

SUMMARY REPORT
NOISE CLIMATE AT SLINFOLD, WEST SUSSEX,
OCTOBER 2009 TO AUGUST 2010

Client: Gatwick Airport Limited



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SUMMARY REPORT

This summary Report presents the results from a mobile Noise Monitoring Terminal (NMT) deployed at Slinfold in West Sussex by Gatwick Airport Ltd, between 1 October 2009 and 3 September 2010.

The site is approximately 18 km south west of the airport. The noise monitor is located in a large garden adjacent to a golf course, and well away from the nearest road.

It can be seen from typical aircraft tracks for both easterly and westerly take-offs shown below that the site is overflown by both departing aircraft (when departures are to the west) and also by arrivals when departures are to the east.

The dominant source of noise audible at the site is that from aircraft arriving at or departing from Gatwick. In between bursts of aircraft noise the site is quiet with occasional noise from domestic activity (e.g. grass cutting), and from birdsong. Occasionally noise from golf buggies is audible.

The Noise monitoring Terminal (NMT) gathers data about the number and level of aircraft noise events, and also data about the total level of noise at the site, on an hourly basis. The hourly values of total noise are a combination of the noise from the aircraft noise events and from all other noise sources, called residual noise.

The data gathered during the survey is summarised in the Table and graphs below.

The monitor was set to operate with a threshold trigger level of 56 dBA, well above the general level of background noise.

Figure 1 shows the month to month variation in numbers of aircraft noise events recorded at the site.

Note: there is some data missing for some of the months, i.e. data is not available for all of the hours in some months. The numbers of events shown in Figure 1 are the actual numbers of events recorded by the monitor each month. The Table below shows the % of hours each month for which data was available, together with the actual number of events as plotted in the above graph.

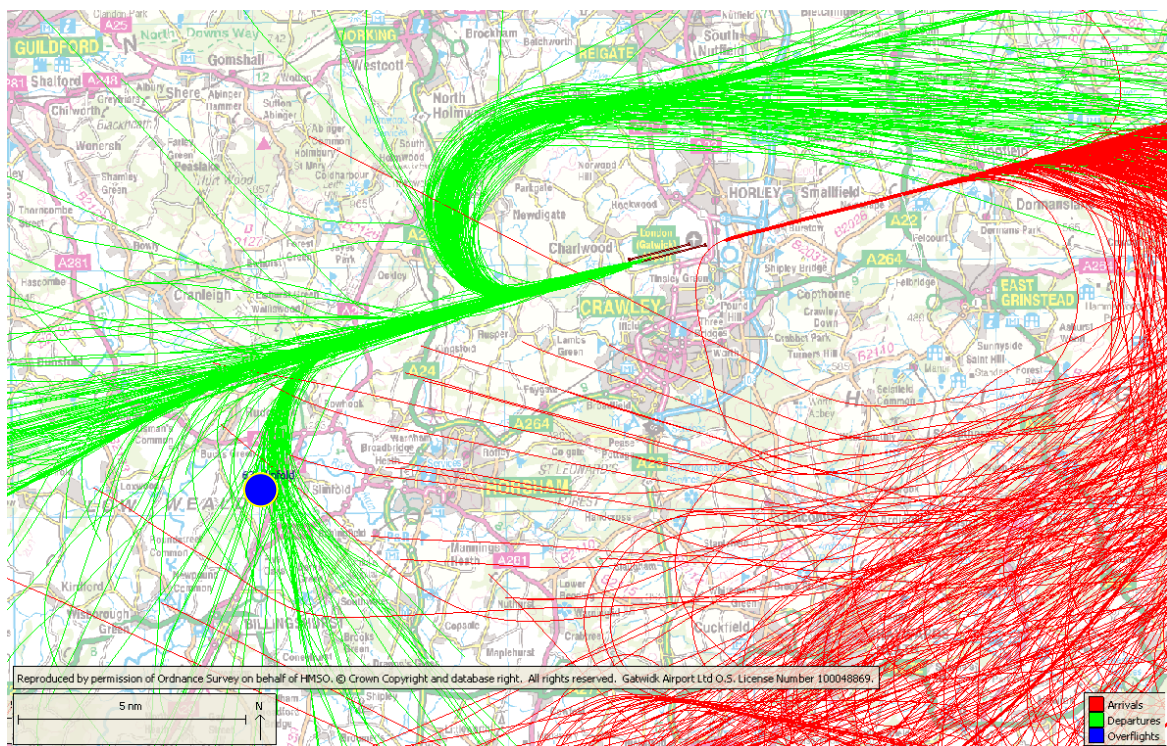
Month	Number of events recorded	% of hours recorded	Month	Number of events recorded	% of hours recorded
October	1949	95 %	April	1644	100 %
November	1033	100 %	May	2345	100 %
December	1054	73 %	June	1279	60 %
January	840	56 %	July	1654	95 %
February	1152	84 %	August	1450	68 %
March	1623	95 %	September	175	9 %

Figure 2 shows that the highest numbers of aircraft noise events recorded at the site occur each day between 07.00 and 08.00 hours (local time).

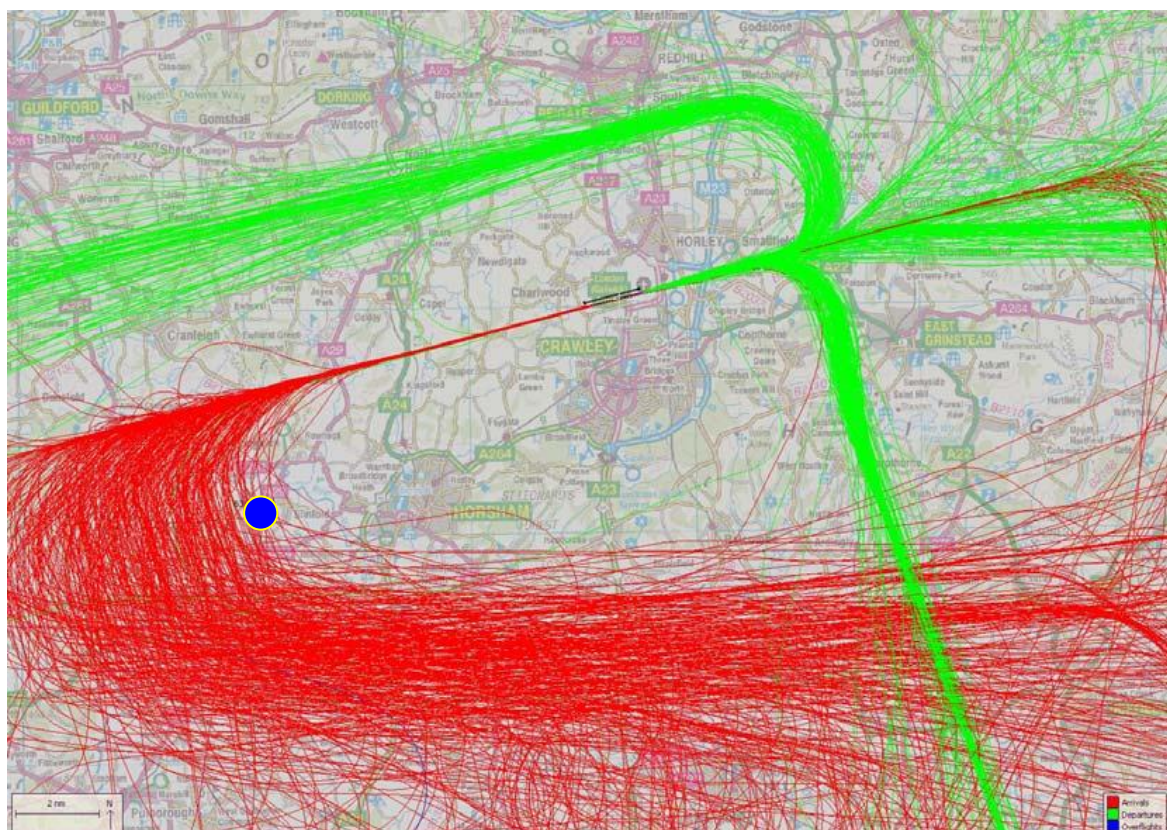
Figures 3 and 4 show the average monthly values of noise climate parameters during daytime and night-time. The graphs show that the average of the maximum levels of aircraft noise events does not change significantly between day and night, but that the values of all the other noise climate parameters are significantly higher in the daytime than at night. There is not much variation in the average noise levels from month to month.

Figure 5 shows the variation of average noise climate parameter values over the 24 hour period, indicating, as expected, that the highest levels occur in the daytime, falling in the late evening and night-time periods.

Flight paths for a typical day of departures to the West (Arrivals are shown in Red and Departures in Green). The blue dot shows the location of the noise monitor at Slinfold.



Flight paths for a typical day of departures to the East (Arrivals are shown in Red and Departures in Green). The blue dot shows the location of the noise monitor at Slinfold.



A summary of the main noise related parameters (11 month average for period from 1 October 2009 to 3 September 2010) for the site at SLINFOLD are shown in the Table below:

Survey period	2 October 2009 to 3 September 2010
Aircraft noise event trigger level	56 dBA for 10 seconds
Length of period	11 months
Number of aircraft noise events	16000 (approximately)
% Arrivals and Departures	50.5% Departures; 49.5% Arrivals
% DAY and NIGHT	92% DAY; 8 % NIGHT
Departure flight paths	26 BOG 97.6%; 26 FSD 1.8%; 26 SAM 0.6%
Average noise level and duration of aircraft noise events	Average level 59 dBA Average duration 28 seconds
Average maximum noise level of events	61 dBA Departures; 64 dBA Arrivals; 63 dBA overall
Average total noise level	52 dBA (DAY); 44 dBA (NIGHT)
Average aircraft noise level	45 dBA (DAY); 36 dBA (NIGHT)
Average residual noise level	51 dBA (DAY); 43 dBA (NIGHT)
Daytime level (12 hours)	52 dBA (Total noise); 45 dBA (Aircraft)
Evening level (4 hours)	54dBA (Total noise); 52 dBA (Aircraft)
Day-evening night level	50 dBA (Total noise); 44 dBA (Aircraft)
Background noise (LAS90)	39 dBA (DAY); 30 dBA (NIGHT)

