



Matrix Environmental

***Monitoring of
Noise Levels at the
Milltown Compost Site
Milltownmore, Fethard
Co. Tipperary.
June 2022
W0270-02***

For the Attention of:

Mr David Ronan
Milltown Compost
Milltownmore
Fethard
Co. Tipperary

Prepared by:

Mr. Craig Mallinson
Environmental Consultant

Ref: Noise 2022

Date: June 2022

UNIT 12, OLD CONNELL WEIR, NEWBRIDGE, CO KILDARE, IRELAND
TELEPHONE: +353 45 436935, FAX: +353 45 431891
VAT No: IE 6872328F

REGISTERED OFFICE: UNIT 12, OLD CONNELL WEIR, NEWBRIDGE, CO KILDARE; REGISTERED NO: 329285

TABLE OF CONTENTS

- 1.0 INTRODUCTION
- 2.0 METHODOLOGY
- 3.0 INSTRUMENTATION EQUIPMENT USED
- 4.0 RESULTS
- 5.0 DISCUSSION

1.0 INTRODUCTION

Milltown Compost operates a composting site at Milltownmore, Fethard, Co. Tipperary. Matrix Environmental was contracted to carry out a daytime noise survey in order to assess the noise contribution from on-site activities at the nearest sensitive receptor to the compost site. The site was subsequently visited on the 21st of June 2022 to undertake the noise survey. This report presents details of both the methodologies employed and results obtained.

2.0 METHODOLOGIES

2.1 Measurement Parameters

2.1.1 L_{AeqT} Values

L_{AeqT} values represent the continuous equivalent sound level over a specified time (t). This value expresses the average levels over time and is a linear integral.

2.1.2 L_{AF Max}

The maximum RMS, A-Weighted sound pressure level occurring within a specified time period.

2.1.3 L₉₀ and L₁₀ Values

The L₉₀ and L₁₀ values represent the sound levels exceeded for a percentage of the instrument measuring time. L₁₀ indicates that for 10% of the monitoring period, the sound levels were greater than the quoted value. L₁₀ is a good statistical parameter for expressing event noise such as passing traffic. The L₉₀ represents post event sound levels and is a good indicator of background noise levels.

2.2 Standards and Guidance

The acoustic assessment and subsequent report are in accordance with International Standard Organisation (ISO) 1996 Acoustics – Description and Measurement of Environmental Noise Part 1, 2, and 3 in addition to the Environmental Protection Agency: Environmental Noise Survey – Guidance Document NG4

2.3 Site information

2.3.1 All measurements were taken at 1.5 m height above local ground level and 1-2 m away from reflective surfaces.

2.3.2 The weather was dry and warm (ranged from 18-19 degrees Celsius) with light breeze from a south-westerly direction at the time of the assessment.

2.3.3 Table 2.2 describes the locations of the monitoring positions for the noise monitoring assessment.

2.3.4 Monitoring Locations

The following is a detailed description of the noise monitoring points:

Measurement No.	Location
NSL	At the entrance to the NSL to the Northwest of the site

3.0 INSTRUMENTATION EQUIPMENT USED

The following equipment was employed during the acoustic assessment on 21st of June 2022

Bruel & Kjaer Light Noise Monitor

Model No: 2250 Light

Serial No. 2620701

Microphone Type: B & K Type 4189

Serial No: 2606551

Calibrator: B & K Type 4231

Serial No: 3011175

Tripod

On Site Calibration

The instrument was calibrated immediately before and after the measurement periods with no drift in calibration level noted.

Calibration Date – 21/6/22

Calibration level - 94dB(A)

4.0 **RESULTS**

Tables 4.1 present the results of the noise monitoring survey carried out at the Milltownmore site on the 21st of June 2022

TABLE 4.1: DAY-TIME NOISE MEASUREMENT RESULTS 12:30 – 15:00					
Location / Measurement No.	Measurement Period (min)	L _{eq} dB(A)	L ₁₀ dB(A)	L ₉₀ dB(A)	L _{F Max} dB(A)
NSL No1	30	38	40	31	66
NSL No2	30	44	47	32	65
NSL No3	30	49	53	31	75

5.0 DISCUSSION

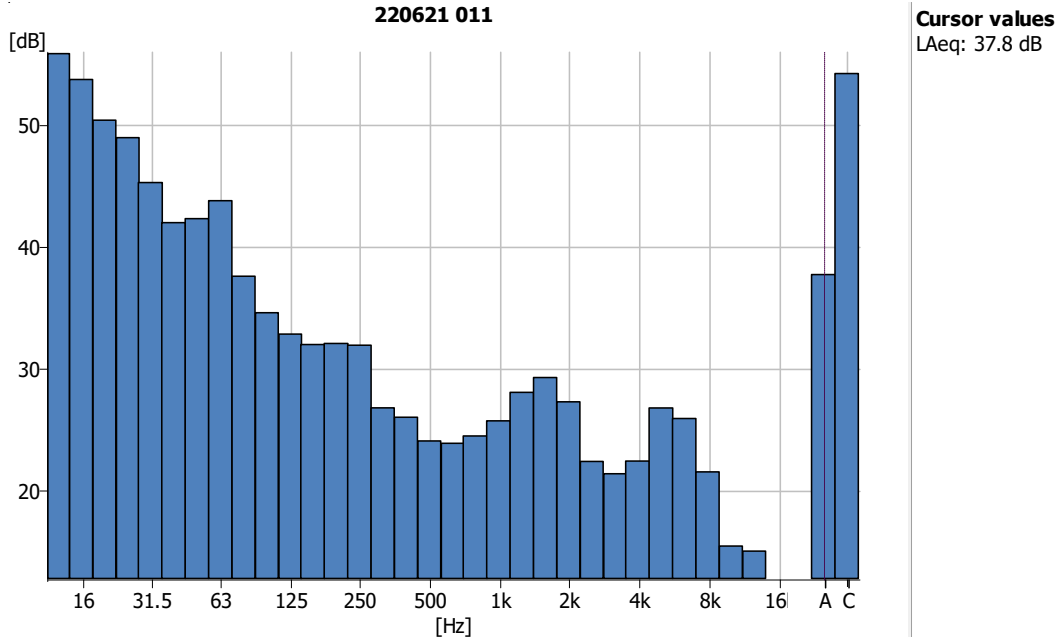
DAYTIME NOISE.

Location - NSL: At entrance to the NSL.

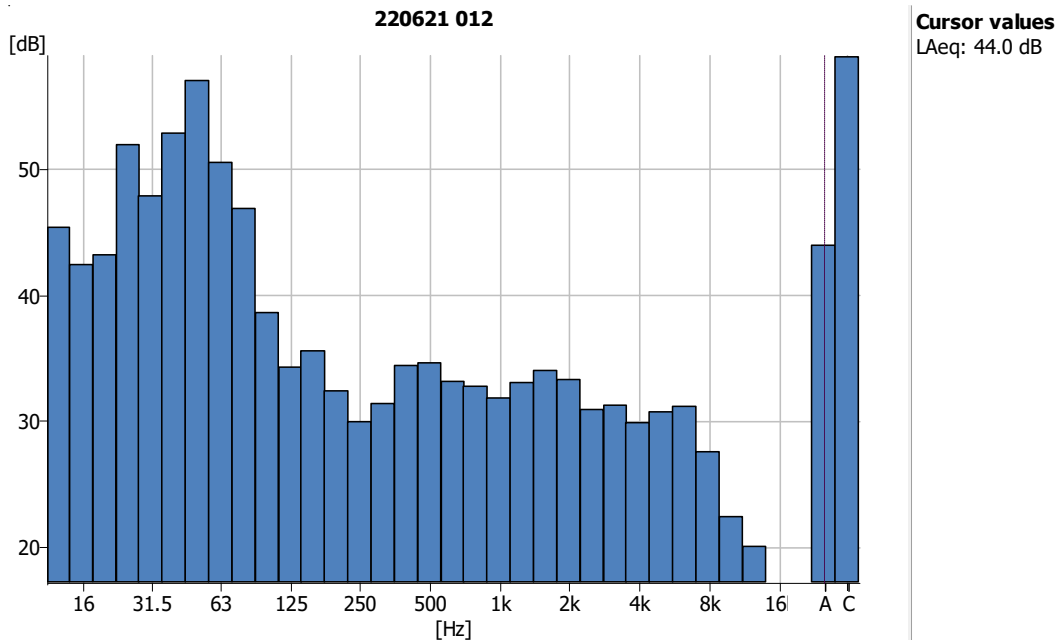
The L_{Aeq} 's recorded at this location ranged from 38-49 dB (A) which are all within the day time limit of 55 dB (A) as stipulated in the waste licence. The L_{AFmax} readings for all measurements were caused by vehicles (vans for measurements 1&2 and a tractor for measurement 3) associated with both the site and the adjacent farm passing directly by the noise meter and also by a car entering and exiting the NSL (measurement No3). The other contributors to the noise levels in the vicinity of the noise monitoring location were bird song and agricultural activities. No site noise was audible during the monitoring periods.

No tonal noise observed at the NSL - see graphs in appendix 1

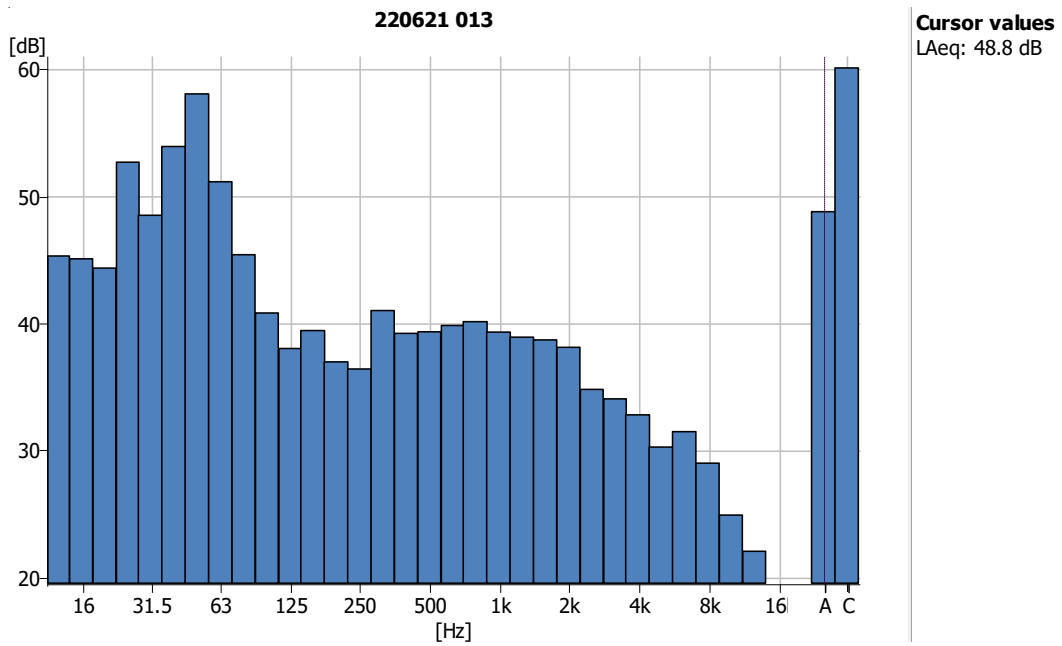
**Appendix 1
Tonal Graph**



Sensitive Receptor NSL Daytime - Tonal Graph No.1




Sensitive Receptor NSL Daytime - Tonal Graph No.2





Sensitive Receptor NSL Daytime - Tonal Graph No.3

Appendix 2
Calibration Certificates



Brüel & Kjær
The Calibration Laboratory
Skodsborgvej 307, DK-2850 Nærum, Denmark





DANAK
CAL Reg.nr. 307

CERTIFICATE OF CALIBRATION

No: CDK2208400

Page 1 of 10

CALIBRATION OF

Sound Level Meter:	Brüel & Kjær Type 2250	No: 2620701	Id: - 2654662
Microphone:	Brüel & Kjær Type 4950	No: 2606551	
Preamplifier:	Brüel & Kjær Type ZC-0032	No: 6822	
Supplied Calibrator:	Brüel & Kjær Type 4231	No: 2460008	
Software version:	BZ7222 Version 2.1	Pattern Approval:	PTB1.63-4046158
Instruction manual:	BE1712-18		

CUSTOMER

Enfonic Ltd
Unit 2A
Century Business Park
Dublin
D11 TOHV
Ireland

CALIBRATION CONDITIONS

Preconditioning: 4 hours at 23°C ± 3°C
 Environment conditions: *See actual values in Environmental conditions sections.*

SPECIFICATIONS

The Sound Level Meter Brüel & Kjær Type 2250 has been calibrated in accordance with the requirements as specified in IEC61672-1:2002 class 1. Procedures from IEC 61672-3:2006 were used to perform the periodic tests. The accreditation assures the traceability to the international units system SI.

PROCEDURE

The measurements have been performed with the assistance of Brüel & Kjær Sound Level Meter Calibration System 3630 with application software type 7763 (version 4.9 - DB: 4.90) by using procedure 2250-4189.


RESULTS

Calibration Mode: **Calibration as received.**


The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95 %. The uncertainty evaluation has been carried out in accordance with EA-4/02 from elements originating from the standards, calibration method, effect of environmental conditions and any short time contribution from the device under calibration.

Date of calibration: 2022-02-18

Date of issue: 2022-02-18



Mikail Önder
Calibration Technician



Susanne Jørgensen
Approved Signatory

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

Certificate of Calibration

Issued by University of Salford (Acoustic Calibration Laboratory)
UKAS ACCREDITED CALIBRATION LABORATORY NO. 0801

Page 2 of 2

Certificate Number: 05619/1

Date of Issue: 14 February 2022

MEASUREMENTS

The sound pressure level generated by the calibrator was measured using a calibrated, WS2P condenser microphone as specified in this certificate. The calibration was carried out with the calibrator in the half-inch configuration.

Five determinations of the sound pressure level, frequency and total distortion were made.

The results have been corrected to the reference pressure of 101.325 kPa using manufacturer's data.

RESULTS

Coupler configuration: Half-inch
Microphone type: B&K 4192
Output level (dB re 20 μ Pa): 94.29 dB \pm 0.09 dB
Frequency (Hz): 999.97 Hz \pm 0.12 Hz
Total Distortion (%): 0.21 % \pm 0.22 %*

*Negative values of distortion are not realistic and are not included in the confidence interval.

Average environmental conditions at the time of measurement were:

Pressure: 101.902 kPa \pm 0.015 kPa
Temperature: 22.2 °C \pm 0.4 °C
Relative humidity: 43.2 % \pm 2.1 %

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

All measurement results are retained at the acoustic calibration laboratory for at least four years.

-----END OF CERTIFICATE-----

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to the units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full except with the prior written approval of the issuing laboratory.

**Appendix 3
Location Map**

