

LONDON ASHFORD AIRPORT

SOUND EXPOSURE LEVEL COMPARISON



Boeing 737 Trial Flight, February 24th 2007

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1 INTRODUCTION

1.1 Parsons Brinckerhoff Ltd (PB) was commissioned by London Ashford Airport, Lydd to undertake noise measurements of a Boeing 737-300 trial flight at various receptors in the vicinity of the airport.

1.1.1 The measurements have been used to calculate Sound Exposure Levels (SEL's) to enable a comparison with the noise data for the Boeing 737-300 contained within the database of CAA's INM noise modelling software.

2 METHODOLOGY

2.1 Noise Measurements

2.1.1 Measurements were carried out at three locations in the vicinity of the airport. These were selected for their close proximity to the flight paths. The positions are as follows:

- Dunes Road – Directly under the incoming flight path and closest property to the north west of the airport
- Lydd Cemetery – Chosen to be representative of Lydd village which is directly under the outbound flight path.
- Greatstone Primary School – Closest “community” receptor to the incoming flight path.

2.1.2 All noise monitoring was conducted in accordance with the measurement guidance set out in BS 7445 Part 2⁽¹⁾. Measurements were made using Class 1 Sound Level Meters, which were calibrated before, and after the measurements, with no change in level recorded. The microphone was placed at 1.5m above the ground, and at least 1.5m from any reflective surface. Appendix A shows the calibration certificates of the meters used.

2.1.3 Measurements were started approximately 30 seconds before the aircraft was sighted and continued for approximately 30 seconds after. The measurement interval was 10 seconds.

3 RESULTS

- 3.1.1 The SEL was calculated from the measurements taken at the receptors and compared to the SEL values contained in the database of the INM modelling software, as reported in the Environmental Statement for London Ashford Airport expansion. This comparison is shown in Table 1.
- 3.1.2 Using the data collected before and after the aircraft passed over, it has been determined that the ambient noise levels at the time of the survey were between 45 and 50dB(A). We have therefore used all measured values over 50dB(A) to calculate the SEL.
- 3.1.3 The following table shows the calculated and predicted SEL at the given altitudes. The predicted values are from a Boeing 737-800 which, being a more modern series version of the 737, will have a lower SEL.

Table 1: Comparison of SEL levels

Location	Movement type	Altitude, ft	SEL, dB(A) L_{AE}	
			Measured	Predicted
Dunes Road	Approach	600	96	93.6
Greatstone Primary	Approach	n/a	82.9	n/a
Lydd Cemetary	Departure	2000	91	88