Community Noise Report
St Albans
Aug – Sept 2017

London
Luton
Airport

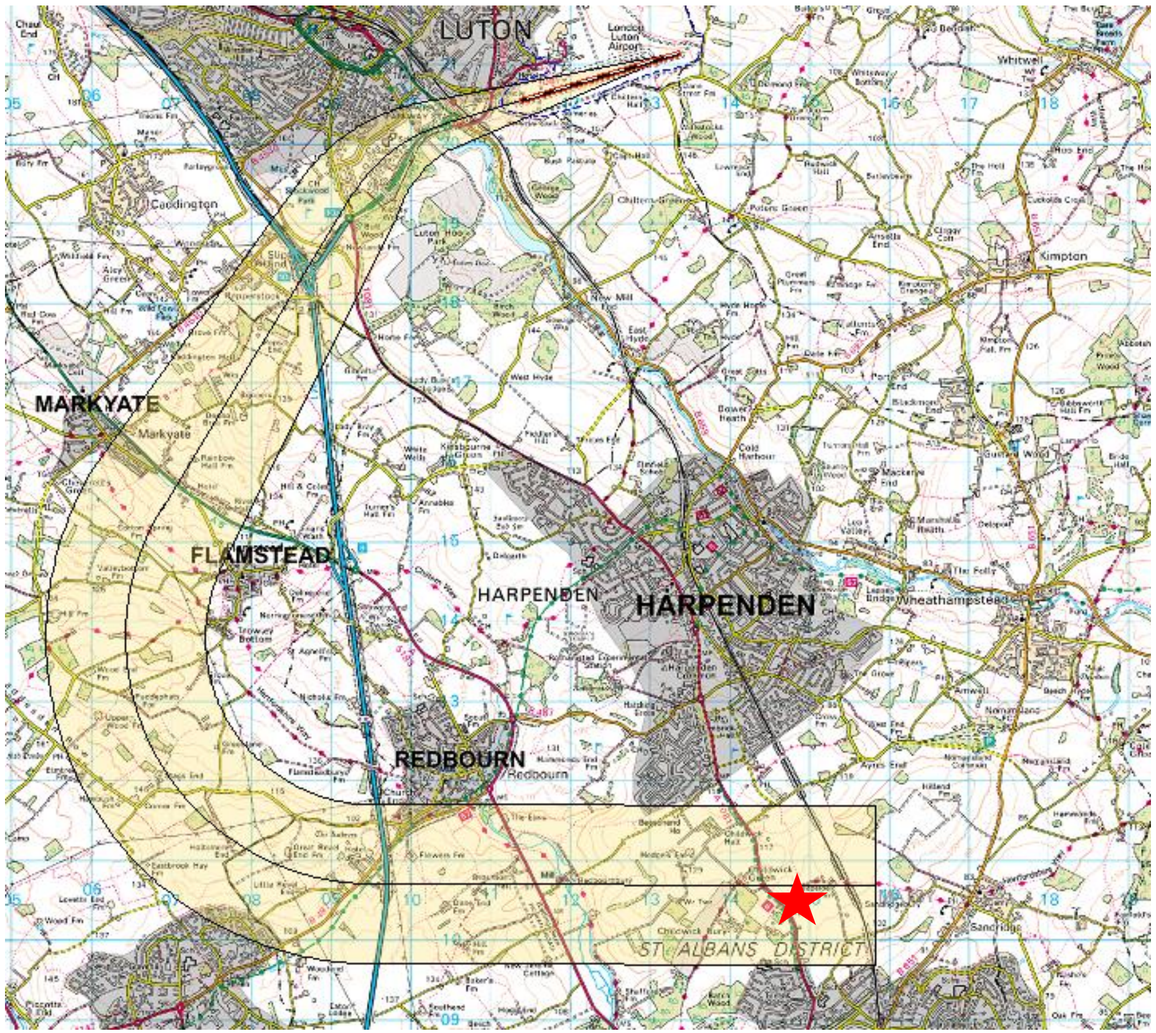
Introduction

London Luton Airport undertook unattended noise monitoring in St Albans 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 Old Woollams Playing Fields, St Albans between the 17th August to 8th September 2017.

The monitor was located within the NPR corridor for the westerly Match/Detling departure route, with aircraft taking approximately 20 track miles before reaching the monitor. The altitude at the monitor was 420ft above mean sea level.

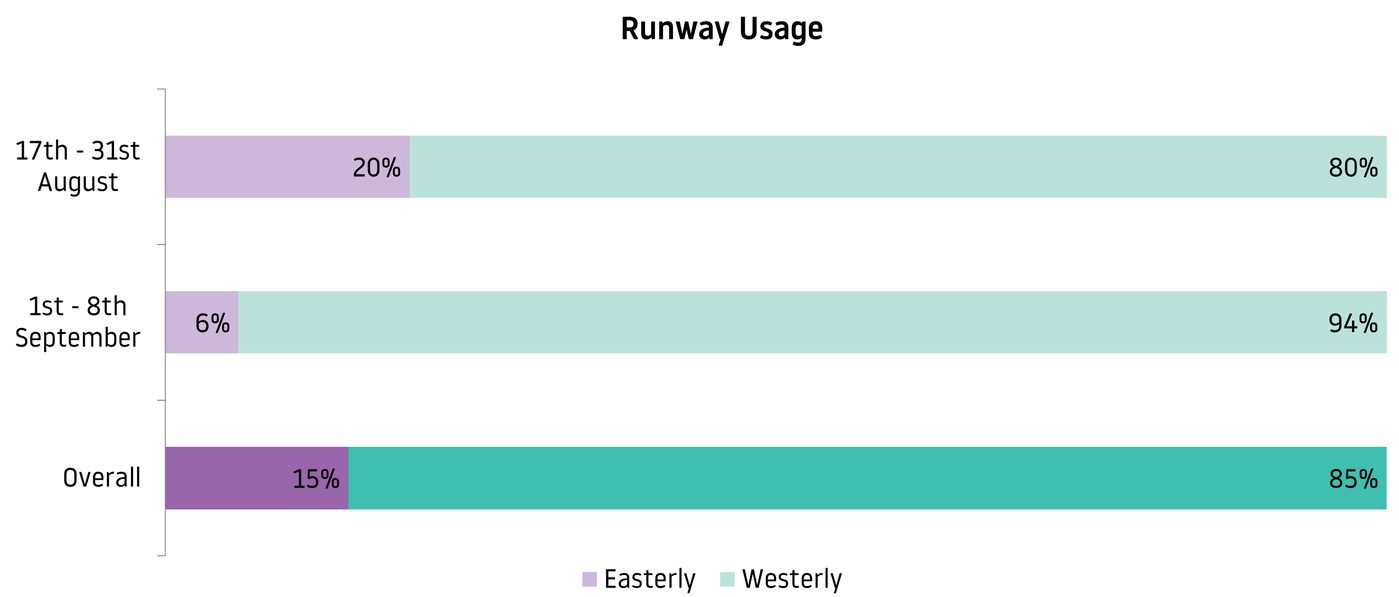
Aircraft data captured was extracted from LLA's noise and track-keeping system (TopSonic). Operations in the area was evaluated by drawing a 3km 'gate' perpendicular to the Noise Preferential Route corridor.



LLA Operations During the Monitoring

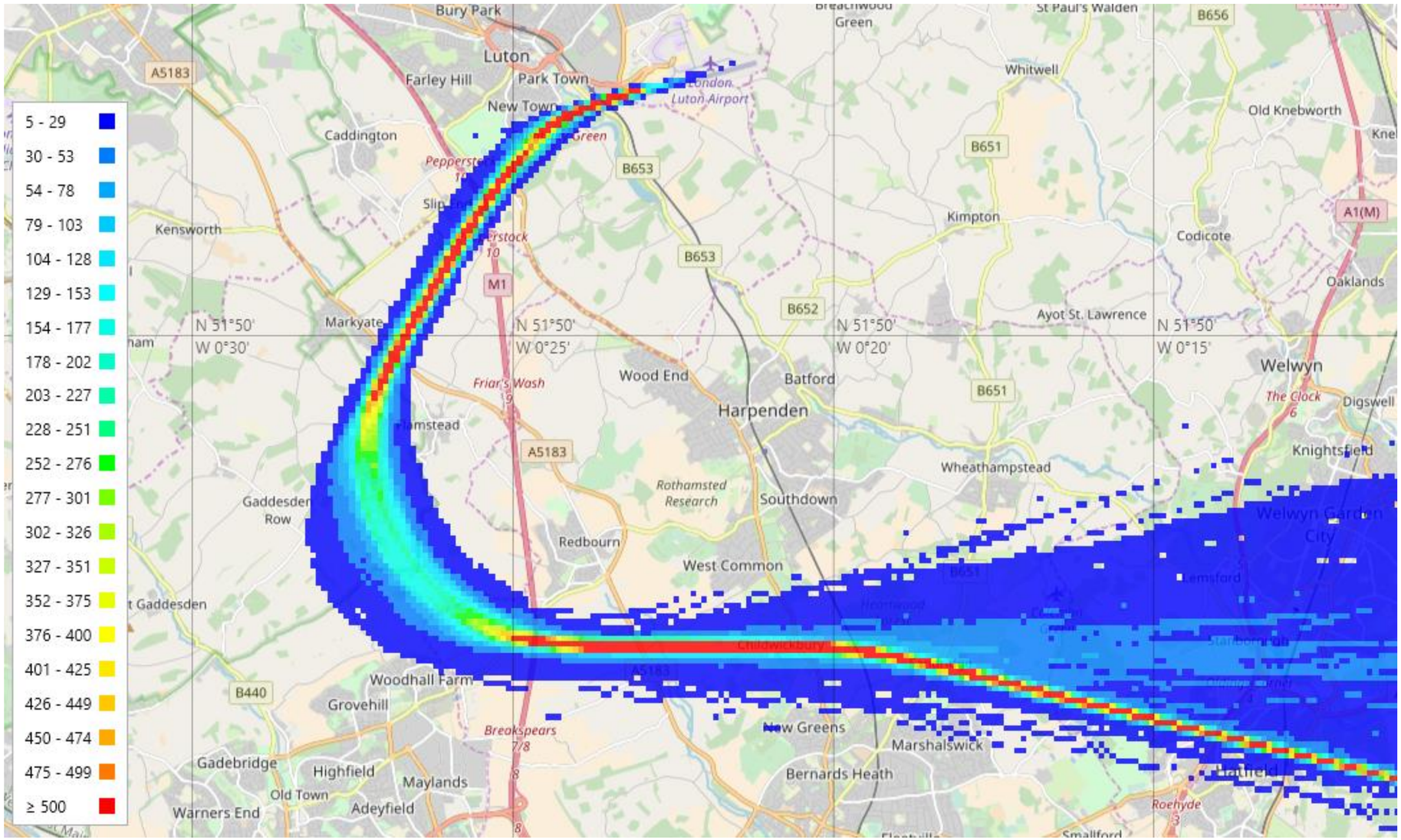
During the monitoring 9,593 air traffic movements were handled by LLA, there were no trials in place that could have affected the position of aircraft during this time.

During the period of monitoring the direction of operation was 15% easterly and 85% Westerly and therefore during easterly operations no data was captured.



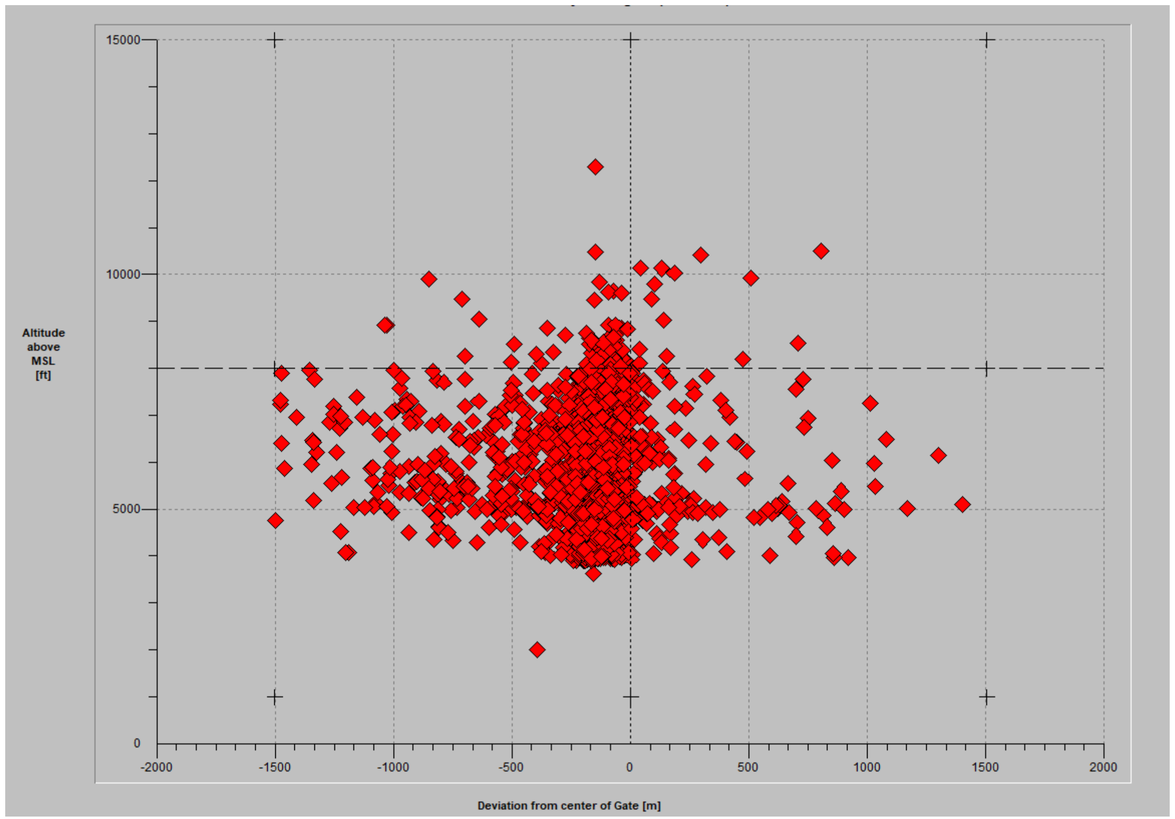
Aircraft Tracks During the Monitoring Period

The plot density map below shows the 1,871 flight tracks that passed nearby the monitor during the monitoring period.

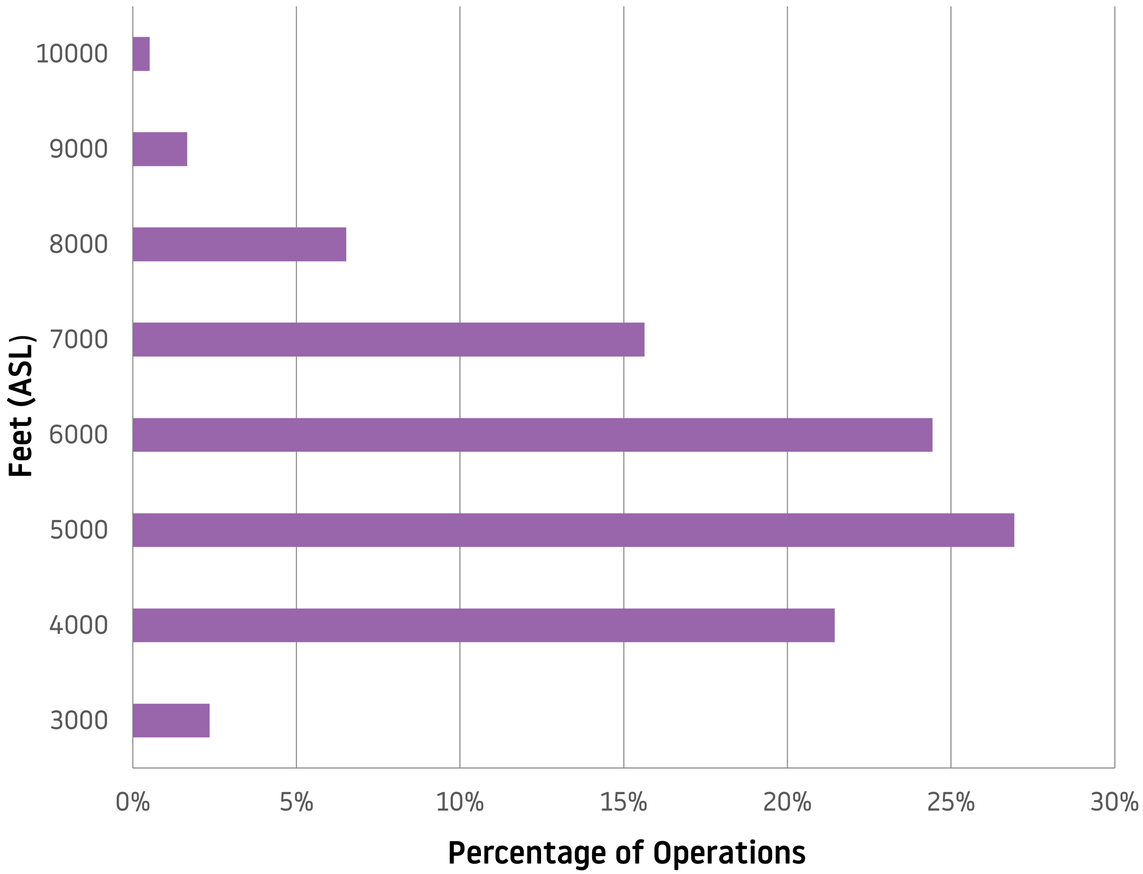


Gate analysis During Monitoring Period 2017

Gate analysis shows the altitude and lateral dispersion of aircraft between 17th August - 8th September. The chart below shows that 71% of all flights were above 5000ft when passing through the gate. The average altitude of aircraft in the area is 5750ft above mean sea level.

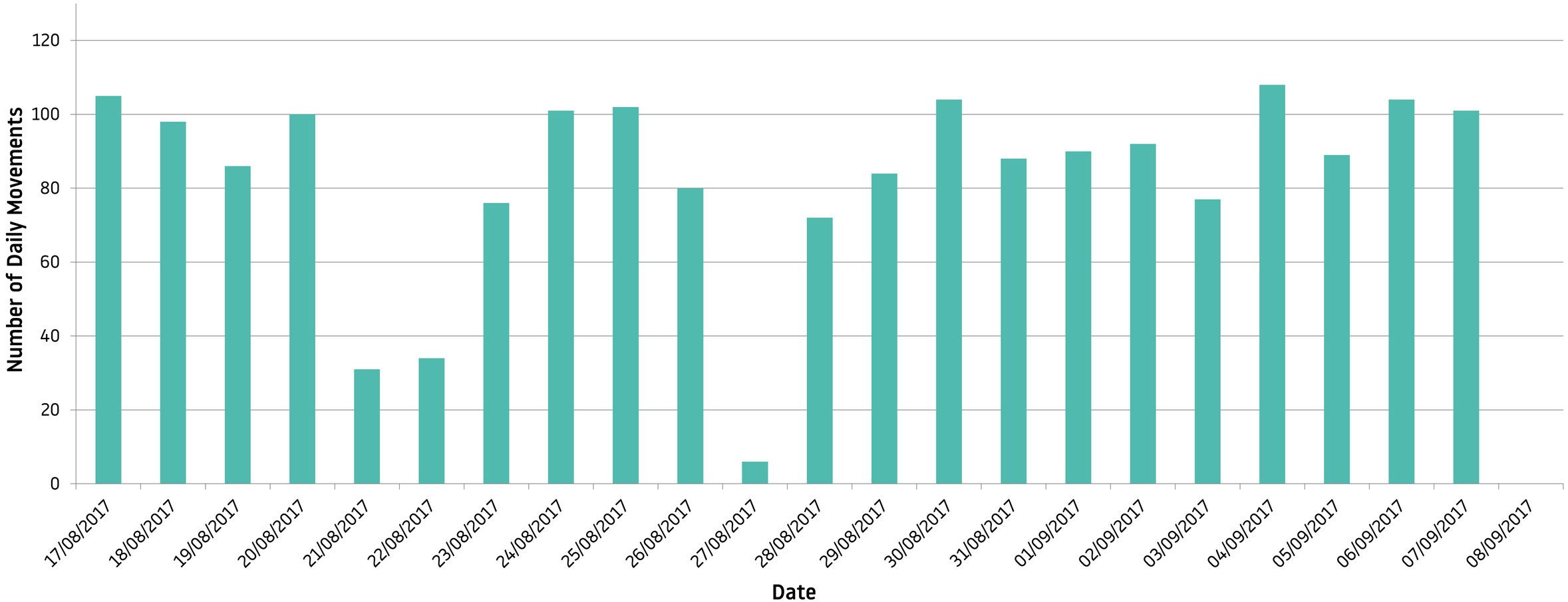


1828 aircraft shown on gate analysis



Daily Movements During Monitoring Period

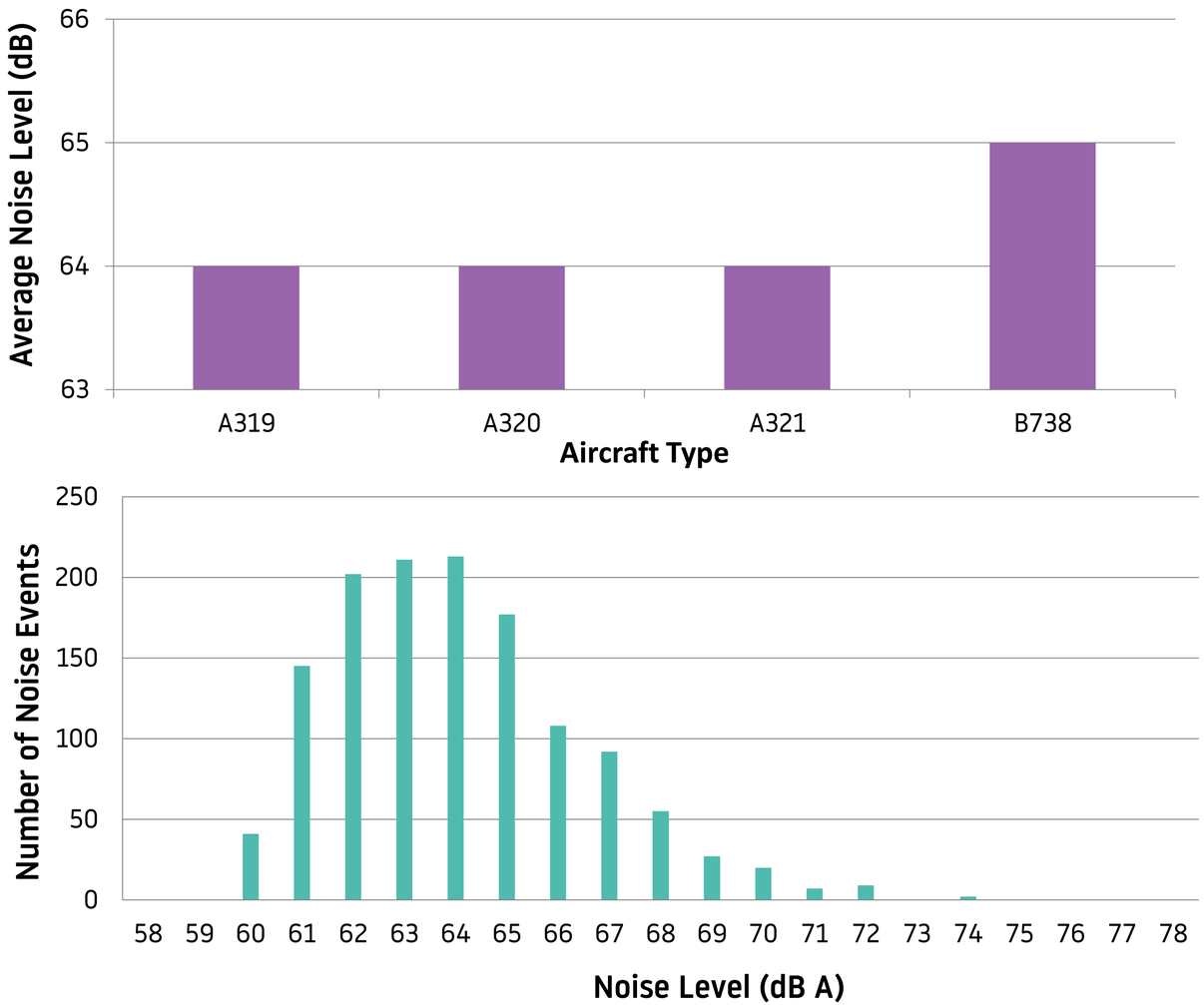
92% of aircraft using the westerly Match/Detling route passed through the ‘gate’ during the monitoring period. The chart below shows the daily number of movements that passed through the ‘gate’ and nearby St Albans. During the monitoring period there was one full day of only easterly operations, meaning no flights passed through the gates on this day.



Noise Results During Monitoring Period 2017

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

Aircraft Type	Number of movements
A319	116
A320	754
A321	196
B738	134



Summary

- During the monitoring period, the airport was using westerly operations for 85% of the time, whereas annually the average for westerly operations is 70% of the time.
- The main aircraft types operating at the airport are A320 and A321's therefore the aircraft types overflying St Albans are in line with this.
- Based on the gate analysis, most aircraft remained close to the centre of the NPR corridor.
- These 2017 noise results produced an LAEQ (16hr day) value of 47dB which is consistent with the expected noise for the area.

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 St Albans.

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 3km 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'.