

## CONSULTANTS ADVICE NOTE

CAN Subject:	<b>CAN - 001</b> - Noise monitoring protocol	Date:	23/03/2021
Contract Name:	Wainuiomata Cleanfill		
Client:	Hutt City Council	Job No:	84466.0050
Attn:	c/o Steve Arden		
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### Introduction

This measurement protocol is intended to provide a robust methodology for monitoring noise from Wainuiomata Cleanfill to assess whether noise from activities on the site are compliant with the noise limit of 50 dB LAeq as defined in Condition 12 of resource consent RM190050.

This consultant advice note (CAN) incorporates discussions held between Mr Darran Humpheson of Tonkin & Taylor Ltd and Mr Steve Arden of Marshall Day Acoustics in particular the duration of monitoring on site.

This CAN will be followed for the next compliance survey which is scheduled for the end of March 2021.

### Instrumentation

A 01dB Fusion sound level meter will be used for the measurements together with an environmental kit such that it can be left unattended. This will be set up to record 1 second measurements which can be subsequently post-processed. Audio will be recorded continuously.

### Monitoring location

Monitoring is proposed to take place at 200 Coast Road, as shown in Figure 1 below. This location is within the garden, approximately at the notional boundary, at a location with clear line of sight to the cleanfill. The microphone will be installed at a height of 1.5 m above ground level.

Depending upon site operations, monitoring may be undertaken at 199 Coast Road if operations are taking place near the eastern boundary rather than within the southern area of the site and access can be gained to install equipment within the property boundary. Observations performed at the time of the visit will determine which location is likely to experience the highest noise levels from site activities.



Figure 1: Monitoring location at 200 Coast Road, Wainuiomata

## Measurement protocol

Measurements will be undertaken in accordance with NZS 6801. A suitable 48-hour period will be chosen when wind speeds are ideally less than 5 m/s and conditions are dry, although it is noted this may be difficult to achieve at this location.

Personnel related to the cleanfill operation either at the site or at the Council will not be made aware of the survey prior to or during measurements.

The meter will be set up at the location specified above. The meter calibration will be checked prior to starting the measurements. Notes will be made on visible site activities, meteorological conditions, and any other noise sources present at the time of the setup.

The meter will be left to log continuously for a period of at least 48 hours covering normal working days (Monday to Saturday).

After 48 hours of continuous logging, the meter will be collected. The microphone calibration will be checked after the measurements have been stopped and any drift in calibration noted. Notes will be made on visible site activities, meteorological conditions, and any other noise sources present at the time of the collection. Monitoring will then commence at the remaining locations as per previous compliance monitoring visits.

The cleanfill site will subsequently be contacted and asked to provide information around the location and type of site activities during the survey period, as well as the number of vehicle movements within the site and any other relevant information.

Meteorological data for the duration of the survey will be obtained.

The measured results will be post-processed into 15-minute measurements, in accordance with NZS 6802 using O1dB Trait software. Any 15-minute period that exceeds 50 dB LAeq will be further

investigated to establish whether noise from the site exceeded the noise limits in the resource consent.

The rating level of the noise will be established as per the detailed method in Appendix B of NZS 6802, taking into account any special audible character, duration and intermittency as well as contamination from other sound sources, including vehicle traffic on Coast Road.

Periods of residual sound level will be established by examining the details of activity provided by the site as well as confirmation from listening to the audio recordings. If the difference between the measured total sound level and the residual sound level is less than 3.0 dB, a valid assessment cannot be done, and this will be noted in the report. If the difference is greater than 3.0 dB, an adjustment will be subtracted from the total measured level as per Table B1 in NZS 6802.

If a special audible characteristic is present (such as reversing beeps) then an adjustment of +5 dB will be added to the rating level. This will only be applied to measurements where the special audible characteristics are present and frequent in their occurrence.

A report will be prepared detailing the measured results and any subsequent investigation into 15-minute results higher than 50 dB LAeq.

The report will include (as per NZS 6802):

- Name of person(s) responsible for carrying out the measurements and assessment;
- A statement that sound measurements and records comply with the requirements of NZS 6801 (or provide details if any deviations required);
- Measurement procedures, measurement time intervals and justification of the choice of time intervals;
- Any adjustments made to obtain the rating level, including any assumptions made for the purpose of calculating the adjustments;
- A statement of whether the sound(s) under investigation complies with the relevant noise limit.

## **Applicability**

This report has been prepared for the exclusive use of our client Hutt City Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

23-Mar-21

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