

NOISE CLIMATE AT DAIRY HOUSE, CAPEL, SURREY, JANUARY TO DECEMBER 2009 SUMMARY REPORT

This summary report presents the results from a mobile Noise Monitoring Terminal (NMT) deployed at Capel, in Surrey by Gatwick Airport Ltd between January and December 2009.

The site is approximately 8 km west of the airport.. The noise monitor is located in a field next to a farm house.

It can be seen from typical aircraft tracks for both easterly and westerly take-offs shown below that the site is overflown by departing aircraft, when take off is to the west.

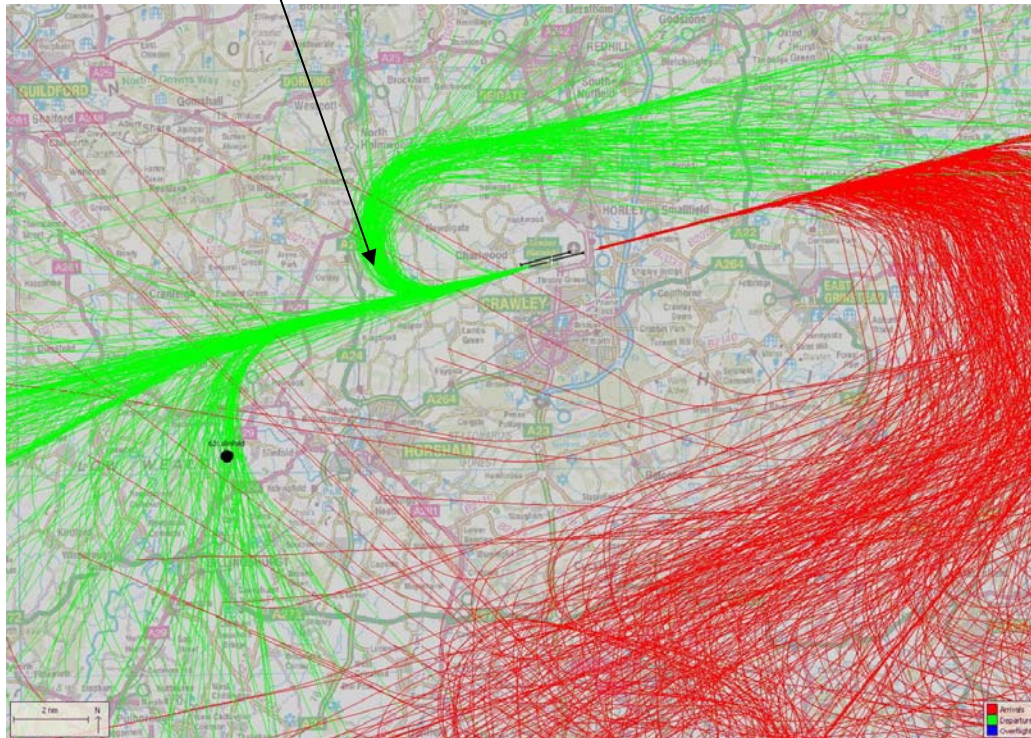
The dominant source of noise audible at the site is that from aircraft departing from Gatwick. In between bursts of aircraft noise the site is quiet with occasional noise from traffic on a minor road, from birdsong, and from domestic activity.

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.

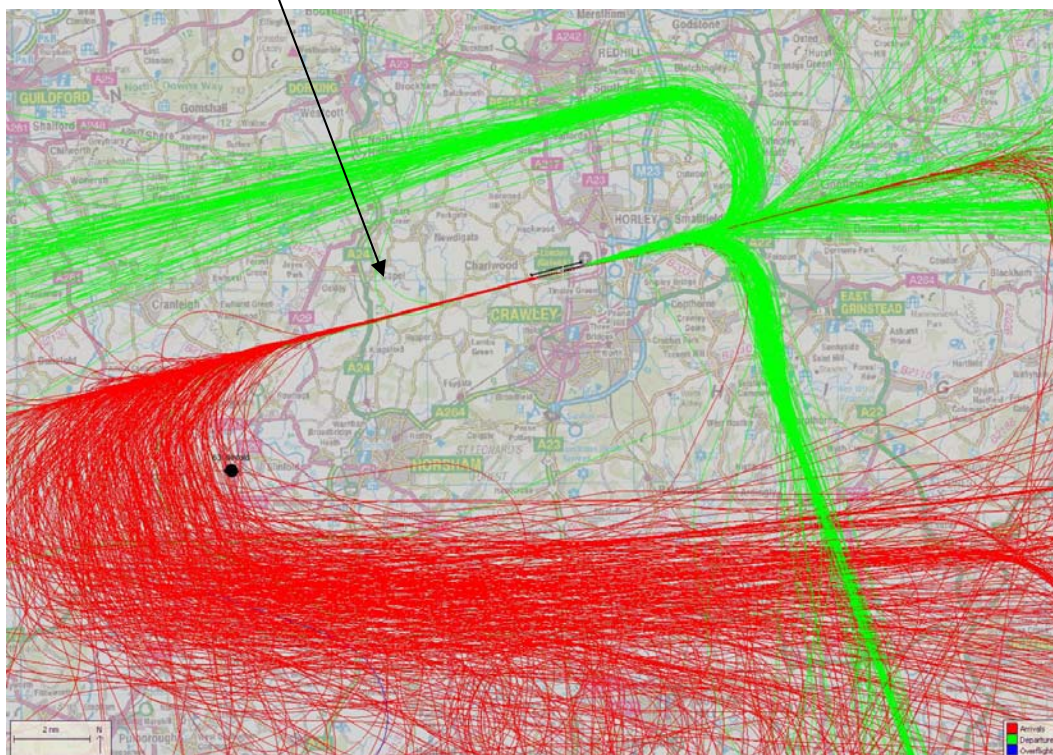
The data gathered during the survey is summarised Table and graphs below.

The monitor was set to operate with a floating threshold trigger level from January to August. This means that the monitor detects sudden increases in the general background noise level, whereas from August to December a fixed threshold of 61 dBA, well above the general background noise level, was used. The effect of this was that during the first part of the year the monitor detected a relatively small number of events identified by the Noise and Track Keeping System as aircraft arrival events, with an average maximum level of about 57 dBA, in addition to the much more frequent events identified as departures, with an average maximum noise level of about 67 dBA. During the second part of the year, with the fixed threshold in operation only, departure related events were detected.

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

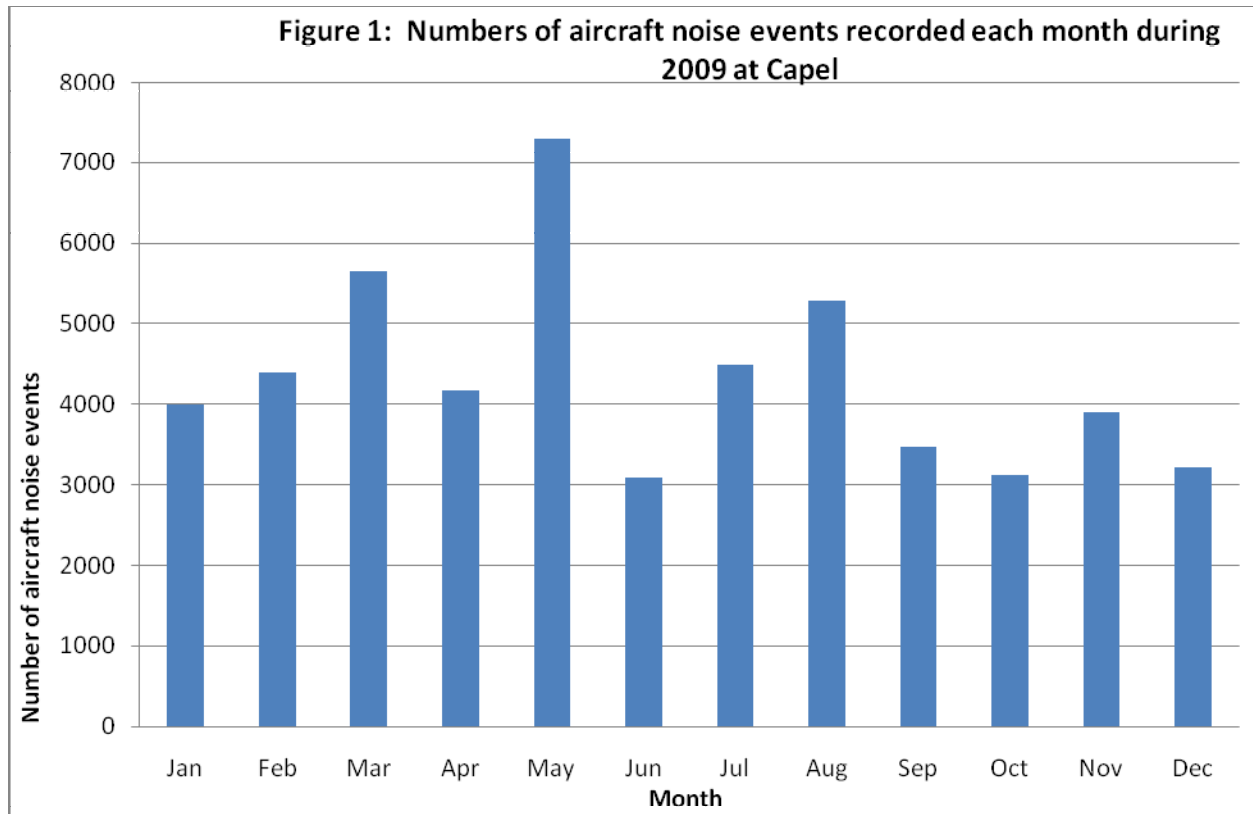


Flight paths for a typical day of departures to the East (Arrivals are shown in Red and Departures in Green). The arrow shows the location of the noise monitor at Capel.



A summary of the main noise related parameters (yearly average for 2009) for the site at DAIRY HOUSE, CAPEL are shown in the Table below:

Survey period	1 January to 31 December 2009
Aircraft noise event trigger level	Floating threshold (January to July); 61 dBA (August to December)
Length of period	12 months
Number of aircraft noise events	52071
% Arrivals and Departures	86% Departures; 14% Arrivals
% DAY and NIGHT	92% DAY; 8% NIGHT
Average maximum noise level of events	66 dBA (Departures); 57 dBA (Arrivals)
Average total noise level	57 dBA (DAY); 56 dBA (NIGHT)
Average aircraft noise level	53 dBA (DAY); 45 dBA (NIGHT)
Average residual noise level	54 dBA (DAY); 55 dBA (NIGHT)
Daytime level (12 hours)	57 dBA (Total noise); 53 dBA (Aircraft)
Evening level (4 hours)	54dBA (Total noise); 53 dBA (Aircraft)
Day-evening night level	62 dBA (Total noise); 55 dBA (Aircraft)
Background noise (L_{AS90})	43 dBA (DAY); 37 dBA (NIGHT)



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 number of events shown in the above graph 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
January	3990	100%	July	4488	100%
February	4392	79%	August	5283	100%
March	5648	80%	September	3472	100%
April	4164	72%	October	3172	100%
May	7303	98%	November	3905	100%
June	3088	46%	December	3211	90%

