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1 INTRODUCTION

This report deals with the noise monitoring requirement conditions of RILTA Environmental Ltd. Hazardous Waste Facility at Greenogue Business Park, Catchpole, Co. Dublin, Waste Licence No**.** 192-1.

2 NOISE MONITORING SURVEY

The noise survey was carried out in the environs surrounding the waste facility at the locations agreed with the EPA (see Drawing No. 1250/01/1002). Weather conditions during monitoring were dry and calm with a slight breeze. The following conditions were adhered to in undertaking the survey:

- Measurement of noise levels was undertaken using Type 1 instrumentation;
- Cognisance was taken of the EPA's 'Environmental Noise Survey Guidance Document, 2003;
- The survey was carried out in accordance with ISO 1996 Acoustics - Description and Measurement of Environmental Noise: Parts 1/2/3.

2.1 Instrumentation Used

The following instrumentation was used in the environmental noise monitoring survey:

- One Larson Davis 824 Precision Integrating Sound Level Analyser/Data logger with *Real-Time* Frequency Analyser Facility.
- Wind Shield Type: Larson Davis 2120 Windscreen.
- Calibration Type: Larson Davis Precision Acoustic Calibrator Model CA200.

2.2 Measurement Procedure

Day time noise monitoring was carried out on 6th December 2007 during the day (for 30 minute intervals) at four agreed EPA locations. Night time noise monitoring was carried out on the 14th December 2007. All the environmental noise analysers had data logging facilities set on real-time, the logged data was later downloaded via a personal computer using software. One third octave frequency analysis was taken at the locations using the 824 Precision Integrating Sound Level Analyser/Data logger with *real-time* frequency analyser facility.

The measurement locations were all away from reflecting surfaces and at 1.5m height above local ground.

All acoustic instrumentation was calibrated before and after the survey period and no drift of calibration was observed (calibration level 114dB at 1000Hz).

2.3 Results of Noise Survey

The noise monitoring locations are described in Table 1 and illustrated on Drawing No. 1250/01/1002. The results of the noise survey are given in Table 2. The 1/3 Octave frequency analysis data is given in graphical format in Appendix I.

Table 1 Noise Monitoring Locations

Monitoring Location	Description
N1	South western boundary of site
N2	North western boundary of site
N3	North eastern boundary of site
N4	South eastern boundary of site

Location N1

Noise monitoring location N1 is located at the south western boundary of the site, adjacent to the site car park and to the access road to RILTA within the Greenogue Business Park. Daytime noise sources included activities on site, site traffic and traffic on the Business Park roads. Night time noise sources included traffic on the Business Park roads, noise from neighbouring premises and occasional aircraft. A radio was also playing within building "10", the sliding door of which was open.

Location N2

N2 is located in the north western corner of the site, behind the racked storage building. During daytime monitoring periods noise emissions from RILTA were audible, and the dominant sources of noise included heavy goods vehicles (HGVs) within the site, aircraft and traffic on Business Park roads. Aircraft and distant traffic were audible during the frequency analysis measurement. During night time monitoring periods noise emissions from RILTA were not audible and the dominant noise sources included the adjacent river and traffic on Business Park roads, plus the Garda helicopter overhead.

Location N3

N3 is located at the north eastern boundary of the site, adjacent the bunded tank area. Noise emissions from RILTA were audible at N3 during the daytime noise monitoring period. Dominant noise sources included activity within the site including forklift truck operations, and noise from activity in adjacent premises. During night time measurement periods, the dominant noise sources included emissions from adjacent pipes within the RILTA premises and traffic on Business Park roads. These noise sources were audible during the frequency analysis measurement.

Location N4

Noise monitoring location N4 is located in the south eastern corner of the site. During the daytime noise monitoring periods activities in the drum centre and site traffic were the dominant sources. These emissions were audible during the frequency analysis measurement. During the night time noise monitoring periods aircraft and distant traffic were the dominant sources of noise emissions. Occasional passing traffic and a barking dog also contributed to noise levels.

Table 2 Noise Monitoring Results – dB(A) and 30 minute intervals

Location	Date	Time	Leq	L_{10}	L_{90}	Comments
DAYTIME MONITORING						
N1	6th Dec 07	12:10	59.3	61.7	54.5	HGV engine noise, cars entering/exiting site, Radio playing in Building "10", sliding doors open.
N2	6th Dec 07	13:21	59.7	61.4	54.2	Site activities and HGVs were the dominant sources. Activity is adjacent premises, birdsong and aircraft also contributed to noise levels.
N3	6th Dec 07	13:50	62.1	66.1	58.2	Site activities, forklift operations and activities in adjacent premises were the dominant noise sources. Occasional aircraft, and bird song also contributed to noise levels. The adjacent flowing river was also audible.
N4	6th Dec 07	12:47	65.4	68.9	55.7	Busy traffic on external roads, infrequent site traffic, facility noise and noise from surrounding facilities.
NIGHT TIME MONITORING						
N1	14th Dec 07	23:30	43.2	45.6	40.8	Distant Traffic on external roads was the dominant noise source. infrequent passing traffic and aircraft also contributed to noise levels.
N2	14th Dec 07	22:00	46.6	48.1	44.3	The adjacent river was audible at this location along with distant traffic and occasional aircraft. Foliage noise was also audible
N3	14th Dec 07	23:00	46.5	48.0	44.2	Traffic on Business Park roads foliage noise and occasional aircraft contributed to noise levels.
N4	14th Dec 07	22:30	45.6	47.9	43.2	Traffic on Business Park roads contributed to noise levels along with occasional aircraft.

3 CONCLUSION

The noise emission limits given in Waste Licence 192-1 are 55 dB(A) for day time and 45 dB(A) for night time. These levels specifically relate to noise emissions arising from the activity, measured at any noise sensitive location.

The noise emissions from RILTA Environmental Ltd. are given in Table 2. Noise levels recorded at all EPA agreed noise monitoring locations contain noise emissions from RILTA , noise emissions from adjacent sites and from traffic on the road network of Greenogue Business Park. These levels are typical of noise levels resulting from industrial activities. Note that the EPA agreed noise monitoring locations are all on site and do not reflect emissions at noise sensitive locations.

There were no impulsive noise emissions audible at any of the monitoring locations. With regard to tonal emissions, Figures 1-4 indicate that no tonal components were present during the daytime or night time frequency analysis at any location.

APPENDIX 1 – FREQUENCY ANALYSIS

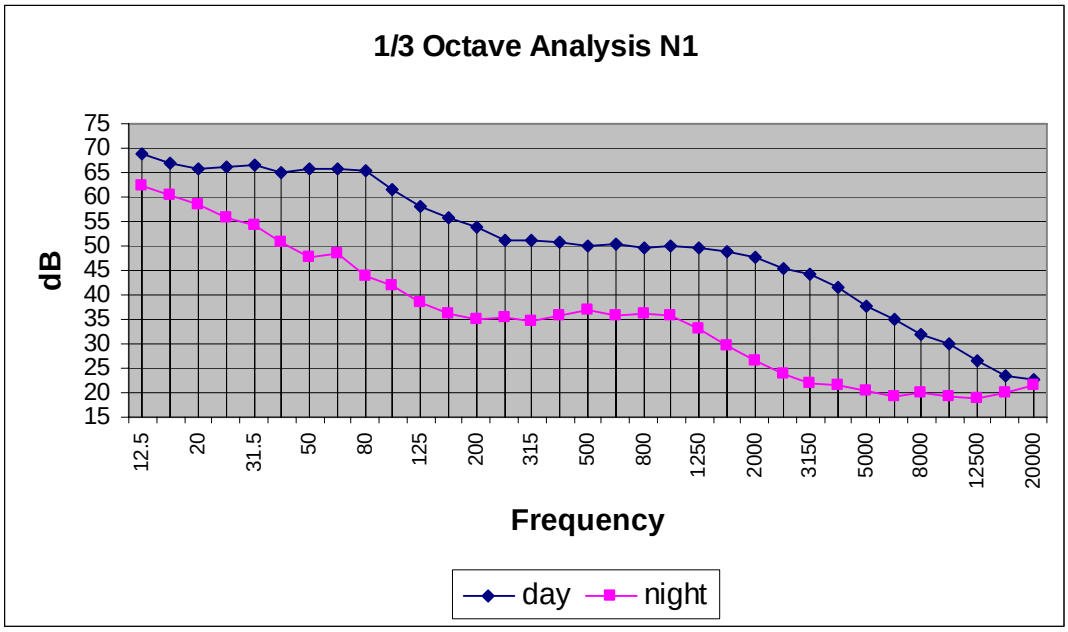

Figure 1 Frequency Analysis at N1

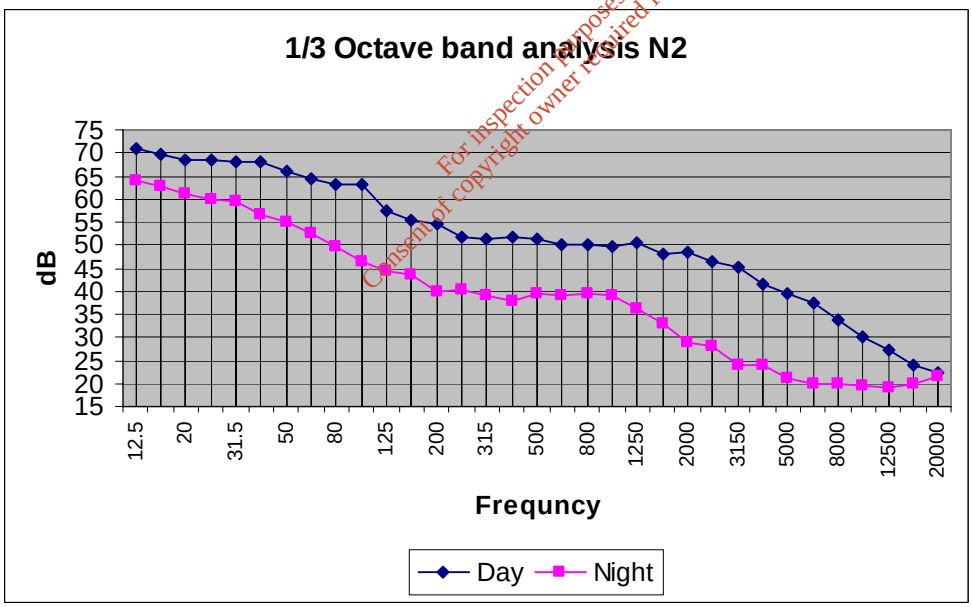

Figure 2 Frequency Analysis at N2

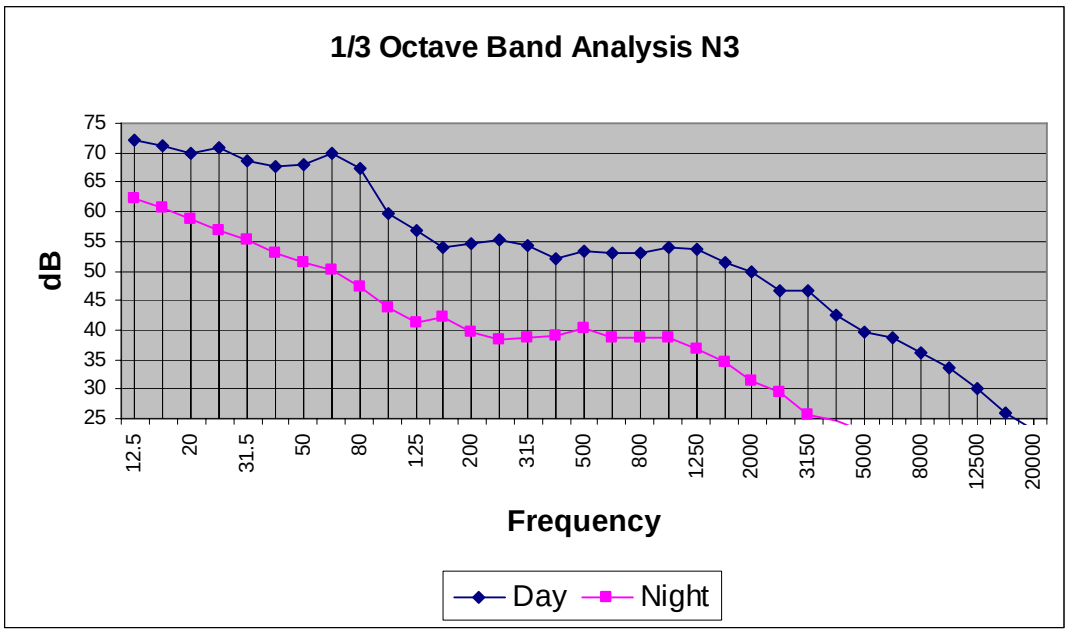

Figure 3 Frequency Analysis at N3

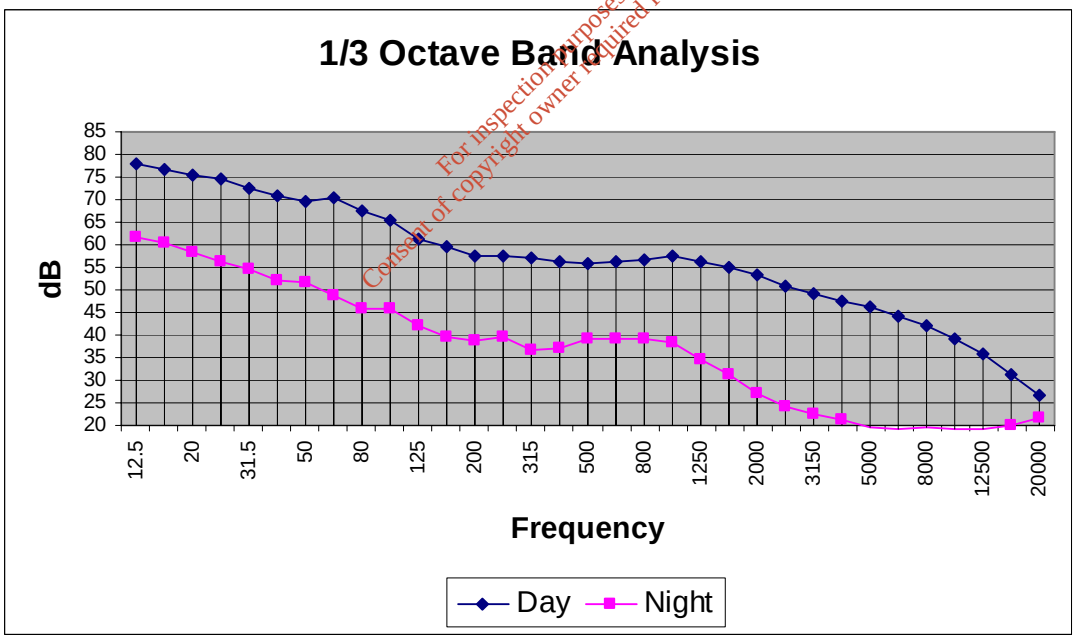

Figure 4 Frequency Analysis at N4