



Noise Summary Report
Fourth Quarter 2025





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1. Introduction

This report provides a summary of noise measurements and assessments undertaken by OceanaGold (NZ) Ltd Waihi Operations (OceanaGold) for the fourth quarter of 2025. The report is prepared to comply with the requirements of five consents:

- Hauraki District Council (HDC) Land Use Consent (LUC) for Project Martha (LUC 202.2018.857.1, condition 26A). OceanaGold is required to submit quarterly summary reports to Council on representative noise levels.
- Under the Noise Conditions of the LUC for the Favona Underground Mine (No. 85.050.326.E, condition 9) a summary report is required at the end of each 3-month period from commencement to completion of work.
- Under the Noise Conditions of the LUC for the Trio Underground Mine (RC-15774, condition 6d) a summary report is required at the end of each 3-month period from commencement to completion of work.
- Under the Noise Conditions of the LUC for the Correnso Underground Mine (RC-202.2012, condition 11d) a summary report is required at the end of each 3-month period from commencement to completion of work.
- Under the Noise Conditions of the LUSE for the Services Trench (LUSE-202.2024.00001981, condition 13), a summary report on compliance with Condition 11 to the Hauraki District Council every three months.

Although a report is required, there was no active mining in Favona and Trio during the period.

For exploration drilling operations, the conditions set out in section 8.3.1 of the Hauraki District Plan apply. Any monitoring of these activities is also included in this report.

2. Equipment and Calibration

2.1. Instrumentation Information

OceanaGold (NZ) Ltd Waihi Operations uses equipment and accessories from the manufacturer Brüel & Kjær to measure sound, these are outline in **Table 1** below. These are calibrated by Diatec, an IANZ accredited laboratory in the field of metrology and calibration to ISO 17025.

Table 1. Monitoring Equipment and Accessory information and calibration schedule

Type	Model	Serial Number	*Date of Calibration
Sound Level Meter (night use)	B&K 2250	3025096	30/04/2024
Sound Level Meter (day use)	B&K 2250	2619858	27/06/2024
Acoustic Calibrator	B&K 4231	3014415	02/05/2025
Microphone	B&K 4189	2345693	27/06/2024
Microphone	B&K 4189	3087408	30/04/2024
Microphone	B&K 4952	3166745	11/11/2025

* Calibrations are valid for two years

2.1. Field Checks/Calibration

Field Checks (pre and post calibration) of the microphone are completed before and after each reading. Sensitivity is automatically calculated and accepted or rejected. Any differences greater than 0.5dB as well as any adjustments made are recorded below.

During this quarter there were no variations over 0.5dB or changes made to the calibration of the sound level meters.

2.2. Additional Equipment

OceanaGold (NZ) Ltd Waihi Operations uses the Brüel & Kjær Applications – BZ5503 – Measurement Partner Suite to store and assess noise readings.

3. Methodology

Sound measurements and assessments by OceanaGold comply with the consent conditions and the New Zealand Standards *NZS 6801:2008 Acoustics - Measurement of Environmental Sound*, *6802:2008 Acoustics - Environmental Noise and NZS 6803:1999 Acoustics - Construction Noise*.

Compliance noise is measured for a minimum of 15 minutes as required under the consent conditions. Compliance readings cannot always be made on every site visit or check due to excessive wind conditions (i.e. greater than 5 m/s).

Monitoring checks are made in response to complaints whenever necessary; initially to verify the noise level and subsequently (if necessary) to determine the effectiveness of any mitigating actions and/or the effect of changing wind conditions (changing wind strength or direction influences noise transmission between the mine and the receiver).

OceanaGold uses noise monitoring procedures to ensure compliance with the above standards and consent conditions, and to support noise mitigation protocols documented in the site Noise Management Plan. The noise mitigation protocols require review of wind conditions that could potentially result in noise levels generating complaints. Monitoring has shown that wind speeds over 3 m/s (as measured at the OceanaGold weather station at Kenny St) are likely to increase mine noise downwind of an activity to levels that may generate complaints. When such wind conditions occur, OceanaGold implements mitigating actions to reduce noise levels where practicable. During periods when high frequency sounds such as birds, cicadas and crickets become the controlling noise, a filter may be applied to noise measurements to exclude four and eight kHz (kilohertz) and enable analysis of the lower frequency noise levels (i.e. those usually associated with mine operations).

Wind has a significant influence on sound propagation. Sound measurement and assessment must take the effect of wind into account. Sound measurements are taken in conditions ranging from nil wind up to 5 m/s at the receiver (*NZS 6801:2008 Acoustics - Measurement of Environmental Sound*). Wind greater than 5 m/s is generally unacceptable for monitoring due to wind noise effects in the nearby environment (e.g. trees) and on the microphone.

Downwind, wind speeds of 3 - 5 m/s are considered marginal due to propagation of sound by wind from source to receiver. Conditions like those for which the compliance limits are set generally occur when wind speeds are less than 3 m/s (*Hegley, 2003: Evidence of Nevil Hegley – Favona Underground Project 2003 Final – 11/11/03*).

Wind speeds are recorded at the OceanaGold weather station. These wind readings are assumed to represent the general wind conditions across Waihi and at the noise source (e.g. the mine/mill).

Other meteorological factors influencing the overall sound environment include solar radiation, cloud cover, sunrise and sunset times, wind direction and the direction from source to receiver. These factors were also measured to derive a meteorological stability rating at the time of monitoring. Meteorological stability categories of 4 (neutral) or 5 (slightly positive) are considered suitable meteorological influences on sound propagation and are used to determine noise compliance (*NZS 6801:2008 Acoustics - Measurement of Environmental Sound* (HDC LUC 97/98-105, Condition 3.8 (e))).

4. Results

4.1. Summary of Data

Monitoring activity for the period is shown in Table 2. These measurements include all quarterly compliance readings for operations, weekly services trench noise readings and all other checks.

Table 2. Noise monitoring activity.

	Number of days monitored	Number of checks (compliance & other)	Number of complainants	Number of complaints	Number of complaint checks
October	6	9	0	0	0
November	5	8	2	2	1
December	4	11	1	1	1
QR Total	15	28	3	3	2

4.2. Compliance

No mine dominated SCML exceeded compliance levels in suitable met conditions during the reporting period (see Table 3).

Table 3. Summary of Single Corrected Measured Levels (SCML).

	Total SCML readings	Mine dominated SCML over (limit + 5% during the day, limit at night)	SCML in suitable met	Mine dominated SCML over (in suitable met)
October	9	0	2	0
November	8	0	4	0
December	11	0	7*	0
QR Total	28	0	13	0

*There was one recording in December that did not have a met stability score associated with it due to a weather station upgrade at the time, therefore data was unobtainable.

Two MCNL assessments were made during the quarter (see Table 4) and were within consent limits. (Mean Corrected Noise Level assessments are taken from the quarterly day and night readings of the operational mine/mill noise measurements.)

Table 4. Summary of Mean Corrected Noise Levels (MCNL).

	Total MCNL calculations	Marginal MCNL	MCNL 5 dB over limit	MCNL in suitable met*	MCNL over limit in suitable met
October	0	0	0	0	0
November	0	0	0	0	0
December	2	0	0	1	0
QR Total	2	0	0	1	0

* All SCML readings that contribute to the MCNL reading must be in suitable met

4.3. Wind

As seen in Table 5, 50% (14/28) of the measurements made in the reporting period were in suitable wind conditions (<3m/s at the weather station). 100% (20/20) of the measurements made in the reporting period were in suitable wind conditions at the receiver, under 3m/s on average over the time monitored, using a handheld kestrel. (This total number is lower than the total number of measurements taken due to nighttime monitoring being unattended and therefore cannot obtain wind readings at the receiver).

46% (13/28) of the measurements made in the reporting period had suitable met scores of 4 or 5. Adverse wind conditions can influence suitable met assessments, as well as other factors including wind direction, solar radiation, and cloud cover. While it is the general prevailing wind condition as measured at the weather station that primarily affects noise propagation, measurements may be made under adverse conditions if the wind at the receiver or at street level is generally more favourable for monitoring. Even then, representative noise measurements of mining activities are not always possible due to wind noise.

There was one occasion where a period of high wind strength above 5 m/s was experienced during a monitoring period. The weather station read 5.0m/s, no wind speed at the receiver was recorded due to the reading being at night. Dominant noises recorded was possums and birds, wind seemed to not overtly effect the reading at the time.

Table 5. Meteorological conditions of noise assessments during Q4

	Monitoring occasions with average windspeed ≤3 m/s		Monitoring occasions with suitable met
	Receiver	Weather Station	
October	5/5	5/9	2/9
November	8/8	1/8	4/8
December	7/7	8/11**	7/11**
Total	20/20*	14/28	13/28

*Night monitoring is unattended and therefore cannot obtain wind readings at the receiver, this means this total number is less than total amount of noise checks

**One check with no weather station wind reading and met stability, due to a weather station upgrade at the time

5. Complaints

There were three complaints during this reporting period, received from two different complainants (Figure 1). In November, two complaints were lodged by separate individuals, both relating to the Service Trench works. One complaint was concerned about pile-driving noise on the State Highway 25 bridge; this was investigated, and a noise reading was taken, which confirmed compliance with activity limits. The second complaint was about general noise from the works, and the recent compliance check was referenced in the response. In December, a previous complainant raised concerns about earthworks—specifically directional drilling—occurring outside their home. This was also investigated, and a noise check confirmed compliance with the limits.

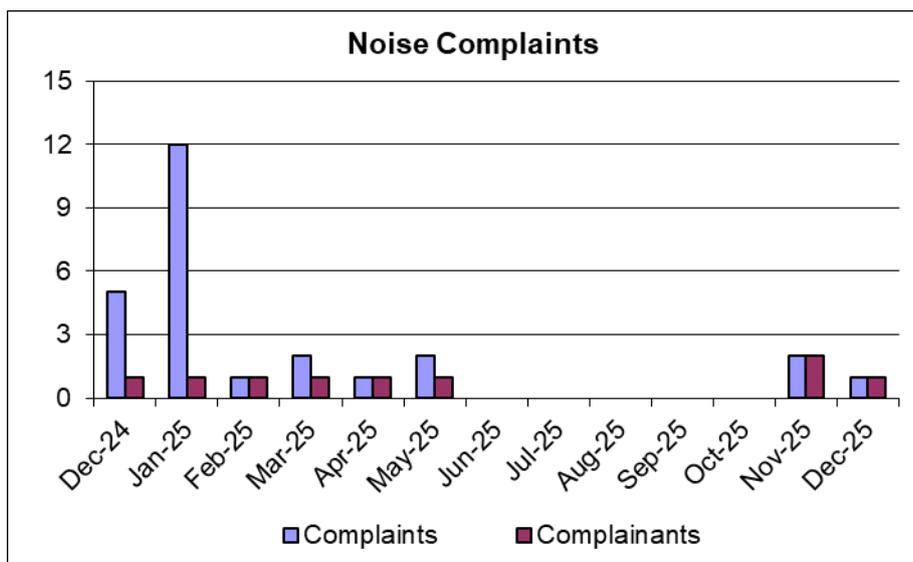


Figure 1. Noise complaint history

6. Operations Assessment

6.1. Processing and Underground Operations

Processing and underground mining operations continued as usual during the quarter. Seven compliance measurements were made of activities at the processing plant and surface-related activities supporting underground operations; all were compliant with noise limits. Day-time noise levels ranged between 46.9dB and 51.0dB (MCNL 48.6dB), with birds, and traffic being the dominant noises. Night-time noise levels ranged between 28.2 and 35.1dB (MCNL 32.7dB), with crickets, birds and dogs being the dominant noises.

Material for underground backfilling is currently being sourced from the polishing pond stockpile. As a result, increased machinery activity has occurred in that area this quarter. To assess compliance, one noise check was conducted. This reading was at 43.6dB, with birds and wind being the dominating noises and operations as background noise.

6.2. Exploration & Other Drilling

Local surface drilling occurred at the Willows Road site for geotechnical and hydrogeological investigations. To assess noise levels arising from these activities 4 checks were completed at night south of the drilling. All results were compliant and ranged between 35.5dB and 38.1dB.

6.3. Martha Pit

In-pit stockpiling of waste rock from underground has continued during the quarter when material is not being used for backfilling underground. No significant surface-related works were conducted in the Martha Pit, with only essential maintenance (drainage, weed control, and security) and low-impact geotechnical monitoring being undertaken.

6.4. Services Trench

Services trench works continued during the fourth quarter. In accordance with consent conditions, weekly noise monitoring was undertaken throughout the operational period. Measurements were taken at various locations, depending on where active works were occurring at the time. All recorded noise levels were compliant with the relevant limits. These levels ranged between 43.4dB and 65.1dB, with construction (including but not limited to diggers, pile drivers, directional drills, and motors), birds, traffic, cicadas and wind being the dominant noises. Three complaints and two investigations were made about Services Trench noise, this is explained in section 5.

6.5. TSF Construction

Construction at the TSFs commenced during the fourth quarter of the year. The current project is a crest raise for TSF1a, so noise checks were taken on public roads closest to the southwest of the Development Site. Two noise checks were made of construction activities on the crest; all were compliant with noise limit of 55dB. The levels ranged from 46.0 and 46.7 dB, with wind, cicadas, birds and heavy machinery being the dominant noises.

7. Mitigation

7.1. Mine & Exploration

Commitment to the management and mitigation of mine noise was sustained during the reporting period. In accordance with the Noise Management Plan (noise mitigation), no yellow or red assessments were determined during the quarter.

7.2. Services Trench

In accordance with Condition 11 of the consent, monitoring was undertaken to determine whether temporary noise barriers were required at the specified addresses to achieve the noise limits. During this quarter, no works occurred within 100 metres of the identified dwellings that necessitated the installation of temporary noise barriers to achieve the noise limits. As such, any barriers erected were a proactive measure taken by the construction team to reduce noise. All activities remained compliant with the noise limits set out in Condition 10.