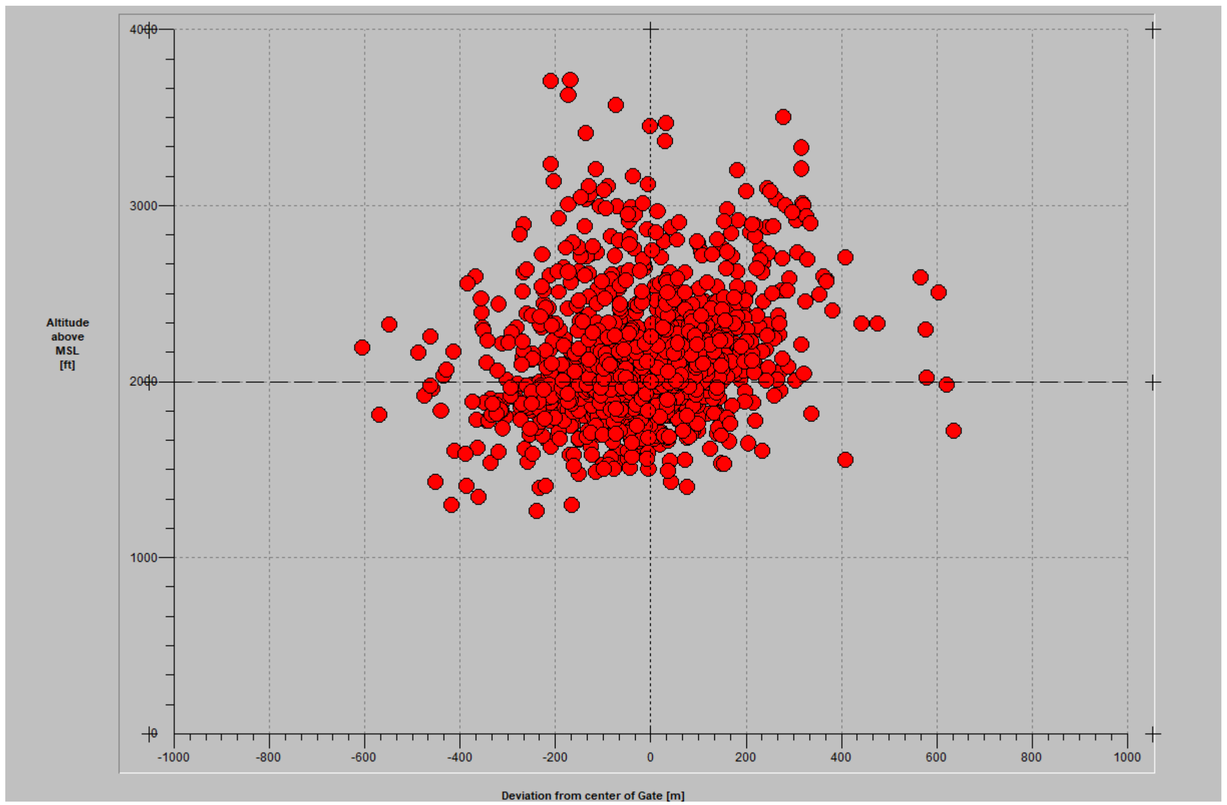
Aircraft Tracks During the Monitoring Period

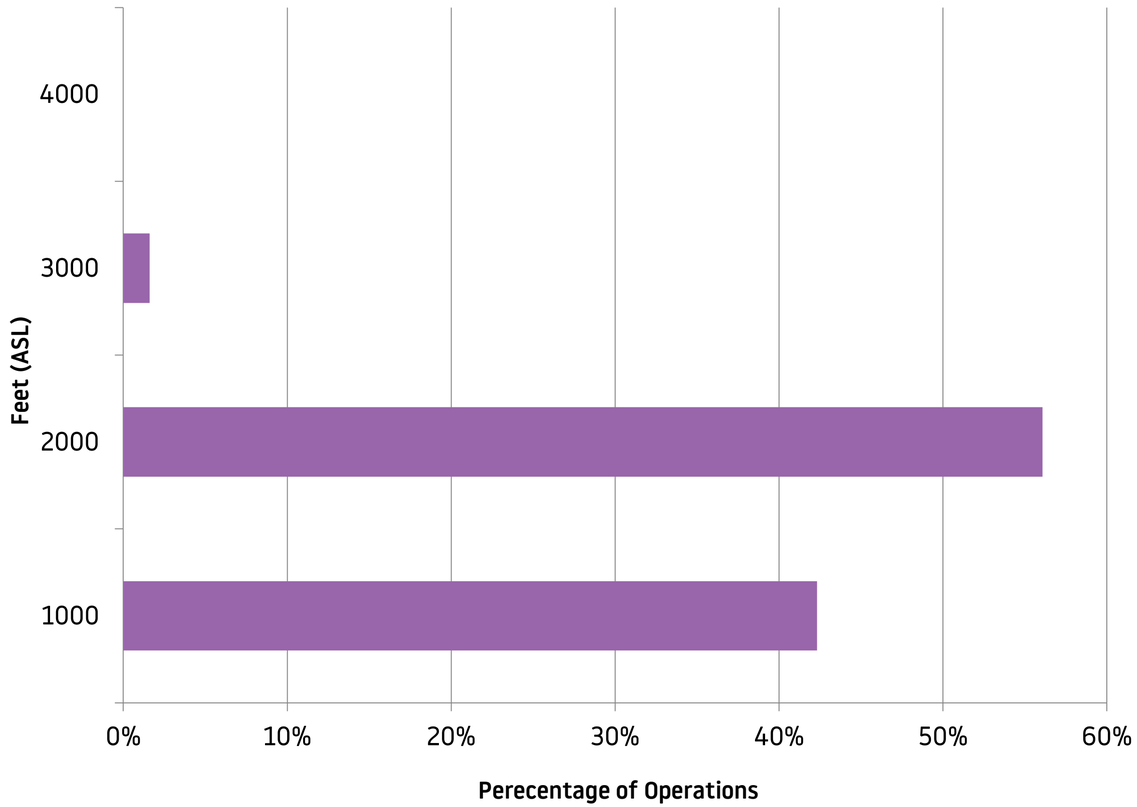
The sample below shows 1943 flight tracks that passed over the monitor during the monitoring period.



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 58% of flights were above 2000ft.

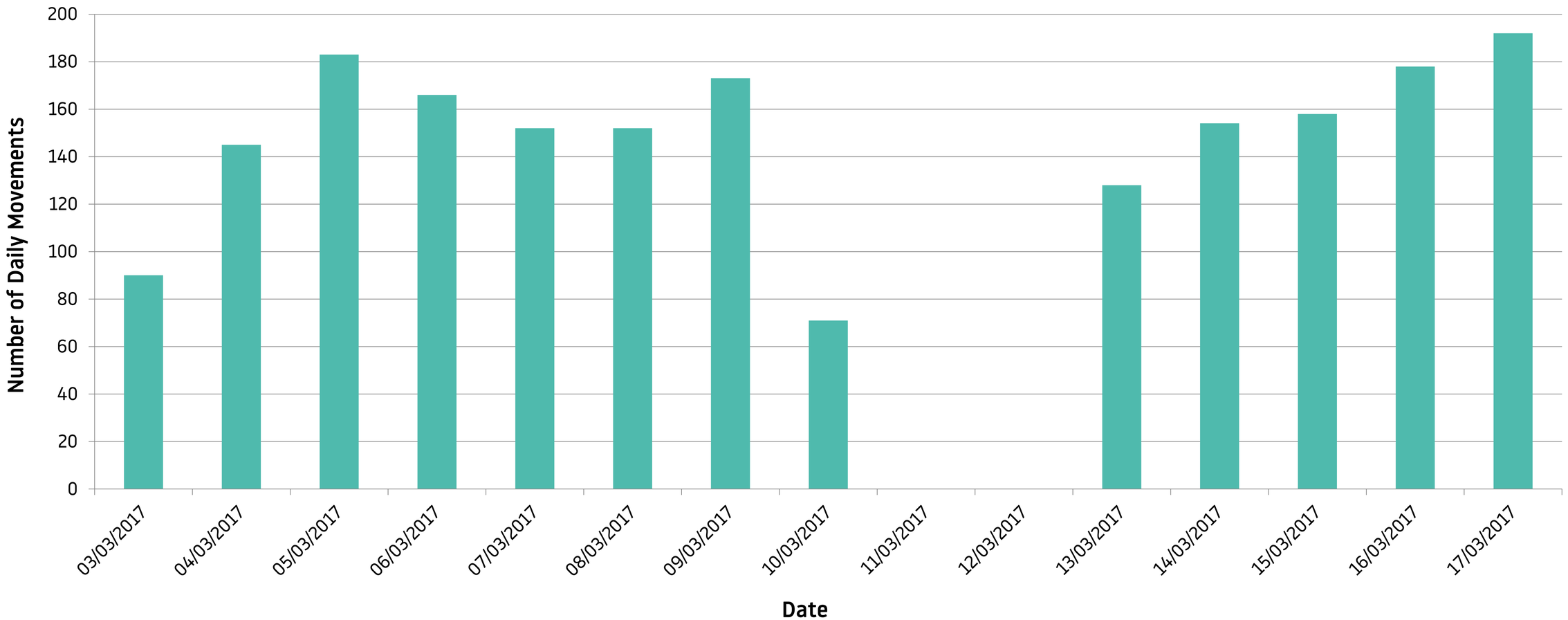




1942 aircraft shown on gate analysis

Daily Movements During Monitoring Period

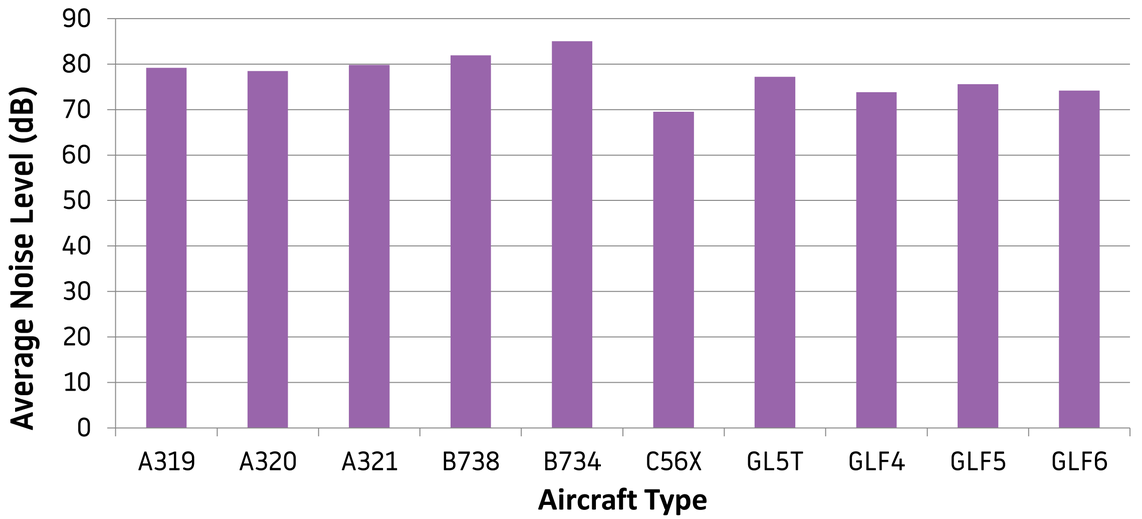
99% of westerly departures passed through the ‘gate’ during the monitoring period. The chart below shows the daily number of movements that passed through the ‘gate’ and over South Luton. Unfortunately there was also a loss of radar between 10th March at (18:20hrs) and 13th March (07:20hrs), and hence less data shown on these dates.

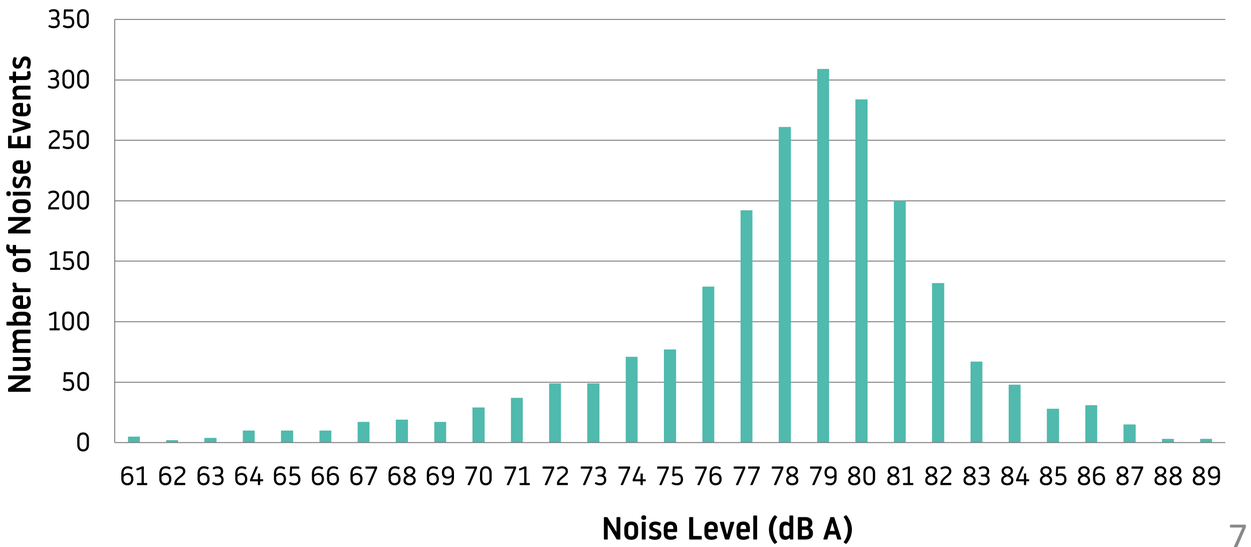


Noise Results During Monitoring Period

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	504
A320	737
A321	113
B738	221
B734	18
C56X	48
GL5T	61
GLF4	30
GLF5	36
GLF6	25





Summary

- During the monitoring period, the airport was using westerly operations for 94% of the time, whereas annually the average for westerly operations is 70% of the time.

- The average altitude of aircraft in the area is 1700ft above sea level, although the Flight Operations team does appreciate that South Luton is already 550ft above sea level, therefore aircraft will typically be 1,150ft above the properties in this area.

- The main aircraft types operating at the airport are A320 and A319's therefore the aircraft types overflying South Luton are in line with this.

- These noise results are 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 South Luton.

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'.