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225-1 App further info.



Hg.

Our Ref: 10599

21st December 2005

Ann Bosely
Environmental Protection Agency

Re: **Waste Licence Applications for Listowel Civic Amenity Centre:
Register Number 224-1**

**Waste Licence Application for Dingle Civic Amenity Centre:
Register Number 225-1**

Ann,

Please find enclosed Noise Surveys completed for Listowel and Dingle Civic Amenities.

Waste Licence Applications for both these proposed Civic Amenity Centres were sent to the Agency on 22nd November 2005. A cover letter was enclosed stating that Noise Monitoring surveys would be forwarded at a later date.

The Agency notified receipt of documentation relating to the Waste Licence Applications on 28th November 2005 and assigned the above mentioned register numbers.

Dust and Surface Water Monitoring Surveys will be forwarded upon completion in due course.

If you have any questions please do not hesitate to contact me

Thank you and regards

Helen Griffin

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Dixon Brosnan
environmental consultants

project title

Noise survey: Dingle, Co. Kerry

client

Southern Scientific Services Ltd.

client ref.

Caitriona Fox

project ref.

05091

report ref.

05091.1

revision

0

revision date

15.12.05

approved by

Damian Brosnan

issue date

15.12.05

certified only where signed

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Date Recd

21/12/05

Action

HG

Job No.

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1. INTRODUCTION

1.1 Dixon.Brosnan Environmental Consultants were commissioned by Southern Scientific Services Ltd. to undertake a noise survey at Dingle, Co. Kerry. The aim of the survey was to record existing noise levels in the vicinity of a greenfield site. It is proposed to construct a waste management facility at the site.

2. NOISE

2.1 Noise levels are usually recorded on a logarithmic decibel scale. Table 1 provides an indication of this scale.

Table 1. The decibel scale.

DECIBELS (dB)	NOISE
20	Very quiet room
35	Rural environment at night
65	Conversation
80	Busy pub
100	Nightclub
120	Jet take-off
140	Threshold of pain

2.2 An adjustment or weighting – the 'A weighting' – is normally applied to recorded levels in order to approximate the manner in which the human ear hears noise, the ear being more sensitive to sounds of higher frequency. Measurements which have been subjected to the weighting are denoted by the inclusion of 'A' with the measurement parameter.

2.3 The $L_{Aeq,t}$ is the parameter usually used to describe noise levels at a location. The parameter represents the average noise level at that location from all sources when measured over time interval t . The duration of t may be several seconds or will more usually be 5-60 minutes depending on the standard or noise limit under consideration.

2.4 Noise parameters to which reference is made in this report are defined Table 2. Throughout this report noise levels are presented as decibels (dB) relative to 2×10^{-5} Pa.

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Table 2. Noise glossary.

TERM	DEFINITION
$L_{Aeq,t}$	The equivalent continuous sound level during the measurement interval t , effectively representing the average noise level.
L_{An}	The sound level which is exceeded for $n\%$ of the measurement interval.
L_{A10}	The sound level which is exceeded for 10% of the measurement interval, usually used to quantify traffic noise.
L_{A90}	The sound level which is exceeded for 90% of the measurement interval, usually used to quantify background noise.
A weighting	The weighting or filter response of the human ear. The filter is denoted by the suffix A in the parameters listed above.
Tone	A sound of one or more frequencies which results in increased nuisance.
Impulse	A noise which is of short duration (typically less than one second), the sound of which is significantly higher than the background.

3. LOCATION

3.1 The study site is located at Flemingstown, Lispolo, 4 km east of Dingle town. The site occupies a level plot on the north side of the N86 national route. The site is level and at the same elevation as the road.

3.2 The southern boundary of the site is formed directly by the N86. The eastern boundary is formed by a third class road which serves Flemingstown. The northern and western boundaries adjoin scrub which may be developed in the future.

3.3 There are several noise sensitive receptors in the vicinity of the study site. The nearest consists of a commercial garage to the east of the site, and which is separate from the site by the third class road noted above. The nearest houses consist of two detached dwellings located 150 m west of the site. Scattered houses are located to the northeast, north and northwest of the site, all of which are over 500 m from the site boundary. There is little or no development to the south of the site, and the nearest properties located on the southern side of the N86 consist of two dwellings situated 300 m southwest of the site, and an isolated bungalow 400 m east of the site.

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3.4 During the noise survey described herein, a number of monitoring stations were selected to represent the sensitive receptors described above. The stations used, designated N1-N4, are described in table 3 and indicated in figure 1.

Table 3. Noise monitoring stations.

REF.	LOCATION
N1	Plot to W of site. 70 m from site boundary, 70 m from bungalow to W of site.
N2	House 500 m NNW of site.
N3	Near isolated house 600 m E of site.
N4	Near 2 houses 300 m SW of site, 100 m from N86.

3.5 The local noise environment is dominated entirely by traffic on the N86 which links Tralee to Dingle. Other noise sources in this area include agricultural traffic and plant involved in landfilling a site 1 km to the west. During lulls in traffic, typical rural noise sources include barking dogs, birdsong and rustling vegetation. While a significant commercial facility is located approximately 700 m north of the site, no emissions arose from here during the survey. Similarly no emissions, apart from visiting vehicles, arose from the commercial garage located adjacent to the site. The noise environment is considered typical of a rural area through which a national route runs.

4. NOISE SURVEY

4.1 A noise survey was undertaken in this area on Wednesday 14.12.05. Weather conditions during the survey were dry and overcast, with a northerly air measuring 0-2 mls initially and increasing to 1-3 mls later. While occasional patches of fine mist passed, road surfaces remained dry.

4.2 Measurements were recorded at the four monitoring stations indicated in table 3. Near the N86, emissions were dominated by traffic. No other significant sources of noise emissions were noted.

4.3 Measurements were recorded using a Bruel & Kjaer Type 2260 integrating sound level meter which was calibrated before and after the survey using a Type 4231 calibrator. Measurements were recorded using the fast network at frontal incidence. The survey was conducted by Damian Brosnan on behalf of Dixon.Brosnan. Following survey completion recorded data were uploaded to PC for subsequent analysis using task-specific software. Measurements were recorded in accordance with International Standard ISO 1996: 1982 Acoustics – Description and measurement of environmental noise, *Part 1*: Basic quantities and procedures. Monitoring intervals of 30 minutes were used at each station.

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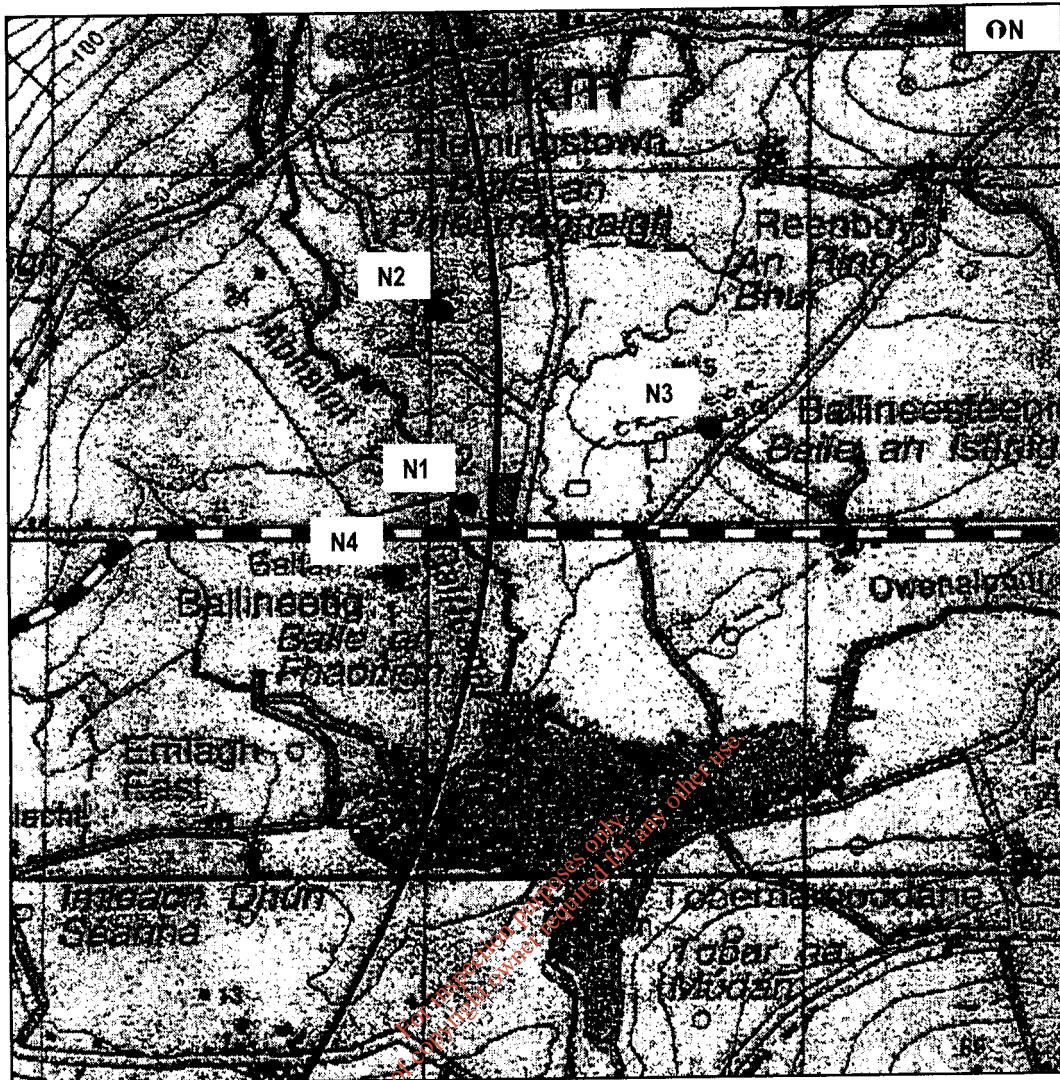


Figure 1. Noise monitoring stations.

4.4 Noise levels recorded at all stations are presented in table 4. Profiles are presented in section 7.

4.5 No specific tones or impulses were noted during the survey, apart from passing tonal components due to traffic and birdsong.

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Table 4. Recorded noise levels.

STATION	TIME	L _{Aeq} (dB)	L _{A10} (dB)	L _{A90} (dB)	NOISE
N1	1353-1423	55	59	36	N86 dominant. Birdsong. No noise from nearby garage.
N2	1434-1504	36	35	31	Birdsong. Barking dogs in distance. Stream slightly audible nearby. N86 faintly audible.
N3	1513-1543	47	45	36	N86 dominant. Stream at 20 m. Birdsong. Local traffic.
N4	1610-1640	56	59	45	N86 dominant. Breeze picked up, now 1-3 m/s. Rustling vegetation

5. DISCUSSION

5.1 The influence of N86 traffic noise is apparent in the recorded noise data. At station N1 and N4, both of which were located near the road, the L_{Aeq} levels recorded were 55-56 dB, with identical L_{A10} levels of 59 dB. A significant difference of 9 dB observed in recorded L_{A90} levels was most likely attributable to the influence of rustling vegetation at N4. It is considered that the noise levels recorded at N1 (L_{Aeq} 55 dB, L_{A90} 36 dB) are reasonably representative of levels at properties in the vicinity of the road, including the bungalow located 400 m east of the site.

5.2 At station N3, the diminishing influence of traffic noise from the N86 200 m distant is reflected in a reduced L_{Aeq} of 47 dB. The L_{Aeq} was maintained at a slightly elevated level by local traffic.

5.3 The lowest noise levels were recorded at N2. Traffic noise, both local and distant, was minimal here, and the L_{Aeq} and L_{A90} levels recorded are at the lower end of the daytime range expected in any rural environment.

6. CONCLUSIONS

6.1 Based on the type of noise environment which pertains, it is considered that noise levels recorded during the survey are reasonably representative of daytime conditions. It is likely that levels fluctuate with traffic volume, although the variations in daytime noise levels are unlikely to be significant.

6.2 The local noise environment is dominated by noise emissions from N86 traffic. This particularly applies at properties located adjacent to the road.

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6.3 Apart from traffic noise, no significant sources of noise emissions were noted.

7. NOISE PROFILES

Instrument: 2260
Application: BZ7202 version 2.0

Bandwidth: 1/3 Octave
Peaks Over: 140.0 dB
Range: 20.9-100.9 dB

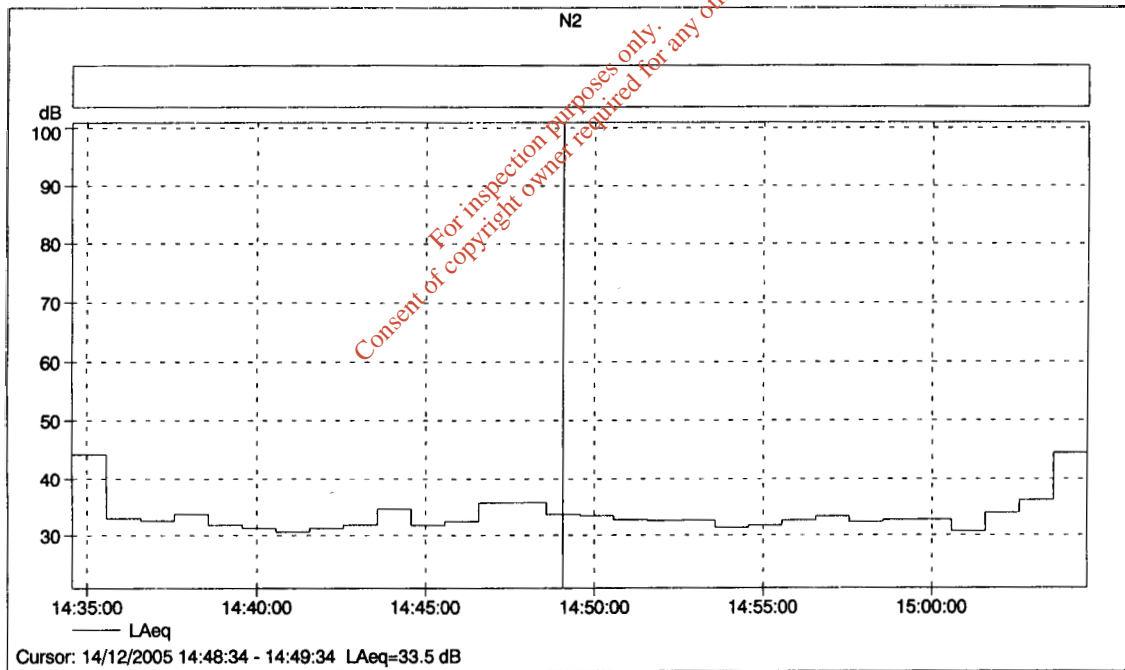
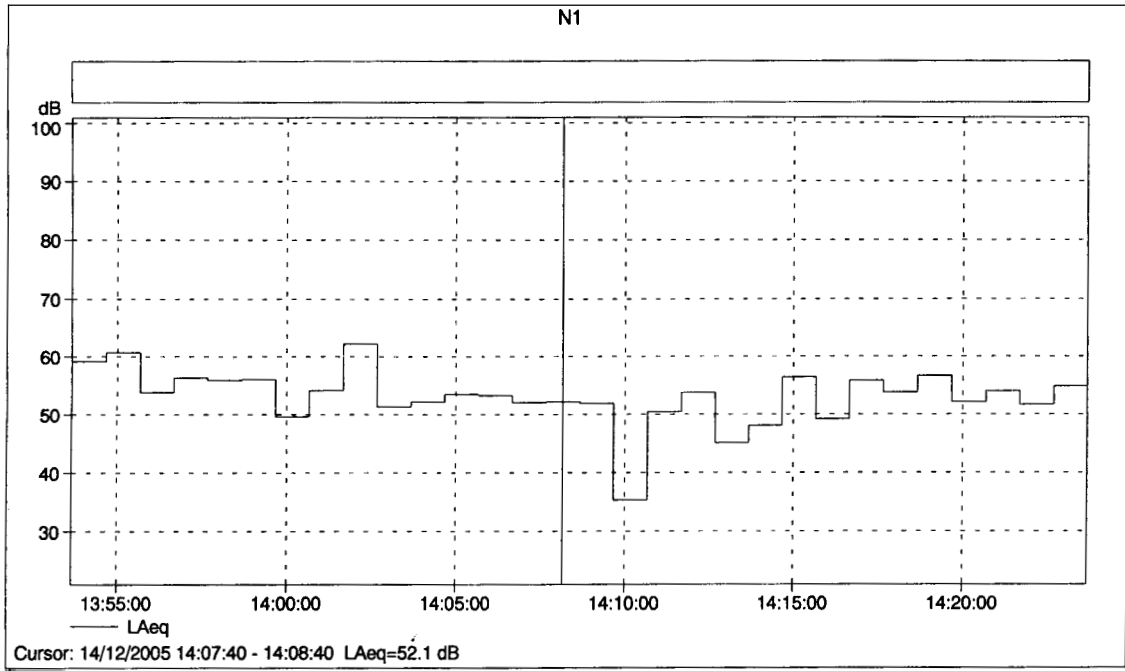
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Broad-band measurements:	S F I	A L
Broad-band statistics:	F	A
Octave measurements:	F	L

instrument Serial Number: 2217608
Microphone Serial Number: 2174854
Input: Microphone
Pol. Voltage: OV
S. I. Correction: Frontal

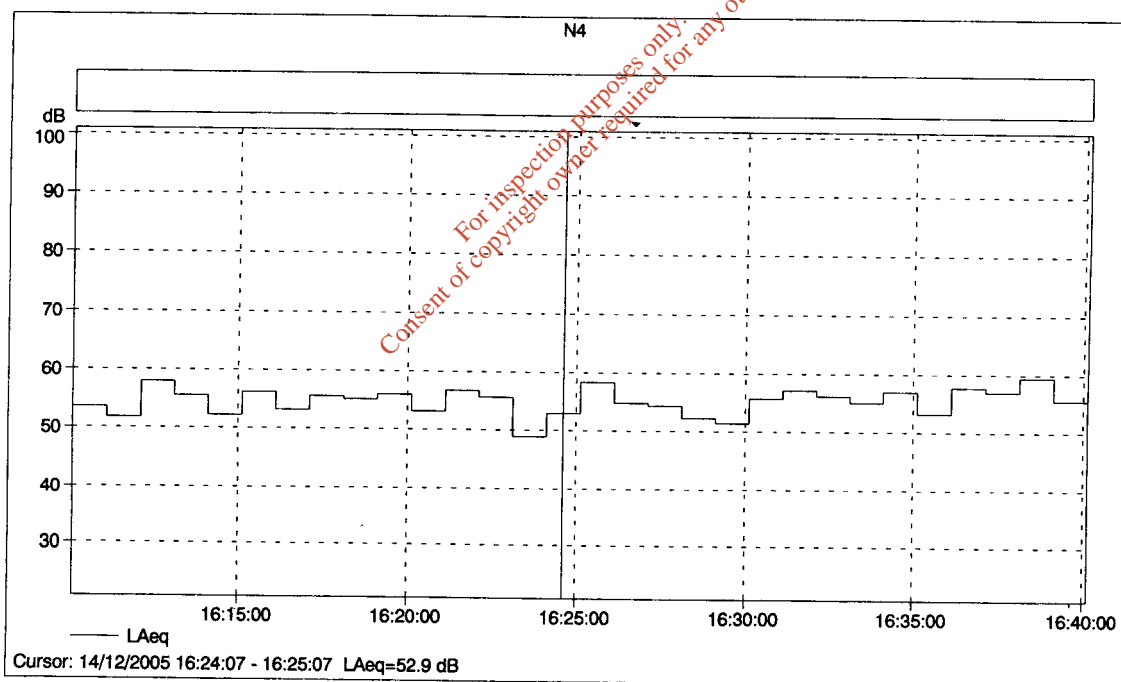
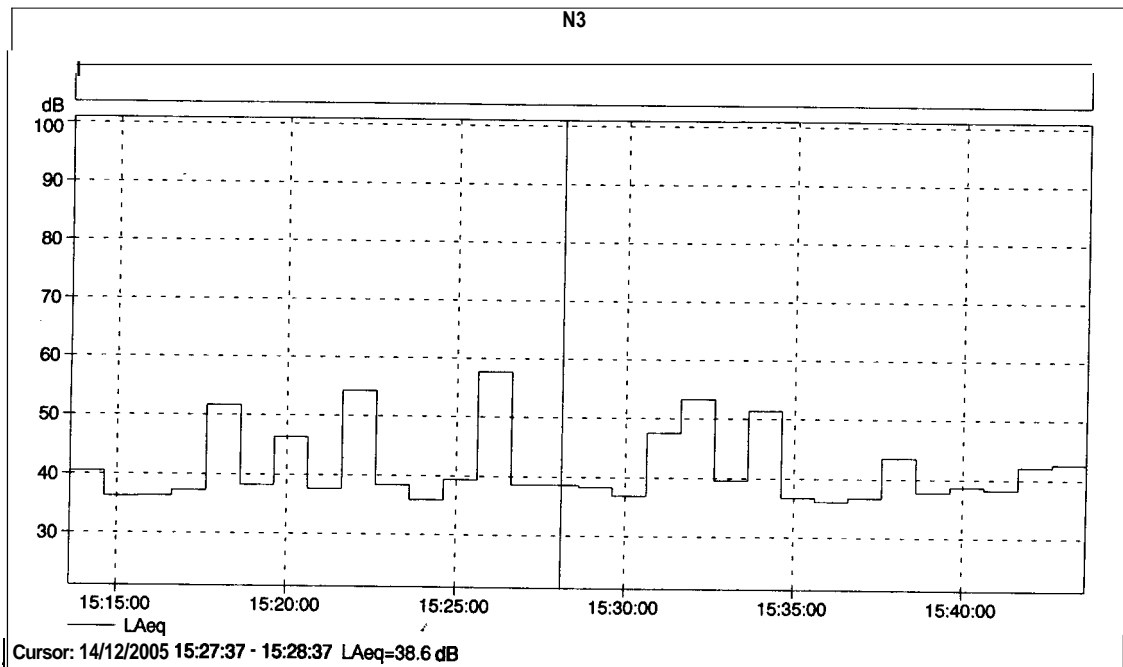
Calibration Time: 14/12/2005 13:52:29
Calibration Level: 94.0 dB
Sensitivity: -27.1 dB
ZF0023: Not used

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