

APPENDIX 12C: NOISE SURVEY PROCEDURE AND RESULTS

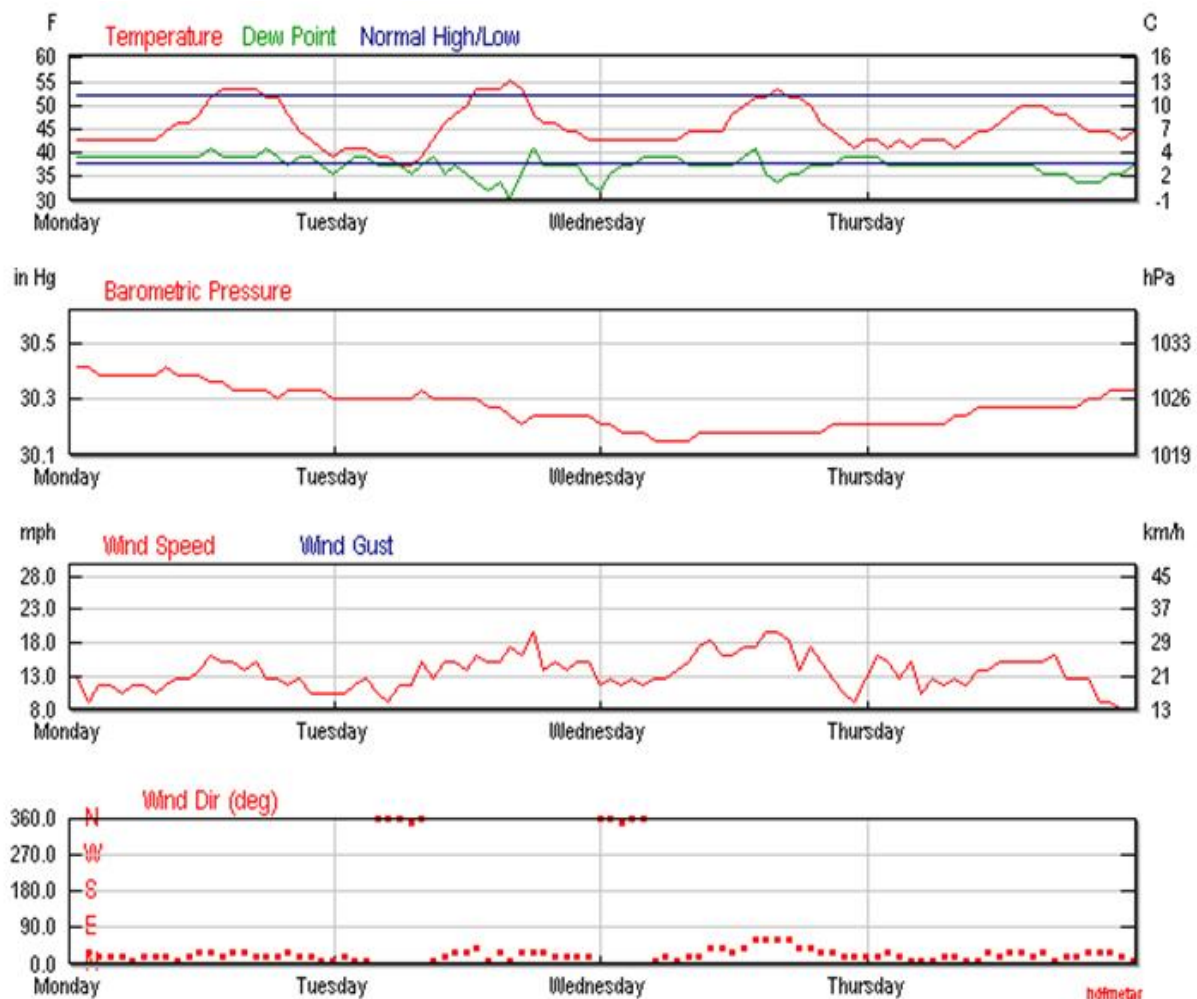
Baseline Noise Surveys

Baseline noise surveys were carried out between the 12th April and 15th April 2010 with additional attended noise surveys being completed in September 2010.

The parameters logged throughout the survey period were L_{Aeq} , L_{Amax} , L_{Amin} , L_{A90} and L_{A10} . The L_{Aeq} level is the equivalent continuous sound pressure level over the measurement period; L_{Amax} is an indicator of the highest sound level during the measurement period; the L_{Amin} is the lowest level during the measurement period; L_{A90} is used as a descriptor of background noise levels and L_{A10} is the noise level which is achieved for 10% of the monitoring period and is often used to describe road traffic noise.

The monitoring equipment used during the survey period is described in Table A1. The sound level meters were calibrated both before and after each monitoring period; no drift from the reference level of 94dB was recorded.

All measurements were undertaken under free-field conditions. The weather was dry and wind speeds were less than 5m/s. A wind shield was fitted to the monitoring equipment at all times. Weather conditions experienced over the survey period are summarised by the graphs below.



Monitoring was undertaken by trained and competent staff holding an IOA Certificate of Competence in Environmental Noise Measurement.

Long-term Baseline Noise Measurements

Monitoring Location	Monitoring Period	L _{Aeq,T} (dB(A))	L _{A10,T} (dB(A))	L _{A90,T} ⁺ (dB(A))	L _{Amax} [#] (dB(A))
LT1	Daytime (07:00-23:00)	71.3	72.9	59.7	77.0
	Night-time (23:00-07:00)	68.0	69.9	64.7	85.7
LT2	Daytime (07:00-23:00)	64.9	68.1	44.9	90.4
	Night-time (23:00-07:00)	60.1	64.6	37.4	81.4
LT3	Daytime (07:00-23:00)	65.3	68.3	42.6	83.1
	Night-time (23:00-07:00)	54.9	57.6	39.0	69.0
LT4	Daytime (07:00-23:00)	58.5	61.5	54.3	78.7
	Night-time (23:00-07:00)	47.2	49.4	39.4	70.0

Short-term Baseline Noise Measurements

Monitoring Location	Monitoring Period	L _{Aeq,T} [*]	L _{A10,T} [*]	L _{A90,T} ^{**}	L _{Amax} [#]
ST1	Daytime (07:00-23:00)	67.8	69.2	55.0	78.2
	Night-time (23:00-07:00)	59.7	60.2	42.0	74.0
ST2	Daytime (07:00-23:00)	69.2	71.2	54.6	76.5
	Night-time (23:00-07:00)	59.8	60.5	47.0	69.8
ST3	Daytime (07:00-23:00)	61.2	63.4	49.0	81.0
	Night-time (23:00-07:00)	57.9	60.1	42.0	75.0
ST4	Daytime (07:00-23:00)	59.8	61.2	41.0	79.0
	Night-time (23:00-07:00)	51.5	53.5	37.2	72.5
ST5	Daytime (07:00-23:00)	70.1	72.4	56.8	80.1
	Night-time (23:00-07:00)	69.5	71.0	55.4	80.0

Notes:

Maximum monitored noise level during survey period.

* Minimum monitored noise level during survey period.