

## APPENDIX 10.2

### NOISE SURVEY DETAILS

#### *Instrumentation*

The following instrumentation was used for all noise measurements:

<b>Manufacturer</b>	<b>Description</b>	<b>Type</b>	<b>Calibration Due date</b>	<b>Serial No.</b>
Cirrus	Precision Integrating Sound Level Meter	CR: 704B	August 2007	B15733F
Cirrus	Precision Integrating Sound Level Meter	CR: 831A	August 2007	B15227FF
Norsonic	Precision Real Time Sound Analyser	Nor 118	May 2008	30528
Norsonic	Precision Real Time Sound Analyser	Nor 118	June 2008	30544
Norsonic	Precision Real Time Sound Analyser	Nor 188	February 2008	31992
Cirrus	Electronic Calibrator	CR: 513A	August 2007	031462

The following set-up parameters were used on the sound level meters during noise measurement:

#### Static Noise Monitoring:

Time Weighting: Fast  
Frequency Weighting: 'A'  
Measurement Period: 15 minutes

#### **Calibration**

Calibration setting: 94dB

The noise meters were calibrated with the electronic calibrator prior to commencement and on completion of the survey. No significant drift in calibration was observed.

#### **Survey Dates and Personnel**

Static noise measurements positions (shown on figure 10.1) were chosen in liaison with North Kesteven District Council to carry out noise monitoring around the site to establish typical ambient noise data (see Technical Appendix 10.3 for detailed

information). Mr. D.R. Kettlewell of Noise & Vibration Consultants Limited undertook these measurements on Sunday 20<sup>th</sup> May to Tuesday 22<sup>nd</sup> May 2007..

An additional noise survey was carried out at an existing REP site in Cambridgeshire during a night-time period from 2300 to midnight at various distances from the relevant buildings to establish typical noise levels and frequency content of the noise source (see Technical Appendix 10.4 for detailed information). Mr. D.R. Kettlewell of Noise & Vibration Consultants Limited undertook these measurements on Thursday 31<sup>st</sup> May 2007.

### ***Monitoring Period and Test Details***

#### *Sleaford Baseline Survey*

Measurements were recorded over a period of at approximately 48 hours. Data logging of  $L_{Aeq}$ ,  $L_{A10}$ ,  $L_{A90}$  and  $L_{Amax}$  were recorded at 15-minute intervals for information on the variation of typical boundary noise levels.

Additional noise monitoring on a spot roaming basis was undertaken at other receptor positions and sample third octave band frequency analysis monitoring at receptor positions for additional information.

The noise meters were mounted on a tripod at a height of between 1.2 to 1.5 metres above ground level and fitted with a wind and rain shield.

#### *Existing REP Site Survey*

Measurements were recorded over a period of at approximately 1 hour. Data logging of  $L_{Aeq}$ ,  $L_{A10}$ ,  $L_{A90}$  and  $L_{Amax}$  were recorded at 1-minute intervals at different distances from the site for information on typical site noise levels.

Noise monitoring of sample third octave band frequency analysis was recorded for information.

The noise meters were mounted on a tripod at a height of between 1.2 to 1.5 metres above ground level and fitted with a wind and rain shield.

### ***Meteorological Conditions***

Weather details were recorded by the NVC engineer during the period of the surveys, and appear below:

#### *Sunday 20<sup>th</sup> May 2007*

During the daytime it was dry, variable cloud cover and a light south westerly wind (1-2 m/sec) with a temperature of 12-16deg C. During the night-time period the skies were generally clear and it remained dry with winds light south westerly at 1-2 m/sec. Temperature falling to 6deg C.

#### *Monday 21<sup>st</sup> May 2007*

During the morning and afternoon period it was dry with variable cloud cover, sunny periods and a light south westerly wind (1-2m/s), temperature 12 to 17 deg C.

#### *Tuesday 22<sup>nd</sup> May 2007*

Dry monitoring period, overcast and a light south west wind (1-2m/s), temperature 12-14deg C.

#### *Thursday 31<sup>st</sup> May 2007*

Dry, overcast, wind light from the west (0-1m/s), temperature 10-12deg C.

The above climatic conditions were suitable for monitoring environmental noise levels in accordance with advice given in BS 7445:1991 'Description and measurement of environmental noise'.