SAINT ELMO MINE

ANNUAL NOISE QUALITY MONITORING REPORT

1 April 2023– 31 December 2024

Reference: SEP-RPT-EV-00003

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1 EXECUTIVE SUMMARY

The Annual Noise Quality Monitoring Report for the Saint Elmo Mine, covering the period from 1 April 2023 to 31 December 2024, details the findings of noise monitoring conducted in accordance with the Environmental Authority (EA) Permit P-EA-100119386, Schedule D. The monitoring system, utilizing a Class 1 noise monitoring station compliant with AS/NZS IEC 61672.1:2019 standards, recorded environmental noise levels over 15-minute intervals. Alongside meteorological data the information was used to assess compliance with the specified noise criteria. Despite some equipment challenges, including network failures and wildlife interference, the monitoring system remained operational throughout the period with any data gaps being identified within the data.

During this reporting period, no mining activities took place, and the nearest homestead remained unoccupied, limiting the potential for noise impacts from operations. However, the monitoring results consistently showed exceedances of the established noise criteria, primarily due to natural factors such as weather and wildlife, with background noise levels regularly surpassing the limits. The frequency of these exceedances indicates that the current noise limits may not fully account for the consistently high background noise levels in the area.

The introduction of real-time monitoring software in July 2024 has enhanced the ability to remotely track exceedances and identify their causes, providing valuable insight for future management decisions.

The persistent exceedances underscore the need to reassess and potentially raise the noise limits to better reflect the natural ambient noise levels, ensuring compliance and reducing the likelihood of ongoing exceedances. This adjustment would help prevent frequent exceedances caused by background factors that are beyond the control of the mining activities. Continued evaluation and adaptation of noise management strategies will be critical to maintaining operational compliance and minimizing the impact of environmental noise at the Saint Elmo Mine.

2 INTRODUCTION

Multicom Resources Noise Management Plan includes a commitment to develop Annual Noise Quality Monitoring Reports to determine compliance against the conditions set out in Schedule D of the Environmental Authority (EA) Permit P-EA-100119386.

3 METHODOLOGY

Monitoring is conducted using a Class 1 noise monitoring station with 1/3 octave band analysis, compliant with AS/NZS IEC 61672.1:2019 Electroacoustics – Sound Level Meters Specifications and holds current NATA and manufacturer calibration certificates. The monitor performs automatic system checks and can enable calibration factors, periodically verified by a built-in speaker.

Monitoring has been undertaken in accordance with the *AS 1055:2018 Acoustics – Description and Measurement of Environmental Noise* standards. The real-time noise monitoring system records one-third octave band noise levels with A-weighting (including LAeq, LA1, LA10, and LA90) over 15-minute intervals. Meteorological data over 1-hour intervals identify weather conditions during monitoring.

The real time monitoring utilises a noise monitoring device, installed in free-field conditions with a microphone height of 1.8 meters (m) above the ground, is solar-powered and connected to the network via a modem with an embedded SIM card.

Calibration of the noise monitoring device occurred prior to installation in April 2023 and on 12 June 2024. The acoustic calibrator was also calibrated on 12 June 2024.

4 CURRENT REPORTING PERIOD

This report presents the noise logging data for the period of:

- 1 April 2023 – 31 December 2024

It should be noted that there was no mining activity during this period.

5 LOCATION

The Saint Elmo Mine is located on rural, agricultural land. The predominant existing land use within the mine site and surrounding area is cattle grazing with several homesteads interspersed on the surrounding properties.

Immediately to the south of the mining boundary is the Flinders Highway. The Offsite Water Storage Facility (OWSF) and associated infrastructure are located near the Flinders River north-east of the mine. The planned pipeline from the OWSF to the Construction Infrastructure Area on Saint Elmo Station will be located along Punchbowl Road. The township of Julia Creek is located approximately 15 kilometres (km) from the western boundary of the mining lease and consequently very unlikely to be impacted by any noise generated from mining activities. The noise monitoring device installed on site is shown in **Figure 1.**

Figure 1 - Noise Monitoring Device

It is important to note that the noise monitor was relocated multiple times due to issues with the initial setup, which relied on solar power that proved to be unreliable. The monitor was first moved closer to the homestead for a more stable power source but was subsequently relocated twice more because the proximity to the homestead caused interference from machinery, particularly the cold rooms & generator. A summary of these relocations is provided in **Table 1**, with the final position shown in **Figure 2**.

Monthly weather data has been included within the noise monitoring results to provide context and help assess how weather conditions may have influenced noise levels during the monitoring period. The weather station is located near the noise monitoring equipment at the homestead and is shown in **Figure 3**.

NOTE: Any rainfall data below 1mm will not appear on graphs.

Table 1 - List of Noise Monitor Relocation Locations

Date	Easting (m)	Northing (m)	Reason
13/04/2023	590163	7722904	Noise monitor was originally installed by Trinity Consultants on solar power at this location
20/08/2024	590224	7722969	Relocated noise monitor closer to homestead to access permanent power, due to solar power battery unreliability
25/10/2024	590168	7722936	Relocated noise monitor further away from homestead to reduce interference from homestead machinery
14/11/2024	590154	7722897	Upgraded power supply and relocated noise monitor closer to original position to eliminate noise interference from homestead machinery

Figure 2 - Noise Monitoring Station position as of 14 November 2024

Figure 3 - Saint Elmo Weather Station

The nearest existing sensitive receptors are summarised in **Table 2** and shown in **Figure 4**, with the closest receptor (A) being the currently uninhabited Saint Elmo Homestead. The homestead is located approximately 270m west of the mining lease boundary and is the location at which the noise monitoring device has been installed. The Universal Transverse Mercator (UTM) coordinates for the device are 590163E, 7722911N. All receptors listed in **Table 2** are residences.

Table 2 - List of Sensitive Receptors with Coordinates

ID	Real Property Description	Approximate Distance and Direction from Site Boundary	Easting (m)	Northing (m)	Latitude (°)	Longitude (°)
A	Lot 13 EN89	270m west	590175	7722971	-20.5901	141.8653
B	Lot 4 EN30	4.2km west	584451	7724151	-20.5798	141.8104
C	Lot 4 MF16	6.8km north	588714	7739955	-20.4369	141.8503
D	Lot 2 MF3	10km north-east	598316	7739202	-20.4431	141.9424
E	Lot 11 EN105	6.2km south-west	591181	7709990	-20.7074	141.8756

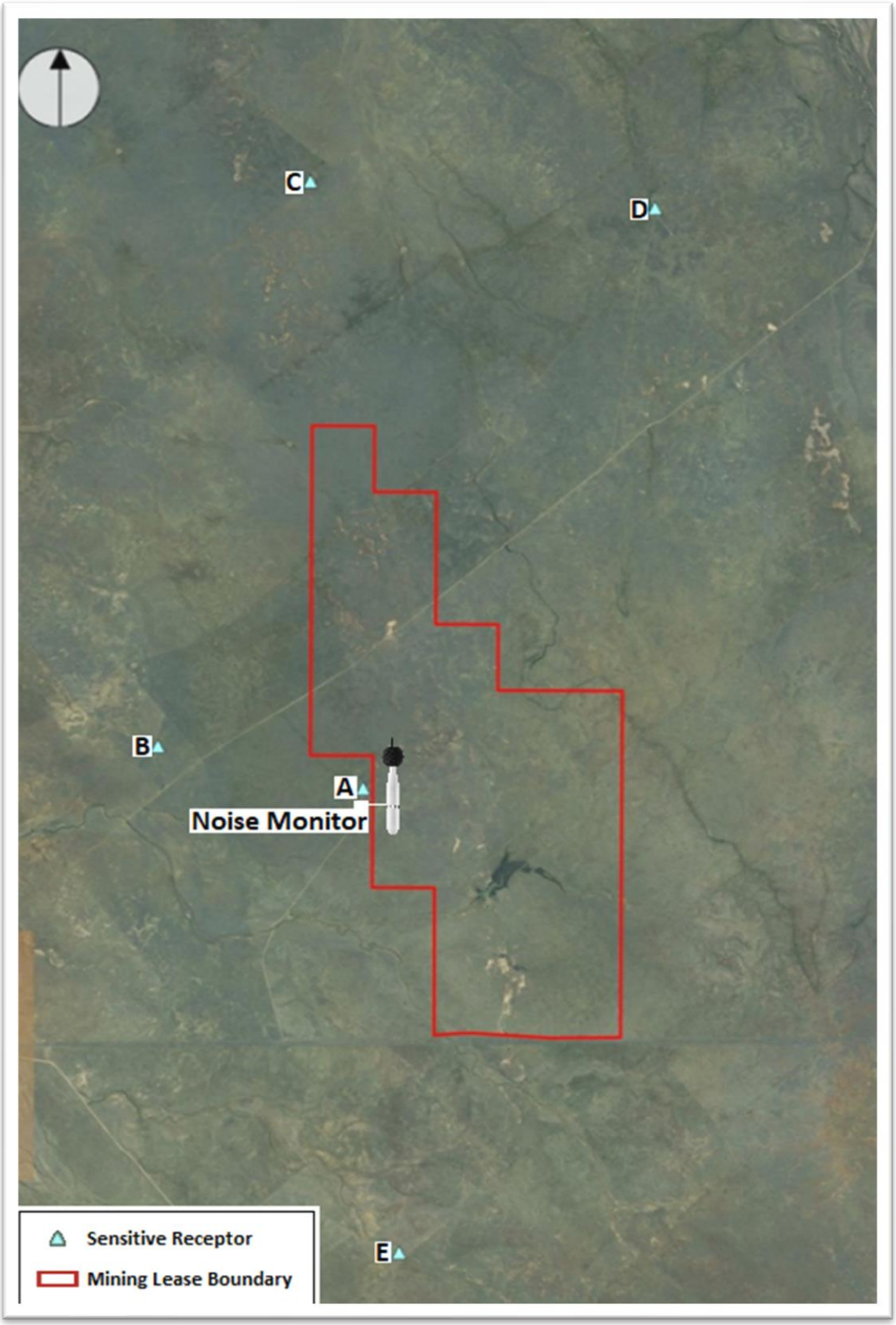


Figure 4 - Location of Sensitive Receptors and Noise Monitor

6 NOISE CRITERIA

Condition D of the EA specifies the maximum noise limits, which is outline in **Table 3** that should not be exceeded at the nearest sensitive place or commercial place.

Further information regarding the management and mitigation measures to be implemented as part of the Saint Elmo Project are outlined in the Noise Management Plan. These measures are in place to ensure impacts to environmental noise levels due to mining activities comply with the conditions detailed in Schedule D of the EA.

Table 3 - Relevant Noise Criteria at the Sensitive Place or Commercial Place

Period	Noise Limits $L_{Aeq, adj, 1\ hour}$ dBA Outdoor
Day (7:00am – 6:00pm)	**45**
Evening (6:00pm – 10:00pm)	**40**
Night (10:00pm – 7:00am)	**35**

7 EXCEEDANCE MONITORING

On 2 July 2024, noise monitoring event recording software was implemented to enable remote monitoring of noise exceedances and determine causation. Prior to this date, noise exceedances were identified through physical attendance at the site during periods when elevated noise was common. While the noise monitor recorded all decibel levels for exceedances as numerical figures, the new software allows for the gathering of audio recordings of the noise events. All exceedance definitions are categorized in **Table 4**.

Table 4 - Noise Category Definitions

Noise Category	Description
Wildlife	Native Wildlife (particularly: Insects, frogs, and birds), livestock and pest animals
Weather	Rain, storms, wind, hail, etc.
Speech	Human speech, music, communications, etc.
Non-Mining Ground	All Non-Mining Ground Vehicles and Equipment such as, trains, homestead machinery, cold-rooms, generators, pumps, power tools, farm vehicles cars, trucks, motorbikes, mowers, emergency services, farm labour etc.
Non-Mining Air	All Non-Mining Air Vehicles and Equipment such as, drones, aeroplanes, helicopters, fireworks, etc.
Construction/Mining Activities	Activities authorized under a mining tenement, including excavation or deposition of earth or materials, surface disturbance, construction, shaft sinking, mining equipment, machinery, power tools, operations, etc.
Other	Other noises unrelated to mining that are not specified above or cannot be determined with accuracy.

The data on the noise monitoring software from 2 July 2024 supports earlier findings regarding the sources of noise exceedances. The software's categories detailing exceedance causes, align with those identified through previous physical attendance, confirming consistency in the sources of noise exceedances.

Due to the high frequency of noise exceedance events, monitoring is conducted hourly for seven seconds only when a trigger value (noise limit) is exceeded four consecutive times. This approach allows us to understand the underlying causes without overloading the data management process.

The following data has been presented for the period of 2 July 2024 to 31 December 2024 which details the exceedances percentages by category (**Figure 5**) and for the period (**Figure 6**).

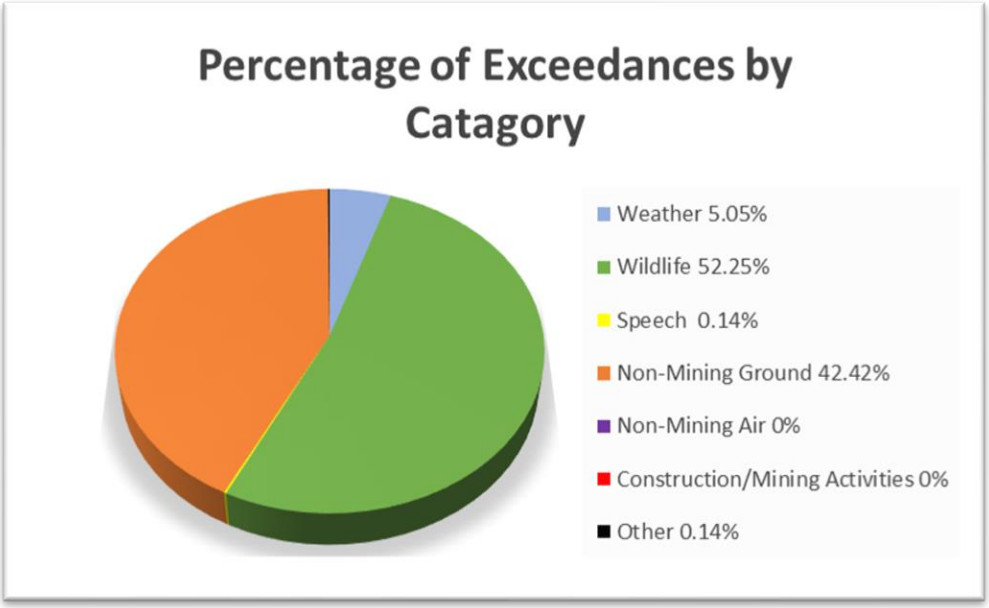


Figure 5 - Percentage of Exceedances by Noise Category

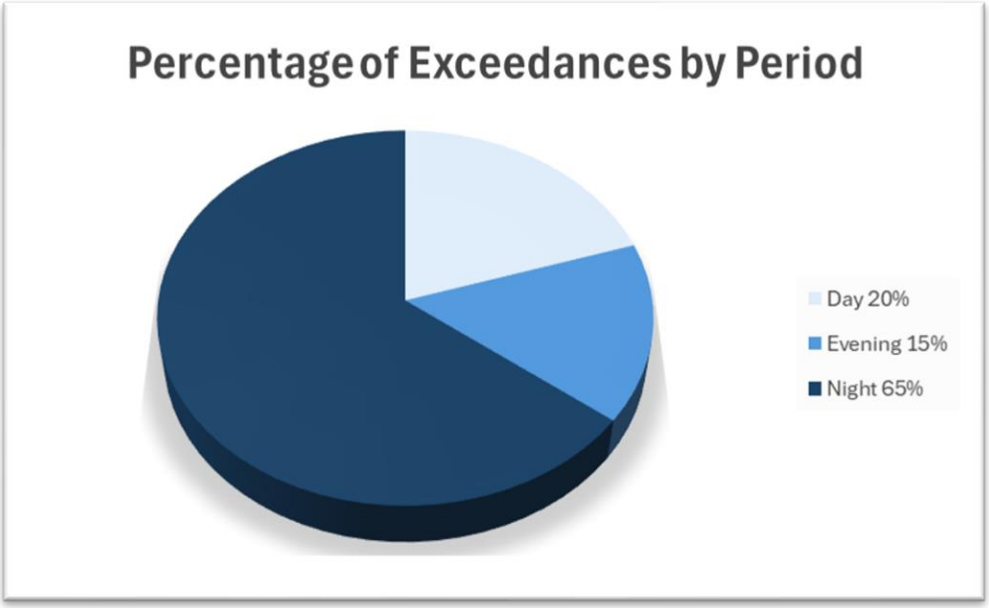


Figure 6 - Percentage of Exceedances by Period

7 METEOROLOGICAL DATA AND NOISE MONITORING RESULTS

7.1 APRIL 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 7**) as well as wind speed and direction (**Figure 8**)**.** Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 13 April 2023 through 30 April 2023 is presented in **Figure 9.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 5.**

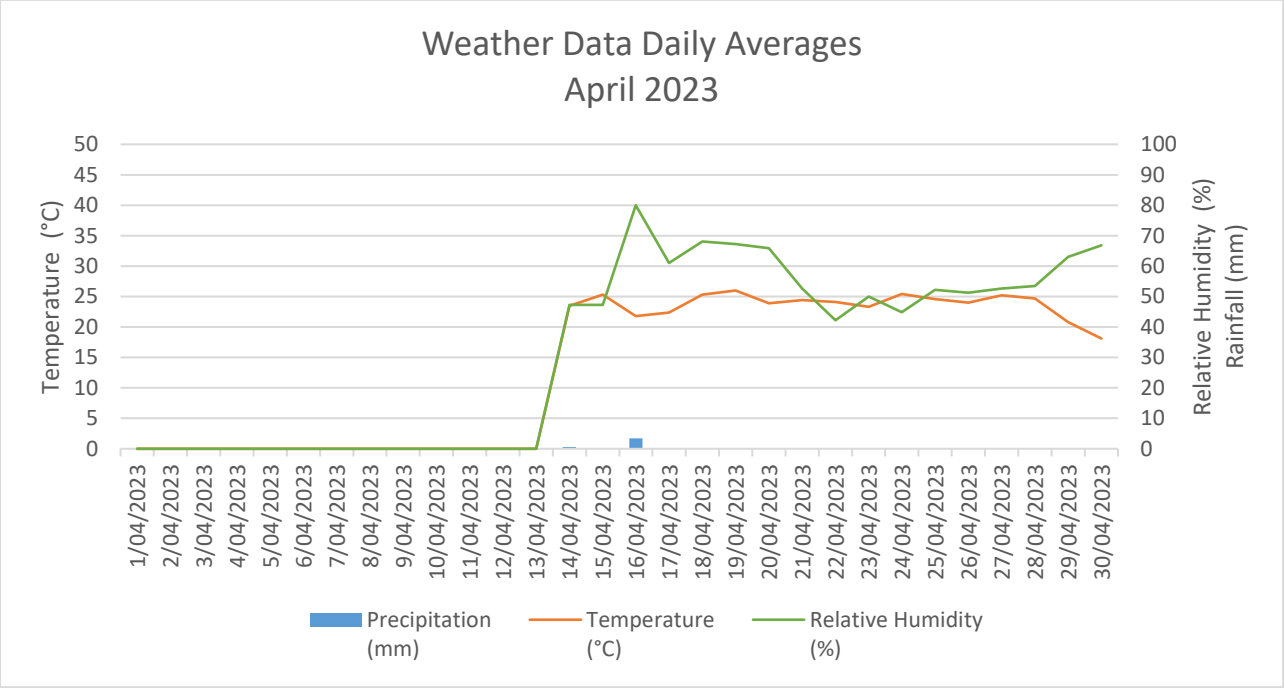


Figure 7 - April 2023 Weather Station Data

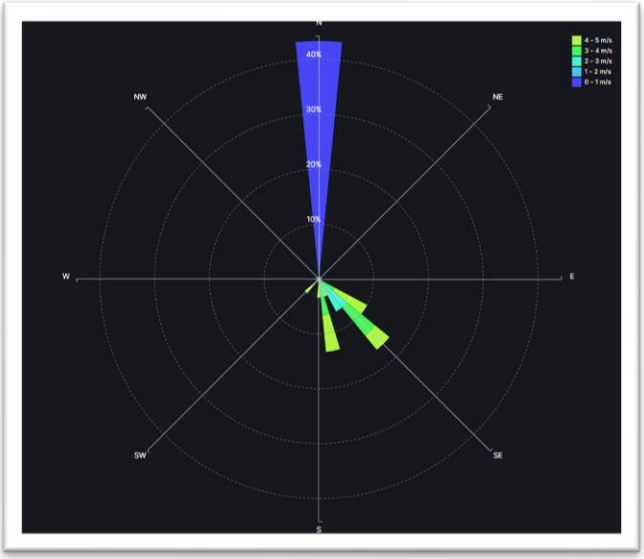


Figure 8 - April 2023 Wind Speed and Direction

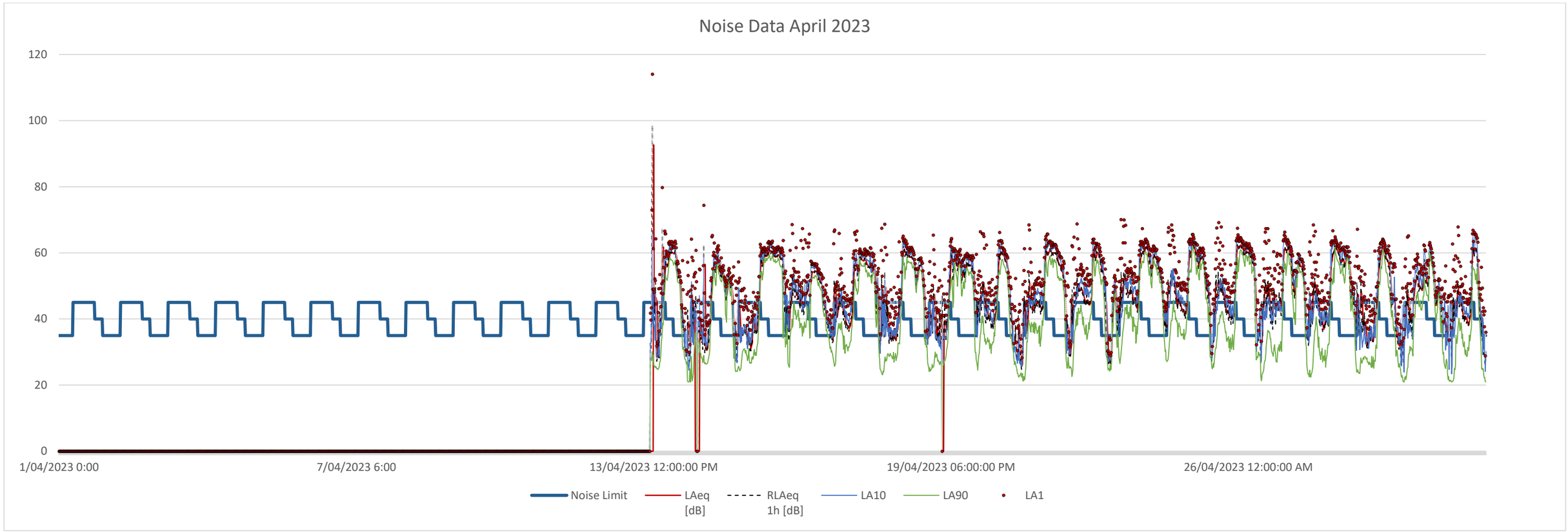


Figure 9 - April 2023 Noise Data

Table 5 - April 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/04/2023	0%	0%	0%
2/04/2023	0%	0%	0%
3/04/2023	0%	0%	0%
4/04/2023	0%	0%	0%
5/04/2023	0%	0%	0%
6/04/2023	0%	0%	0%
7/04/2023	0%	0%	0%
8/04/2023	0%	0%	0%
9/04/2023	0%	0%	0%
10/04/2023	0%	0%	0%
11/04/2023	0%	0%	0%
12/04/2023	0%	0%	0%
13/04/2023	30%	100%	22%
14/04/2023	25%	100%	69%
15/04/2023	7%	100%	83%
16/04/2023	55%	100%	100%
17/04/2023	34%	100%	86%
18/04/2023	25%	100%	89%
19/04/2023	23%	100%	92%
20/04/2023	27%	100%	97%
21/04/2023	36%	100%	47%
22/04/2023	80%	100%	78%
23/04/2023	77%	100%	72%
24/04/2023	52%	100%	100%
25/04/2023	52%	100%	81%
26/04/2023	50%	100%	78%
27/04/2023	32%	100%	89%
28/04/2023	20%	100%	94%
29/04/2023	68%	100%	61%
30/04/2023	27%	81%	61%
Totals *	24%	59%	47%

*includes data gaps

7.1.1 APRIL MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - Rainfall: Events occurred on 14 and 16 April, at 0.6 millimeters (mm) and 3.4mm respectively.
  - Wind: Speeds were above 2m/s (approximately 7.4km/h) and were mostly South to South Easterly.
  - Temperature: Highest Daily Average (HDA) 26.0°C, Lowest Daily Average (LDA) 18.1°C, Monthly Average (MA) 23.7°C.
  - Humidity: HDA 80%, LDA 42.2%, MA 32.2%
- Noise Monitor was Installed on 13 April 2023 prior to this date no data was collected.
  - Most exceedances occurred during the evening and nighttime periods, with events occurring almost every hour.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.2 MAY 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 10**) as well as wind speed and direction (**Figure 11**) and provides 1-hour averages. Continuous noise logging occurred in 15-minute intervals over the monitoring period. The monitoring data output for 1 May 2023 through 31 May 2023 is presented in **Figure 12**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 6.**

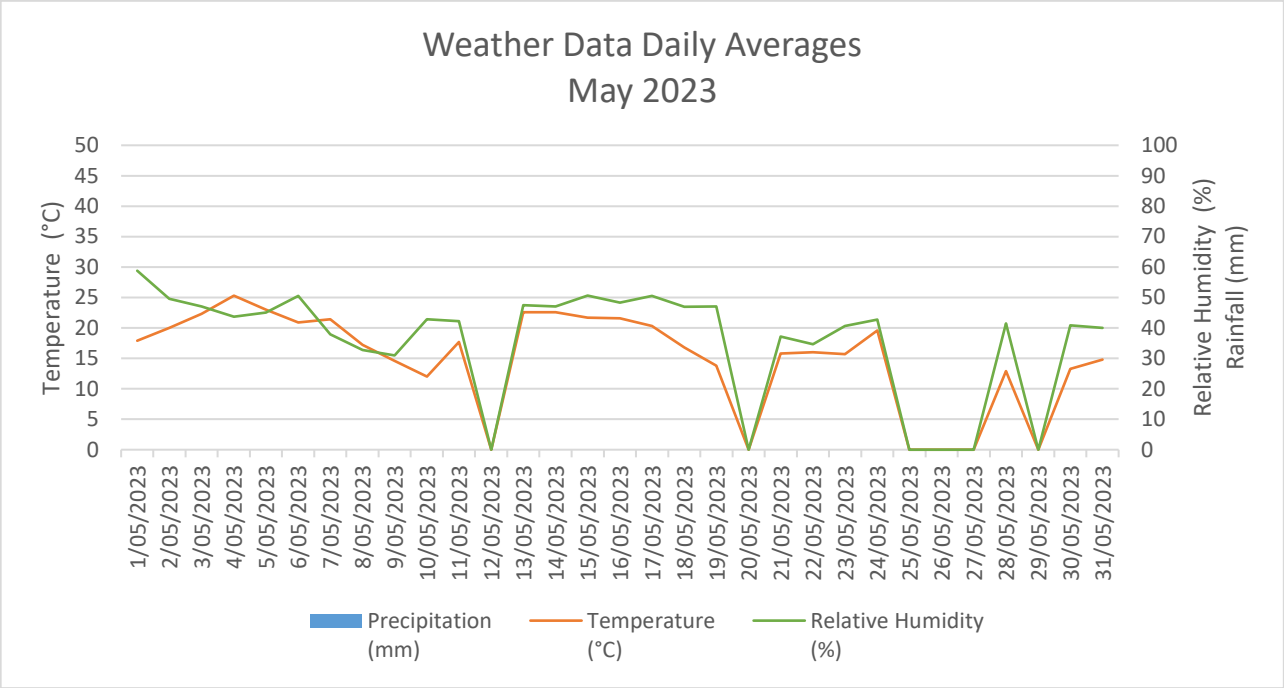


Figure 10 - May 2023 Weather Station Data

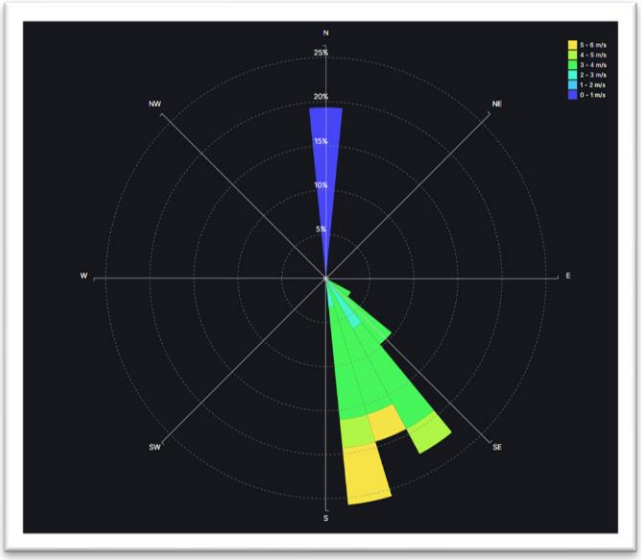


Figure 11 - May 2023 Wind Speed and Direction

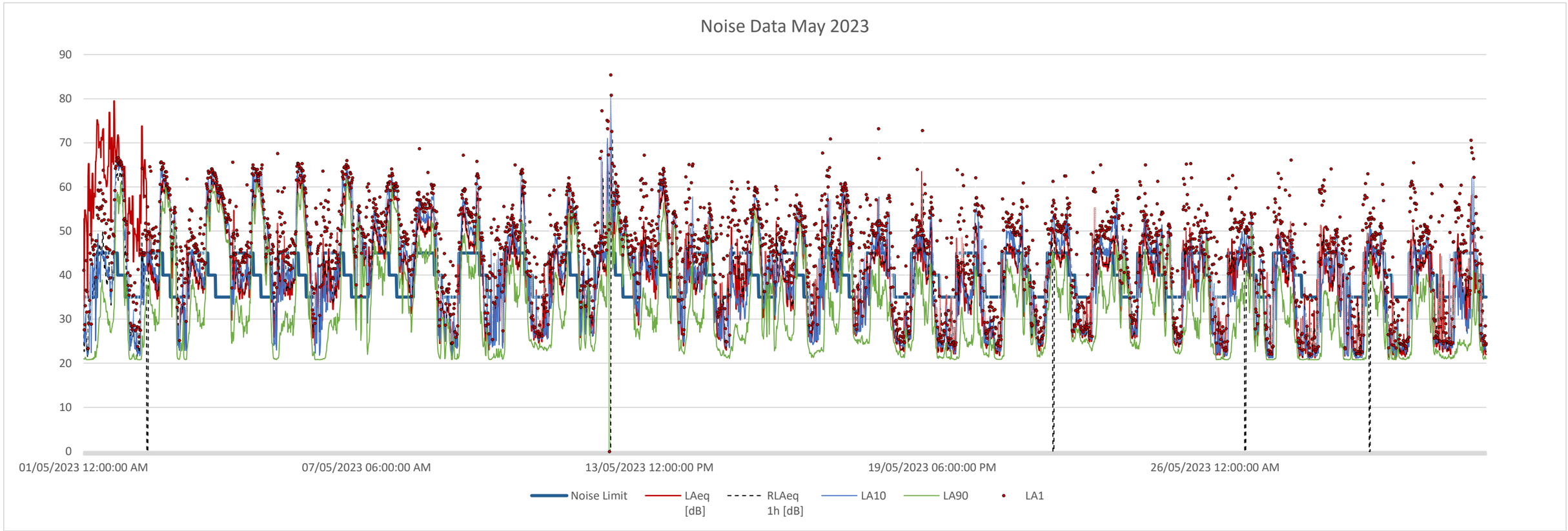


Figure 12 - May 2023 Noise Data

Table 6 - May 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/05/2023	41%	100%	50%
2/05/2023	34%	100%	25%
3/05/2023	9%	100%	47%
4/05/2023	18%	100%	100%
5/05/2023	18%	100%	81%
6/05/2023	20%	100%	78%
7/05/2023	77%	100%	100%
8/05/2023	89%	56%	78%
9/05/2023	89%	56%	6%
10/05/2023	59%	38%	44%
11/05/2023	30%	100%	31%
12/05/2023	59%	100%	53%
13/05/2023	39%	100%	86%
14/05/2023	34%	100%	58%
15/05/2023	14%	100%	33%
16/05/2023	14%	100%	92%
17/05/2023	45%	100%	53%
18/05/2023	23%	56%	33%
19/05/2023	57%	19%	0%
20/05/2023	18%	50%	0%
21/05/2023	55%	81%	0%
22/05/2023	45%	50%	3%
23/05/2023	36%	94%	17%
24/05/2023	39%	81%	56%
25/05/2023	36%	75%	22%
26/05/2023	25%	75%	3%
27/05/2023	39%	0%	25%
28/05/2023	32%	0%	8%
29/05/2023	41%	0%	11%
30/05/2023	36%	31%	6%
31/05/2023	32%	44%	11%
Totals *	39%	71%	39%

*includes data gaps

7.2.1 MAY MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry.
  - No rainfall was recorded for the period.
  - Average wind speeds were above 2m/s (approximately 7.4km/h) and were mostly South to South Easterly.
  - Temperature: HDA 265.3°C, LDA 12.0°C, MA 18.4°C.
  - Humidity: HDA 58.8%, LDA 31.0%, MA 35.4%.
  - Some weather station data losses were experienced on 12, 20, 25, 26, 27 May, this has been attributed to intermittent network failures.
- Most noise exceedances occurred during the evening time period, with events occurring above 70% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.3 JUNE 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 13**) as well as wind speed and direction (**Figure 14**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 June 2023 through 30 June 2023 is presented in **Figure 15.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 7.**

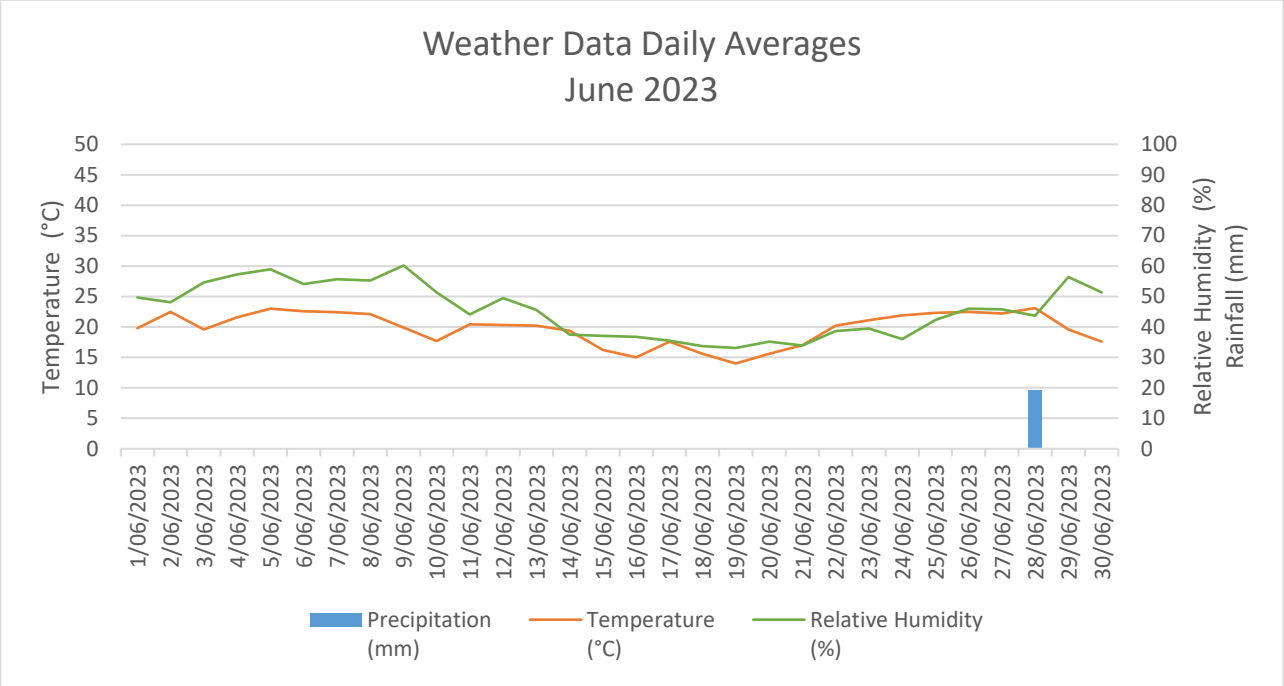


Figure 13 - June 2023 Weather Station Data

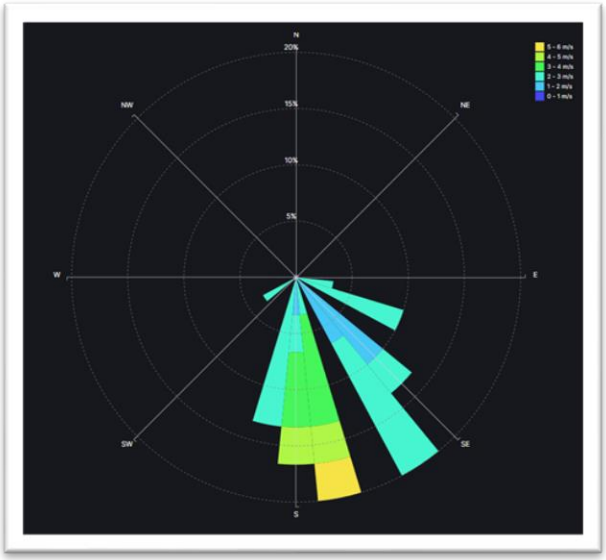


Figure 14 - June 2023 Wind Speed and Direction

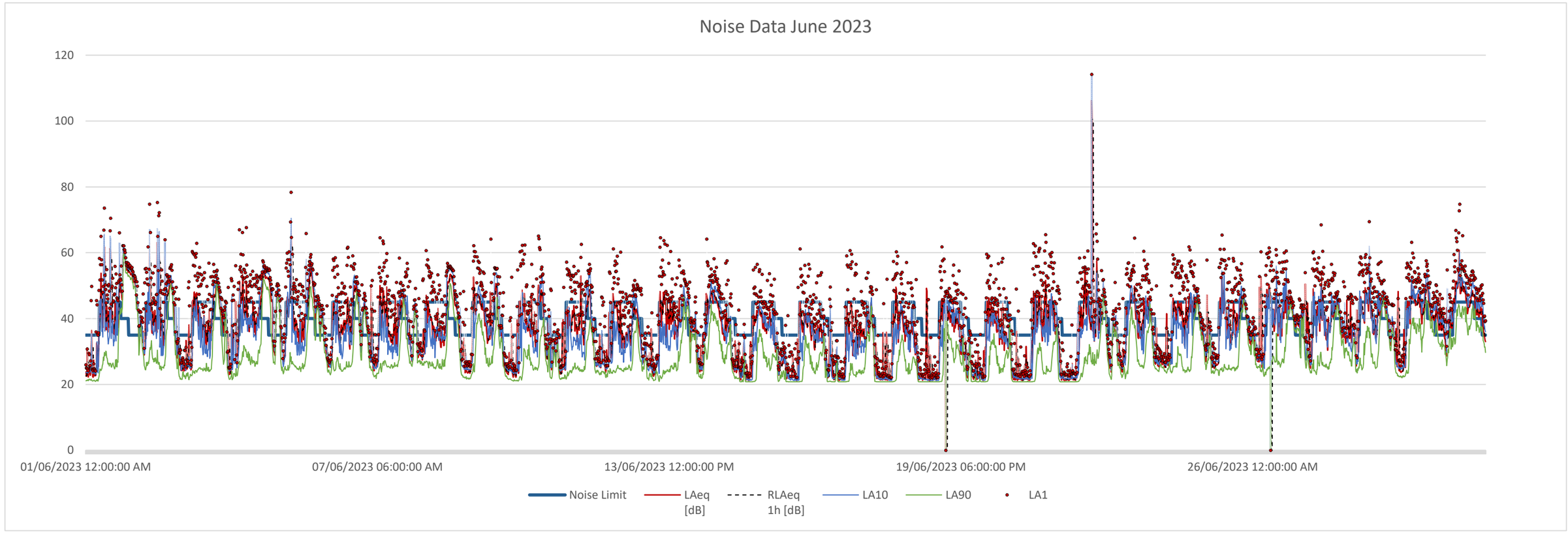


Figure 15 - June 2023 Noise Data

Table 7 - June 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/06/2023	39%	100%	22%
2/06/2023	43%	100%	83%
3/06/2023	16%	100%	25%
4/06/2023	34%	100%	56%
5/06/2023	27%	100%	69%
6/06/2023	2%	88%	56%
7/06/2023	27%	100%	42%
8/06/2023	0%	100%	47%
9/06/2023	32%	69%	17%
10/06/2023	30%	50%	22%
11/06/2023	9%	63%	11%
12/06/2023	2%	63%	11%
13/06/2023	20%	88%	22%
14/06/2023	39%	0%	28%
15/06/2023	0%	0%	0%
16/06/2023	0%	0%	14%
17/06/2023	0%	38%	0%
18/06/2023	9%	0%	0%
19/06/2023	7%	0%	11%
20/06/2023	0%	0%	0%
21/06/2023	30%	19%	0%
22/06/2023	43%	75%	0%
23/06/2023	25%	63%	28%
24/06/2023	9%	81%	28%
25/06/2023	18%	88%	22%
26/06/2023	48%	94%	58%
27/06/2023	16%	88%	83%
28/06/2023	30%	100%	75%
29/06/2023	43%	94%	50%
30/06/2023	70%	100%	86%
Totals *	22%	65%	32%

*includes data gaps

7.3.1 JUNE MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry.
  - No rainfall was recorded for the period. Disregard rainfall on 28 June 2023, this was due to rain gauge calibrations.
  - Average wind speeds were above 2m/s (approximately 9.6km/h) and were mostly South to South Easterly.
  - Temperature: HDA 23.1°C, LDA 14.0°C, MA 19.8°C.
  - Humidity: HDA 60.2%, LDA 33.1%, MA 45.6%
- Most Exceedances occurred during the evening time period, with events occurring above 60% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.4 JULY 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 16**) as well as wind speed and direction (**Figure 17**). Continuous noise logging in 15-minute intervals over the monitoring period occurred. The monitoring data output for 1 July 2023 through 31 July 2023 is presented in **Figure 18.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 8.**

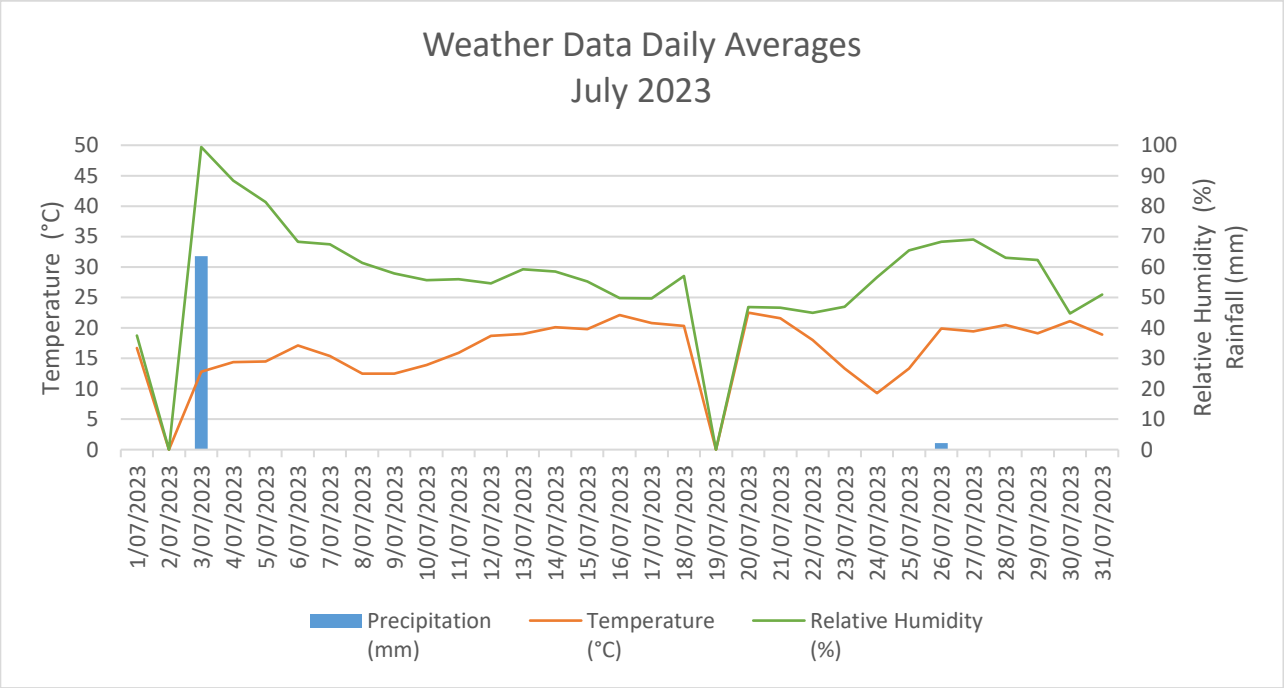


Figure 16 - July 2023 Weather Station Data

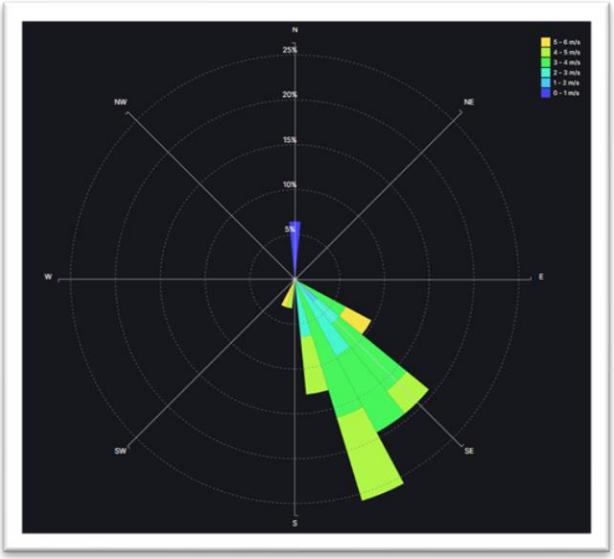


Figure 17 - July 2023 Wind Speed and Direction

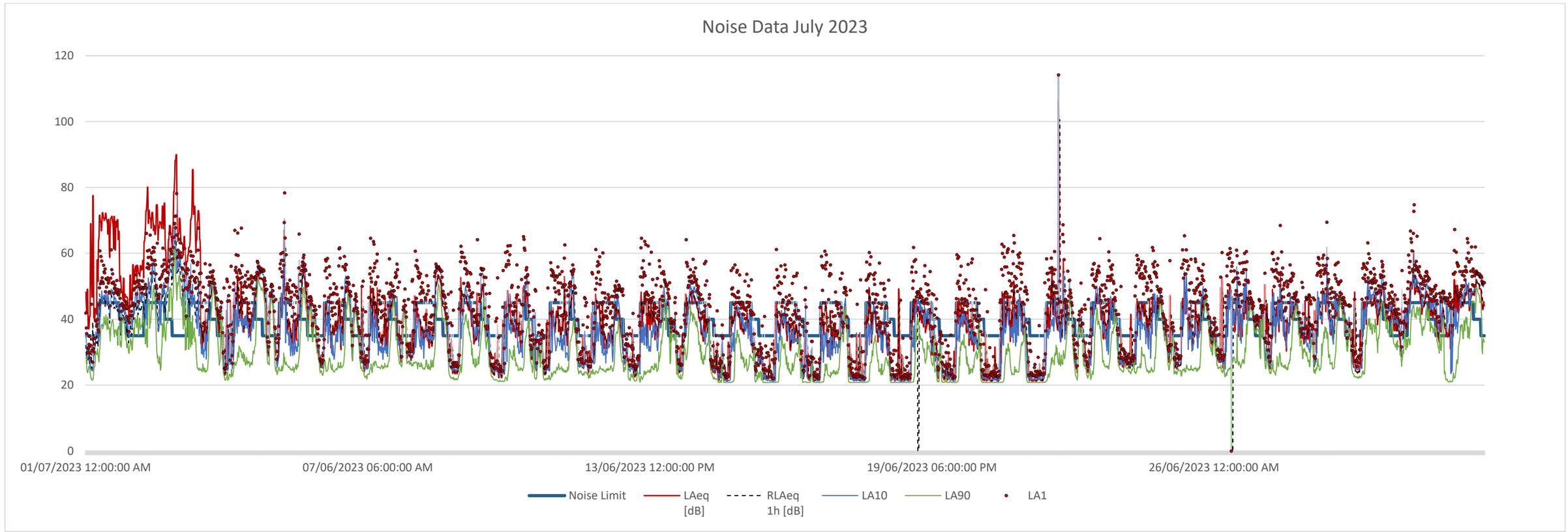


Figure 18 - July 2023 Noise Data

Table 8 - July 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/07/2023	45%	44%	19%
2/07/2023	66%	100%	100%
3/07/2023	34%	100%	100%
4/07/2023	34%	100%	56%
5/07/2023	25%	100%	72%
6/07/2023	2%	88%	56%
7/07/2023	25%	100%	39%
8/07/2023	0%	100%	50%
9/07/2023	30%	69%	17%
10/07/2023	30%	50%	25%
11/07/2023	9%	56%	11%
12/07/2023	5%	56%	17%
13/07/2023	23%	88%	25%
14/07/2023	41%	0%	31%
15/07/2023	0%	0%	0%
16/07/2023	0%	0%	11%
17/07/2023	0%	38%	0%
18/07/2023	9%	0%	0%
19/07/2023	7%	0%	11%
20/07/2023	0%	0%	0%
21/07/2023	30%	19%	0%
22/07/2023	43%	75%	0%
23/07/2023	25%	63%	28%
24/07/2023	9%	81%	28%
25/07/2023	18%	88%	22%
26/07/2023	48%	94%	58%
27/07/2023	16%	88%	83%
28/07/2023	30%	100%	75%
29/07/2023	43%	94%	50%
30/07/2023	70%	100%	86%
31/07/2023	70%	100%	86%
Totals *	25%	64%	37%

*includes data gaps

7.4.1 JULY MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - A significant period of rain occurred on 3 July 2023 where 63.6mm was recorded.
  - This was followed by two smaller periods of rainfall on 16 and 26 July at 0.2mm and 2.2mm respectively.
  - Average wind speeds were above 3m/s (approximately 12km/h) with daytime wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 22.5°C, LDA 9.3°C, MA 17.4°C.
  - Humidity: HDA 99.4%, LDA 37.5%, MA 55.6%
  - Some weather station data losses were experienced on 2 and 19 July, this has been attributed to intermittent network failures.
- Most noise exceedances occurred during the evening time period, with events occurring above 60% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.5 AUGUST 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 19)** as well as wind speed and direction (**Figure 20**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 August 2023 through 31 August 2023 is presented in **Figure 21**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 9.**

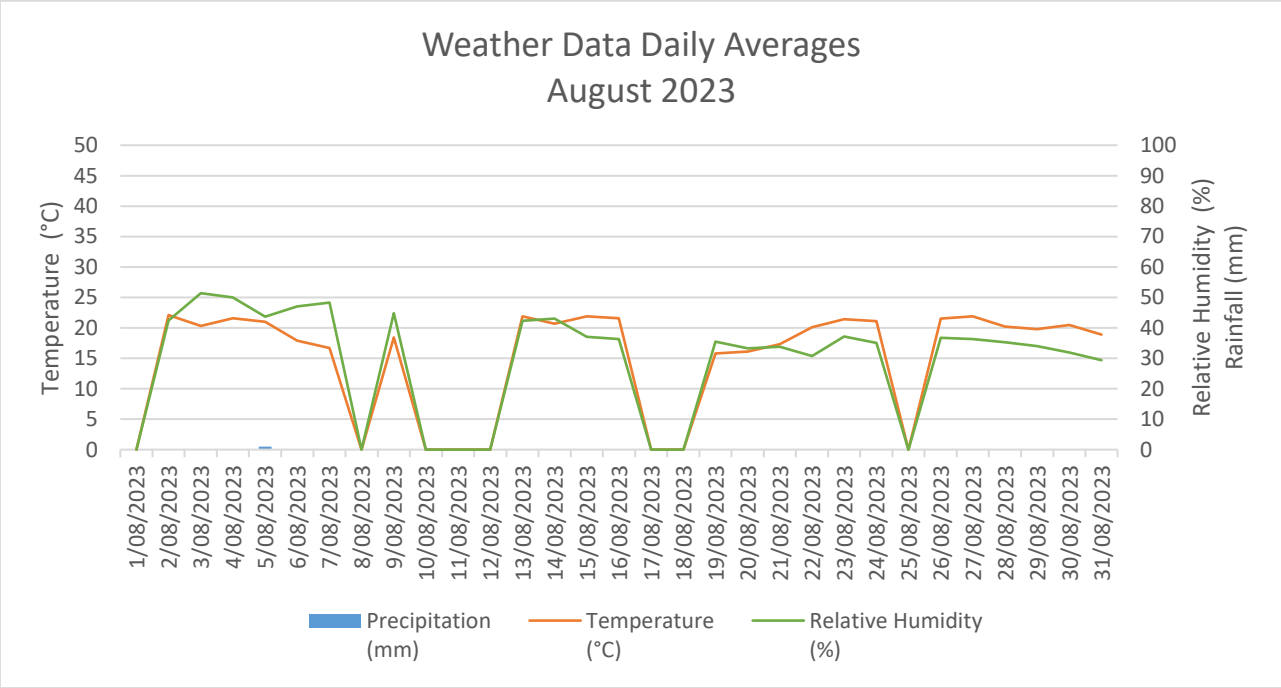


Figure 19 - August 2023 Weather Station Data

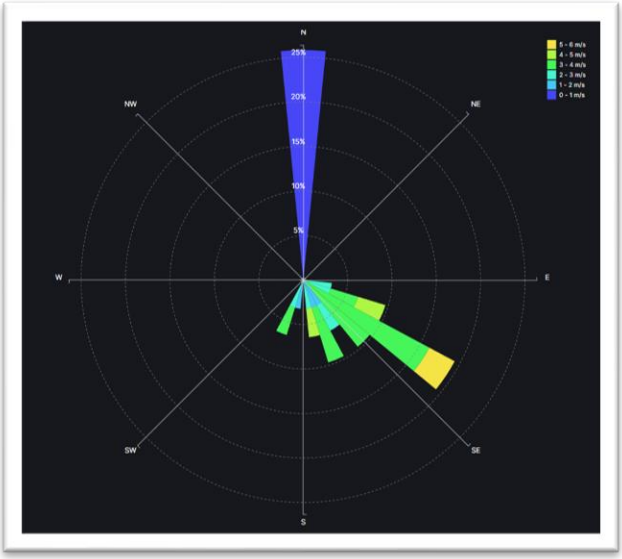


Figure 20 - August 2023 Wind Speed and Direction

Figure 21 21 - August 2023 Noise Data

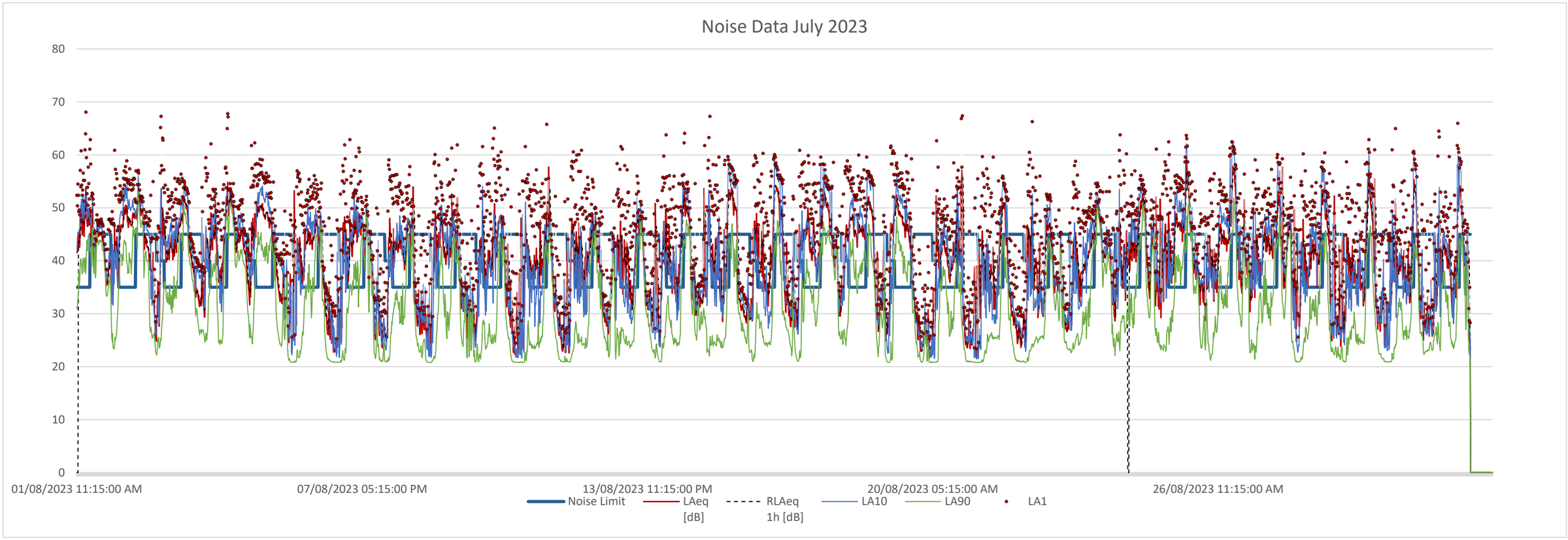


Table 99 - August 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/08/2023	52%	100%	22%
2/08/2023	70%	100%	100%
3/08/2023	34%	100%	67%
4/08/2023	30%	100%	61%
5/08/2023	89%	63%	69%
6/08/2023	16%	69%	42%
7/08/2023	57%	100%	28%
8/08/2023	16%	75%	3%
9/08/2023	39%	81%	0%
10/08/2023	34%	75%	11%
11/08/2023	5%	94%	31%
12/08/2023	9%	100%	31%
13/08/2023	5%	94%	36%
14/08/2023	14%	100%	36%
15/08/2023	18%	100%	44%
16/08/2023	23%	100%	22%
17/08/2023	32%	100%	47%
18/08/2023	77%	100%	75%
19/08/2023	86%	19%	28%
20/08/2023	11%	94%	0%
21/08/2023	7%	81%	28%
22/08/2023	18%	75%	19%
23/08/2023	0%	100%	44%
24/08/2023	20%	100%	75%
25/08/2023	57%	100%	94%
26/08/2023	18%	100%	78%
27/08/2023	9%	100%	94%
28/08/2023	5%	100%	72%
29/08/2023	2%	100%	44%
30/08/2023	16%	81%	11%
31/08/2023	18%	81%	31%
Totals *	29%	90%	43%

*includes data gaps

7.5.1 AUGUST MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - Minor rainfall events occurred on 5 and 22 August, at 1mm and 0.2mm respectively.
  - Average wind speeds were above 2m/s (approximately 8.6km/h) with daytime wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 22.1°C, LDA 15.8°C, MA 19.9°C.
  - Humidity: HDA 51.4%, LDA 29.4%, MA 28.9%
  - Some weather station data losses were experienced on 1, 8, 10, 11, 12, 17, 18, 25 August, this has been attributed to intermittent network failures.
- Most noise exceedances occurred during the evening time period, with events occurring above 90% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.6 SEPTEMBER 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 22**) as well as wind speed and direction in (**Figure 23**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 September 2023 through 3 September 2023 is presented in **Figure 24**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 10.**

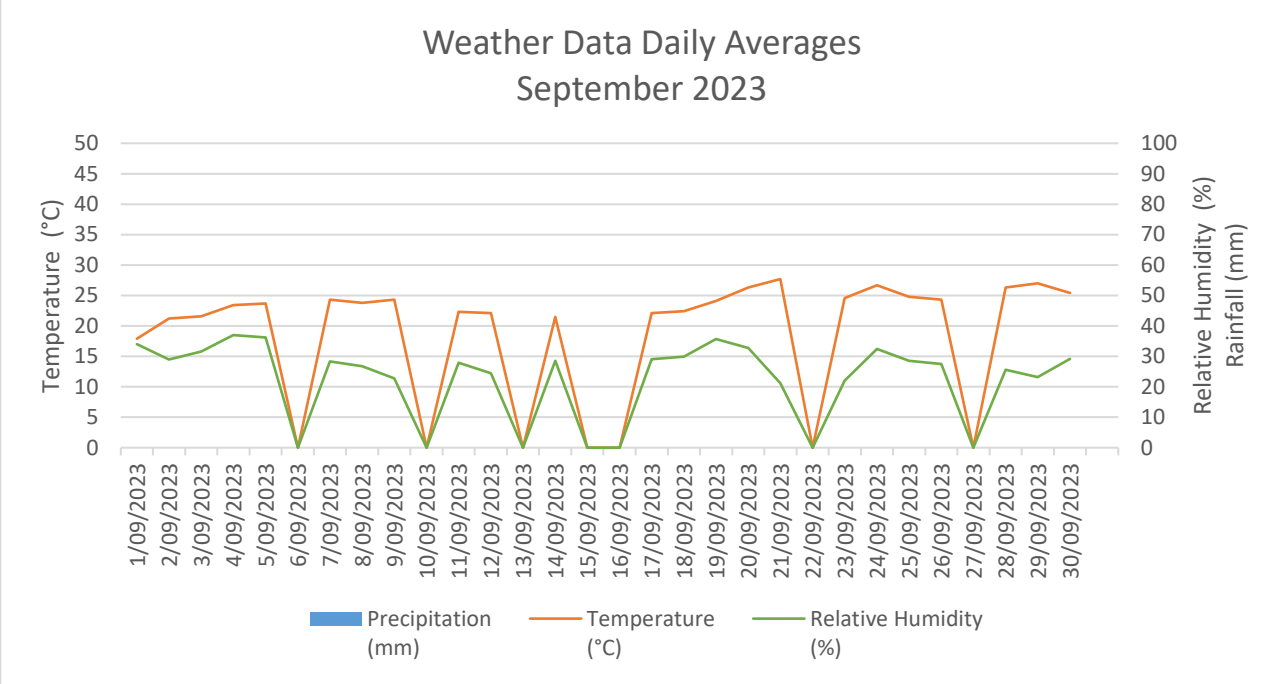


Figure 22 - September 2023 Weather Station Data

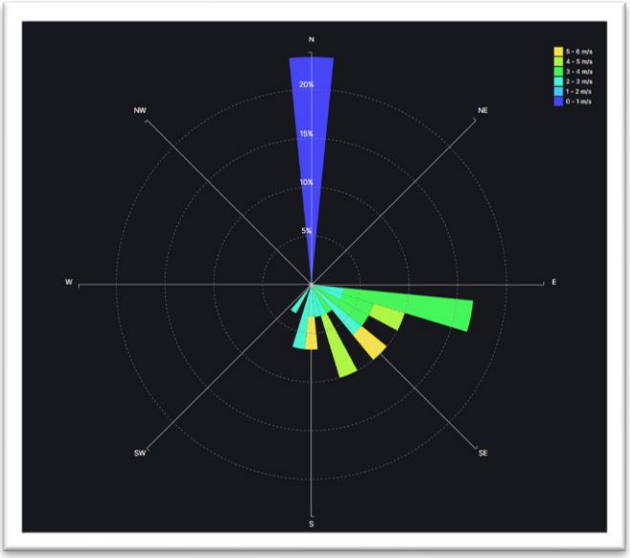


Figure 23 - September 2023 Wind Speed and Direction

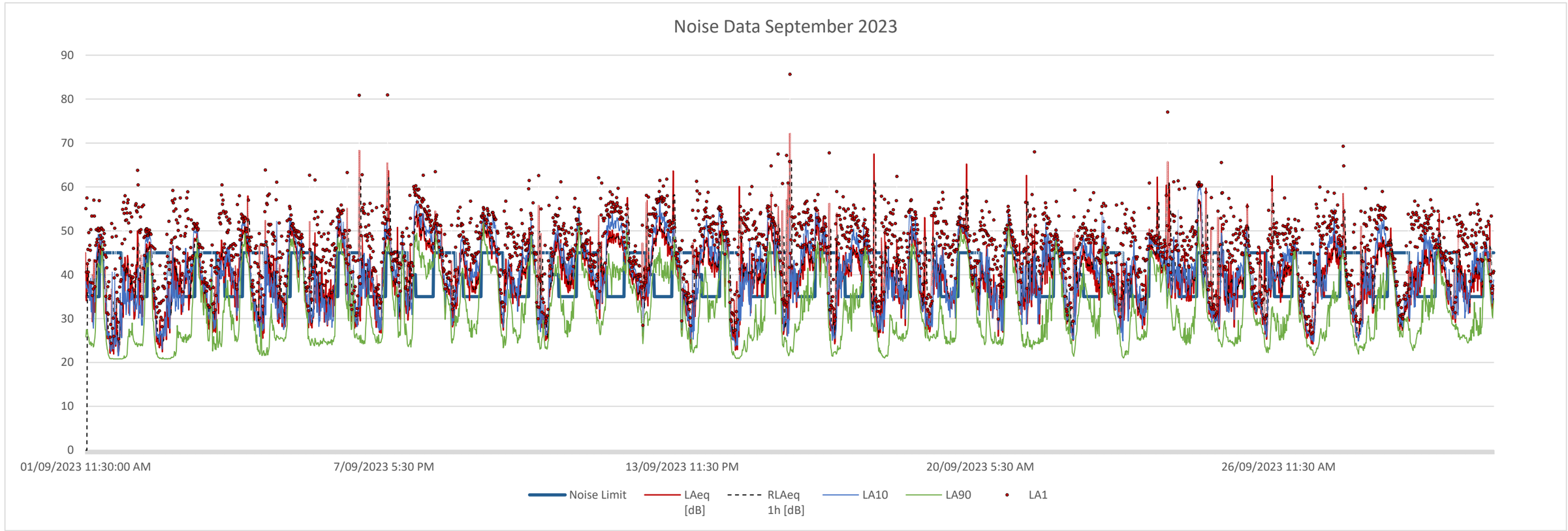


Figure 24 - September 2023 Noise Data

Table 10 - September 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/09/2023	7%	75%	3%
2/09/2023	9%	81%	11%
3/09/2023	0%	94%	22%
4/09/2023	9%	100%	50%
5/09/2023	0%	100%	50%
6/09/2023	0%	100%	67%
7/09/2023	0%	100%	72%
8/09/2023	84%	100%	78%
9/09/2023	5%	100%	89%
10/09/2023	0%	100%	72%
11/09/2023	25%	100%	64%
12/09/2023	75%	100%	94%
13/09/2023	82%	100%	94%
14/09/2023	23%	100%	53%
15/09/2023	0%	100%	53%
16/09/2023	20%	100%	89%
17/09/2023	11%	100%	58%
18/09/2023	0%	100%	69%
19/09/2023	0%	100%	67%
20/09/2023	0%	100%	100%
21/09/2023	18%	94%	83%
22/09/2023	5%	88%	64%
23/09/2023	0%	94%	81%
24/09/2023	5%	88%	100%
25/09/2023	7%	88%	58%
26/09/2023	9%	94%	42%
27/09/2023	23%	94%	22%
28/09/2023	39%	100%	39%
29/09/2023	0%	100%	47%
30/09/2023	0%	81%	75%
Totals *	15%	96%	62.22%

*includes data gaps

7.6.1 SEPTEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry.
  - No rainfall was recorded for the period.
  - Average wind speeds were above 2m/s (approximately 9km/h) with daytime wind speeds occasionally above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 27.7°C, LDA 17.9°C, MA 23.8°C.
  - Humidity: HDA 37.0%, LDA 21.2%, MA 22.1%
  - Some weather station data losses were experienced on 6, 13, 15, 16, 22 and 27 September, this has been attributed to intermittent network failures.
- Most noise exceedances occurred during the evening time period, with events occurring above 95% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.7 OCTOBER 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 25**) as well as wind speed and direction (**Figure 26**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 October 2023 through 31 October 2023 is presented in **Figure 27.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 11.**

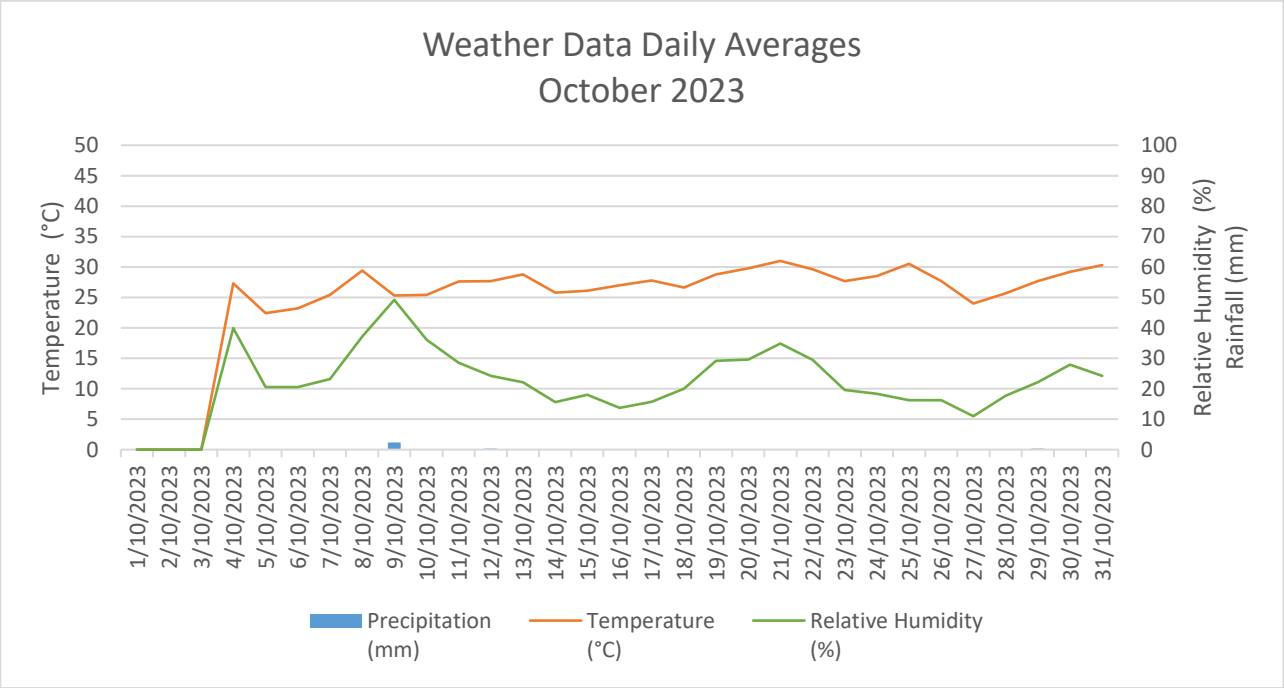


Figure 25 - October 2023 Weather Station Data

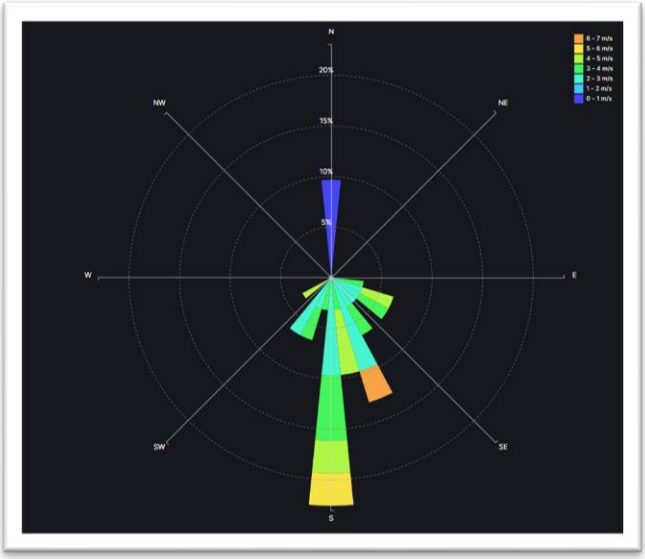


Figure 26 - October 2023 Wind Speed and Direction

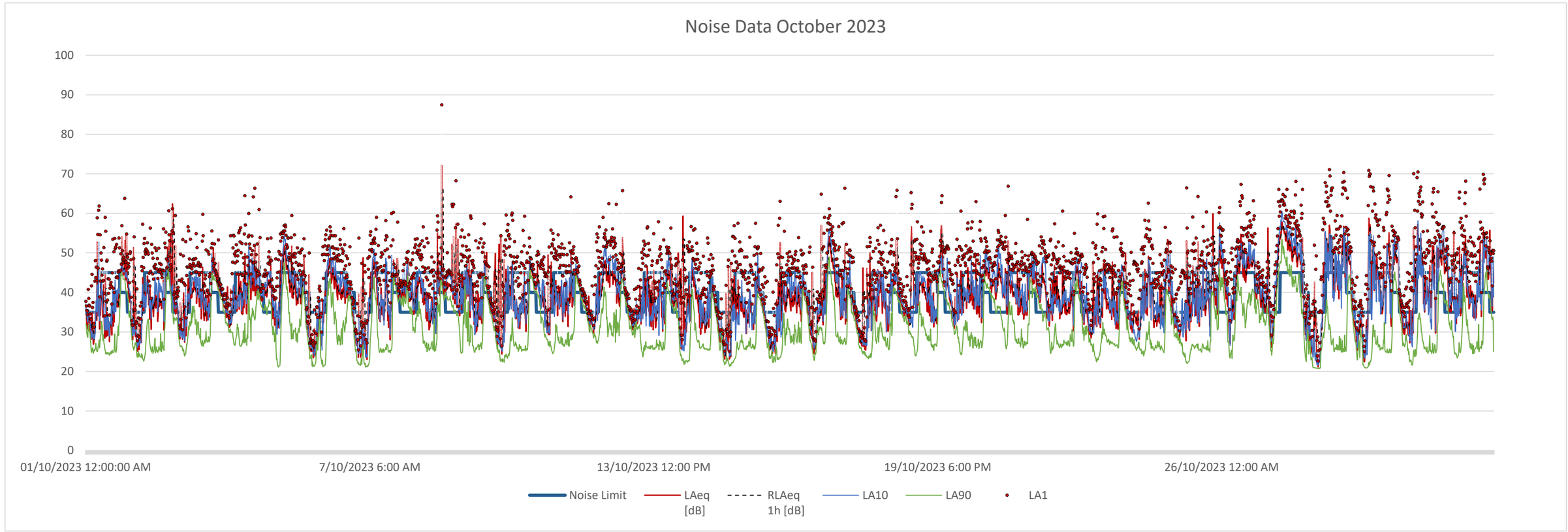


Figure 27 - October 2023 Noise Data

Table 11 - October 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/10/2023	7%	100%	42%
2/10/2023	0%	94%	58%
3/10/2023	0%	88%	64%
4/10/2023	32%	75%	89%
5/10/2023	45%	56%	56%
6/10/2023	18%	31%	25%
7/10/2023	18%	94%	56%
8/10/2023	2%	100%	100%
9/10/2023	0%	75%	92%
10/10/2023	5%	94%	83%
11/10/2023	2%	88%	89%
12/10/2023	30%	63%	56%
13/10/2023	0%	81%	44%
14/10/2023	2%	31%	67%
15/10/2023	0%	56%	44%
16/10/2023	7%	38%	31%
17/10/2023	48%	50%	44%
18/10/2023	0%	94%	56%
19/10/2023	0%	94%	75%
20/10/2023	0%	88%	86%
21/10/2023	9%	100%	100%
22/10/2023	0%	88%	94%
23/10/2023	2%	75%	50%
24/10/2023	7%	88%	25%
25/10/2023	9%	50%	39%
26/10/2023	80%	63%	86%
27/10/2023	100%	44%	56%
28/10/2023	75%	81%	28%
29/10/2023	57%	94%	33%
30/10/2023	57%	100%	39%
31/10/2023	34%	100%	100%
Totals *	21%	76.41%	61%

*includes data gaps

7.7.1 October Monitoring Results Summary

- Weather during the monitoring period was generally fine and dry, with the following exceptions:
  - Minor rainfall was recorded on 4, 9, 12 and 29 October at 0.2mm, 2.4mm, 0.4mm, 0.4mm respectively.
  - Average wind speeds were above 2m/s (approximately 10.6km/h) with many daytime and some evening wind speeds regularly above 5m/s. Winds were mostly Southerly.
  - Temperature: Highest Daily Average (HDA) 31.0°C, Lowest Daily Average (LDA) 22.4°C, Monthly Average (MA) 27.4°C.
  - Humidity: HDA 49.2%, LDA 11.0%, MA 22.0%
  - Some weather station data losses were experienced on 1, 2 and 3 October, this was due to a loose cable.
- Most noise exceedances occurred during the evening time period, with events occurring above 75% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.8 NOVEMBER 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 28**) as well as wind speed and direction (**Figure 29**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 November 2023 through 30 November 2023 is presented in **Figure 30**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 12.**

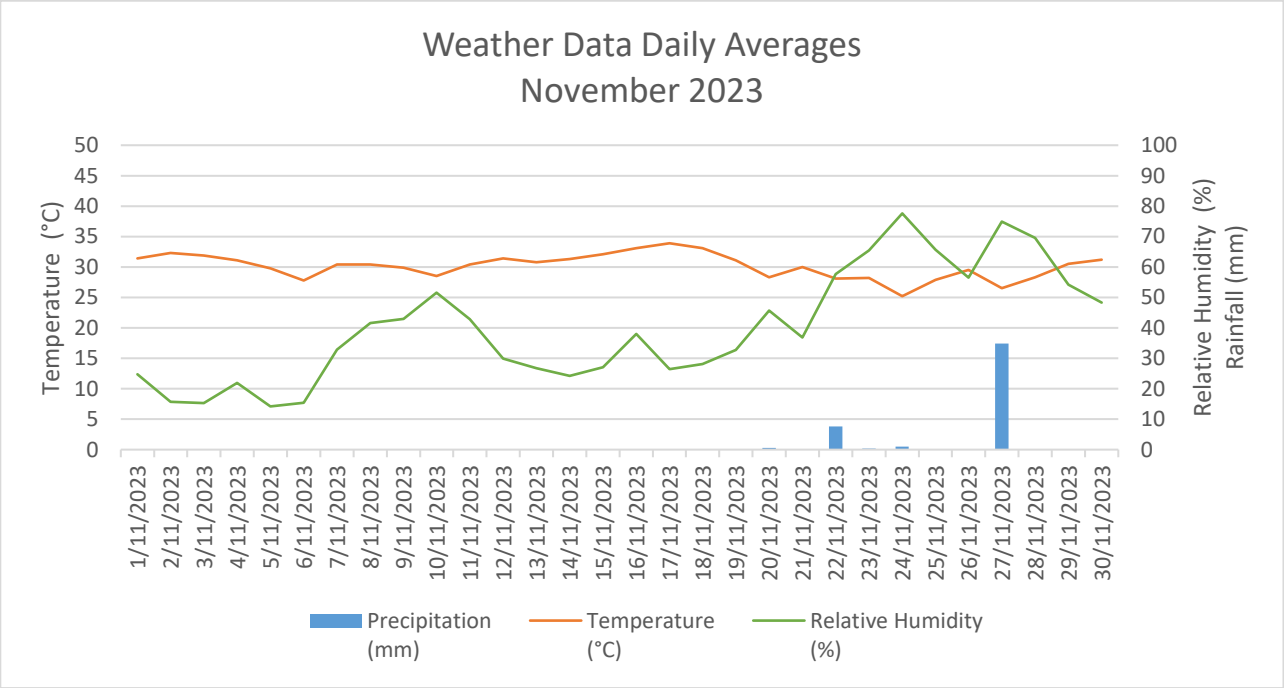


Figure 28 - November 2023 Weather Station Data

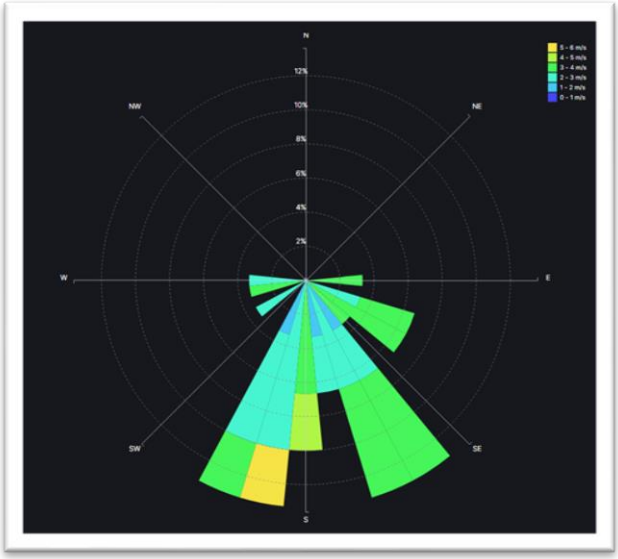


Figure 29 - November 2023 Wind Speed and Direction

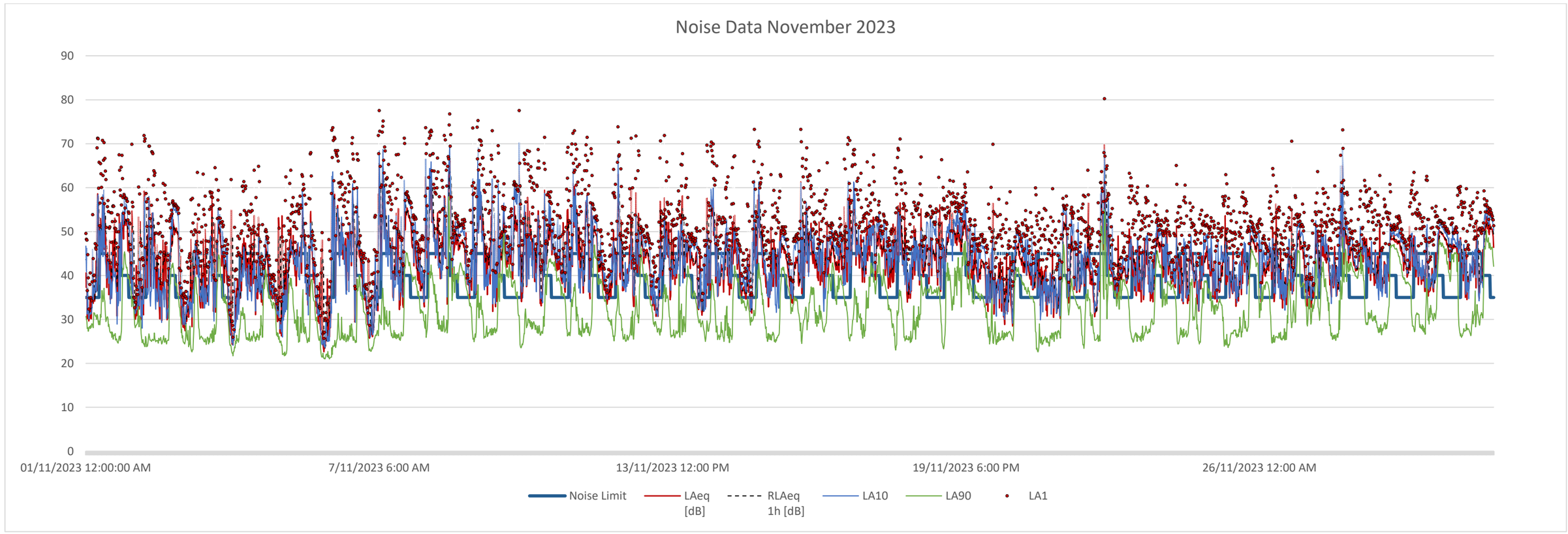


Figure 30 - November 2023 Noise Data

Table 12 - November 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/11/2023	57%	100%	75%
2/11/2023	50%	88%	81%
3/11/2023	32%	100%	50%
4/11/2023	45%	63%	64%
5/11/2023	52%	81%	64%
6/11/2023	95%	100%	47%
7/11/2023	80%	88%	64%
8/11/2023	86%	100%	100%
9/11/2023	66%	100%	100%
10/11/2023	75%	100%	100%
11/11/2023	77%	100%	100%
12/11/2023	43%	100%	94%
13/11/2023	64%	100%	64%
14/11/2023	57%	100%	86%
15/11/2023	48%	100%	94%
16/11/2023	55%	100%	97%
17/11/2023	77%	100%	100%
18/11/2023	52%	100%	100%
19/11/2023	93%	100%	100%
20/11/2023	9%	75%	100%
21/11/2023	0%	69%	100%
22/11/2023	41%	94%	100%
23/11/2023	11%	94%	100%
24/11/2023	5%	88%	100%
25/11/2023	7%	81%	100%
26/11/2023	25%	94%	100%
27/11/2023	39%	100%	97%
28/11/2023	16%	100%	100%
29/11/2023	18%	100%	100%
30/11/2023	16%	94%	100%
Totals *	46.36%	94%	89%

*includes data gaps

7.8.1 NOVEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - A significant period of rain occurred on 27 November 2023 where 34.8mm was recorded.
  - This was followed by other minor rainfall events on 20, 22 and 23 November, at 0.6mm, 7.6mm and 0.4mm respectively.
  - Average wind speeds were above 3m/s (approximately 10.9km/h) with many daytime and some evening wind speeds regularly above 5m/s. Winds were mostly South Westerly to South Easterly.
  - Temperature: HDA 33.9°C, LDA 25.2°C, MA 30.1°C.
  - Humidity: HDA 77.6%, LDA 14.2%, MA 40.2%
- Most noise exceedances occurred during the evening time period, with events occurring above 90% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.9 DECEMBER 2023 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 31**) as well as wind speed and direction (**Figure 32**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 December 2023 through 31 December 2023 is presented **in Figure 33.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 13.**

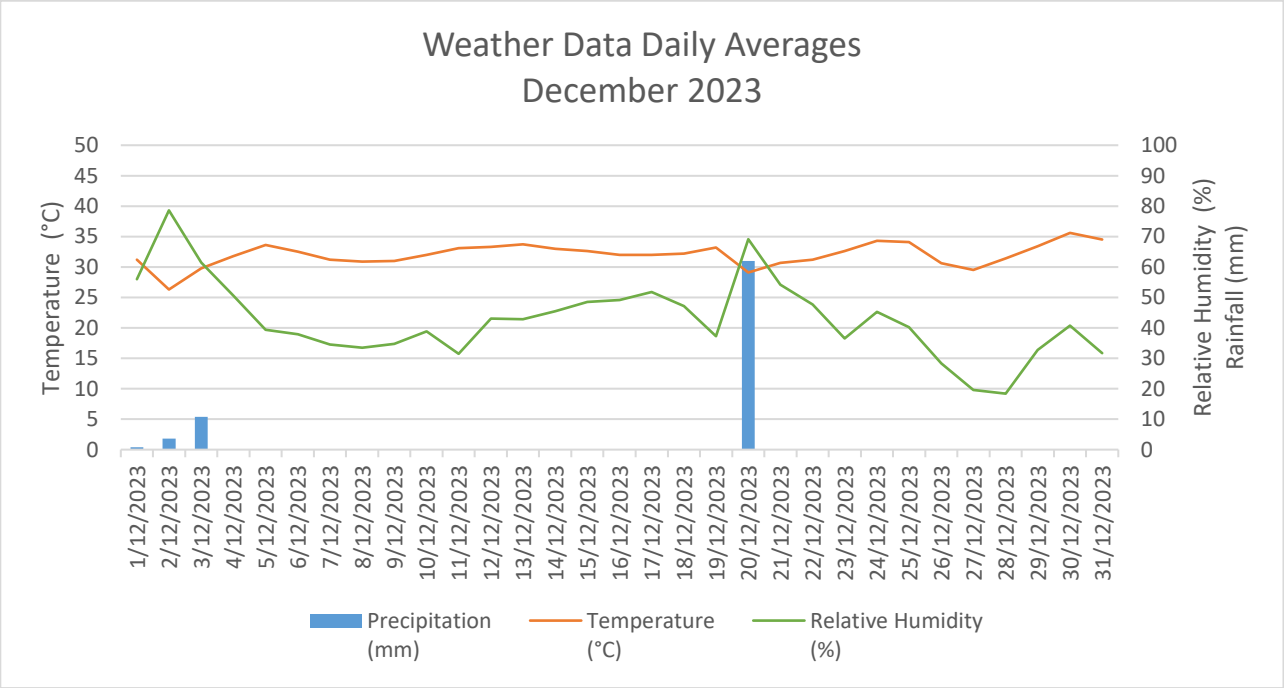


Figure 31 - December 2023 Weather Station Data

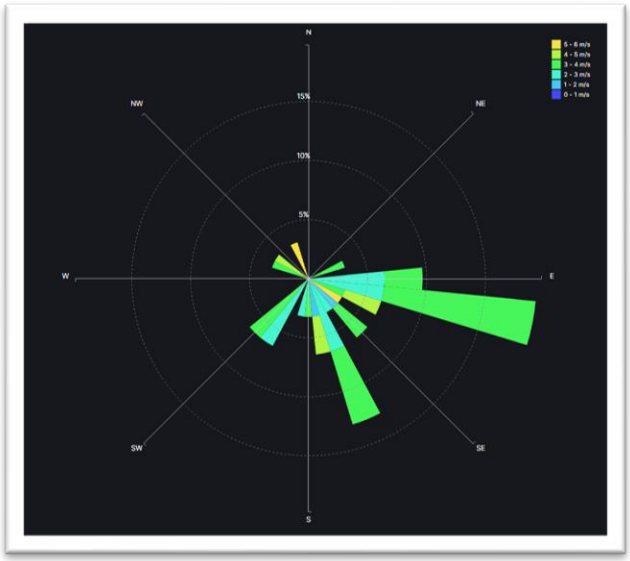


Figure 32 - December 2023 Wind Speed and Direction

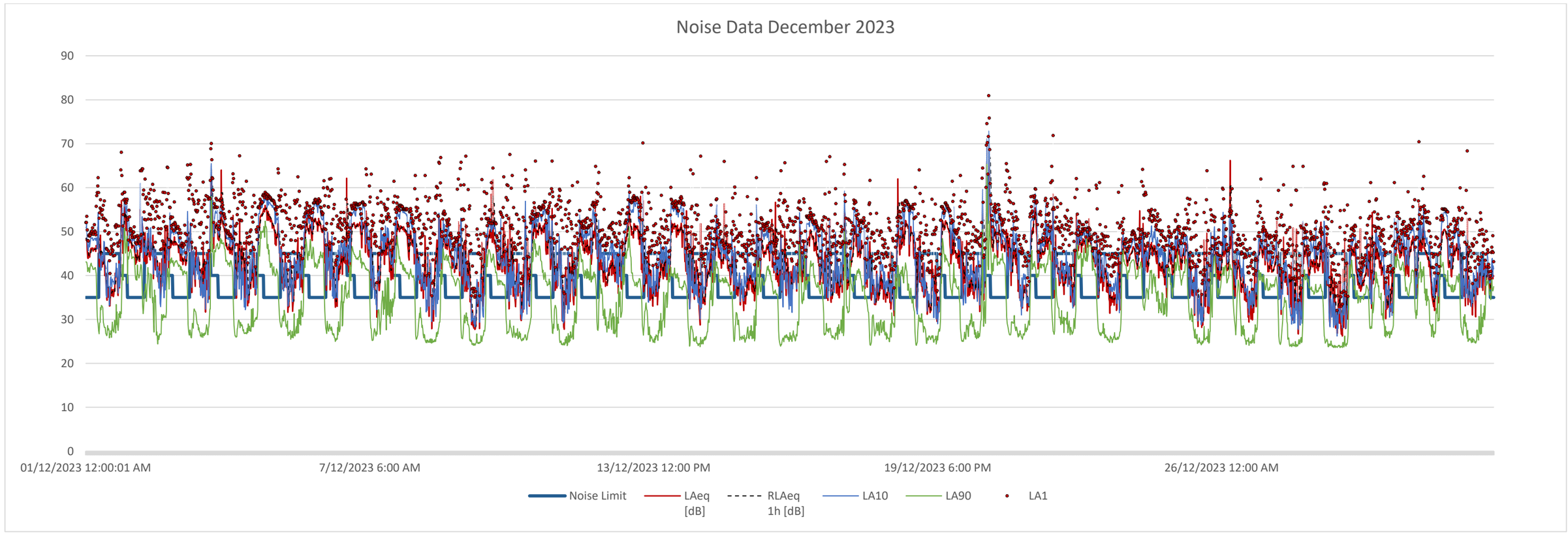


Figure 33 - December 2023 Noise Data

Table 13 - December 2023 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/12/2023	14%	100%	100%
2/12/2023	50%	100%	100%
3/12/2023	16%	100%	100%
4/12/2023	11%	88%	100%
5/12/2023	9%	94%	100%
6/12/2023	18%	100%	100%
7/12/2023	45%	100%	100%
8/12/2023	14%	100%	100%
9/12/2023	11%	94%	100%
10/12/2023	27%	88%	100%
11/12/2023	7%	63%	100%
12/12/2023	9%	100%	100%
13/12/2023	2%	100%	100%
14/12/2023	16%	100%	100%
15/12/2023	0%	94%	100%
16/12/2023	25%	100%	100%
17/12/2023	32%	75%	100%
18/12/2023	0%	44%	100%
19/12/2023	9%	56%	100%
20/12/2023	7%	88%	100%
21/12/2023	30%	75%	100%
22/12/2023	14%	88%	100%
23/12/2023	0%	75%	100%
24/12/2023	43%	63%	100%
25/12/2023	7%	94%	100%
26/12/2023	0%	75%	100%
27/12/2023	16%	75%	100%
28/12/2023	2%	63%	100%
29/12/2023	20%	69%	100%
30/12/2023	39%	81%	100%
31/12/2023	9%	63%	100%
Totals *	16%	84%	100%

*includes data gaps

7.9.1 DECEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - A significant period of rain occurred on 3 October 2023 where 10.8mm was recorded.
  - A significant period of rain and hail occurred on 20 December 2023 where 62mm was recorded.
  - This was accompanied by other minor rainfall events on 1, 2, 15, at 0.8mm, 3.6mm and 0.2mm respectively.
  - Average wind speeds were above 3m/s (approximately 11.4km/h) with many daytime and evening wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 35.6°C, LDA 26.3°C, MA 32°C.
  - Humidity: HDA 78.6%, LDA 18.4%, MA 42.8%
- Most noise exceedances occurred during the nighttime period, with events occurring 100% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.10 JANUARY 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 34)** as well as wind speed and direction (**Figure 35**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 January 2024 through 31 January 2024 is presented in **Figure 36.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 14.**

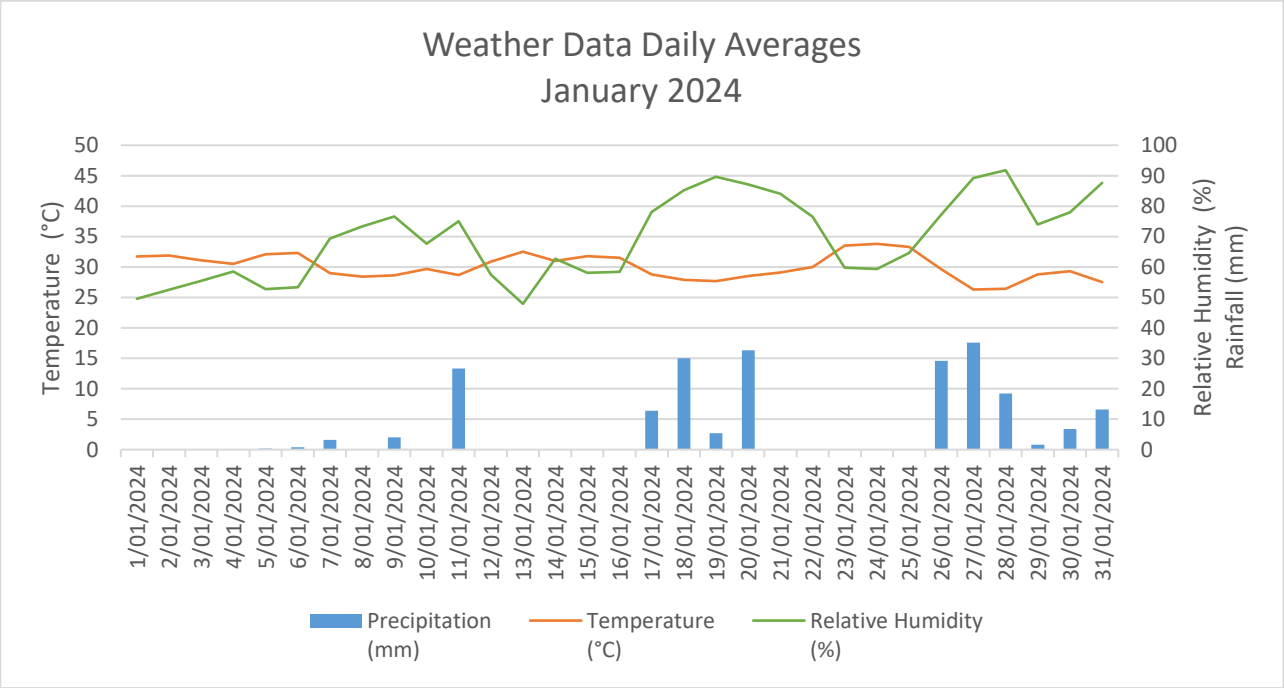


Figure 34 - January 2024 Weather Station Data

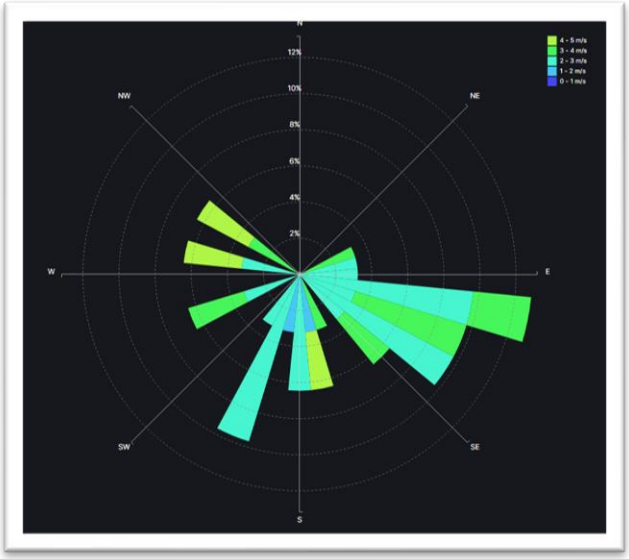


Figure 35 - January 2024 Wind Speed and Direction

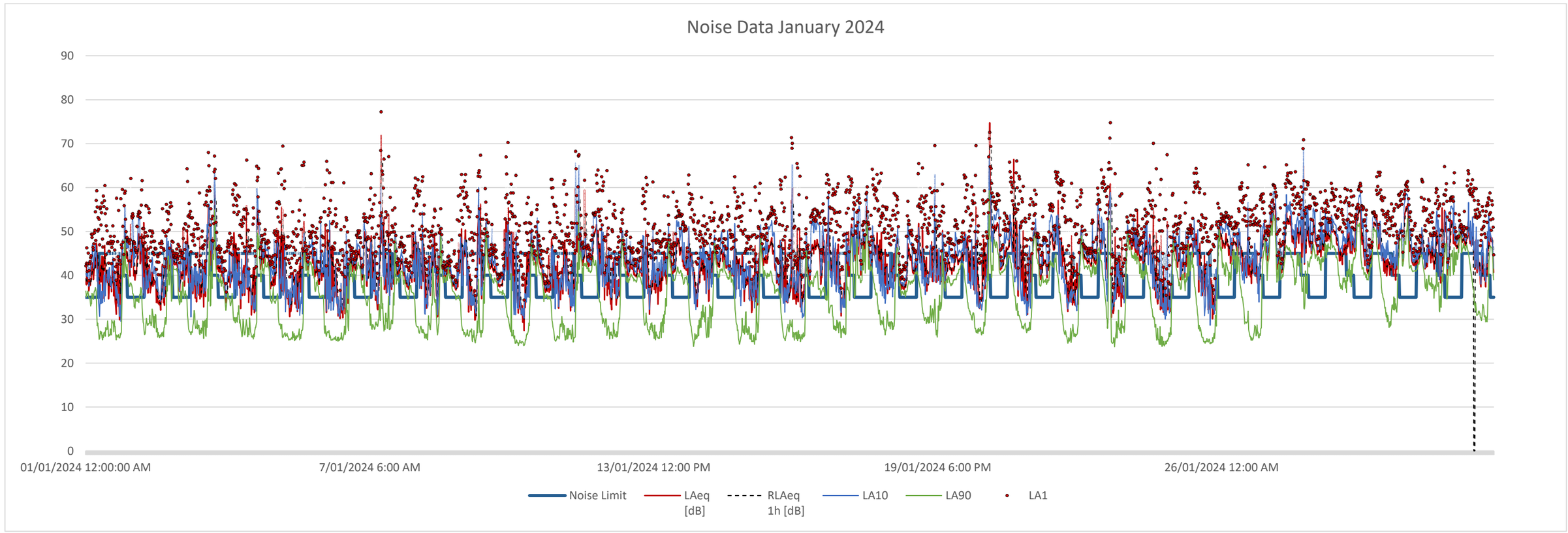


Figure 36 - January 2024 Noise Data

Table 14 - January 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/01/2024	0%	75%	100%
2/01/2024	5%	88%	100%
3/01/2024	18%	100%	100%
4/01/2024	16%	94%	100%
5/01/2024	20%	94%	100%
6/01/2024	23%	81%	100%
7/01/2024	41%	88%	100%
8/01/2024	25%	75%	100%
9/01/2024	36%	88%	100%
10/01/2024	23%	100%	100%
11/01/2024	5%	81%	100%
12/01/2024	32%	88%	100%
13/01/2024	11%	88%	100%
14/01/2024	5%	100%	100%
15/01/2024	7%	88%	100%
16/01/2024	36%	50%	100%
17/01/2024	20%	100%	100%
18/01/2024	41%	100%	100%
19/01/2024	30%	100%	100%
20/01/2024	32%	94%	100%
21/01/2024	66%	94%	100%
22/01/2024	50%	44%	100%
23/01/2024	59%	38%	100%
24/01/2024	43%	25%	100%
25/01/2024	48%	0%	100%
26/01/2024	48%	75%	100%
27/01/2024	86%	100%	100%
28/01/2024	82%	100%	100%
29/01/2024	48%	100%	100%
30/01/2024	50%	100%	100%
31/01/2024	64%	94%	100%
Totals *	34.46%	82%	100%

*includes data gaps

7.10.1 JANUARY MONITORING RESULTS SUMMARY

- Weather during the monitoring period consisted of frequent heavy rainfall and frequent periods of high humidity.
  - Total rainfall for the month of January was 220.6mm.
  - Average wind speeds were above 2m/s (approximately 10.25km/h) with some daytime and many evening wind speeds regularly above 5m/s. Winds were mostly Easterly to Westerly
  - Temperature: HDA 33.8°C, LDA 26.3°C, MA 30.1°C.
  - Humidity: HDA 91.8%, LDA 47.9%, MA 69.4%
- Most noise exceedances occurred during the nighttime period, with events occurring 100% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.11 FEBRUARY 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 37**) as well as wind speed and direction (**Figure 38**)**.** Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 February 2024 through 29 February 2024 is presented in **Figure 39**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 15.**

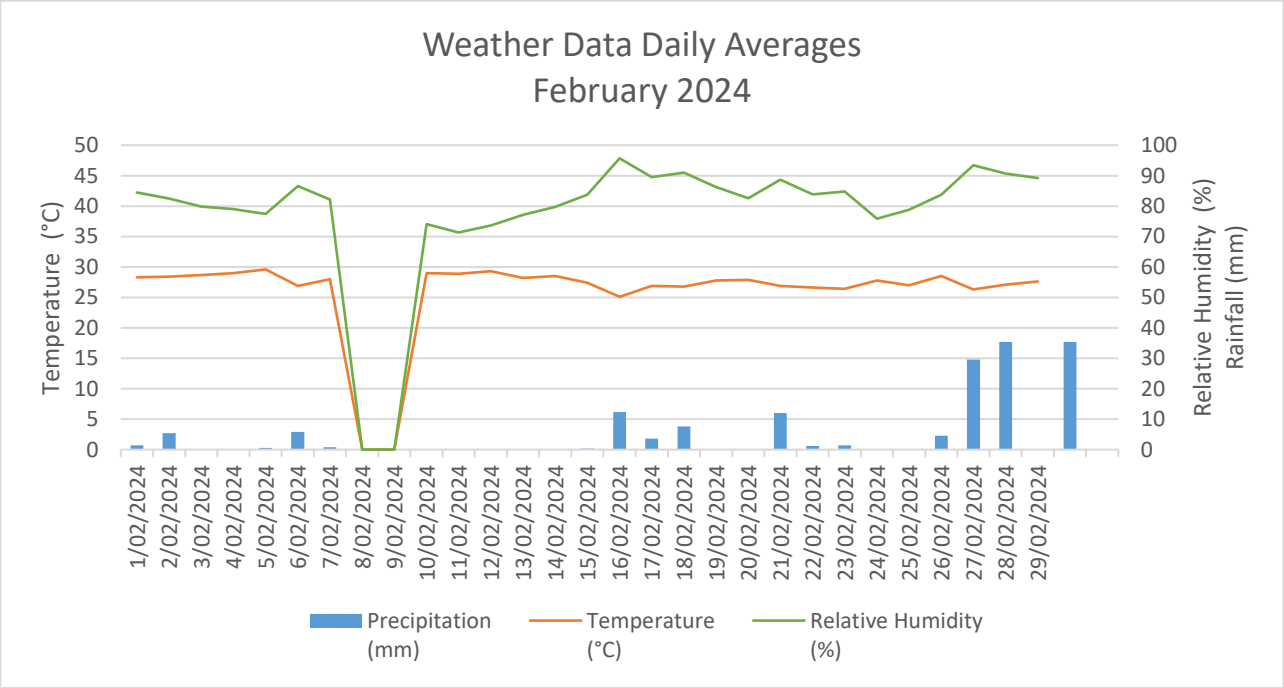


Figure 37 - February 2024 Weather Station Data

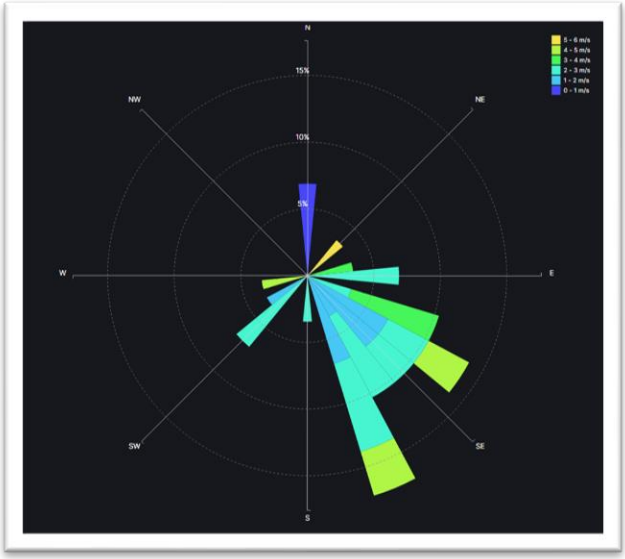


Figure 38 - February 2024 Wind Speed and Direction

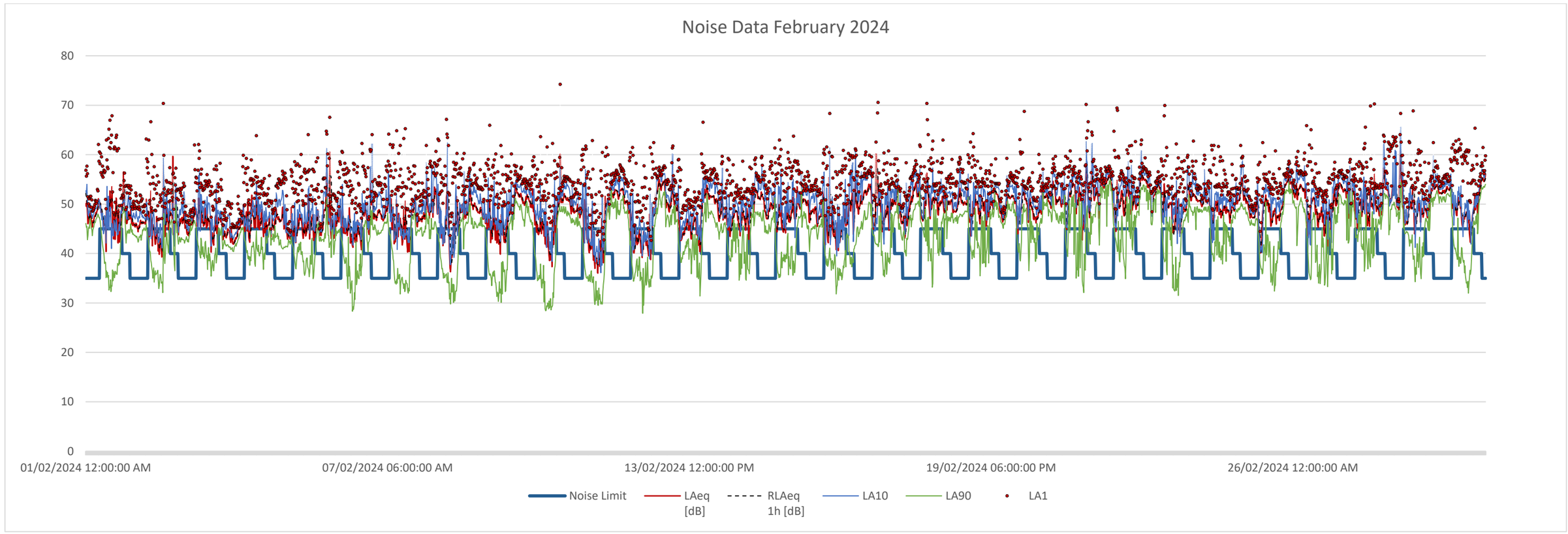


Figure 39 - February 2024 Noise Data

Table 15 - February 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/02/2024	100%	100%	100%
2/02/2024	61%	100%	100%
3/02/2024	80%	100%	100%
4/02/2024	91%	100%	100%
5/02/2024	70%	100%	100%
6/02/2024	50%	100%	100%
7/02/2024	66%	100%	100%
8/02/2024	48%	100%	100%
9/02/2024	55%	100%	100%
10/02/2024	48%	100%	100%
11/02/2024	32%	100%	100%
12/02/2024	20%	100%	100%
13/02/2024	50%	100%	100%
14/02/2024	95%	100%	100%
15/02/2024	93%	100%	100%
16/02/2024	59%	100%	100%
17/02/2024	95%	100%	100%
18/02/2024	100%	100%	100%
19/02/2024	100%	100%	100%
20/02/2024	100%	100%	100%
21/02/2024	100%	100%	100%
22/02/2024	100%	100%	100%
23/02/2024	93%	100%	100%
24/02/2024	100%	100%	100%
25/02/2024	86%	100%	100%
26/02/2024	95%	100%	100%
27/02/2024	100%	100%	100%
28/02/2024	100%	100%	100%
29/02/2024	91%	100%	100%
Totals *	78.61%	100%	100%

*includes data gaps

7.11.1 FEBRUARY MONITORING RESULTS SUMMARY

- Weather during the monitoring period consisted of several periods of rainfall and consistently high humidity.
  - Total rainfall for the month of January was 122.4mm.
  - Average wind speeds were above 2m/s (approximately 9km/h) with daytime and some evening wind speeds (especially early in the month) being above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 29.6°C, LDA 25.1°C, MA 27.7°C.
  - Humidity: HDA 95.7%, LDA 71.3%, MA 77.4%
  - Some weather station data losses were experienced on 8 and 9 February, this has been attributed to ants in equipment.
- Most noise exceedances occurred during the evening and nighttime periods, with events occurring 100% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.12 MARCH 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 40**) as well as wind speed and direction (**Figure 41**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 March 2024 through 31 March 2024 is presented in **Figure 42.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 16.**

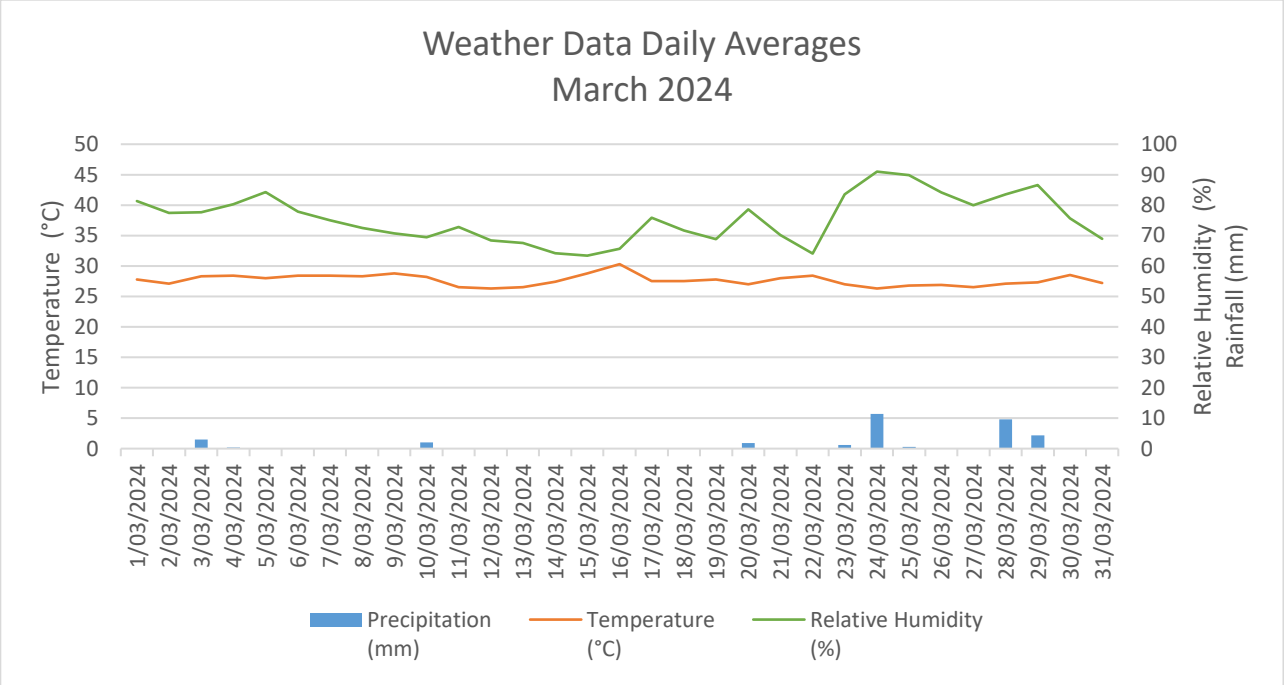


Figure 40 - March 2024 Weather Station Data

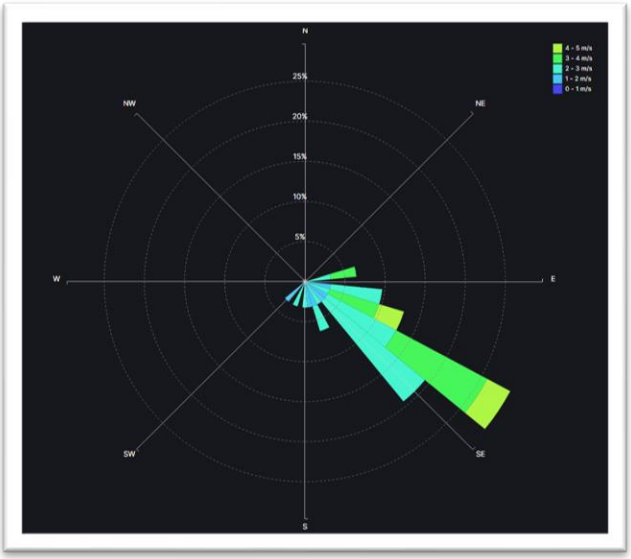


Figure 41 - March 2024 Wind Speed and Direction

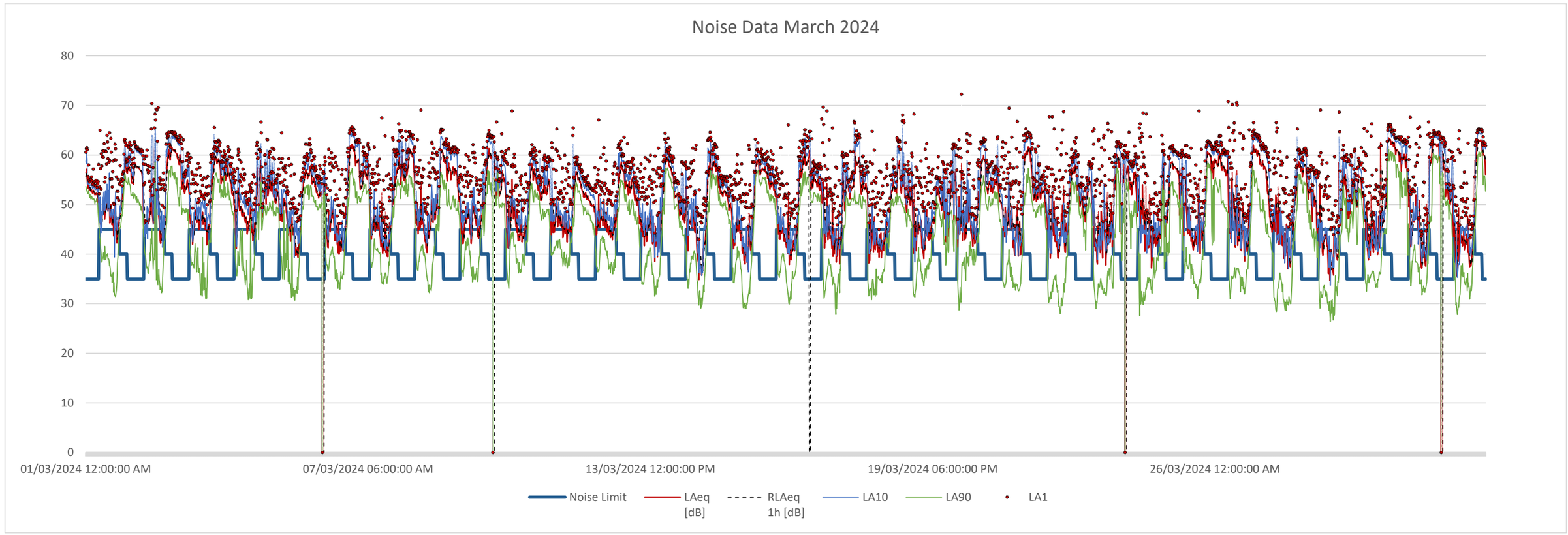


Figure 42 - March 2024 Noise Data

Table 16 - March 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/03/2024	93%	100%	100%
2/03/2024	84%	100%	100%
3/03/2024	82%	100%	100%
4/03/2024	89%	100%	100%
5/03/2024	61%	100%	100%
6/03/2024	50%	100%	97%
7/03/2024	55%	100%	100%
8/03/2024	75%	100%	100%
9/03/2024	73%	100%	100%
10/03/2024	68%	100%	97%
11/03/2024	89%	100%	100%
12/03/2024	73%	100%	100%
13/03/2024	43%	100%	100%
14/03/2024	52%	100%	100%
15/03/2024	36%	100%	100%
16/03/2024	39%	100%	100%
17/03/2024	48%	100%	100%
18/03/2024	25%	100%	100%
19/03/2024	59%	100%	100%
20/03/2024	70%	100%	100%
21/03/2024	66%	100%	100%
22/03/2024	52%	100%	100%
23/03/2024	61%	100%	100%
24/03/2024	57%	100%	97%
25/03/2024	55%	100%	100%
26/03/2024	70%	100%	100%
27/03/2024	50%	100%	100%
28/03/2024	18%	100%	100%
29/03/2024	52%	100%	100%
30/03/2024	61%	100%	100%
31/03/2024	18%	100%	97%
Totals *	58.87%	100%	100%

*includes data gaps

7.12.1 March Monitoring Results Summary

- Weather during the monitoring period consisted of several periods of rainfall and frequent high humidity.
  - A significant period of rain occurred on 24 March 2024 where 11.4mm was recorded.
  - This was accompanied by other minor rainfall events throughout the month totalling 34.4mm for the month of March.
  - Average wind speeds were above 2m/s (approximately 9.4km/h) with many daytime and some evening wind speeds regularly above 5m/s. Winds were mostly South Easterly.
  - Temperature: HDA 30.3°C, LDA 26.3°C, MA 27.7°C.
  - Humidity: HDA 91.0%, LDA 71.363.4%, MA 75.5%
- Most noise exceedances occurred during the evening and nighttime periods, with events occurring over 99% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.13 April 2024 Monitoring

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity in (**Figure 43**) as well as wind speed and direction (**Figure 44**)**.** Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 April 2024 through 30 April 2024 is presented in **Figure 45**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 17.**

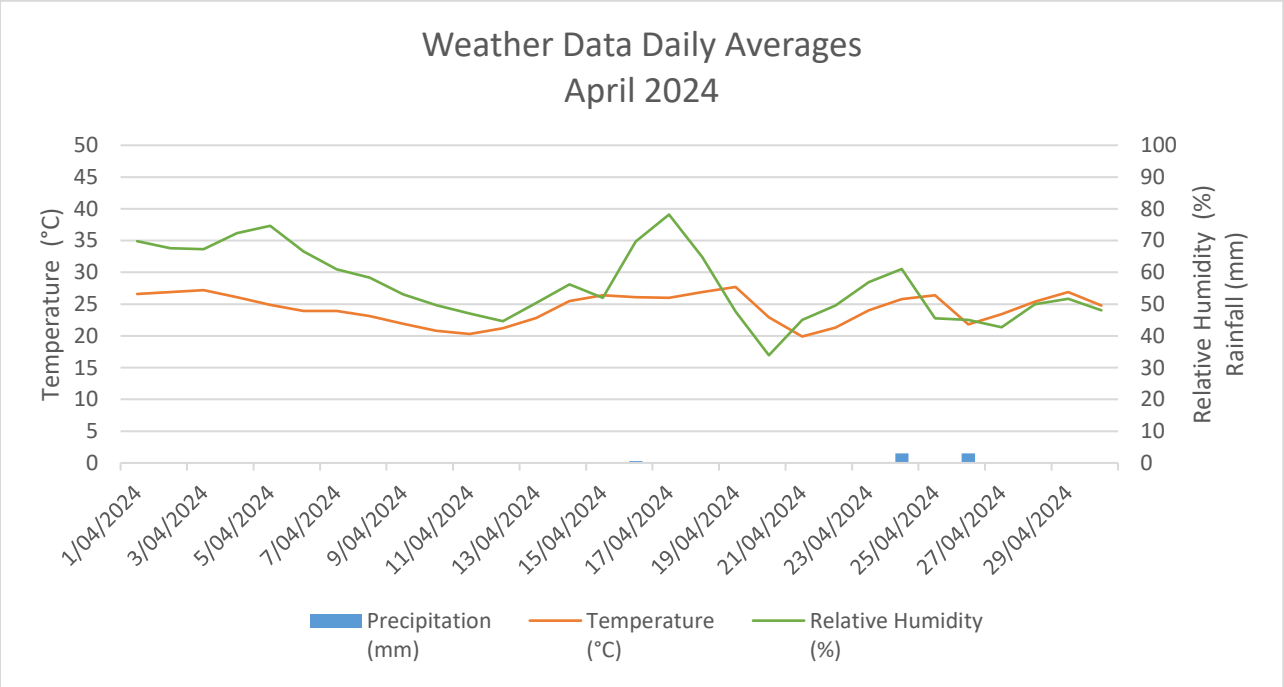


Figure 43 - April 2024 Weather Station Data

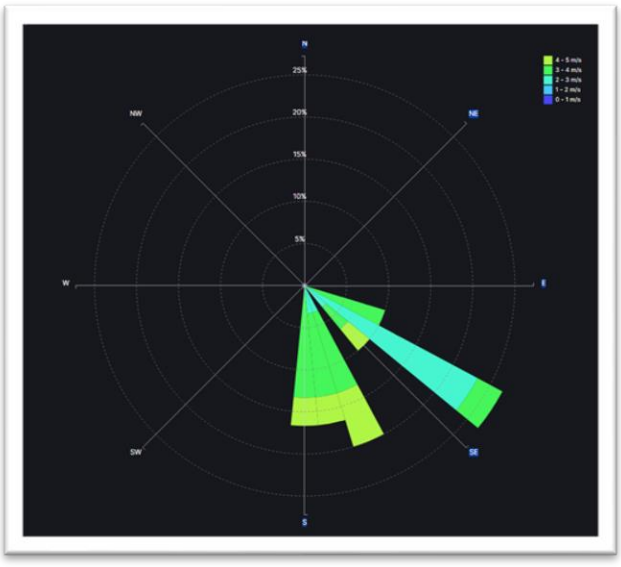


Figure 44 - April 2024 Wind Speed and Direction

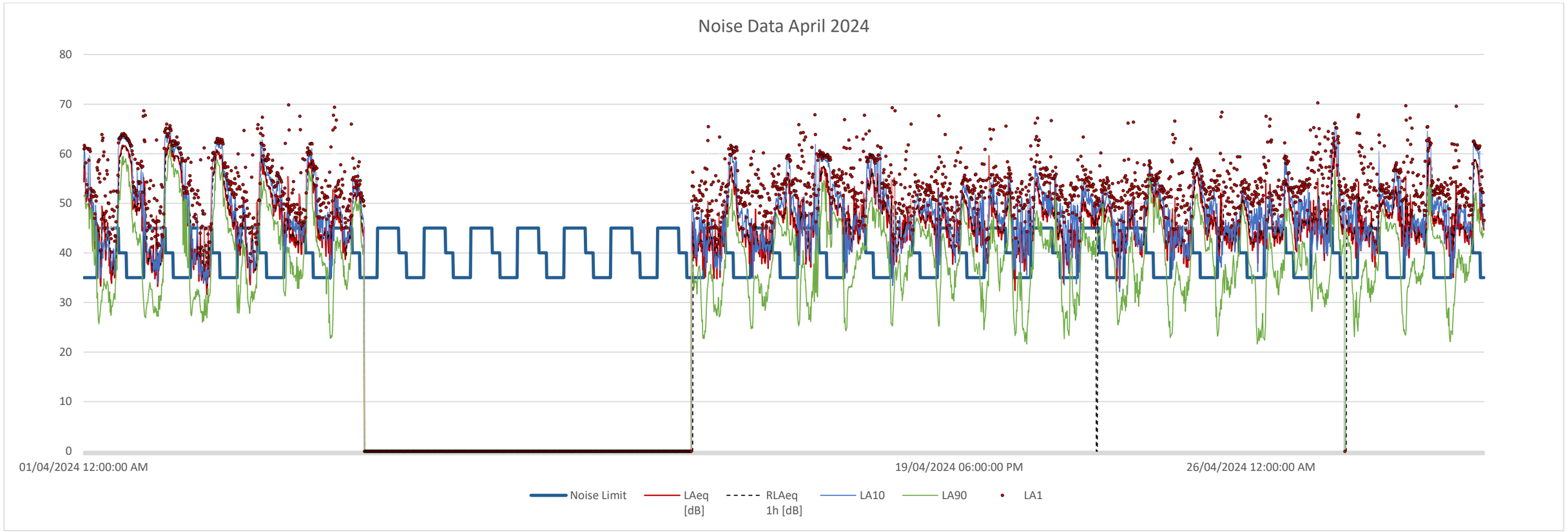


Figure 45 - April 2024 Noise Data

Table 17 - April 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/04/2024	23%	100%	100%
2/04/2024	20%	100%	100%
3/04/2024	5%	100%	100%
4/04/2024	23%	100%	100%
5/04/2024	30%	100%	100%
6/04/2024	55%	100%	100%
7/04/2024	0%	0%	3%
8/04/2024	0%	0%	0%
9/04/2024	0%	0%	0%
10/04/2024	0%	0%	0%
11/04/2024	0%	0%	0%
12/04/2024	0%	0%	0%
13/04/2024	0%	0%	0%
14/04/2024	20%	100%	94%
15/04/2024	5%	100%	100%
16/04/2024	68%	100%	100%
17/04/2024	66%	100%	100%
18/04/2024	45%	100%	100%
19/04/2024	39%	100%	100%
20/04/2024	52%	100%	100%
21/04/2024	95%	100%	100%
22/04/2024	86%	100%	100%
23/04/2024	41%	100%	100%
24/04/2024	27%	100%	100%
25/04/2024	23%	100%	100%
26/04/2024	45%	100%	100%
27/04/2024	77%	100%	100%
28/04/2024	39%	100%	100%
29/04/2024	41%	100%	100%
30/04/2024	43%	100%	100%
Totals *	31.23%	74%	74%

*includes data gaps

7.13.1 APRIL MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - Rainfall events occurred on 16, 24 and 26 April, at 0.6mm, 3mm and 3mm respectively.
  - Average wind speeds were above 3m/s (approximately 12.2km/h) and were mostly South to South Easterly.
  - Temperature: HDA 27.7°C, LDA 19.9°C, MA 24.4°C.
  - Humidity: HAD 78.2%, LDA 33.9%, MA 56.0%
- Most noise exceedances occurred during the evening and nighttime period, with events occurring above 99% of the time when data losses are not accounted for.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - Noise monitor data losses were experienced from 7 to 13 April. This was due to an infestation of native fat tailed rats (*Rattus villosissimus*), damaging cables and equipment. Following this discovery, the device was sent away for repairs and calibrations.

7.14 MAY 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 46**) as well as wind speed and direction (**Figure 47**). Continuous noise logging occurred in 15-minute intervals over the monitoring period. The monitoring data output for 1 May 2024 through 31 May 2024 is presented in **Figure 48**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 18.**

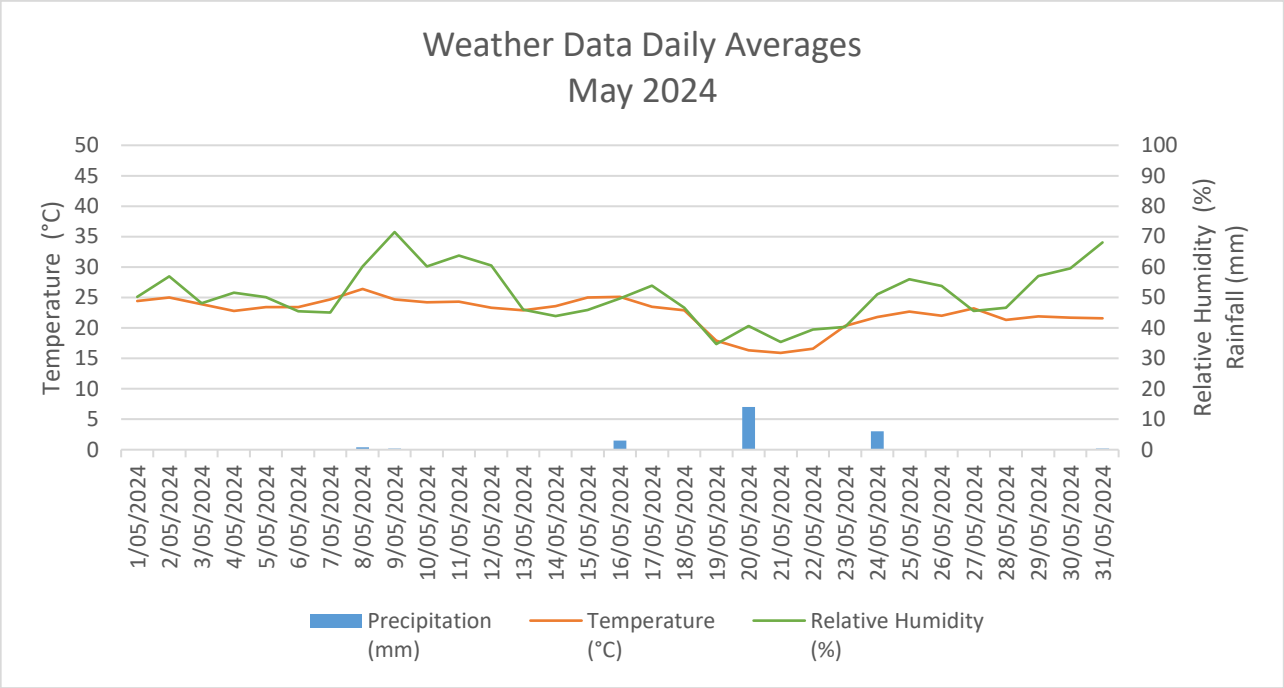


Figure 46 - May 2024 Weather Station Data

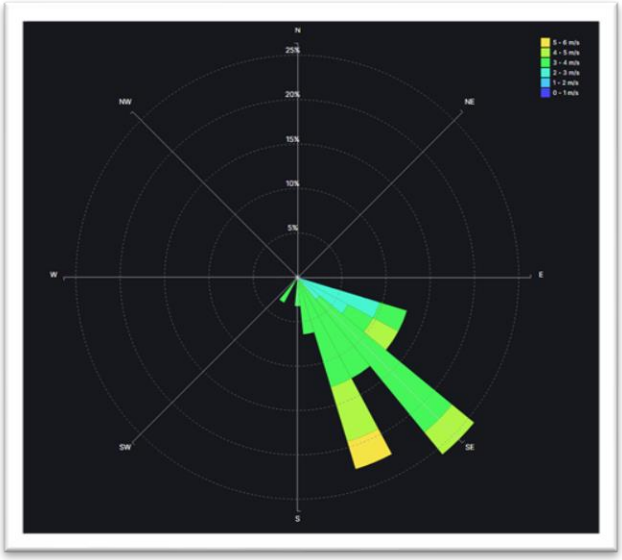


Figure 47 - May 2024 Wind Speed and Direction

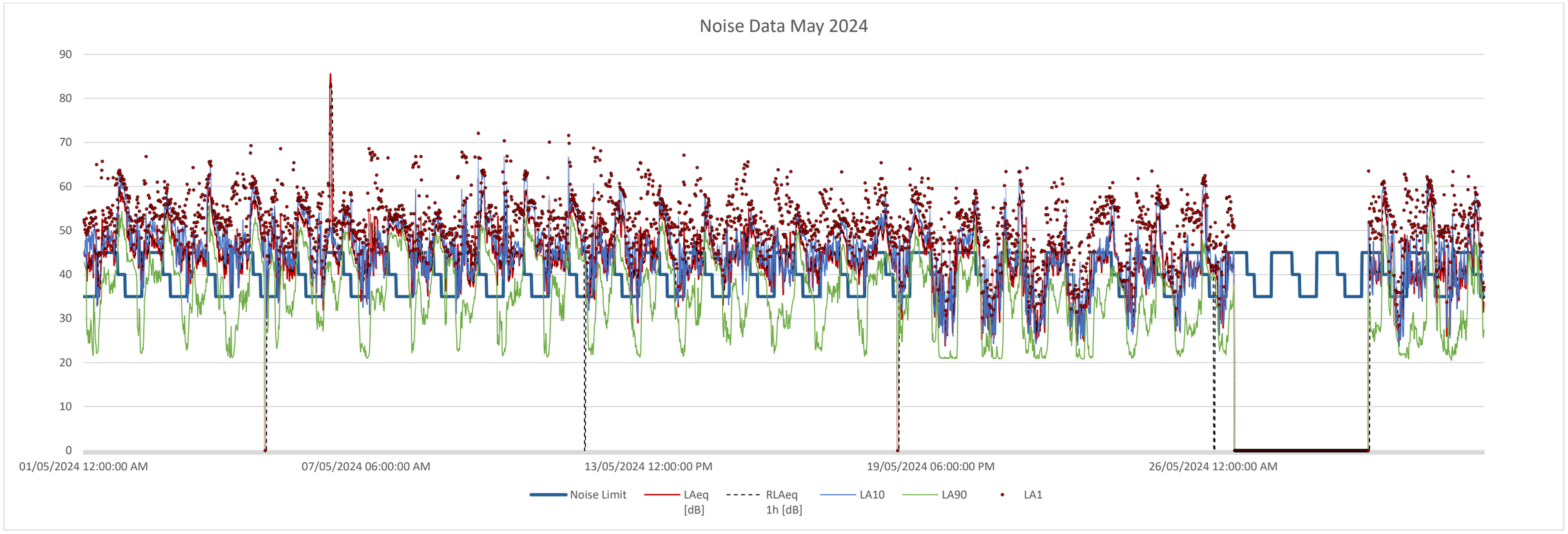


Figure 48 - May 2024 Noise Data

Table 18 - May 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/05/2024	73%	100%	100%
2/05/2024	80%	100%	100%
3/05/2024	25%	100%	100%
4/05/2024	73%	100%	100%
5/05/2024	39%	100%	97%
6/05/2024	45%	100%	100%
7/05/2024	75%	100%	100%
8/05/2024	41%	100%	100%
9/05/2024	45%	100%	100%
10/05/2024	41%	100%	100%
11/05/2024	32%	100%	100%
12/05/2024	75%	100%	94%
13/05/2024	59%	100%	97%
14/05/2024	30%	100%	100%
15/05/2024	59%	100%	100%
16/05/2024	43%	100%	100%
17/05/2024	32%	100%	100%
18/05/2024	61%	100%	100%
19/05/2024	100%	31%	78%
20/05/2024	91%	75%	56%
21/05/2024	34%	69%	42%
22/05/2024	18%	19%	17%
23/05/2024	20%	100%	42%
24/05/2024	23%	100%	69%
25/05/2024	2%	100%	69%
26/05/2024	0%	0%	53%
27/05/2024	0%	0%	0%
28/05/2024	0%	0%	0%
29/05/2024	14%	100%	22%
30/05/2024	18%	100%	72%
31/05/2024	30%	100%	92%
Totals *	38.86%	80%	74%

*includes data gaps

7.14.1 May Monitoring Results Summary

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - A significant period of ran occurred on 20 May, where 14mm was recorded.
  - Rainfall events occurred on 8, 9, 16, 24 and 31 May, at 0.8mm, 4mm 3mm, 6mm and 0.4mm respectively.
  - Average wind speeds were above 3m/s (approximately 12.3km/h) with daytime, evening and night wind speeds regularly above 5m/s. Winds were mostly South Easterly.
  - Temperature: HDA 26.4°C, LDA 15.9°C, MA 22.5°C.
  - Humidity: HDA 71.5%, LDA 34.7%, MA 50.9%.
- Most noise exceedances occurred during the evening time periods, with events occurring above 80% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - Noise monitor was sent away for calibrations and a hire device was used in the interim from 29 May 2024 to 25 June 2024.
  - Noise monitor data losses were experienced between 26 May 2024 and 29 May 2024, this was due to a faulty solar panel cable.

7.15 JUNE 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 49**) as well as wind speed and direction (**Figure 50**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 June 2024 through 30 June 2024 is presented in **Figure 51.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 19.**

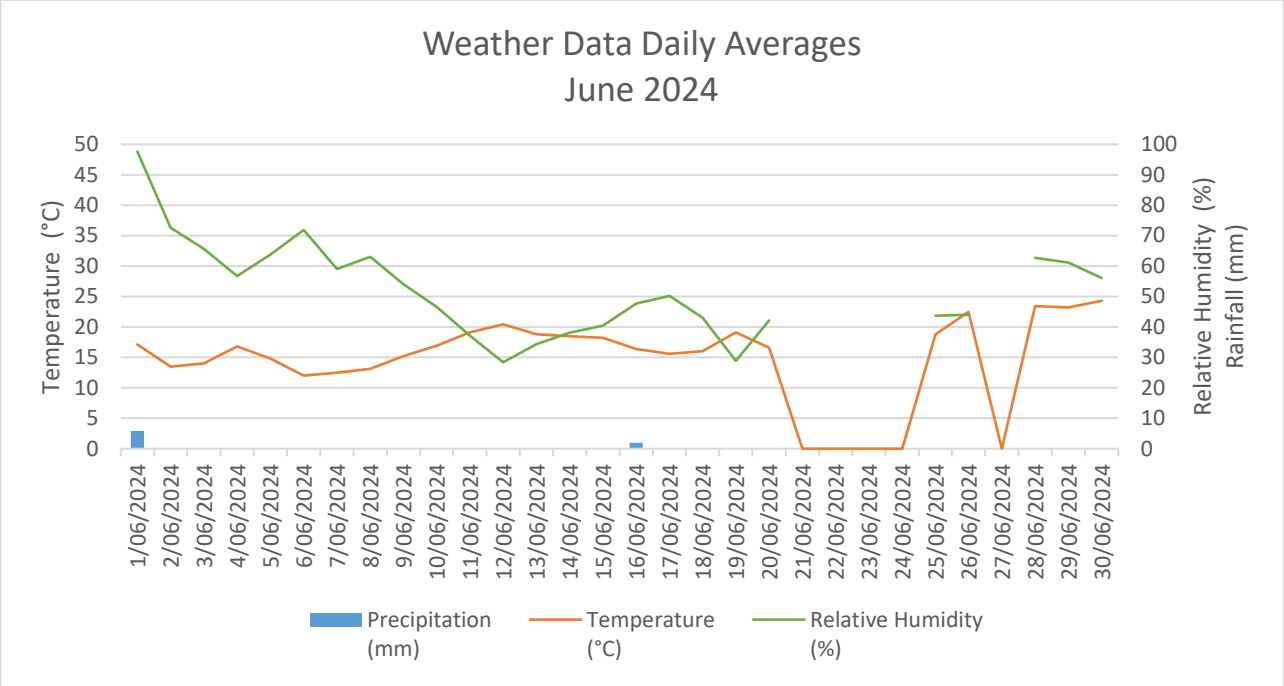


Figure 49 - June 2024 Weather Station Data

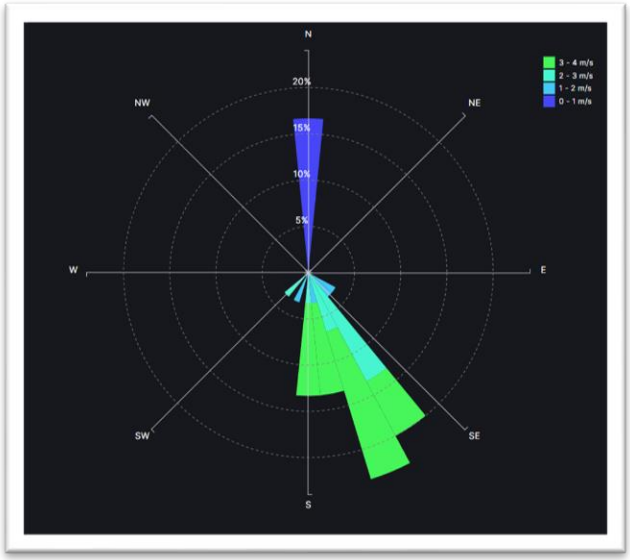


Figure 50 - June 2024 Wind Speed and Direction

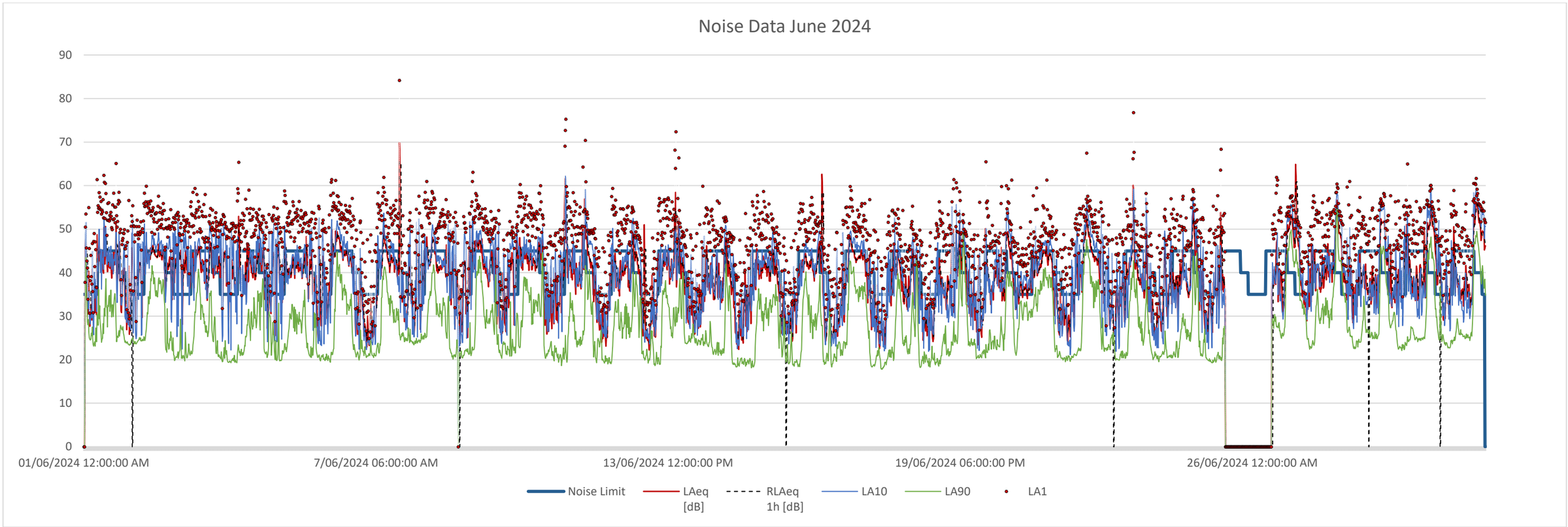


Figure 51 - June 2024 Noise Data

Table 19 - June 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/06/2024	27%	31%	67%
2/06/2024	20%	69%	86%
3/06/2024	9%	16%	36%
4/06/2024	11%	81%	94%
5/06/2024	7%	81%	92%
6/06/2024	48%	19%	61%
7/06/2024	20%	25%	17%
8/06/2024	27%	100%	78%
9/06/2024	45%	81%	58%
10/06/2024	16%	63%	69%
11/06/2024	32%	94%	75%
12/06/2024	5%	94%	19%
13/06/2024	20%	63%	25%
14/06/2024	7%	56%	22%
15/06/2024	0%	63%	11%
16/06/2024	5%	50%	6%
17/06/2024	20%	31%	22%
18/06/2024	0%	44%	22%
19/06/2024	25%	88%	28%
20/06/2024	14%	88%	28%
21/06/2024	7%	0%	72%
22/06/2024	41%	44%	42%
23/06/2024	20%	19%	28%
24/06/2024	9%	69%	56%
25/06/2024	11%	0%	36%
26/06/2024	18%	100%	22%
27/06/2024	0%	100%	81%
28/06/2024	7%	100%	81%
29/06/2024	27%	100%	81%
30/06/2024	11%	100%	67%
Totals *	16.50%	60%	48%

*includes data gaps

7.15.1 JUNE MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - Rainfall events occurred on 1, 2, 16 and 18 June, 5.8mm, at 0.2mm, 2mm and 0.2mm respectively.
  - Average wind speeds were above 2m/s (approximately 8.29km/h) and were mostly South to South Easterly.
  - Temperature: HDA 24.3°C, LDA 12.0°C, MA 17.5°C.
  - Humidity: HDA 97.6%, LDA 28.4%, MA 52.4%.
  - Some weather station data losses were experienced on 21, 22, 23, 24 and 27 June.
- Most noise exceedances occurred during the evening time periods, with events occurring above 60% of the time.
  - Regular attendance at the noise monitoring station indicates that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - Some weather station data losses were experienced on 21, 22, 23, 24 and 27 June.
  - Noise monitor was sent away for calibrations and a hire device was used in the interim from 29 May 2024 to 25 June 2024.
  - Partial noise data for 25 and 26 June 2024 was lost as midnight update did not occur due to noise monitor changeover.

7.16 JULY 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 52**) as well as wind speed and direction (**Figure 53**). Continuous noise logging in 15-minute intervals over the monitoring period occurred. The monitoring data output for 1 July 2024 through 31 July 2024 is presented in **Figure 54.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 20.**

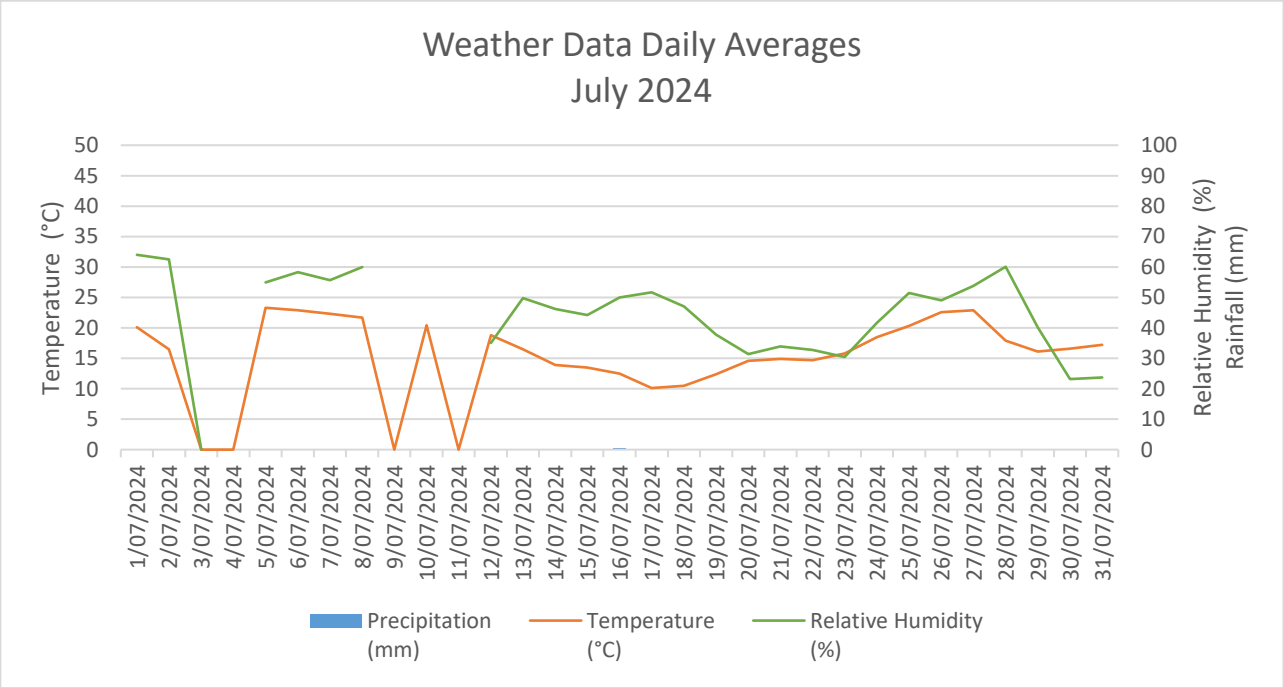


Figure 52 - July 2024 Weather Station Data

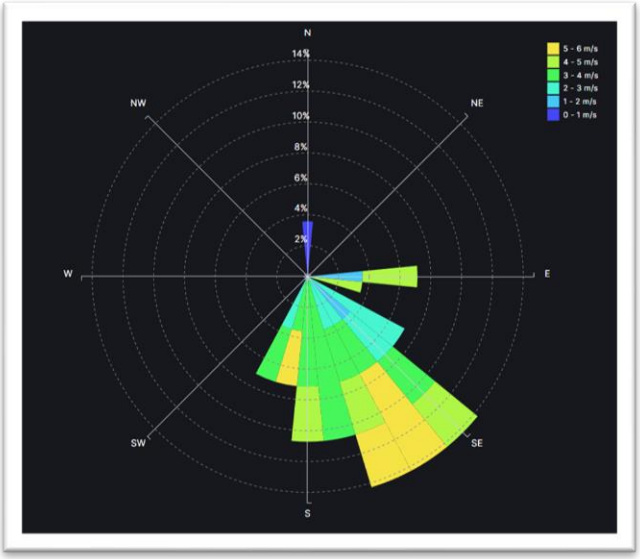


Figure 53 - July 2024 Wind Speed and Direction

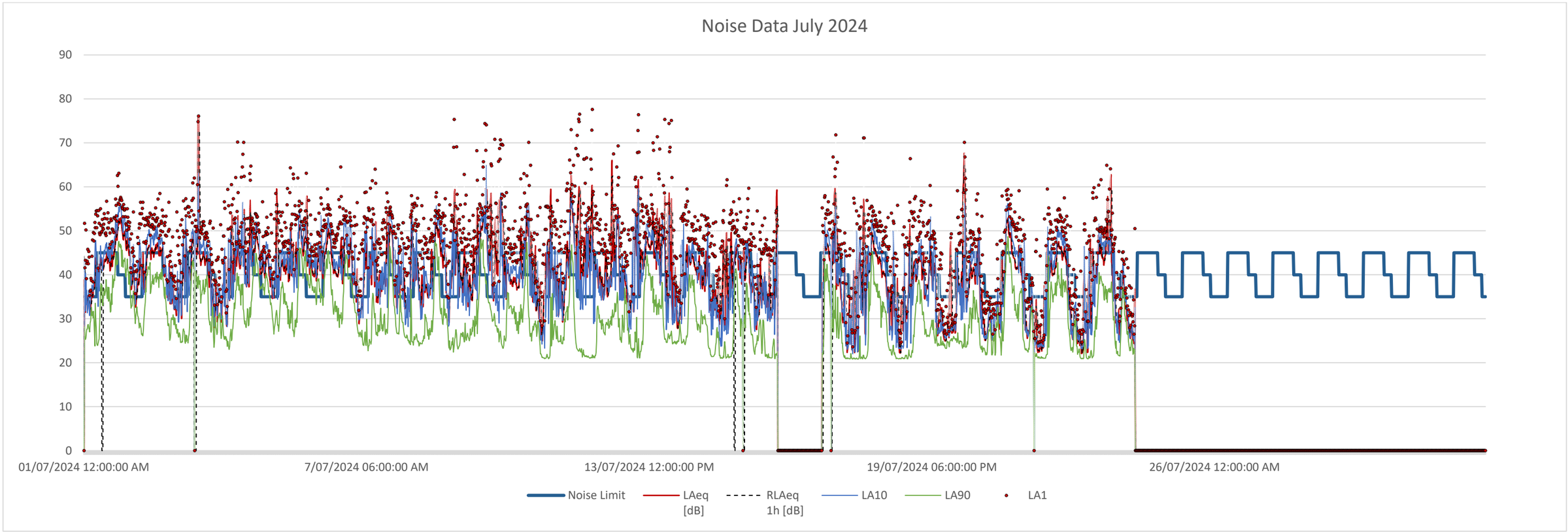


Figure 54 - July 2024 Noise Data

Table 20 - July 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/07/2024	23%	100%	58%
2/07/2024	66%	50%	83%
3/07/2024	41%	31%	64%
4/07/2024	59%	100%	75%
5/07/2024	27%	100%	97%
6/07/2024	39%	100%	100%
7/07/2024	30%	75%	69%
8/07/2024	0%	100%	72%
9/07/2024	11%	100%	89%
10/07/2024	16%	100%	97%
11/07/2024	18%	100%	69%
12/07/2024	16%	69%	100%
13/07/2024	70%	81%	81%
14/07/2024	2%	44%	58%
15/07/2024	41%	0%	69%
16/07/2024	7%	0%	53%
17/07/2024	66%	0%	0%
18/07/2024	27%	19%	78%
19/07/2024	9%	38%	31%
20/07/2024	18%	44%	14%
21/07/2024	36%	6%	3%
22/07/2024	36%	19%	3%
23/07/2024	48%	6%	44%
24/07/2024	0%	0%	8%
25/07/2024	0%	0%	0%
26/07/2024	0%	0%	0%
27/07/2024	0%	0%	0%
28/07/2024	0%	0%	0%
29/07/2024	0%	0%	0%
30/07/2024	0%	0%	0%
31/07/2024	0%	0%	0%
Totals *	22.07%	38%	44%

*includes data gaps

7.16.1 JULY MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - Rainfall events occurred on 16 August 2024 where 0.6mm was recorded.
  - Average wind speeds were above 3m/s (approximately 12.45km/h) with daytime wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 23.3°C, LDA 10.0°C, MA 17.3°C.
  - Humidity: HDA 64.0%, LDA 23.2%, MA 44.3%
  - Some weather station data losses were experienced on 4, 9 and 11 July. This was due to an infestation of native fat tailed rats damaging cables and equipment (**Figure 55**).
- Most noise exceedances occurred during the nighttime periods, with events occurring above 55% of the time when data losses are not accounted for.
  - Event trigger recording was implemented in July to identify exceedances. This has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - Cattle were moved into the Saint Elmo Homestead paddock near the noise monitor on 2 July 2024 until 17 July 2024 which has impacted noise levels.
  - Noise data was lost on 16 and 17 July as the device temporarily lost power.
  - Noise data from 23 July 2024 to 20 August 2024 was lost as native fat tailed rats, had destroyed cabling to the solar panel. The device was not able to be completely repaired until 20 August 2024 (**Figure 56**).

Figure 55 - Cable Damage from Native Bush Rats to Weather Station Solar Pannel.

Figure 56 - Cable Damage from Native Bush Rats to Noise Monitor Solar Pannel.

7.17 AUGUST 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 57**) as well as wind speed and direction (**Figure 58**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 August 2024 through 31 August 2024 is presented in **Figure 59**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 21.**

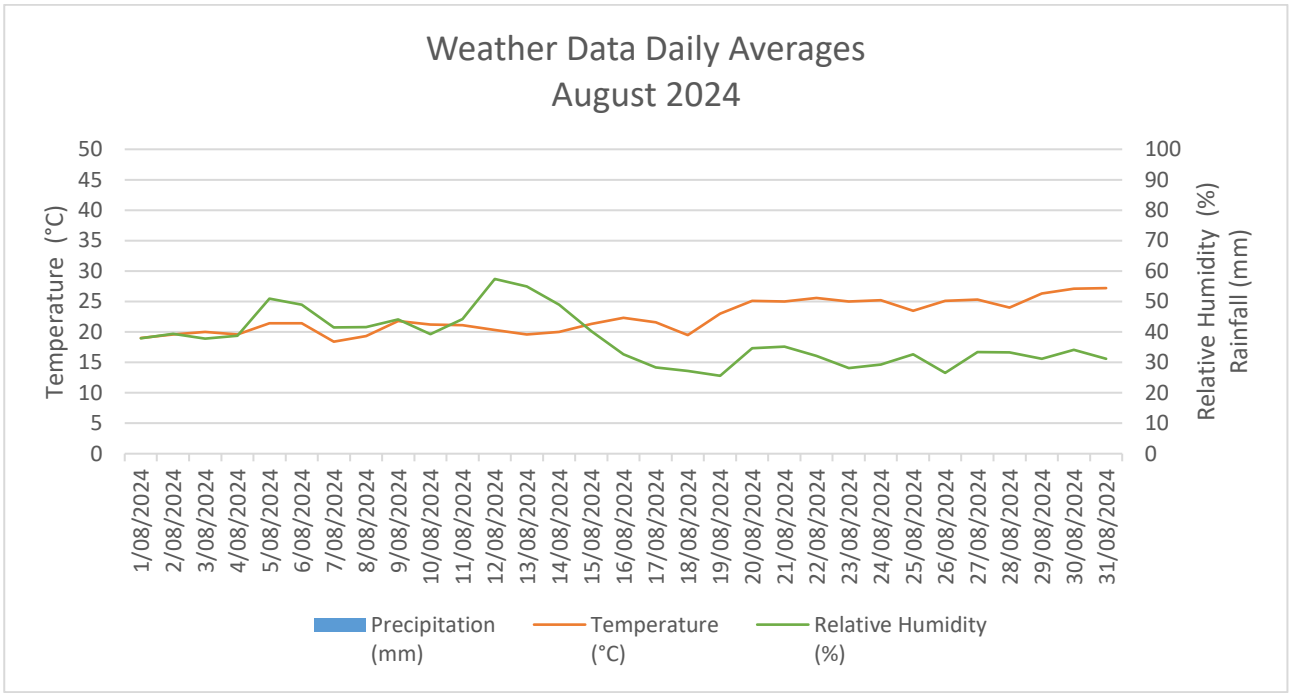


Figure 57 - August 2024 Weather Station Data

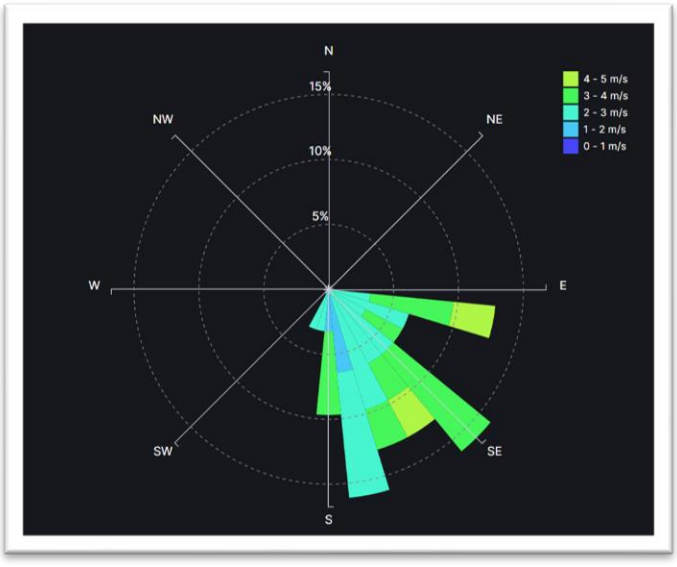


Figure 58 - August 2024 Wind Speed and Direction

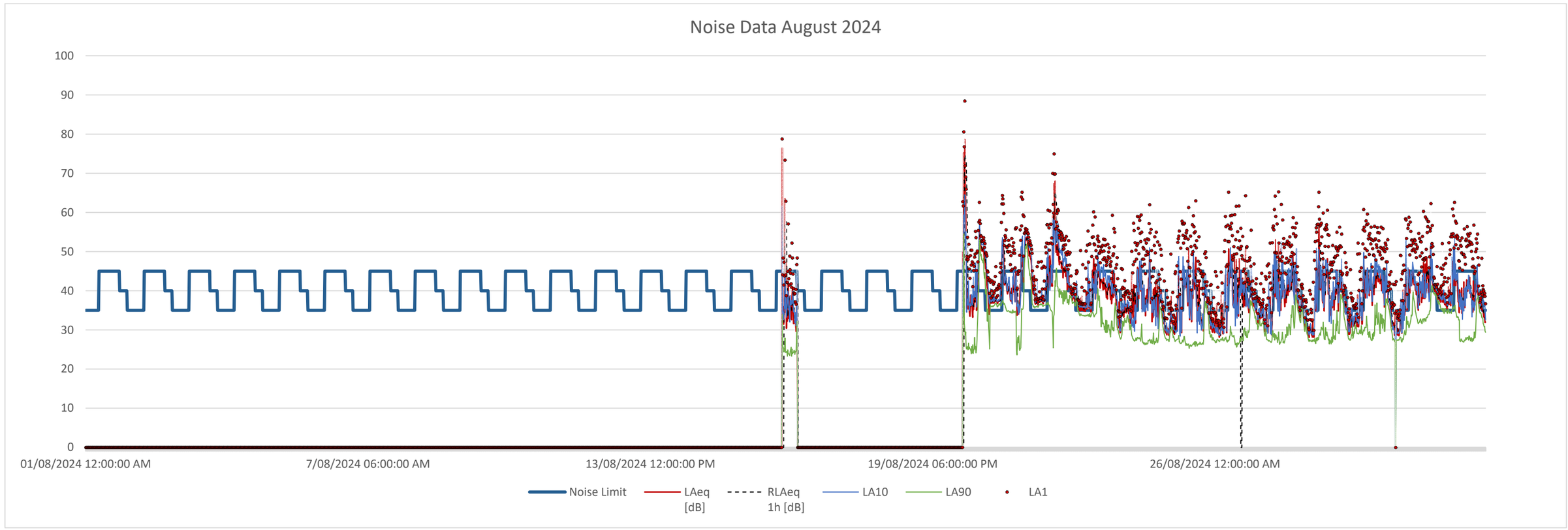


Figure 59 - August 2024 Noise Data

Table 21 - August 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/08/2024	0%	0%	0%
2/08/2024	0%	0%	0%
3/08/2024	0%	0%	0%
4/08/2024	0%	0%	0%
5/08/2024	0%	0%	0%
6/08/2024	0%	0%	0%
7/08/2024	0%	0%	0%
8/08/2024	0%	0%	0%
9/08/2024	0%	0%	0%
10/08/2024	0%	0%	0%
11/08/2024	0%	0%	0%
12/08/2024	0%	0%	0%
13/08/2024	0%	0%	0%
14/08/2024	0%	0%	0%
15/08/2024	0%	0%	0%
16/08/2024	18%	6%	0%
17/08/2024	0%	0%	0%
18/08/2024	0%	0%	0%
19/08/2024	0%	0%	0%
20/08/2024	25%	94%	22%
21/08/2024	23%	100%	100%
22/08/2024	80%	44%	100%
23/08/2024	11%	44%	78%
24/08/2024	7%	0%	61%
25/08/2024	9%	0%	25%
26/08/2024	36%	25%	25%
27/08/2024	36%	56%	28%
28/08/2024	14%	44%	28%
29/08/2024	0%	38%	28%
30/08/2024	5%	100%	53%
Totals *	8.50%	18%	18%

*includes data gaps

7.17.1 August Monitoring Results Summary

- Weather during the monitoring period was generally fine and dry.
  - No rainfall was recorded for the period.
  - Average wind speeds were above 2m/s (approximately 10.2km/h) with daytime wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 27.9°C, LDA 22.4°C, MA 25.3°C.
  - Humidity: HDA 42.5%, LDA 15.6%, MA 29.6%
- Most noise exceedances occurred during the evening and nighttime periods, with events occurring above 45% of the time when data losses are not accounted for.
  - Event trigger recording has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - Noise data from 23 July 2024 to 20 August 2024 was lost as native fat tailed rats, had destroyed cabling to the solar panel. Partial data was collected for 16 August 2024. The device was not able to be completely repaired until 20 August 2024.
  - Noise Monitor was relocated nearer to the homestead, so that it may be connected to permanent power. New UTM Coordinates: 590224E, 7722969N.

7.18 SEPTEMBER 2024 MONITORING

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 60**) as well as wind speed and direction (**Figure 61**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 September 2024 through 30 September 2024 is presented in **Figure 62**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 22.**

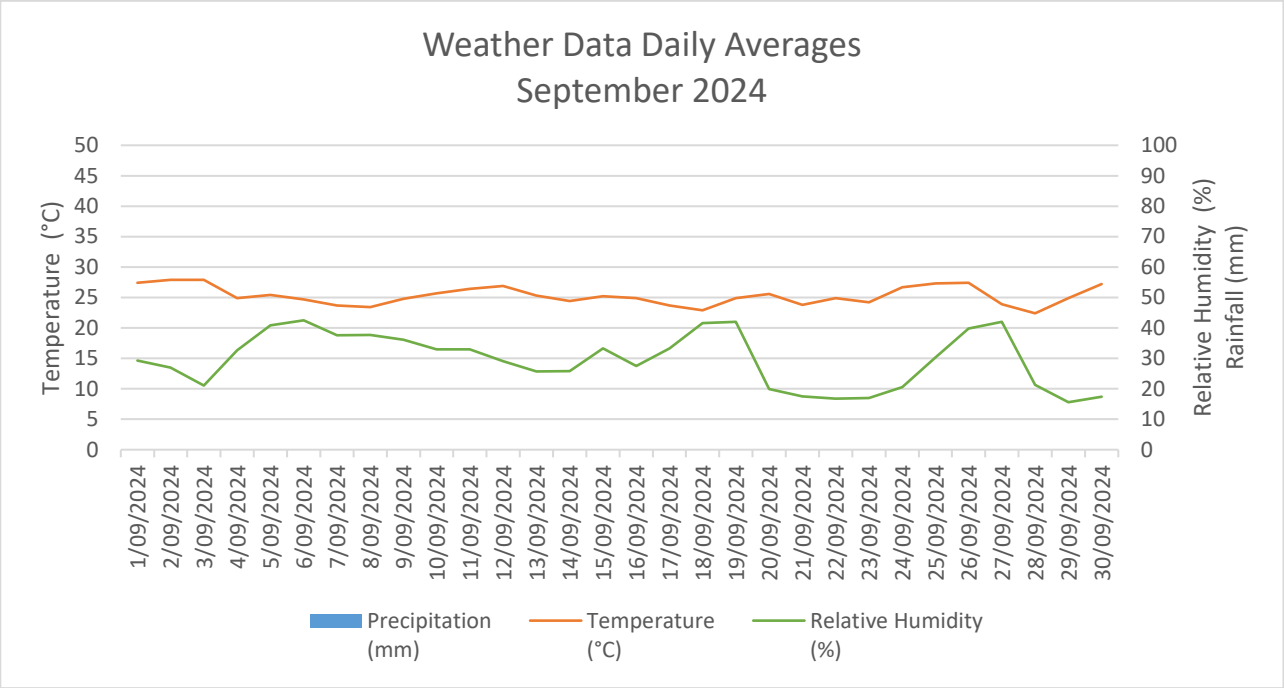


Figure 60 - September 2024 Weather Station Data

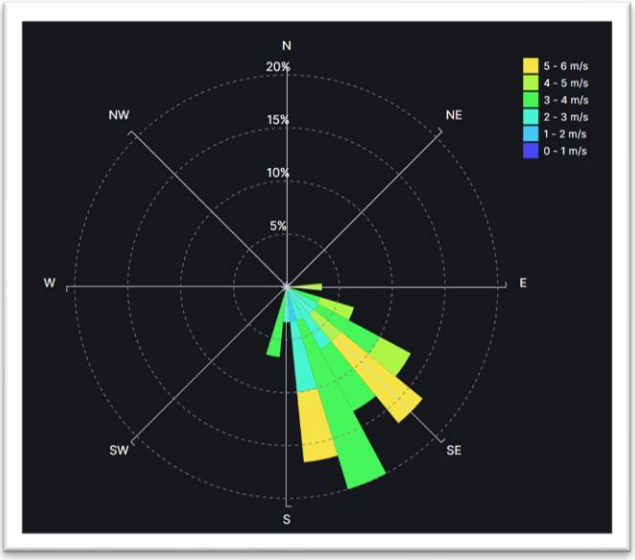


Figure 61 - September 2024 Wind Speed and Direction

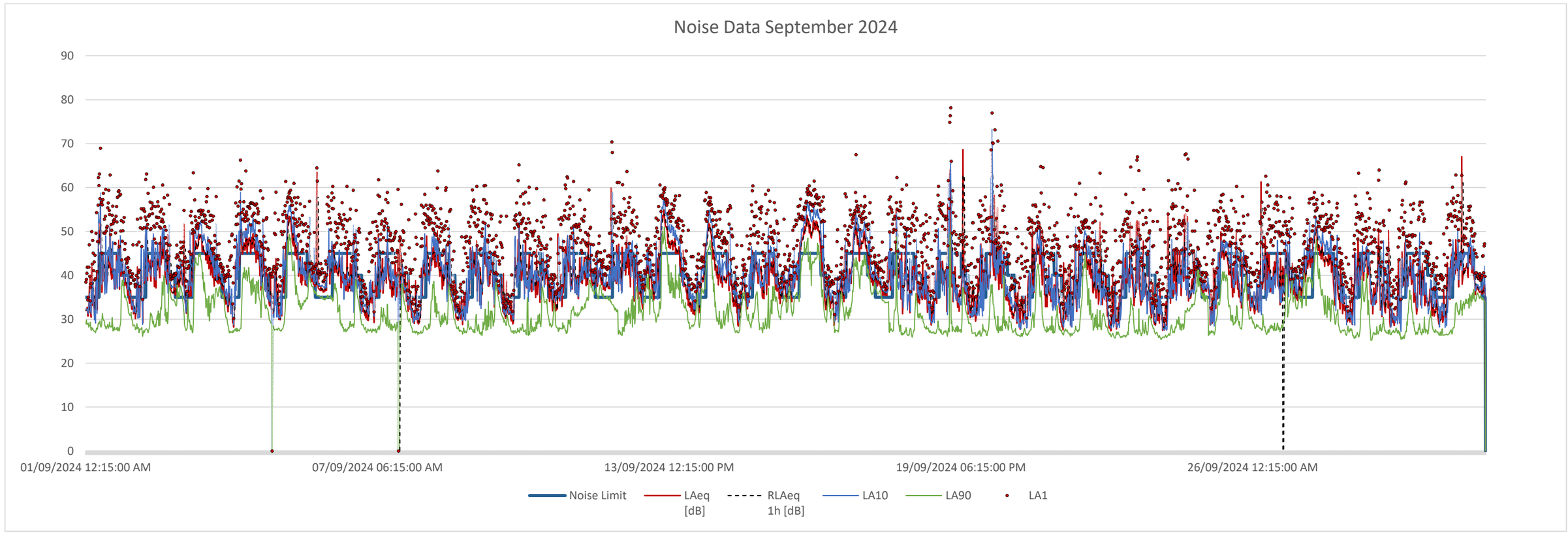


Figure 62 - September 2024 Noise Data

Table 22 - September 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/09/2024	32%	63%	58%
2/09/2024	30%	50%	64%
3/09/2024	64%	44%	89%
4/09/2024	91%	56%	39%
5/09/2024	57%	38%	58%
6/09/2024	7%	44%	78%
7/09/2024	16%	38%	56%
8/09/2024	20%	38%	39%
9/09/2024	11%	6%	44%
10/09/2024	9%	56%	47%
11/09/2024	14%	44%	78%
12/09/2024	14%	38%	92%
13/09/2024	93%	56%	81%
14/09/2024	41%	63%	42%
15/09/2024	0%	56%	69%
16/09/2024	93%	56%	83%
17/09/2024	64%	56%	67%
18/09/2024	11%	38%	100%
19/09/2024	25%	25%	56%
20/09/2024	39%	0%	53%
21/09/2024	43%	0%	39%
22/09/2024	20%	19%	50%
23/09/2024	27%	13%	42%
24/09/2024	23%	81%	50%
25/09/2024	25%	69%	75%
26/09/2024	7%	75%	61%
27/09/2024	48%	31%	83%
28/09/2024	9%	6%	47%
29/09/2024	2%	0%	44%
30/09/2024	9%	13%	53%
Totals *	30.43%	38%	59%

*includes data gaps

7.18.1 SEPTEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry.
  - No rainfall was recorded for the period.
  - Average wind speeds were above 3m/s (approximately 12.59km/h) with daytime, evening and nighttime wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 27.9°C, LDA 22.4°C, MA 25.3°C.
  - Humidity: HDA 42.5%, LDA 15.6%, MA 29.6%
- Most noise exceedances occurred during the evening time periods, with events occurring above 55% of the time.
  - Event trigger recording was implemented in July to identify exceedances. This has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.19 October 2024 Monitoring

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 63**) as well as wind speed and direction (**Figure 64**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. Weather Station data. The monitoring data output for 1 October 2024 through 31 October 2024 is presented in **Figure 65.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 23.**

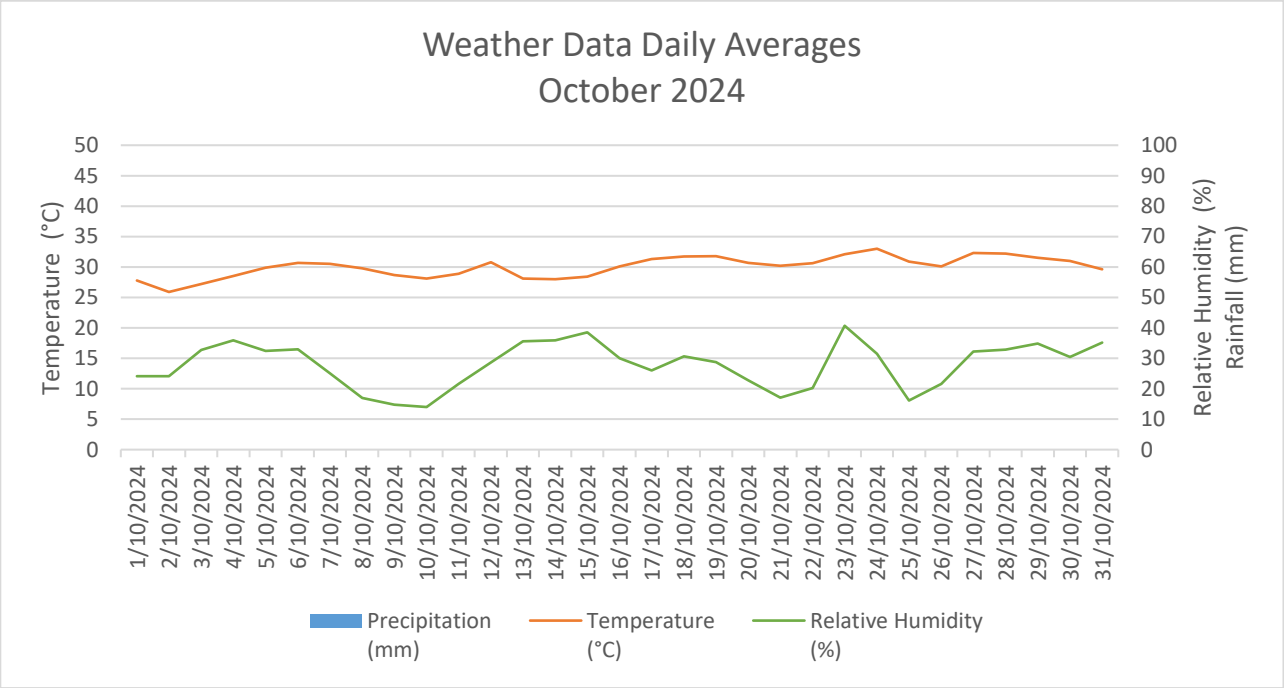


Figure 63 - October 2024 Weather Station Data

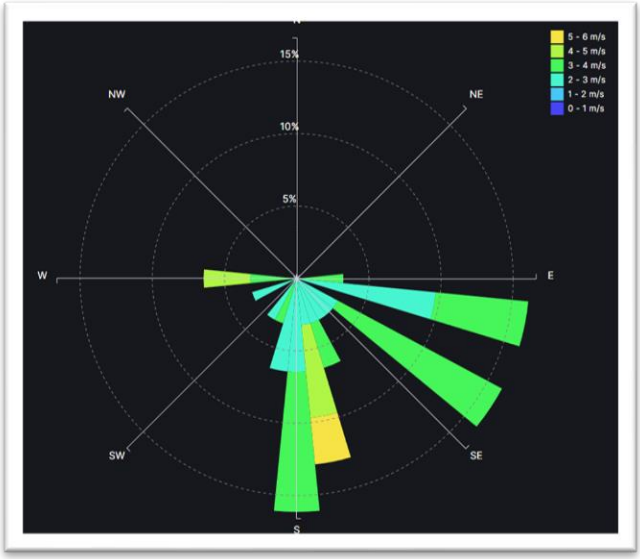


Figure 64 - October 2024 Wind Speed and Direction

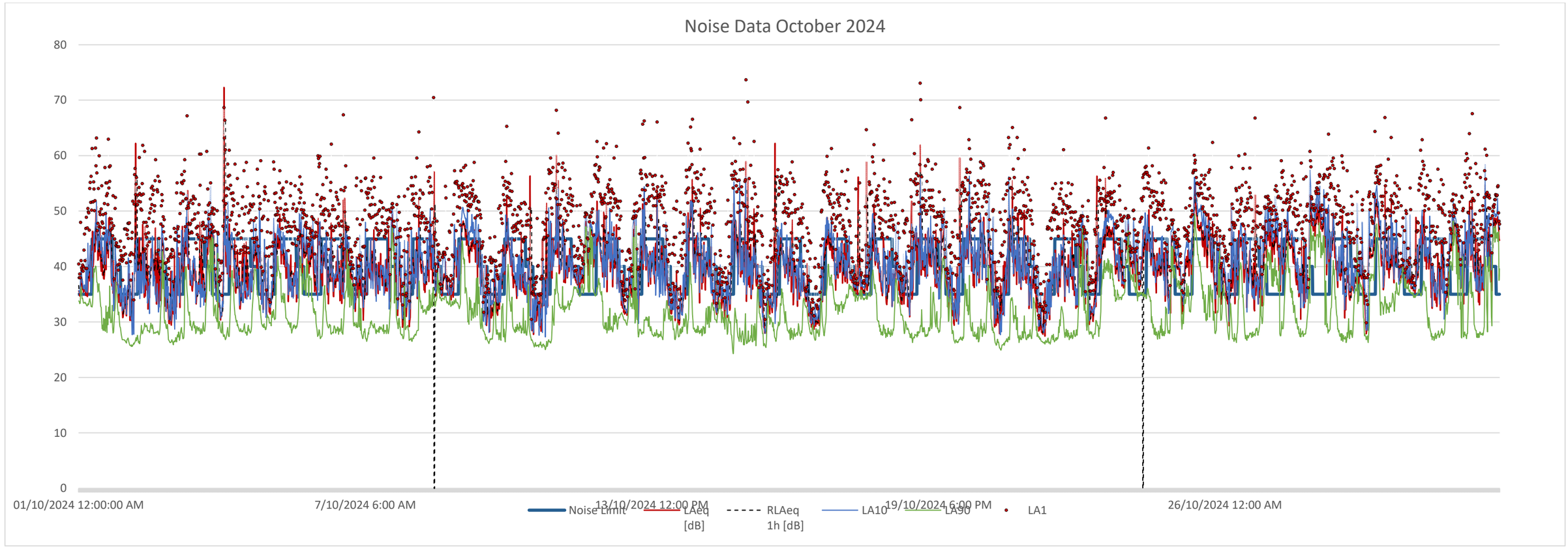


Figure 65 - October 2024 Noise Data

Table 23 - October 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/10/2024	27%	6%	78%
2/10/2024	0%	44%	44%
3/10/2024	16%	75%	86%
4/10/2024	0%	69%	78%
5/10/2024	9%	63%	81%
6/10/2024	0%	88%	100%
7/10/2024	0%	81%	86%
8/10/2024	16%	31%	78%
9/10/2024	30%	13%	75%
10/10/2024	9%	25%	39%
11/10/2024	32%	25%	61%
12/10/2024	34%	13%	78%
13/10/2024	25%	31%	78%
14/10/2024	39%	6%	36%
15/10/2024	50%	19%	44%
16/10/2024	0%	0%	33%
17/10/2024	20%	56%	47%
18/10/2024	14%	19%	92%
19/10/2024	11%	63%	83%
20/10/2024	23%	81%	72%
21/10/2024	41%	0%	42%
22/10/2024	0%	63%	44%
23/10/2024	45%	56%	67%
24/10/2024	11%	56%	100%
25/10/2024	66%	63%	86%
26/10/2024	11%	44%	81%
27/10/2024	11%	56%	100%
28/10/2024	18%	19%	100%
29/10/2024	43%	63%	78%
30/10/2024	20%	31%	100%
31/10/2024	30%	94%	100%
Totals *	20.16%	43%	71%

*includes data gaps

7.19.1 October Monitoring Results Summary

- Weather during the monitoring period was generally fine and dry, with the following exceptions:
  - No rainfall was recorded for the period.
  - Average wind speeds were above 2m/s (approximately 10.6km/h) with many daytime and some evening wind speeds regularly above 5m/s. Winds were mostly Southerly.
  - Temperature: HDA 33.0°C, LDA 25.9°C, MA 30.0°C.
  - Humidity: HDA 40.7%, LDA 14.0%, MA 27.9%
  - Some weather station data losses were experienced on 1, 2 and 3 October, this was due to a loose cable.
- Most noise exceedances occurred during the nighttime periods, with events occurring above 70% of the time.
  - Event trigger recording was implemented in July to identify exceedances. This has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.
  - The relocation of the noise monitor closer to the homestead has presented issues as the events recordings are picking up homestead machinery noise regularly as exceedances. We are currently investigating options for moving the device further away to correct this issue, however locating a permanent power source is problematic due to the remote location and wildlife interference.

7.20 November 2024 Monitoring

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 66**) as well as wind speed and direction (**Figure 67**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 November 2024 through 30 November 2024 is presented in **Figure 68**. No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 24.**

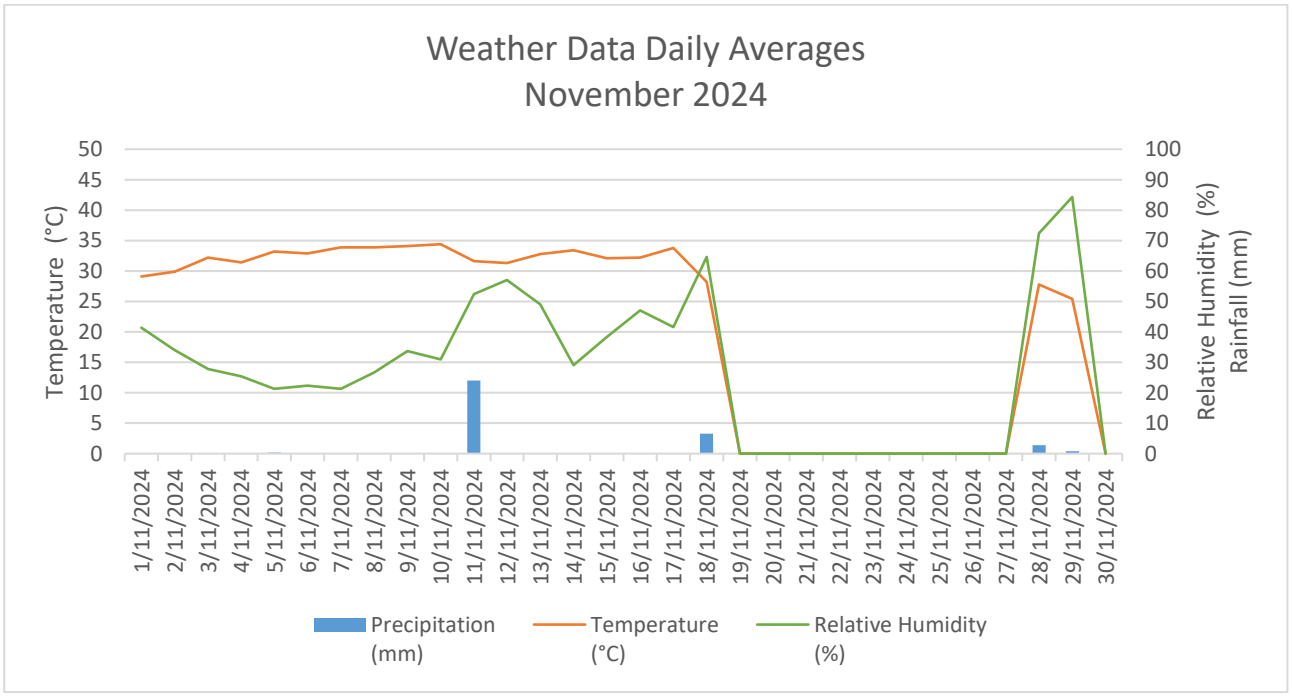


Figure 66 - November 2024 Weather Station Data

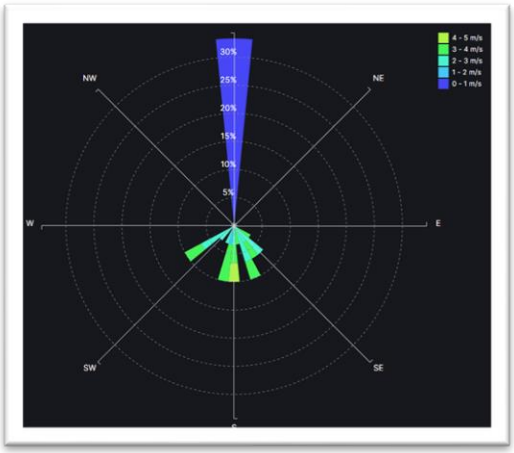


Figure 67 - November 2024 Wind Speed and Direction

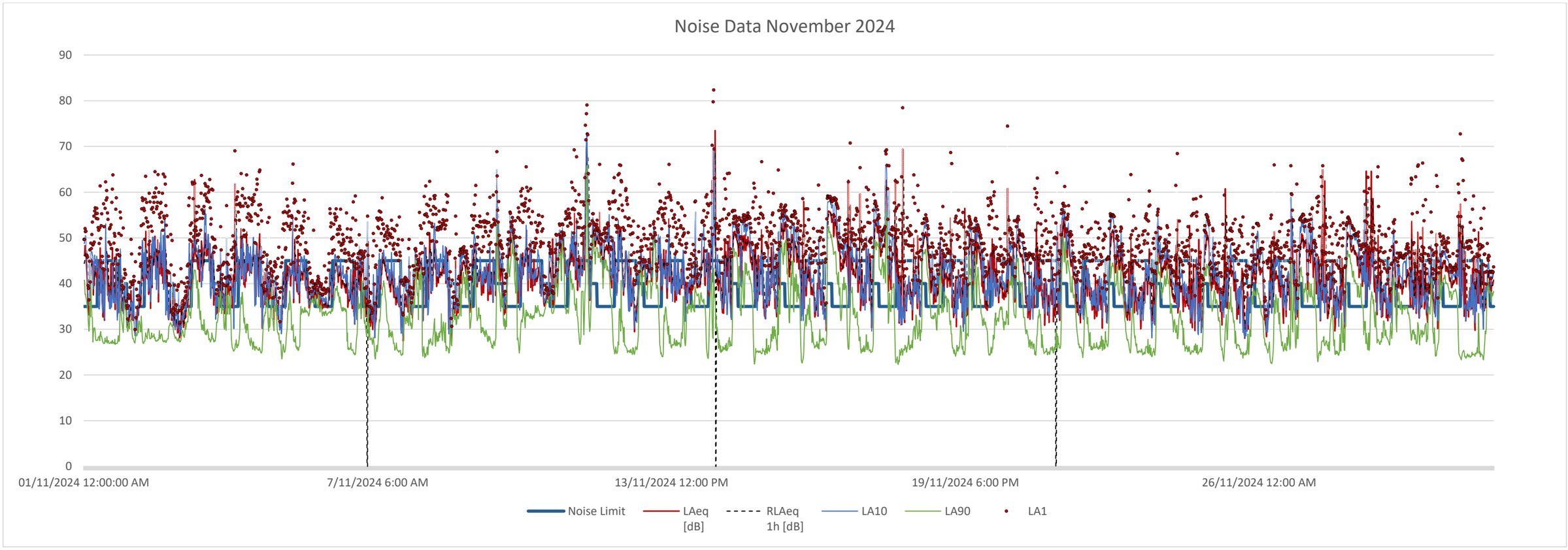


Figure 68 - November 2024 Noise Data

Table 24 - November 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/11/2024	16%	25%	78%
2/11/2024	57%	19%	39%
3/11/2024	68%	25%	53%
4/11/2024	55%	88%	100%
5/11/2024	16%	0%	72%
6/11/2024	0%	69%	97%
7/11/2024	5%	0%	61%
8/11/2024	27%	25%	97%
9/11/2024	16%	100%	92%
10/11/2024	25%	31%	100%
11/11/2024	64%	100%	100%
12/11/2024	34%	63%	100%
13/11/2024	9%	19%	100%
14/11/2024	41%	88%	100%
15/11/2024	20%	88%	100%
16/11/2024	14%	69%	100%
17/11/2024	25%	75%	100%
18/11/2024	23%	69%	100%
19/11/2024	16%	81%	100%
20/11/2024	39%	88%	100%
21/11/2024	16%	88%	97%
22/11/2024	0%	56%	92%
23/11/2024	5%	63%	86%
24/11/2024	11%	81%	100%
25/11/2024	7%	31%	92%
26/11/2024	25%	75%	72%
27/11/2024	23%	75%	100%
28/11/2024	41%	50%	100%
29/11/2024	20%	81%	100%
30/11/2024	30%	31%	100%
Totals *	24.05%	56%	88%

*includes data gaps

7.20.1 NOVEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry.
  - Rainfall events occurred on 5, 11, 18, 28 and 29 November 2024 where 0.4mm, 24mm, 6.6mm, 2.8mm and 0.8mm respectively were recorded.
  - On the 18 November a calibration was conducted on the rain gauge, where 4.2mm was put through the device that was not due to rainfall.
  - Average wind speeds were above 3m/s (approximately 10.8km/h) with many daytime and some evening wind speeds regularly above 5m/s. Winds were mostly South Westerly to South Easterly.
  - Temperature: HDA 34.4°C, LDA 25.4°C, MA 31.7°C.
  - Humidity: HDA 84.3%, LDA 21.3%, MA 27.4%
  - Some weather station data losses were experienced on 19, 20, 21, 22, 23, 24, 25, 26, 27 November, this has been attributed to a hardware changeover which caused initial data upload issues.
- Most noise exceedances occurred during the nighttime periods, with events occurring above 85% of the time.
  - Event trigger recording was implemented in July to identify exceedances. This has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

7.21 December 2024 Monitoring

Data from the Saint Elmo Weather Station presents daily averages for temperature, precipitation, and relative humidity (**Figure 69**) as well as wind speed and direction (**Figure 70**). Continuous noise logging in 15-minute intervals occurred over the monitoring period. The monitoring data output for 1 December 2024 through 31 December 2024 is presented **in Figure 71.** No mining or construction occurred during this period, and the homestead remained unoccupied. The percentage of hourly noise limit exceedances is shown in **Table 25.**

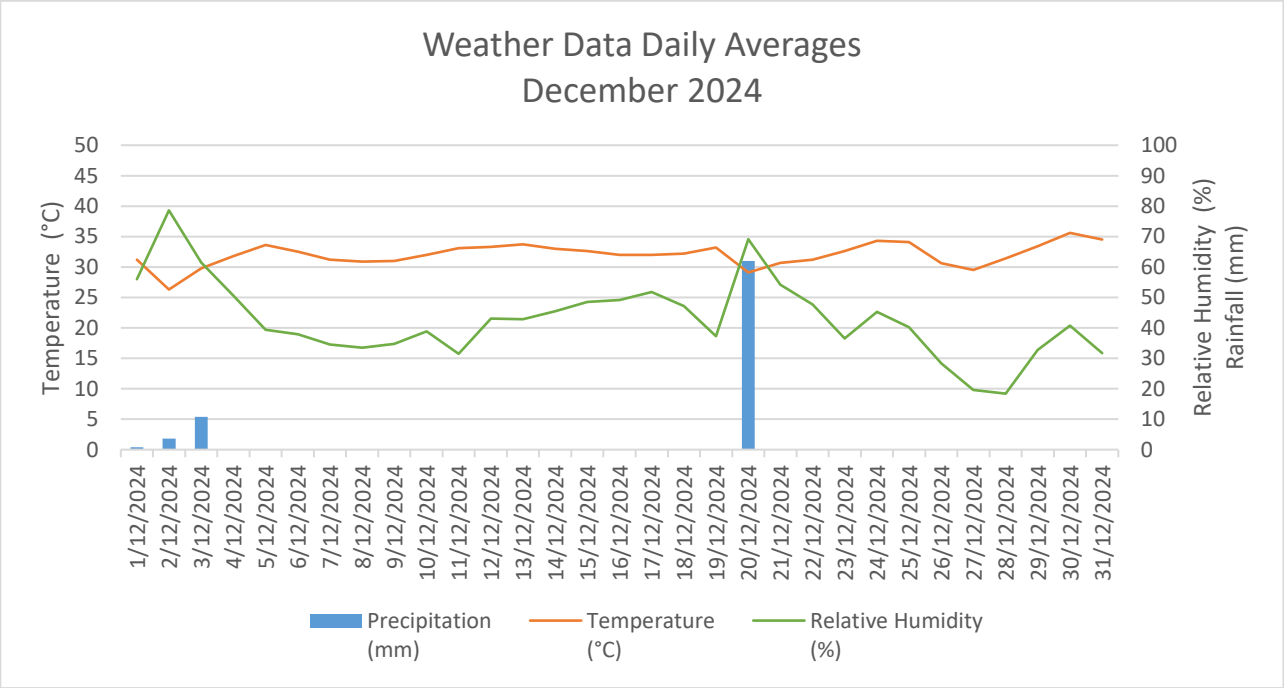


Figure 69 - December 2024 Weather Station Data

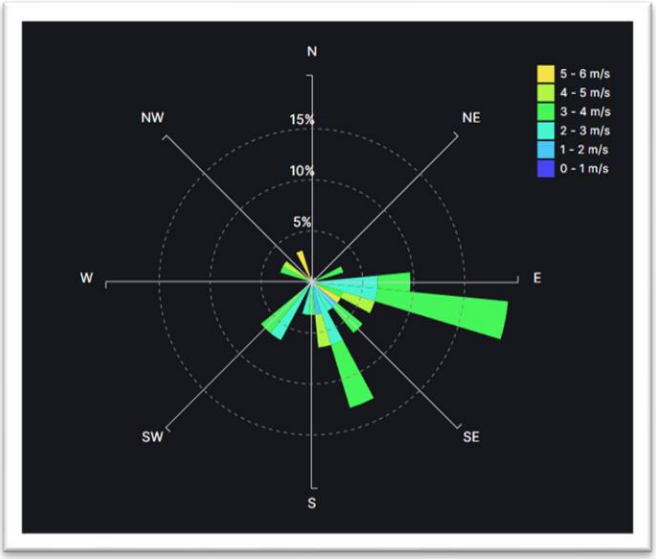
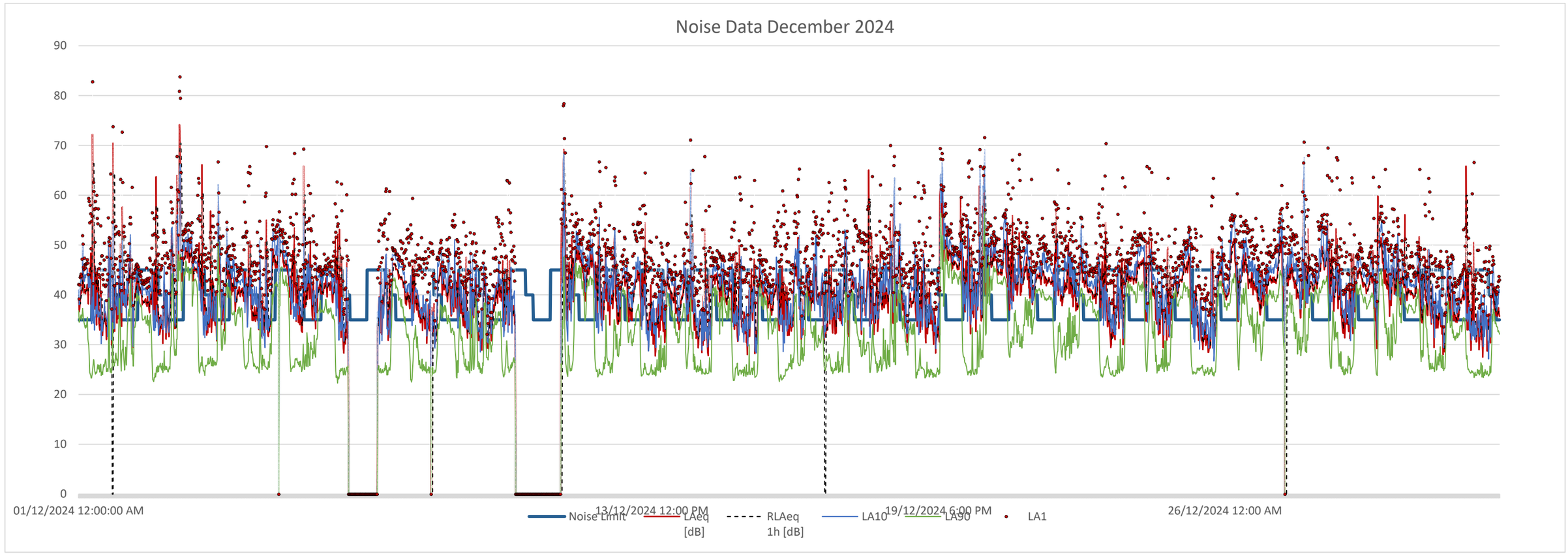


Figure 70 - December 2024 Wind Speed and Direction



v

Figure 71 - December 2024 Noise Data

Table 25 - December 2024 Hourly Exceedance Percentages

Date	Day % OL	Evening % OL	Night % OL
1/12/2024	25%	56%	100%
2/12/2024	9%	19%	89%
3/12/2024	82%	25%	94%
4/12/2024	9%	19%	97%
5/12/2024	80%	19%	81%
6/12/2024	27%	38%	100%
7/12/2024	9%	0%	86%
8/12/2024	0%	38%	83%
9/12/2024	2%	50%	67%
10/12/2024	59%	63%	100%
11/12/2024	9%	0%	78%
12/12/2024	9%	31%	69%
13/12/2024	0%	44%	67%
14/12/2024	0%	13%	78%
15/12/2024	9%	44%	94%
16/12/2024	18%	50%	100%
17/12/2024	5%	56%	100%
18/12/2024	82%	88%	64%
19/12/2024	68%	100%	100%
20/12/2024	20%	75%	100%
21/12/2024	9%	31%	89%
22/12/2024	43%	63%	89%
23/12/2024	34%	0%	67%
24/12/2024	36%	100%	72%
25/12/2024	32%	100%	100%
26/12/2024	59%	75%	83%
27/12/2024	20%	100%	89%
28/12/2024	25%	44%	92%
29/12/2024	9%	44%	50%
30/12/2024	84%	100%	58%
31/12/2024	98%	100%	97%
Totals *	30.57%	49%	82%

*includes data gaps

7.21.1 DECEMBER MONITORING RESULTS SUMMARY

- Weather during the monitoring period was generally fine and dry with the following exceptions:
  - A significant period of rain and hail occurred on 20 December 2024 where 62 mm was recorded.
  - This was accompanied by other minor rainfall events on 1, 2, 3, 15, at 0.8mm, 3.6mm, 10.8mm and 0.2mm respectively.
  - Average wind speeds were above 3m/s (approximately 11.4km/h) with many daytime and evening wind speeds regularly above 5m/s. Winds were mostly South to South Easterly.
  - Temperature: HDA 35.6°C, LDA 26.3°C, MA 32.0°C.
  - Humidity: HDA 78.6%, LDA 18.4%, MA 42.8%
- Most noise exceedances occurred during the nighttime periods, with events occurring above 85% of the time.
  - Event trigger recording was implemented in July to identify exceedances. This has confirmed that exceedances were primarily caused by wildlife, weather, and occasional nearby non-mining farm works.

8 COMPLAINTS

No noise complaints were received within this reporting period.

9 CONCLUSION

The Annual Noise Quality Monitoring Report for the period from 1 April 2023 to 31 December 2024 demonstrates that the noise monitoring system at the Saint Elmo Mine effectively recorded environmental noise levels in accordance with relevant standards. Throughout the reporting period, no mining or construction activities were undertaken, and the nearest homestead to the monitoring device remained unoccupied. The monitoring results revealed that exceedances of noise criteria were primarily due to natural sources such as weather, wildlife and non-mining ground activities (farm works). Importantly, background noise levels consistently exceeded the established limits, suggesting that the current noise thresholds may not adequately reflect the natural ambient conditions in the area.

Data Gaps

Some data gaps were recorded during the monitoring period, caused by equipment issues, including intermittent network failures and minor technical malfunctions. Significant data losses occurred on specific days, particularly in May, as well as during other months due to improperly attached connections and wildlife interference.

Overall Compliance Summary

Despite the frequent exceedances, no noise complaints were received during the reporting period, indicating that the noise management measures in place were effective in mitigating potential impacts. However, the persistent exceedances point to the need for a review and potential increase in the noise limits to prevent routine exceedances driven by naturally high background noise levels. The monitoring results show general compliance with the conditions outlined in the Environmental Authority Permit, but they also emphasise the necessity for ongoing monitoring and regulatory adjustments. Raising the noise limits will help accommodate the high background levels and ensure that the Saint Elmo Mine operates within acceptable noise boundaries. Continued evaluation and refinement of noise management strategies will be essential to maintain compliance and minimize the impact of environmental noise from the mine.

10 APPENDIX A - GLOSSARY

Parameter or Term	Description
Day	The period between 7am and 6pm.
dB	The decibel (dB) is the unit measure of sound. Most noises occur in a range of 20 dB (quiet rural area at night) to 120 dB (nightclub dance floor or concert).
dBA	Noise levels are most commonly expressed in terms of the 'A' weighted decibel scale, dBA. This scale closely approximates the response of the human ear, thus providing a measure of the subjective loudness of noise and enabling the intensity of noises with different frequency characteristics (e.g. pitch and tone) to be compared.
EA	Environmental Approval
Evening	The period between 6pm and 10pm.
Free-field	The description of a noise receiver or source location which is away from any significantly reflective objects (e.g. buildings, walls).
HDA	Highest Daily Average
km/h	Kilometers per hour
L_1	The noise level exceeded for 1% of the measurement period.
L_{10}	The noise level exceeded for 10% of the measurement period. It is sometimes referred to as the average maximum noise level.
L_{90}	The noise level exceeded for 90% of the measurement period. This is commonly referred to as the background noise level.
L_{eq}	The equivalent continuous sound level, which is the constant sound level over a given period, which is equivalent in total sound energy to the time-varying sound level, measured over the same time period.
$L_{eq,1hour}$	As for Leq except the measurement intervals are defined as 1 hour duration.
L_{max}	Maximum A-weighted sound pressure level.
L_{eq}(24 hour)	The average Leq noise level over the 24-hour period from midnight to midnight.
L_{10}(18 hour)	The arithmetic average of the one-hour L10 values between 6am and midnight. This parameter is used in the assessment of road traffic noise.
HDA	Highest Daily Average
LDA	Lowest Daily Average
MA	Monthly Average
m/s	Meters per second

Night	The period between 10pm and 7am.
OWSF	Offsite Water Storage Facility
UTM	The Universal Transverse Mercator
%OL	Percentage Over Limit