Appendix G15

Report: *2013 Noise Monitoring Report*

AGNICO EAGLE

MEADOWBANK GOLD PROJECT

2013 Noise Monitoring Report

In Accordance with NIRB Project Certificate No.004

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Division

February, 2014

EXECUTIVE SUMMARY

The 2013 noise monitoring program at Meadowbank was conducted in support of the Noise Abatement and Management Plan (AEM, 2009; 2013). The objective of the 2013 program was to measure noise levels at five previously determined monitoring locations around the Meadowbank site, over at least two 24 h periods.

While monitoring was conducted for a total of 23 days, the total amount of available data was reduced due to equipment malfunction, difficulties with software and filtering of the data recorded outside optimal weather conditions. However, one to two days of valid records were available for all stations except R1.

Since noise levels vary constantly over time, the monitoring instrument used at Meadowbank measures acoustical energy near-continuously and reports a single number for each minute, representing the "equivalent sound level" (L_{eq}). Daytime, nighttime, 10-11pm and 24 h L_{eq} values are shown for each monitoring location in Table 1.

No L_{eq} values exceeded target sound levels of 55 dBA (daytime) and 45 dBA (nighttime). Since no L_{eq}s were elevated as a result of mine activity, no additional mitigation measures or changes to the monitoring program are recommended at this time.

Table 1. Daytime, nighttime, 10-11pm and 24 h L_{eq} values for monitoring locations R1 – R5 and total hours of valid data available to calculate each L_{eq}.

Site	Dates (2013)	$L_{eq, day}$ 7am-11pm (dBA)	Total Hours	$L_{eq, night}$ 11pm-7am (dBA)	Total Hours	$L_{eq, 1 h}$ 10pm-11pm (dBA)	$L_{eq, 24 h}$ (dBA)	Total Hours
R2	Sept. 7	-	-	-	-	-	36.4	5
	Sept. 9	51.7	11	40.1	8	47.7	44.2	21
R3	Jul. 12	34.1	10	-	-	-	34.1	10
	Jul. 13	-	-	41.2	4	39.7	40.6	6
	Jul. 14	-	-	37.4	8	-	36.6	10
	Jul. 15	41.9	9	39.5	8	38.5	41.2	16
R4	Jul. 27	35.4	9	-	-	36.1	35.4	9
R5	Aug. 12	-	-	42.7	6	-	42.0	11
	Aug. 13	41.1	5	44.6	8	-	45.0	17
	Aug. 14	43.1	16	39.0	8	28.7	38.1	17

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SECTION 1 • INTRODUCTION

Since 2008, Agnico Eagle Mines Ltd. (AEM) has conducted outdoor noise monitoring at the Meadowbank site, near Baker Lake, Nunavut, in support of the Noise Abatement and Management Plan (AEM, 2009; 2013).

The objective of this monitoring program is to measure representative noise levels at the perimeter of the mine, and to inform the implementation of noise mitigation measures. To fulfill these objectives, AEM aims to conduct at least two 24h surveys of ambient outdoor noise each year in five representative locations.

Meadowbank's Noise Monitoring Plan was updated in 2013, particularly with respect to the permissible sound level (PSL) of 55 dBA, since the derivation and application of this value was not clear in the previous plan. Although updates have not yet been processed by NIRB (included in the 2013 Annual Report), noise monitoring data for 2013 are assessed in accordance with the target sound levels presented in this updated plan (55 dBA, daytime L_{eq}, and 45 dBA, nighttime L_{eq}).

1.1 MONITORING LOCATIONS

In 2013, the duration and frequency of monitoring events were increased to overcome difficulties encountered in previous years with obtaining sufficient data. A total of 23 days of monitoring occurred, and 3 – 4 days of data were collected for all sites except R1, where only 11h of data were available.

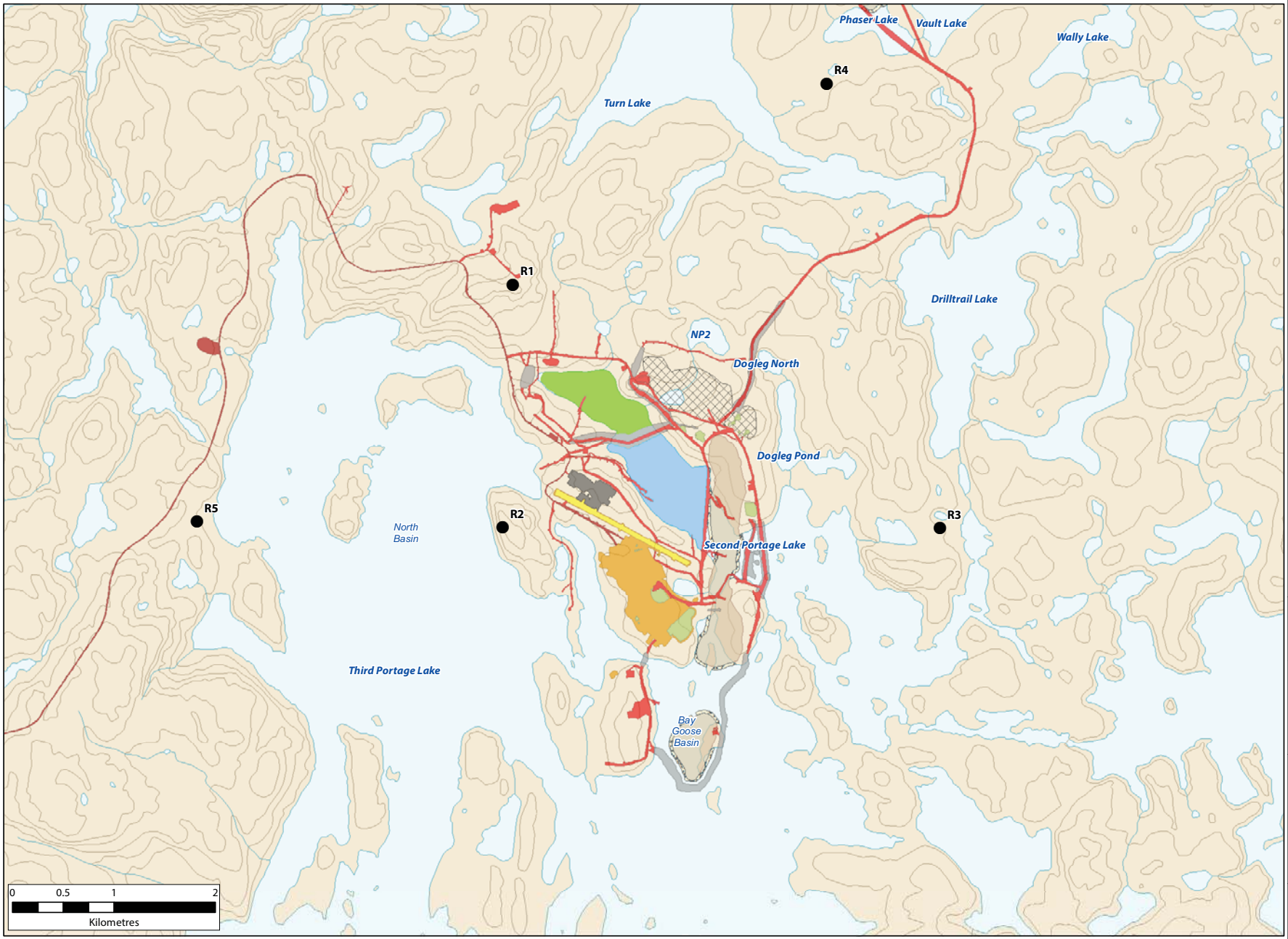
Noise monitoring locations in 2013 were the same as previous years, and were located as recommended in the Noise Abatement and Management Plan (2009). UTM coordinates are provided in Table 2, and are shown in relation to mine site features in Figure 1. Photos of the monitoring locations are provided in Appendix A.

Table 2. UTM coordinates and dates of measurement for the Meadowbank noise monitoring locations.

Monitoring Location	Easting	Northing	Dates
R1	636896	7216829	June 16 – 19[1]
			August 31 – September 3[2]
R2	636795	7214435	July 7 – 10[1]
			September 7 - 9
R3	641104	7214427	July 12 - 16
R4	639990	7218810	July 26 – 29
R5	633781	7214493	August 12 - 15
			September 19- 22[1]

[1] *Software error – no data available*

[2] *Battery died – 11 h available*



Legend

- Noise Monitoring Location
- Quarry
- AWAR Quarry
- Dikes
- Portage Attenuation Facility
- Tailings Storage Facility
- Roads
- AWAR
- Stockpiles
- Facility
- Airstrip
- Portage Rock Storage Facility
- Mine Pit Area
- Pit Cap

Noise Monitoring Locations

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

PROJECT: DA11-062-03

CLIENT: Agnico-Eagle Mines Ltd., Meadowbank Div.

N W E S
UTM Zone 14 NAD83

DATE: MARCH 2013
SCALE: 1:35,000
DRAWN BY: LC
CHECKED BY: TF

FIGURE:
1

1.1.1 R1

Location R1 is approximately 700 m south of the explosive storage area, and 400 m northeast of the all-weather access road. Third Portage Lake is nearby to the south, and surrounding terrain is rocky tundra with some vegetation. A spur road and a storage area were constructed within 100 m of this location in 2011. As a result, AEM proposed to move this station approximately 700 m northwest of the explosives storage area to better represent the originally intended orientation. The specific location will be confirmed during 2014 field season.

1.1.2 R2

Location R2 is approximately 600 m west of the airstrip. Third Portage Lake is to the west and southwest and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.3 R3

Location R3 is approximately 1,800 m east of the East Dike. Second Portage Lake is to the west and east, and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.4 R4

Location R4 is approximately 1,500 m southwest of the future location of Vault Pit, and less than 1 km from the Vault Haul Road. Turn Lake is to the west, and surrounding terrain is vegetated tundra with rocky outcrops.

1.1.5 R5

Location R5 is approximately 500 m south of the exploration camp and 300 m east of the all-weather access road. Third Portage Lake is immediately to the east, and surrounding terrain away from the shoreline is vegetated tundra with rocky outcrops. This location is situated on a known caribou migration route.

SECTION 2 • METHODS

In 2013, AEM field staff conducted noise surveys at each of the locations described in Section 1.1. These surveys provide data on average noise levels during a typical day, as well as variability of noise levels within the day. Since wind speeds in the area tend to exceed preferred levels for noise monitoring (see Section 2.4), two surveys for each location were planned to last 3 – 4 days each to obtain data for a minimum of 2 24-h monitoring periods.

2.1 SOUND LEVEL METER

For all stations a Bruel and Kjaer Model 2250 integrating sound level meter was used to conduct the noise survey. As in the past, the noise level logging rate was set at one-minute intervals, and sound was recorded in 10 minute intervals.

The parameters logged each minute were:

- Integrated average sound level, in dBA – L_{eq}
- Absolute maximum sound level, in dBA – L_{max}
- Absolute minimum sound level, in dBA – L_{min}
- Peak sound level, in dBZ - LZ_{peak}

Calibration of the instrument was performed before and after each monitoring event using a Bruel and Kjaer Type 4231 Calibrator, to ensure variance was within 0.5 dB (see field notes, Appendix B). Estimated uncertainty of the calibrator is ± 0.12 dB at a 99% confidence level.

2.2 WEATHER DATA

Weather data for the noise monitoring periods was collected using the mine site's permanent weather station. Hourly data for wind, temperature and relative humidity was available from this station. The station was offline for three hours during monitoring at R3 (July 15), so weather data could not be confirmed for this period.

The Alberta Energy Resource Conservation Board (ERCB, 2007) has published preferred weather conditions for data to be used in noise complaint investigations because wind and precipitation can affect noise levels. High winds can obscure noises at a distance, but can also cause elevated readings due to interference with the microphone. Based on these guidelines, noise monitoring data was filtered (as in 2011 and 2012) to remove measurements collected outside of conditions where wind speed > 4.17 m/s or relative humidity > 90% (assuming precipitation occurred) prior to data analysis. In previous years, filtering based on wind speeds did not occur, since these conditions were considered typical for the area and wind-induced noise was not recorded. In 2013, wind speeds commonly exceeded preferred levels, and wind-induced interference was frequently audible in recorded noise files, so the available data was significantly reduced as a result of this filtering.

2.3 FIELD NOTES

A pocket weather meter (Kestrel 3000) was used by field staff to record wind speed, direction and temperature at the beginning and end of each monitoring period. Other observations included precipitation, cloud cover and observed noises during instrument set-up and take-down.

2.4 DATA ANALYSIS

Since noise levels constantly vary over time, the monitoring instrument used at Meadowbank measures continuously and reports a single-number value for each minute, representing the "equivalent sound level" (L_{eq}). This value is the average sound level occurring over the specified time period (i.e.one minute). Alternatively, it is the sound level that would produce the same total amount of acoustical energy in the specified time period as the measured sound levels did.

All data points associated with the first and last hour of measurement were also filtered out to remove noise from technicians, and to ensure more than 30 min of data contributed to hourly averages.

One-minute L_{eq} values produced by the instrument were used to calculate hourly, daytime (7am-11pm), nighttime (11pm-7am) and 24 h L_{eq} values, as previously. L_{eq} values for each time period were calculated as the geometric mean of filtered one-minute L_{eq} values.

SECTION 3 • RESULTS

3.1 R1

Due to instrument malfunctions, only 11 h of data were collected for station R1 (~ 10 am – 9 pm; August 31, 2013).

One-minute filtered and unfiltered L_{eq}, maximum (L_{max}) and minimum (L_{min}) values over the monitoring period are shown in Figure 2. Filtered one-minute L_{eq} values exclude data collected in the first and last hour to remove technician interference, and data collected under non-optimal weather conditions (wind speed > 4.17 m/s, relative humidity > 90%). Filtered values were used in subsequent analyses, but unfiltered values are provided for reference. For station R1, all data was filtered out due to non-optimal weather.

Hourly L_{eq} values were calculated for unfiltered data as described in Section 2.4, and are shown in Table 3, along with reasons for filtering out the data (i.e. wind, precipitation).

Weather data for noise monitoring dates at R1 is shown in Table 4. Hourly average wind speeds exceeded 4.17 m/s throughout the monitoring period, with gusts up to 9.35 m/s. During this time, wind was from the south-west, resulting in a crosswind between the monitoring station and the main mine site.

Audible noises noted in the field log at this location include the reclaim pump, air traffic and birds.

A review of the sound files identified birds, distant traffic and continuous wind-induced microphone interference as the most common noises.

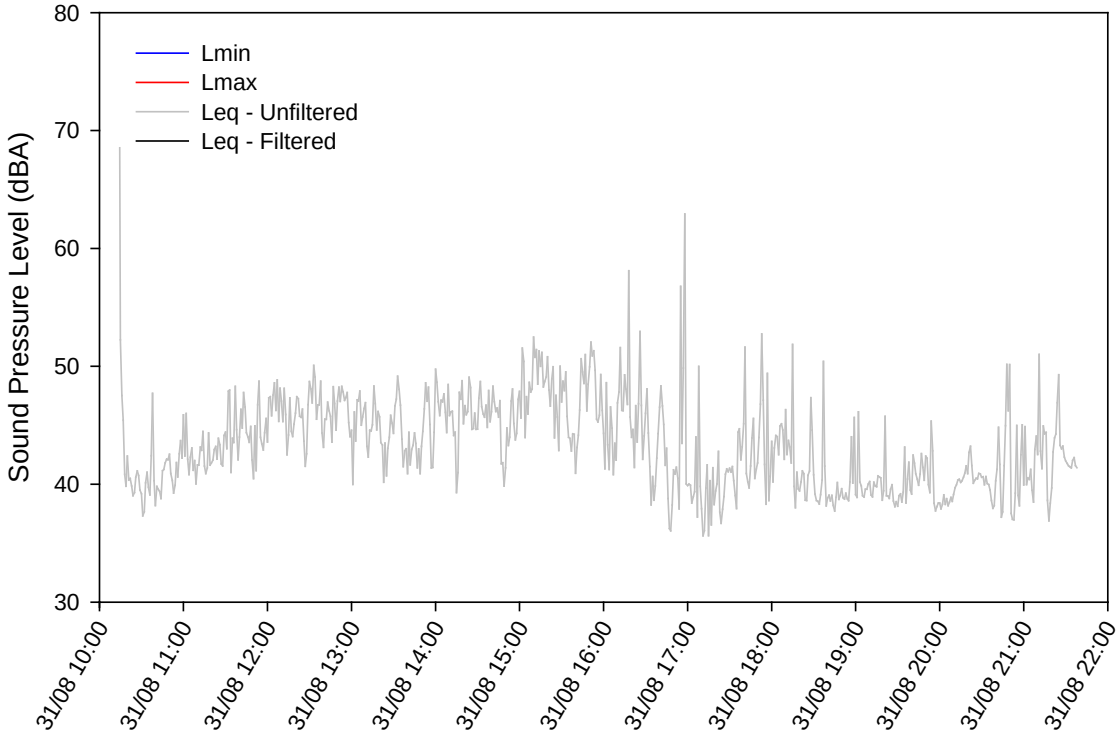


Figure 2. One-minute L_{eq}, L_{max} and L_{min} values recorded at monitoring station R1 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind > 4.17 m/s, RH > 90%). At R1, all data was filtered out due to non-optimal weather conditions.

Table 3. Hourly L_{eq} values for monitoring station R1 at the Meadowbank site and reasons for filtering out data.

Date	Start Time	L_{eq}-1h	Filtered Out
31/08/2013	10:00:00 AM	52.4	Set-up/Wind
	11:00:00 AM	44.1	Wind
	12:00:00 PM	46.6	Wind
	1:00:00 PM	45.1	Wind
	2:00:00 PM	46.3	Wind
	3:00:00 PM	48.6	Wind
	4:00:00 PM	49.3	Wind
	5:00:00 PM	43.3	Wind
	6:00:00 PM	42.7	Wind
	7:00:00 PM	40.6	Wind
	8:00:00 PM	41.8	Wind
	9:00:00 PM	43.4	Take-down

Table 4. Weather conditions for monitoring station R1 at the Meadowbank site. Hours for which average wind speed > 4.17 m/s or relative humidity > 90% are indicated in grey.

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max Wind Speed (m/s)	Wind Direction (deg)
31/08/2013	10:00:00 AM	5.955	74.47	4.424	6.096	213.6
	11:00:00 AM	6.12	72.88	5.037	6.762	199.1
	12:00:00 PM	6.624	66.22	5.709	8.02	209.2
	1:00:00 PM	7.043	67.59	7.018	9.35	225.8
	2:00:00 PM	7.976	63.46	6.442	9.13	239.1
	3:00:00 PM	9.05	53.81	6.572	8.84	254
	4:00:00 PM	9.27	49.64	6.609	8.9	256.4
	5:00:00 PM	8.88	49.78	5.486	7.879	261.5
	6:00:00 PM	8.62	52.76	5.106	7.664	241.4
	7:00:00 PM	8.45	53.23	5.141	7.526	225.7
	8:00:00 PM	8.13	57.6	4.258	5.664	220.8
	9:00:00 PM	7.815	74.73	3.298	4.077	197.6

3.2 R2

The microphone at R2 was knocked over by an animal early in this monitoring period (likely around 11:30pm on Sept. 7 - see first peak on Figure 3), but continued to record. The data was analyzed for reference but the circumstances of collection should be kept in mind in interpreting results.

One-minute L_{eq}, maximum (L_{max}) and minimum (L_{min}) values over the monitoring period are shown in Figure 3.

Hourly L_{eq} values were calculated as described in Section 2.4, and are shown in Table 5, along with reasons for filtering out data from subsequent calculations.

Weather data for noise monitoring dates at R2 is shown in Table 6. Wind exceeded 4.17 m/s for approximately half of the monitoring period, with gusts up to 10.21 m/s. Direction was generally from the north to north-west during this time. Snow/rain occurred on the night of Sept. 7 – 8, and this data was also filtered out prior to analysis.

Audible noises noted in the field log at this location include airplanes, ground traffic and birds.

The sound files were dominated by sounds of wind, waves and distant traffic. Several instances of animal interference were also audible.

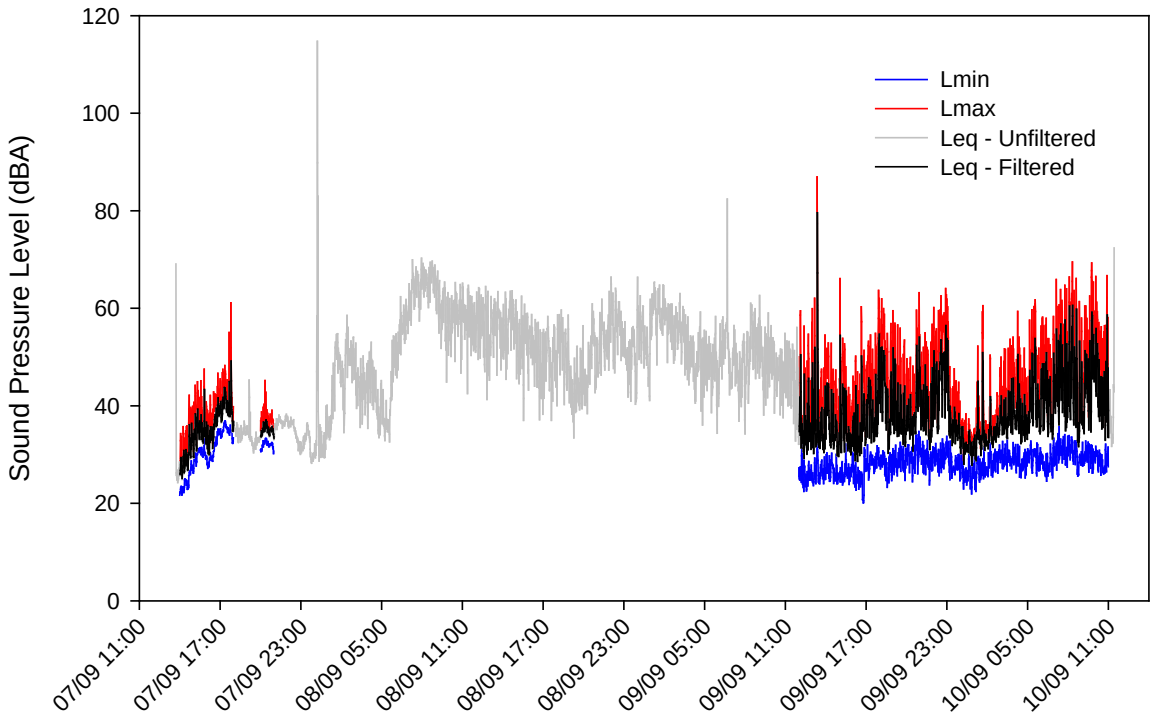


Figure 3. One-minute L_{eq}, L_{max} and L_{min} values recorded at monitoring station R2 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind > 4.17 m/s, RH > 90%).

Table 5. Hourly L_{eq} values for monitoring station R2 at the Meadowbank site and reasons for filtering out data.

Date	Start Time	L_{eq} – 1h	Filtered Out
07/09/2013	1:00:00 PM	56.6	Set-up
	2:00:00 PM	30.3	
	3:00:00 PM	35.0	
	4:00:00 PM	36.0	
	5:00:00 PM	40.2	
	6:00:00 PM	34.4	Wind
	7:00:00 PM	34.3	Wind
	8:00:00 PM	34.8	
	9:00:00 PM	36.5	Precipitation
	10:00:00 PM	34.9	Precipitation
	11:00:00 PM	32.5	Precipitation
08/09/2013	12:00:00 AM	96.8	Precipitation
	1:00:00 AM	48.2	Precipitation
	2:00:00 AM	50.5	Precipitation
	3:00:00 AM	45.3	Precipitation
	4:00:00 AM	45.0	Precipitation
	5:00:00 AM	45.0	Precipitation
	6:00:00 AM	56.1	Precipitation
	7:00:00 AM	64.7	Precipitation/Wind
	8:00:00 AM	66.2	Wind
	9:00:00 AM	61.6	Wind
	10:00:00 AM	59.3	Wind
	11:00:00 AM	59.4	Wind
	12:00:00 PM	58.6	Wind
	1:00:00 PM	57.1	Wind
	2:00:00 PM	58.1	Wind
	3:00:00 PM	54.8	Wind
	4:00:00 PM	52.0	Wind
	5:00:00 PM	51.7	Wind
	6:00:00 PM	53.4	Wind
	7:00:00 PM	46.2	Wind
	8:00:00 PM	51.9	Wind
	9:00:00 PM	54.9	Wind
	10:00:00 PM	58.4	Wind
	11:00:00 PM	51.5	Wind
09/09/2013	12:00:00 AM	56.2	Wind
	1:00:00 AM	60.3	Wind
	2:00:00 AM	57.4	Wind

Date	Start Time	L_{eq} – 1h	Filtered Out
	3:00:00 AM	54.8	Wind
	4:00:00 AM	50.6	Wind
	5:00:00 AM	50.1	Wind
	6:00:00 AM	64.6	Wind
	7:00:00 AM	49.5	Wind
	8:00:00 AM	54.1	Wind
	9:00:00 AM	52.6	Wind
	10:00:00 AM	48.3	Wind
	11:00:00 AM	48.2	Wind
	12:00:00 PM	38.7	
	1:00:00 PM	61.7	
	2:00:00 PM	37.7	
	3:00:00 PM	39.4	
	4:00:00 PM	37.8	
	5:00:00 PM	43.3	
	6:00:00 PM	44.6	
	7:00:00 PM	39.9	
	8:00:00 PM	42.6	
	9:00:00 PM	40.1	
	10:00:00 PM	47.7	
	11:00:00 PM	40.4	
10/09/2013	12:00:00 AM	31.7	
	1:00:00 AM	38.2	
	2:00:00 AM	35.0	
	3:00:00 AM	38.6	
	4:00:00 AM	38.4	
	5:00:00 AM	43.7	
	6:00:00 AM	43.5	
	7:00:00 AM	47.9	
	8:00:00 AM	50.1	
	9:00:00 AM	49.5	
	10:00:00 AM	47.0	
	11:00:00 AM	58.0	Take-down

Table 6. Weather conditions for monitoring station R2 at the Meadowbank site. Hours for which average wind speed > 4.17 m/s or relative humidity > 90% are indicated in grey.

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
07/09/2013	1:00:00 PM	1.398	69.6	1.71	3.959	176.1
	2:00:00 PM	1.303	69.23	1.84	3.508	175.2
	3:00:00 PM	1.782	69.84	3.006	4.802	149.4
	4:00:00 PM	2.458	68.65	3.993	6.252	155.7
	5:00:00 PM	2.81	72.54	4.072	6.997	159.8
	6:00:00 PM	2.919	79.07	4.665	6.096	164.4
	7:00:00 PM	2.556	88.6	4.174	5.743	149.5
	8:00:00 PM	2.323	89.9	3.755	5.174	140.5
	9:00:00 PM	2.454	96.1	4.129	5.37	146.6
	10:00:00 PM	2.543	97.4	4.144	5.704	148
	11:00:00 PM	2.539	97.9	3.866	5.468	137.2
08/09/2013	12:00:00 AM	2.659	98.3	3.196	6.429	124
	1:00:00 AM	2.693	98.9	2.597	3.606	99.5
	2:00:00 AM	2.523	99.3	3.512	5.586	72.77
	3:00:00 AM	1.976	99.3	3.73	5.214	67.58
	4:00:00 AM	1.701	99.2	3.33	5.135	57.77
	5:00:00 AM	1.445	98.3	3.6	5.312	51.67
	6:00:00 AM	1.454	98.3	3.034	5.174	31.9
	7:00:00 AM	1.095	93.6	4.432	7.389	13.63
	8:00:00 AM	0.364	88.8	6.775	10.21	10.85
	9:00:00 AM	-0.37	77.52	6.595	9.82	12.39
	10:00:00 AM	-0.937	76.95	5.883	9.21	9.38
	11:00:00 AM	-1.005	77.8	5.838	8.8	358.8
	12:00:00 PM	-0.933	77.19	5.928	9.27	1.726
	1:00:00 PM	-1	79.73	5.936	9.11	355.8
	2:00:00 PM	-0.663	74.78	5.902	8.39	346.9
	3:00:00 PM	-0.123	72.56	6.12	8.66	345.8
	4:00:00 PM	0.201	70.97	6.081	9.23	345.4
	5:00:00 PM	0.911	68.16	5.643	8.39	344.1
	6:00:00 PM	1.278	68.26	5.463	8.11	348
	7:00:00 PM	0.678	68.53	5.111	8.17	352.3
	8:00:00 PM	0.605	74.69	4.764	8.33	333.6
	9:00:00 PM	0.713	85.7	5.628	9.82	333.1
	10:00:00 PM	0.575	80.9	6.132	9.58	338.8
	11:00:00 PM	0.177	81.8	7.244	10.13	338.3
09/09/2013	12:00:00 AM	-0.215	82.8	6.235	9.33	331.7

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	1:00:00 AM	-0.271	85.8	6.286	9.29	335.8
	2:00:00 AM	-0.781	86.4	7.174	9.72	342.8
	3:00:00 AM	-1.089	81	6.493	9.25	341.8
	4:00:00 AM	-1.032	85.2	5.992	9.64	338.1
	5:00:00 AM	-1.14	83.6	4.907	7.33	347.3
	6:00:00 AM	-1.515	83.6	4.97	7.409	343.6
	7:00:00 AM	-1.67	87.2	5.222	8.64	350.9
	8:00:00 AM	-1.777	86.1	4.64	6.919	351
	9:00:00 AM	-1.629	82.6	5.459	7.997	345.8
	10:00:00 AM	-1.469	81.1	4.896	7.409	347.3
	11:00:00 AM	-1.06	78.04	4.585	6.84	353.1
	12:00:00 PM	-0.61	77.42	3.989	6.056	0.045
	1:00:00 PM	-0.259	76.76	3.393	5.606	341.1
	2:00:00 PM	0.091	75.77	3.706	5.88	336.9
	3:00:00 PM	0.377	75.5	3.314	6.35	330
	4:00:00 PM	0.517	76.01	3.638	6.115	322
	5:00:00 PM	0.596	86.8	3.441	6.37	335.2
	6:00:00 PM	0.905	74.79	4.069	6.35	345.2
	7:00:00 PM	0.202	81.4	3.473	6.076	1.793
	8:00:00 PM	-0.435	73.72	2.927	5.488	24.86
	9:00:00 PM	-0.469	84.7	3.316	5.762	31.08
	10:00:00 PM	-0.636	75.19	2.835	5.096	54.29
	11:00:00 PM	-1.259	75.19	3.925	6.331	42.2
10/09/2014	12:00:00 AM	-1.536	74.38	2.564	5.292	76.23
	1:00:00 AM	-1.554	74.78	1.547	3.567	54.3
	2:00:00 AM	-1.567	74.31	1.876	4.782	67.08
	3:00:00 AM	-1.475	73.97	2.204	3.822	71.69
	4:00:00 AM	-1.496	76.1	2.996	4.861	44.41
	5:00:00 AM	-1.673	75.06	3.228	4.822	30.28
	6:00:00 AM	-1.984	75.02	3.568	5.645	39.32
	7:00:00 AM	-2.396	74.31	3.065	5.488	49.5
	8:00:00 AM	-2.338	74.07	3.595	5.723	60.24
	9:00:00 AM	-2.139	73.63	3.402	6.292	58.53
	10:00:00 AM	-2.125	73.77	3.655	7.056	47.05
	11:00:00 AM	-1.913	72.45	3.07	5.527	59.34

3.3 R3

One-minute L_{eq}, maximum (L_{max}) and minimum (L_{min}) values over the monitoring period are shown in Figure 4.

Hourly L_{eq} values were calculated as described in Section 2.4, and are shown in Table 7, along with reasons for filtering out data from subsequent calculations.

Weather data for noise monitoring dates at R3 is shown in Table 8. Wind speeds exceeded 4.17 m/s in more than half the dataset, with gusts up to 12.17 m/s.

Audible noises noted in the field log at this location include birds, insects, planes and distant traffic.

During the majority of the monitoring period, wind was the most common noise source. During the later portion when wind speeds were lower, birds and traffic sounds, including air traffic, could be heard.

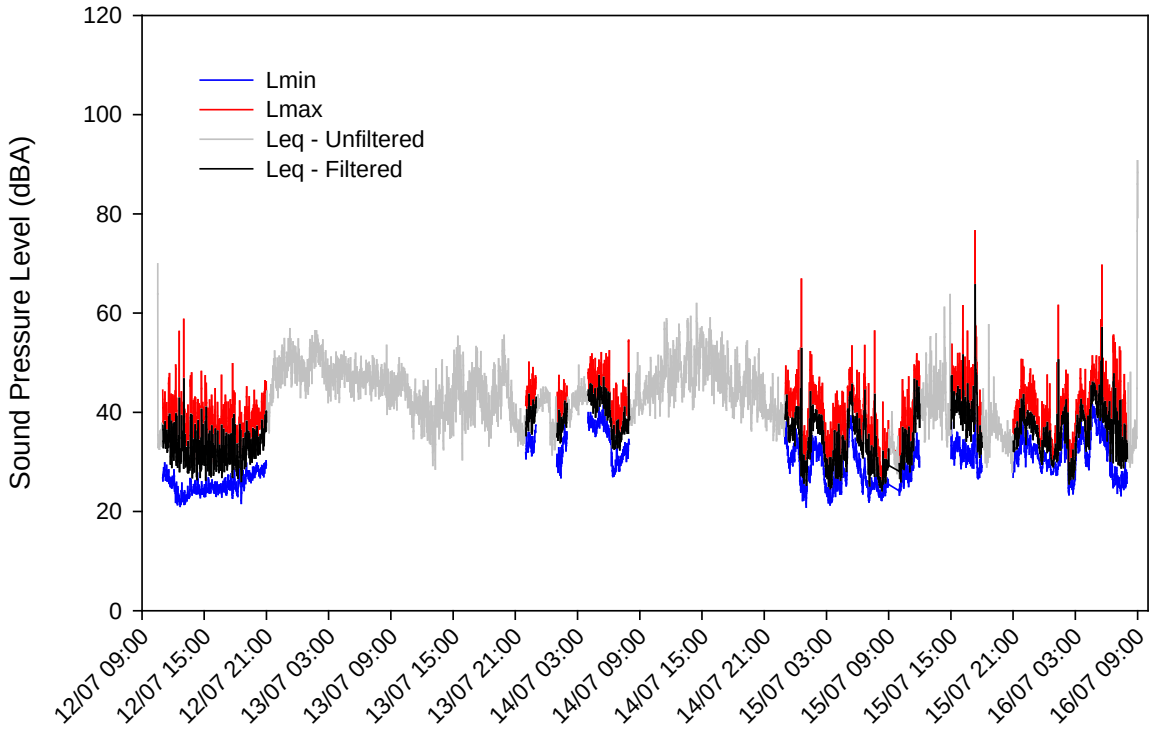


Figure 4. One-minute L_{eq}, L_{max} and L_{min} values recorded at monitoring station R4 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind > 4.17 m/s, RH > 90%).

Table 7. Hourly L_{eq} values for monitoring station R3 at the Meadowbank site and reasons for filtering out data.

Date	Start Time	L_{eq} – 1h	Filtered Out
12/07/2013	10:00:00 AM	56.2	Set-up
	11:00:00 AM	35.5	
	12:00:00 PM	34.7	
	1:00:00 PM	34.6	
	2:00:00 PM	33.7	
	3:00:00 PM	33.3	
	4:00:00 PM	31.9	
	5:00:00 PM	33.5	
	6:00:00 PM	32.0	
	7:00:00 PM	33.8	
	8:00:00 PM	36.0	
	9:00:00 PM	46.0	Wind
	10:00:00 PM	49.7	Wind
	11:00:00 PM	51.4	Wind
13/07/2013	12:00:00 AM	49.0	Wind
	1:00:00 AM	52.6	Wind
	2:00:00 AM	50.5	Wind
	3:00:00 AM	48.1	Wind
	4:00:00 AM	49.0	Wind
	5:00:00 AM	47.2	Wind
	6:00:00 AM	47.7	Wind
	7:00:00 AM	47.2	Wind
	8:00:00 AM	46.6	Wind
	9:00:00 AM	45.7	Wind
	10:00:00 AM	45.8	Wind
	11:00:00 AM	41.3	Wind
	12:00:00 PM	40.8	Wind
	1:00:00 PM	42.6	Wind
	2:00:00 PM	42.1	Wind
	3:00:00 PM	47.8	Wind
	4:00:00 PM	43.3	Wind
	5:00:00 PM	47.1	Wind
	6:00:00 PM	43.1	Wind
	7:00:00 PM	48.0	Wind
	8:00:00 PM	44.3	Wind
	9:00:00 PM	36.7	Wind
	10:00:00 PM	39.7	
	11:00:00 PM	42.6	Wind

Date	Start Time	L_{eq} – 1h	Filtered Out
14/07/2013	12:00:00 AM	39.9	Wind
	1:00:00 AM	38.4	
	2:00:00 AM	41.7	Wind
	3:00:00 AM	44.0	Wind
	4:00:00 AM	43.0	
	5:00:00 AM	43.2	
	6:00:00 AM	37.1	
	7:00:00 AM	38.4	
	8:00:00 AM	43.8	Wind
	9:00:00 AM	43.8	Wind
	10:00:00 AM	46.1	Wind
	11:00:00 AM	51.6	Wind
	12:00:00 PM	51.2	Wind
	1:00:00 PM	52.1	Wind
	2:00:00 PM	53.4	Wind
	3:00:00 PM	52.5	Wind
	4:00:00 PM	50.1	Wind
	5:00:00 PM	47.2	Wind
	6:00:00 PM	45.8	Wind
	7:00:00 PM	47.6	Wind
	8:00:00 PM	45.9	Wind
	9:00:00 PM	40.9	Wind
	10:00:00 PM	39.6	Wind
	11:00:00 PM	38.3	
15/07/2013	12:00:00 AM	39.1	
	1:00:00 AM	37.6	
	2:00:00 AM	36.5	
	3:00:00 AM	30.0	
	4:00:00 AM	32.4	
	5:00:00 AM	40.6	
	6:00:00 AM	36.3	
	7:00:00 AM	31.8	
	8:00:00 AM	27.9	
	9:00:00 AM	33.6	Precipitation
	10:00:00 AM	32.5	
	11:00:00 AM	40.3	
	12:00:00 PM	43.8	Wind
	1:00:00 PM	46.7	Wind
	2:00:00 PM	50.2	Wind
	3:00:00 PM	42.3	

Date	Start Time	L_{eq} – 1h	Filtered Out
	4:00:00 PM	41.3	
	5:00:00 PM	49.2	
	6:00:00 PM	42.3	Wind
	7:00:00 PM	38.5	Wind
	8:00:00 PM	33.8	Wind
	9:00:00 PM	38.0	
	10:00:00 PM	38.5	
	11:00:00 PM	35.1	
16/07/2013	12:00:00 AM	33.5	
	1:00:00 AM	38.0	
	2:00:00 AM	34.3	
	3:00:00 AM	38.6	
	4:00:00 AM	41.8	
	5:00:00 AM	44.0	
	6:00:00 AM	39.6	
	7:00:00 AM	34.8	
	8:00:00 AM	76.0	Take-down

Table 8. Weather conditions for monitoring station R3 at the Meadowbank site. Data for which wind speed > 4.17 m/s or relative humidity > 90% are indicated in grey.

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
12/07/2013	10:00:00 AM	10.55	47.26	4.244	6.644	28.73
	11:00:00 AM	11.12	44.49	3.856	5.958	24.39
	12:00:00 PM	11.73	40.62	3.431	5.429	27.44
	1:00:00 PM	12.52	39.74	3.285	5.978	37.68
	2:00:00 PM	13.25	39.3	3.845	7.428	37.16
	3:00:00 PM	13.83	36.86	3.727	6.566	24.82
	4:00:00 PM	14.39	36.75	3.31	5.998	39.15
	5:00:00 PM	14.65	36.38	2.828	5.998	23.65
	6:00:00 PM	14.87	36.88	3.783	6.488	1.458
	7:00:00 PM	14.62	36.56	3.77	6.272	356.9
	8:00:00 PM	14.41	40.99	4.054	6.782	2.244
	9:00:00 PM	14.07	43.66	4.53	7.193	3.691
	10:00:00 PM	13	50.05	6.892	10.05	6.33
	11:00:00 PM	11.59	56.36	7.903	10.94	6.971
13/07/2013	12:00:00 AM	10.14	61.13	7.86	10.66	6.599
	1:00:00 AM	9.07	63.24	7.534	10.76	5.738
	2:00:00 AM	8.35	68.12	8.09	10.82	6.507

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	3:00:00 AM	7.748	70.66	7.583	10.27	6.967
	4:00:00 AM	7.294	72.28	6.878	9.43	7.698
	5:00:00 AM	6.845	74.05	7.254	10.05	5.071
	6:00:00 AM	6.608	74.16	6.727	9.37	2.671
	7:00:00 AM	6.877	71.37	6.975	9.8	4.402
	8:00:00 AM	7.403	68.36	7.05	9.47	3.393
	9:00:00 AM	7.813	67.01	6.93	9.55	2.737
	10:00:00 AM	8.32	64.56	6.564	9.19	358.9
	11:00:00 AM	8.74	58.23	6.377	9.04	353.5
	12:00:00 PM	10.57	52	5.987	8.6	351
	1:00:00 PM	11.44	50.33	5.573	8.21	343.4
	2:00:00 PM	11.98	48.29	6.333	9.35	322.6
	3:00:00 PM	12.25	48.19	6.439	9.04	313.2
	4:00:00 PM	12.27	45.65	6.47	9.19	318.6
	5:00:00 PM	12.81	42.2	5.854	8.27	318.3
	6:00:00 PM	12.77	42.37	6.113	8.45	318.9
	7:00:00 PM	12.69	48.16	5.592	8.09	294.2
	8:00:00 PM	12.26	53.97	7.015	9.62	295.7
	9:00:00 PM	11.02	62.58	5.678	8.37	294
	10:00:00 PM	10.72	62.72	3.832	5.704	294.9
	11:00:00 PM	10.12	66.34	5.34	8.11	276.9
14/07/2013	12:00:00 AM	9.04	69.7	4.288	6.213	265.1
	1:00:00 AM	9.28	73.09	4.046	5.312	255.9
	2:00:00 AM	8.86	77.82	4.376	6.39	267.5
	3:00:00 AM	7.992	84	4.467	6.468	260.1
	4:00:00 AM	7.012	87.9	3.408	4.724	251.1
	5:00:00 AM	6.83	87.1	3.964	5.214	250.4
	6:00:00 AM	7.175	84.5	3.86	5.018	263
	7:00:00 AM	8.05	73.63	3.794	4.822	272.3
	8:00:00 AM	8.02	74.72	4.525	6.664	257.8
	9:00:00 AM	7.074	87.9	5.924	8.62	267.9
	10:00:00 AM	6.712	84.5	6.214	9.43	270.5
	11:00:00 AM	7.108	75.74	6.968	9.51	274.9
	12:00:00 PM	8.02	68.08	7.134	10.88	283
	1:00:00 PM	9.02	63.97	7.508	11	270.2
	2:00:00 PM	8.69	70.95	7.434	12.17	268.9
	3:00:00 PM	8.94	60.06	8.14	11.6	278.3
	4:00:00 PM	9.65	52.98	8.17	10.9	271.8

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	5:00:00 PM	10.45	47.73	6.976	10.35	267.7
	6:00:00 PM	10.56	47.23	6.499	9.86	264.9
	7:00:00 PM	10.88	45.94	6.539	9.74	273.6
	8:00:00 PM	10.84	49.39	7.38	10.86	265.7
	9:00:00 PM	10.16	60.18	7.138	9.35	281.1
	10:00:00 PM	9.12	68.11	5.452	9.27	279.3
	11:00:00 PM	8.26	71.64	2.536	3.92	256.7
15/07/2013	12:00:00 AM	7.818	74.31	3.381	4.116	246.3
	1:00:00 AM	7.88	74.92	2.871	3.489	241.2
	2:00:00 AM	7.588	80.7	2.287	3.548	209
	3:00:00 AM	7.418	83.7	2.998	3.802	196.9
	4:00:00 AM	7.171	85.6	2.053	2.901	194.3
	5:00:00 AM	7.509	84.4	2.362	3.704	183.1
	6:00:00 AM	7.006	89	3.141	4.606	203.9
	7:00:00 AM	6.93	86.7	2.026	3.116	239.7
	8:00:00 AM	7.008	87.2	1.833	2.724	217
	9:00:00 AM	7.015	92.4	3.072	5.527	213.2
	10:00:00 AM	6.943	84	3.179	4.88	300.6
	11:00:00 AM	7.745	83.4	2.265	6.076	298
	12:00:00 PM	8.94	70.77	4.988	7.879	293.6
	1:00:00 PM	9.4	67.66	5.361	7.644	289.1
	2:00:00 PM	9.68	67.42	5.701	8.82	294.1
	*station offline					
	6:00:00 PM	7.706	54.94	4.433	9.62	296
	7:00:00 PM	7.994	53.86	4.597	7.154	291.2
	8:00:00 PM	7.849	55.99	4.666	7.311	296
	9:00:00 PM	6.714	66.44	3.581	5.9	304.9
	10:00:00 PM	6.227	68.25	2.806	4.978	290
	11:00:00 PM	6.155	77.16	3.557	5.233	299.5
16/07/2013	12:00:00 AM	5.556	74.32	2.825	4.057	318.1
	1:00:00 AM	5.182	79.88	2.364	3.724	313.5
	2:00:00 AM	4.682	83.7	1.089	1.999	275.7
	3:00:00 AM	4.209	87.1	0.563	1.45	222
	4:00:00 AM	4.252	89.4	0.545	1.529	223
	5:00:00 AM	4.977	87	0.621	1.352	200.5
	6:00:00 AM	5.628	86.5	1.723	2.724	296
	7:00:00 AM	6.697	82.6	2.053	4.528	293.5
	8:00:00 AM	6.893	69.26	2.458	4.488	300.3

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	9:00:00 AM	6.928	64.82	3.125	4.704	293.3

3.4 R4

One-minute L_{eq}, maximum (L_{max}) and minimum (L_{min}) values over the monitoring period are shown in Figure 5.

Hourly L_{eq} values were calculated as described in Section 2.4, and are shown in Table 9, along with reasons for filtering out data from subsequent calculations.

Weather data for noise monitoring dates at R4 is shown in Table 10. Average hourly wind speeds exceeded 4.17 m/s for nearly all time points, with gusts up to 13.84 m/s.

No specific noises are noted in the field log, but wind, waves and traffic are dominant in recorded sound files.

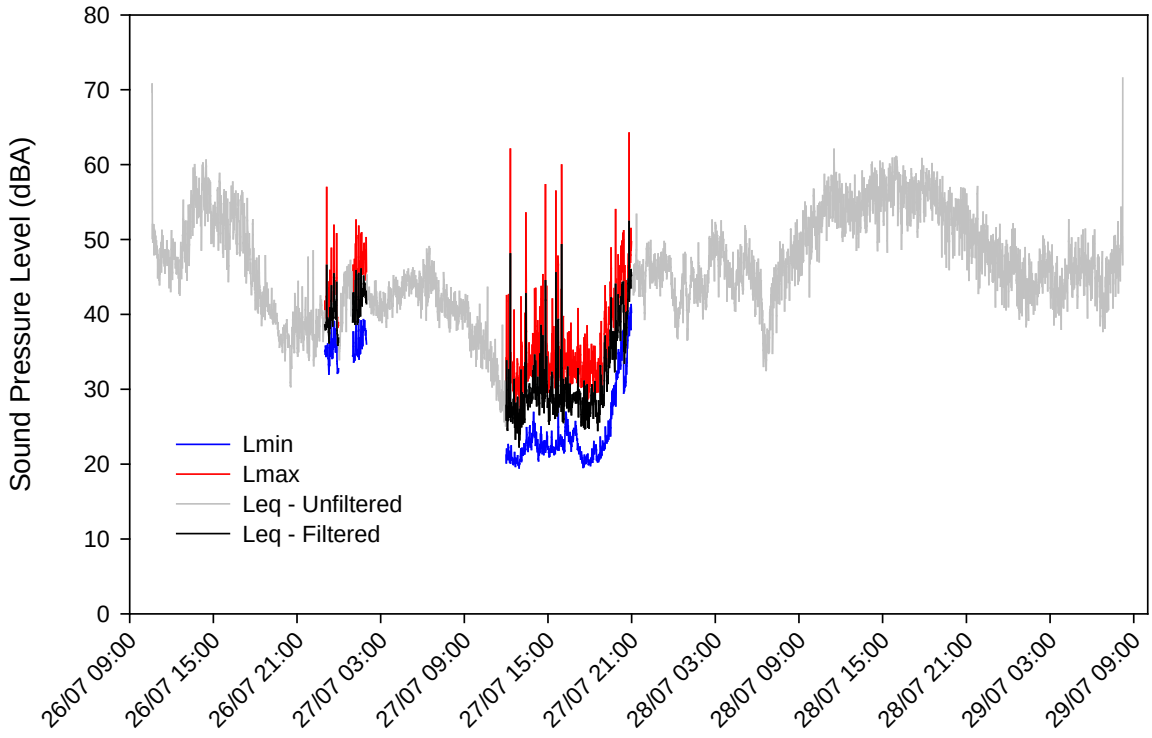


Figure 5. One-minute L_{eq}, L_{max} and L_{min} values recorded at monitoring station R4 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind > 4.17 m/s, RH > 90%).

Table 9. Hourly L_{eq} values for monitoring station R4 at the Meadowbank site and reasons for filtering out data.

Date	Start Time	L_{eq} – 1h	Filtered Out
26/07/2013	10:00:00 AM	59.9	Set-up
	11:00:00 AM	47.7	Wind
	12:00:00 PM	48.3	Wind
	1:00:00 PM	54.4	Wind
	2:00:00 PM	56.1	Wind
	3:00:00 PM	53.8	Wind
	4:00:00 PM	53.2	Wind
	5:00:00 PM	50.7	Wind
	6:00:00 PM	43.1	Wind
	7:00:00 PM	39.1	Wind
	8:00:00 PM	37.6	Wind
	9:00:00 PM	38.9	Wind
	10:00:00 PM	39.3	Wind
	11:00:00 PM	40.1	
27/07/2013	12:00:00 AM	43.2	Wind
	1:00:00 AM	42.5	
	2:00:00 AM	42.0	Wind
	3:00:00 AM	41.7	Wind
	4:00:00 AM	43.7	Wind
	5:00:00 AM	44.0	Wind
	6:00:00 AM	45.2	Wind
	7:00:00 AM	41.9	Wind
	8:00:00 AM	40.8	Wind
	9:00:00 AM	38.8	Wind
	10:00:00 AM	36.3	Wind
	11:00:00 AM	31.2	Wind
	12:00:00 PM	32.1	
	1:00:00 PM	30.7	
	2:00:00 PM	33.1	
	3:00:00 PM	34.8	
	4:00:00 PM	29.1	
	5:00:00 PM	28.1	
	6:00:00 PM	28.5	
	7:00:00 PM	36.1	
	8:00:00 PM	42.4	
	9:00:00 PM	45.5	Wind
	10:00:00 PM	46.7	
	11:00:00 PM	46.4	

Date	Start Time	L_{eq} – 1h	Filtered Out
28/07/2013	12:00:00 AM	42.9	
	1:00:00 AM	44.4	Wind
	2:00:00 AM	47.0	Wind
	3:00:00 AM	48.4	Wind
	4:00:00 AM	45.1	Wind
	5:00:00 AM	46.8	Wind
	6:00:00 AM	40.8	Wind
	7:00:00 AM	45.0	Wind
	8:00:00 AM	48.1	Wind
	9:00:00 AM	50.8	Wind
	10:00:00 AM	53.8	Wind
	11:00:00 AM	56.5	Wind
	12:00:00 PM	54.4	Wind
	1:00:00 PM	54.5	Wind
	2:00:00 PM	56.8	Wind
	3:00:00 PM	57.6	Wind
	4:00:00 PM	56.7	Wind
	5:00:00 PM	56.8	Wind
	6:00:00 PM	56.8	Wind
	7:00:00 PM	54.1	Wind
	8:00:00 PM	53.6	Wind
	9:00:00 PM	51.1	Wind
	10:00:00 PM	49.4	Wind
	11:00:00 PM	47.3	Wind
29/07/2013	12:00:00 AM	46.6	Wind
	1:00:00 AM	44.3	Wind
	2:00:00 AM	46.5	Wind
	3:00:00 AM	43.9	Wind
	4:00:00 AM	46.2	Wind
	5:00:00 AM	46.7	Wind
	6:00:00 AM	45.4	Wind
	7:00:00 AM	40.8	Wind
	8:00:00 AM	40.2	Take-down

Table 10. Weather conditions for monitoring station R4 at the Meadowbank site. Hours for which average wind speed > 4.17 m/s or relative humidity > 90% are indicated in grey.

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
26/07/2013	10:00:00 AM	14.99	44.95	4.252	5.919	242.2
	11:00:00 AM	15.28	43.56	5.789	8.25	233.9
	12:00:00 PM	15.04	43.6	6.37	8.15	229.5
	1:00:00 PM	15.55	44.06	6.117	8.17	233.7
	2:00:00 PM	16.21	39.12	7.17	11.29	236.7
	3:00:00 PM	16.2	37.87	9.09	11.78	237.4
	4:00:00 PM	16.64	33.31	8.88	12.66	242.5
	5:00:00 PM	16.16	35.98	8.72	11.74	241.9
	6:00:00 PM	16.59	35.54	8.69	12	245.3
	7:00:00 PM	16.34	36.59	7.6	11.8	248.5
	8:00:00 PM	16.34	36.72	6.457	9.37	249.9
	9:00:00 PM	15.79	44.5	6.131	8.94	244.4
	10:00:00 PM	15.34	46.57	5.426	9.55	257.6
	11:00:00 PM	14.56	65.77	3.463	6.448	330.2
27/07/2013	12:00:00 AM	13.51	71.97	4.856	7.977	13.45
	1:00:00 AM	12.68	78.31	4.071	7.056	16.95
	2:00:00 AM	11.7	80.7	5.123	8.37	11.11
	3:00:00 AM	10.9	83.1	5.686	8.49	17.77
	4:00:00 AM	10.31	83.8	5.535	8.25	17.2
	5:00:00 AM	9.57	81.7	5.438	8.33	17.21
	6:00:00 AM	9.57	76.96	5.066	7.428	30.79
	7:00:00 AM	9.61	76.39	5.477	8.08	35.57
	8:00:00 AM	10.42	74.34	5.38	7.487	36.86
	9:00:00 AM	11.53	70.75	4.725	6.566	33.65
	10:00:00 AM	12.23	66.55	4.924	6.684	30.61
	11:00:00 AM	13.16	62.78	4.453	6.135	32.92
	12:00:00 PM	14.49	58.45	3.194	5.782	36.28
	1:00:00 PM	15.61	56.17	2.9	5.076	8.44
	2:00:00 PM	16.82	50.71	1.307	3.391	24.42
	3:00:00 PM	16.93	46.59	1.895	3.175	213.2
	4:00:00 PM	17.63	43.51	0.947	2.626	224.2
	5:00:00 PM	17.67	42.6	1.806	4.841	309.8
	6:00:00 PM	15.96	43.48	3.753	5.547	343.3
	7:00:00 PM	16.35	40.95	3.281	4.626	1.859
	8:00:00 PM	16.22	43.49	3.825	6.527	19.26
	9:00:00 PM	14.51	53.33	4.37	6.742	14.1

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	10:00:00 PM	12.93	57.47	3.399	5.645	3.849
	11:00:00 PM	12.03	59.57	3.054	4.782	351.8
28/07/2013	12:00:00 AM	11.78	67.02	3.673	7.095	347.5
	1:00:00 AM	11.23	64.19	5.415	7.409	359.8
	2:00:00 AM	10.79	66.96	6.293	8.76	5.13
	3:00:00 AM	10.13	71.76	6.764	9.92	4.516
	4:00:00 AM	9.53	75.78	7.96	10.9	5.76
	5:00:00 AM	9.35	79.09	7.064	10.19	16.52
	6:00:00 AM	9.54	78.48	6.324	10.02	27.59
	7:00:00 AM	9.88	77.67	5.743	9.06	34.75
	8:00:00 AM	10.19	76.89	5.371	8.27	3.823
	9:00:00 AM	9.86	78.69	6.984	9.92	7.146
	10:00:00 AM	9.4	86.7	7.663	10.64	9.11
	11:00:00 AM	9.36	88.1	7.906	11.51	12.31
	12:00:00 PM	9.93	83.2	8.48	12.52	17.4
	1:00:00 PM	9.85	80.9	8.26	12.15	13.65
	2:00:00 PM	9.51	84	8.31	12.09	13.22
	3:00:00 PM	9.29	81.7	9.41	13.62	10.74
	4:00:00 PM	9.72	78.69	9.48	13.5	14.95
	5:00:00 PM	9.96	76.69	9.72	13.84	12.02
	6:00:00 PM	9.86	76.22	9.18	12.84	17.69
	7:00:00 PM	9.75	77.13	9.37	13.01	14.69
	8:00:00 PM	9.48	79.09	8.73	12.96	13.95
	9:00:00 PM	9.28	80.7	8.2	12.94	14.33
	10:00:00 PM	9.04	82.3	8.6	12.17	9.72
	11:00:00 PM	8.76	83	6.923	11.09	14.53
29/07/2013	12:00:00 AM	8.48	84.4	6.911	10.07	11.01
	1:00:00 AM	8.19	85.9	6.216	9.7	13.99
	2:00:00 AM	8.02	87.2	5.816	8.9	12.92
	3:00:00 AM	7.971	87.5	6.462	8.76	7.516
	4:00:00 AM	7.962	87.6	6.321	9.6	7.022
	5:00:00 AM	7.823	87.3	6.706	9.68	5.689
	6:00:00 AM	7.922	87.3	7.231	10.56	9.41
	7:00:00 AM	8.05	85.8	7.597	10.96	7.81
	8:00:00 AM	8.16	85.3	7.041	9.76	7.571

3.5 R5

One-minute L_{eq}, maximum (L_{max}) and minimum (L_{min}) values over the monitoring period are shown in Figure 6.

Hourly L_{eq} values were calculated as described in Section 2.4, and are shown in Table 11, along with reasons for filtering out data from subsequent calculations.

Weather data for noise monitoring dates at R5 is shown in Table 12. Average wind speeds exceeded 4.17 m/s for 21 out of 67 monitoring hours, with gusts up to 11.86 m/s.

Audible noises noted in the field log at this location include birds, traffic and construction work at the Exploration Camp. The dominant sounds recorded were wind, birds, insects and traffic.

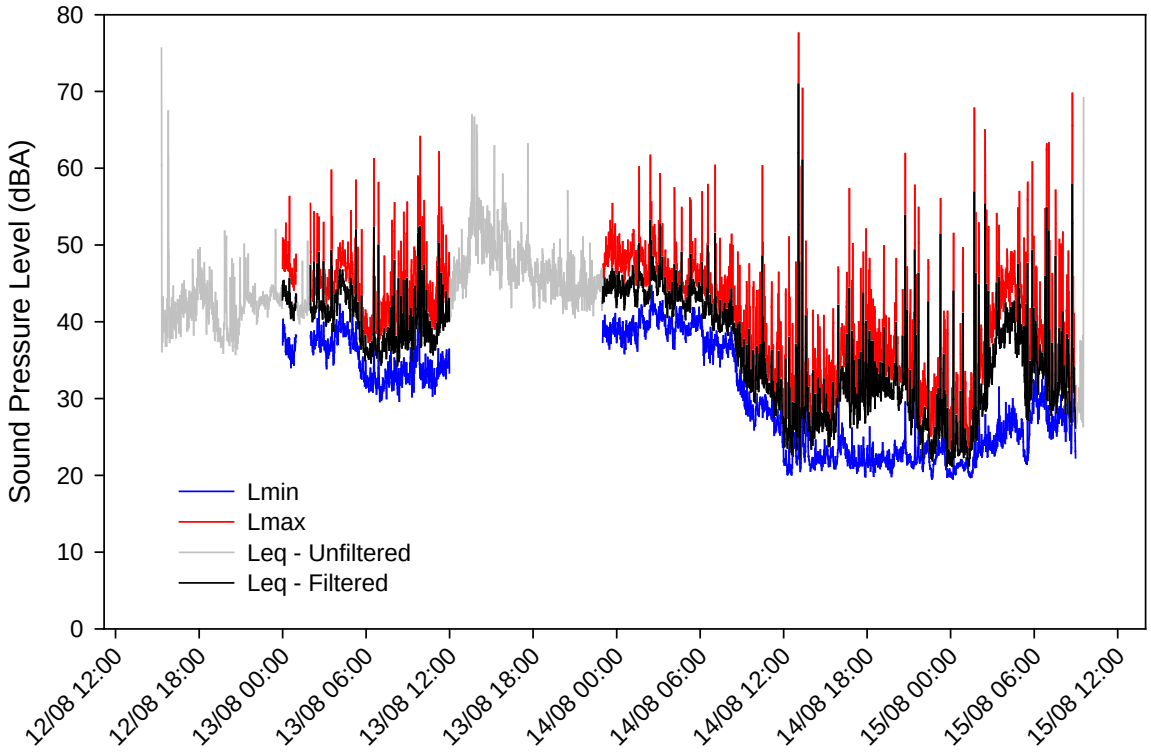


Figure 6. One-minute L_{eq}, L_{max} and L_{min} values recorded at monitoring station R5 at the Meadowbank site. Filtered data excludes those measurements taken outside of optimal conditions (set-up, take-down, wind > 4.17 m/s, RH > 90%).

Table 11. Hourly L_{eq} values for monitoring station R5 at the Meadowbank site and reasons for filtering out data.

Date	Start Time	L_{eq} – 1h	Filtered Out
12/08/2013	3:00:00 PM	60.5	Set-up
	4:00:00 PM	41.8	Wind
	5:00:00 PM	43.4	Wind
	6:00:00 PM	44.7	Wind
	7:00:00 PM	42.7	Wind
	8:00:00 PM	41.4	Wind
	9:00:00 PM	43.6	Wind
	10:00:00 PM	42.6	Wind
	11:00:00 PM	44.0	Wind
	12:00:00 AM	43.1	
	1:00:00 AM	42.6	Wind
13/08/2013	2:00:00 AM	43.1	
	3:00:00 AM	42.3	
	4:00:00 AM	44.6	
	5:00:00 AM	41.5	
	6:00:00 AM	39.9	
	7:00:00 AM	37.9	
	8:00:00 AM	40.2	
	9:00:00 AM	43.1	
	10:00:00 AM	40.5	
	11:00:00 AM	42.0	
	12:00:00 PM	46.0	Wind
	1:00:00 PM	56.6	Wind
	2:00:00 PM	53.0	Wind
	3:00:00 PM	53.1	Wind
	4:00:00 PM	49.1	Wind
	5:00:00 PM	50.2	Wind
	6:00:00 PM	45.9	Wind
	7:00:00 PM	46.3	Wind
	8:00:00 PM	46.1	Wind
	9:00:00 PM	45.2	Wind
	10:00:00 PM	44.8	Wind
	11:00:00 PM	44.9	
	12:00:00 AM	44.6	
	1:00:00 AM	45.3	
14/08/2013	2:00:00 AM	45.8	
	3:00:00 AM	45.0	
	4:00:00 AM	43.7	

Date	Start Time	L_{eq} – 1h	Filtered Out
	5:00:00 AM	44.0	
	6:00:00 AM	42.8	
	7:00:00 AM	41.4	
	8:00:00 AM	39.5	
	9:00:00 AM	33.9	
	10:00:00 AM	35.7	
	11:00:00 AM	31.3	
	12:00:00 PM	28.9	
	1:00:00 PM	54.4	
	2:00:00 PM	28.3	
	3:00:00 PM	30.3	
	4:00:00 PM	33.7	
	5:00:00 PM	32.8	
	6:00:00 PM	33.3	
	7:00:00 PM	32.5	
	8:00:00 PM	38.5	
	9:00:00 PM	36.3	
	10:00:00 PM	28.7	
	11:00:00 PM	34.9	
	12:00:00 AM	30.1	
	1:00:00 AM	40.1	
15/08/2013	2:00:00 AM	40.7	
	3:00:00 AM	39.0	
	4:00:00 AM	40.6	
	5:00:00 AM	38.4	
	6:00:00 AM	41.0	
	7:00:00 AM	38.4	
	8:00:00 AM	42.4	
	9:00:00 AM	54.0	Take-down

Table 12. Weather conditions for monitoring station R5 at the Meadowbank site. Hours for which average wind speed > 4.17 m/s or relative humidity > 90% are indicated in grey.

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
12/08/2013	3:00:00 PM	16.52	35.78	4.408	7.664	310.6
	4:00:00 PM	16.46	31.99	5.583	8.06	310.8
	5:00:00 PM	16.09	30.4	5.518	7.781	312.6
	6:00:00 PM	16.41	34.76	6.348	8.58	312.6
	7:00:00 PM	16.07	39.05	6.747	8.62	300.4
	8:00:00 PM	15.39	43.52	5.833	7.389	291.9
	9:00:00 PM	14.92	47.01	4.305	5.684	296.3
	10:00:00 PM	14.77	55.76	4.76	7.899	313.6
	11:00:00 PM	14.71	55.05	4.51	6.331	338
13/08/2013	12:00:00 AM	13.35	64.03	2.82	5.978	336.2
	1:00:00 AM	12.53	55.1	4.449	6.076	336.6
	2:00:00 AM	12.08	60.65	3.389	4.724	326.5
	3:00:00 AM	11.67	67.35	2.883	4.096	301.2
	4:00:00 AM	11.35	73.22	1.991	2.96	298
	5:00:00 AM	10.9	75.08	1.743	3.195	294.8
	6:00:00 AM	11.27	71.93	2.074	3.352	291
	7:00:00 AM	11.52	76.39	1.148	2.862	286.7
	8:00:00 AM	11.95	72.54	2.357	3.998	293.1
	9:00:00 AM	12.06	68.31	2.996	4.9	300.2
	10:00:00 AM	11.89	80.4	2.861	4.449	337.8
	11:00:00 AM	12.72	76.97	2.753	4.332	347.9
	12:00:00 PM	14.1	72.89	5.212	7.997	330
	1:00:00 PM	14.42	57.71	6.695	9.98	354.3
	2:00:00 PM	12.83	55.17	8.53	11.86	355.2
	3:00:00 PM	12.47	49.59	8.54	11.74	357.2
	4:00:00 PM	12.18	42.29	7.933	10.8	354.3
	5:00:00 PM	12.26	38.95	7.702	10.45	357.3
	6:00:00 PM	12.09	36.41	8.23	11.11	350.9
	7:00:00 PM	12.15	35.29	7.202	10.05	356.1
	8:00:00 PM	11.64	39.55	6.748	9.55	357.5
	9:00:00 PM	11.19	47.9	5.278	7.977	6.013
	10:00:00 PM	10.41	56.51	4.205	6.801	4.41
	11:00:00 PM	9.56	61.79	3.727	6.154	3.311
14/08/2013	12:00:00 AM	9.16	66.78	3.837	5.508	352.6
	1:00:00 AM	8.87	66.95	3.729	6.037	353.5
	2:00:00 AM	8.27	70.77	2.77	5.037	337.3

Date	Start Time	Air Temp. (°C)	Relative Humidity (%)	Avg. Wind Speed (m/s)	Max. Wind Speed (m/s)	Wind Direction (deg)
	3:00:00 AM	7.732	74.29	3.082	4.684	340
	4:00:00 AM	7.6	75.69	2.363	4.39	332.5
	5:00:00 AM	7.201	78.09	2.723	4.116	331.1
	6:00:00 AM	7.107	77.62	1.758	3.685	323.7
	7:00:00 AM	8.25	73.75	2.514	3.998	350.8
	8:00:00 AM	9.28	69.96	2.627	4.684	6.136
	9:00:00 AM	9.33	48.7	3.115	4.743	20.98
	10:00:00 AM	9.64	31.92	1.796	4.136	28.95
	11:00:00 AM	10.5	34.21	1.413	2.901	357.7
	12:00:00 PM	11.6	34.96	1.141	2.391	38.11
	1:00:00 PM	11.98	34.85	1.838	3.234	232.9
	2:00:00 PM	12.56	32.88	1.356	2.881	294.5
	3:00:00 PM	13.28	32.58	1.515	3.371	173.9
	4:00:00 PM	13.64	33.15	1.516	2.979	165.6
	5:00:00 PM	13.76	32.61	2.721	4.704	156.5
	6:00:00 PM	13.93	34.98	3.55	5.86	186.1
	7:00:00 PM	14.29	41.36	3.113	4.822	197.1
	8:00:00 PM	13.9	45.05	3.852	5.429	198.2
	9:00:00 PM	13.29	53.04	2.912	4.351	205.9
	10:00:00 PM	11.95	66.4	1.619	2.489	210.1
	11:00:00 PM	10.97	70.85	1.361	2.705	191.5
15/08/2013	12:00:00 AM	10.43	74.81	2.368	3.998	177.2
	1:00:00 AM	10.19	73.78	3.157	4.547	177.7
	2:00:00 AM	10.03	75.17	2.339	3.312	172.5
	3:00:00 AM	10.06	81.2	1.924	2.96	174.2
	4:00:00 AM	9.93	76.86	2.149	3.41	162.4
	5:00:00 AM	10.03	82.2	1.522	2.764	152.5
	6:00:00 AM	10.48	83.5	3.53	4.92	196.8
	7:00:00 AM	10.78	78.98	3.779	5.272	186.3
	8:00:00 AM	11.64	79.27	3.503	5.312	183.8
	9:00:00 AM	12.52	71.72	3.12	4.449	181

SECTION 4 • SUMMARY

4.1 DAYTIME, NIGHTTIME AND 24 H L_{EQ}

L_{eq} values were calculated for daytime (7am-11pm), nighttime (11pm-7am), 1 h (10pm-11pm) and 24 h time periods as in previous years, based on Health Canada recommendations (as described in Golder, 2012). These L_{eq} values and the total hours of filtered data available for the calculations are shown in Table 13. Alberta ERCB guidance (ERCB 2007) indicates that 3 hours of valid data are required to contribute to daytime and nighttime averages, so time periods with fewer valid hours are excluded. Time points for which data was collected but weather conditions were not optimal for at least 3 hours are indicated with a dash ("-").

No values exceed target sound levels (55 dBA daytime, and 45 dBA nighttime), so no additional mitigation or monitoring is recommended at this time.

Table 13. Daytime, nighttime, 10-11 pm and 24-h L_{eq} values for each monitoring location and total hours used to calculate each L_{eq}. Time periods with fewer than 3 hours of valid data are excluded.

Site	Dates (2013)	$L_{eq, day}$ 7am-11pm (dBA)	Total Hours	$L_{eq, night}$ 11pm-7am (dBA)	Total Hours	$L_{eq, 1 h}$ 10pm-11pm (dBA)	$L_{eq, 24 h}$ (dBA)	Total Hours
R1	Aug. 31	-	-	-	-	-	-	-
R2	Sept. 7	-	-	-	-	-	36.4	5
	Sept. 8	-	-	-	-	-	-	-
	Sept. 9	51.7	11	40.1	8	47.7	44.2	21
R3	Jul. 12	34.1	10	-	-	-	34.1	10
	Jul. 13	-	-	41.2	4	39.7	40.6	6
	Jul. 14	-	-	37.4	8	-	36.6	10
	Jul. 15	41.9	9	39.5	8	38.5	41.2	16
R4	Jul. 26	-	-	-	-	-	-	-
	Jul. 27	35.4	9	-	-	36.1	35.4	9
	Jul. 28	-	-	-	-	-	-	-
R5	Aug. 12	-	-	42.7	6	-	42.0	11
	Aug. 13	41.1	5	44.6	8	-	45.0	17

Site	Dates (2013)	$L_{eq, day}$ 7am-11pm (dBA)	Total Hours	$L_{eq, night}$ 11pm-7am (dBA)	Total Hours	$L_{eq, 1 h}$ 10pm-11pm (dBA)	$L_{eq, 24 h}$ (dBA)	Total Hours
	Aug. 14	43.1	16	39.0	8	28.7	38.1	17

4.2 HISTORICAL COMPARISON

4.2.1 Differences in Data Analysis

Methods of data analysis were not identical in each year, and the differences are noted here.

Firstly, hourly, daytime (7am-11pm), nighttime (11pm-7am) and 24 h L_{eq} values in the 2011 report (Golder, 2012) appear to have been calculated using the arithmetic mean of one-minute L_{eq} values, rather than the geometric mean, which would result in calculated L_{eq} values that are lower than actual, because the decibel scale is logarithmic. Values for 2011 were re-calculated as in this report (see Section 2.4) to provide comparable data. Values in 2009 and 2010 (Golder, 2010; 2011) appear to have been calculated using the geometric mean, as in the current analysis.

Secondly, data points measured outside of acceptable wind conditions (> 4.17 m/s) were not filtered from the analysis in 2009 and 2010 because it was determined that these were typical for the area, and no wind-induced noise in the microphone was noted. These data points were filtered out in 2011, 2012 and 2013.

Lastly, the model of Bruel and Kjaer sound level meter used beginning in 2012 was the same as previous years, but the specific instrument was new.

4.2.2 Interannual Comparison

L_{eq} measurements for all valid time periods from 2009 - 2013 are shown in Figure 7. With the exception of one 10-11pm period at R2, all L_{eq} values in 2013 were lower than or very similar to those recorded previously. A review of the recorded sound files for the 10-11pm period indicated significant wind-induced noise in the microphone (despite average wind speeds within the preferred range) and no notable sounds of mine activity.

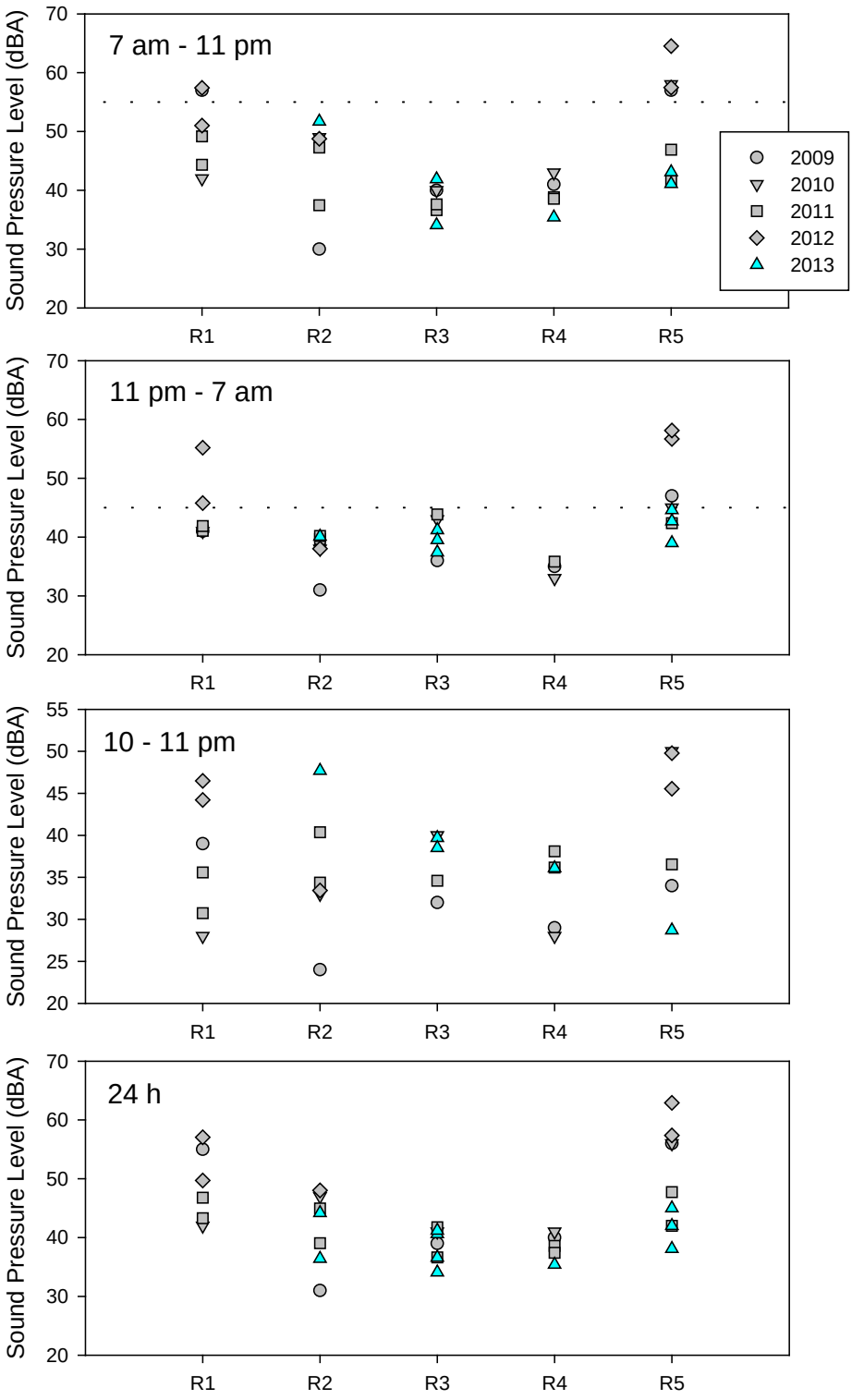


Figure 7. L_{eq} values calculated from filtered data for various time periods at locations R1 – R5 on the Meadowbank site in 24-h surveys from 2009 - 2013. Dashed lines indicate target sound levels.

SECTION 5 • ACTIONS

Techniques to further mitigate wind-induced noise in the microphone will be investigated to help obtain a larger proportion of valid data. This may include new or different wind screens, particular attention to monitoring during calm weather, or further extending the monitoring periods.

SECTION 6 • REFERENCES

AEM, 2009. Noise Management and Abatement Plan. Meadowbank Gold Project. Version 1. September, 2009.

ERCB, 2007. Noise Control Directive 038. Alberta Energy Resources Conservation Board. Calgary, Alberta.

Golder Associates (Golder), 2012. 2011 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. February, 2012.

Golder Associates (Golder), 2011. 2010 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. March 8, 2011.

Golder Associates (Golder), 2010. 2010 Noise Monitoring, Meadowbank Division, Nunavut. Prepared for Agnico-Eagle Mines Ltd. February 4, 2010.

APPENDIX A

Site Photos

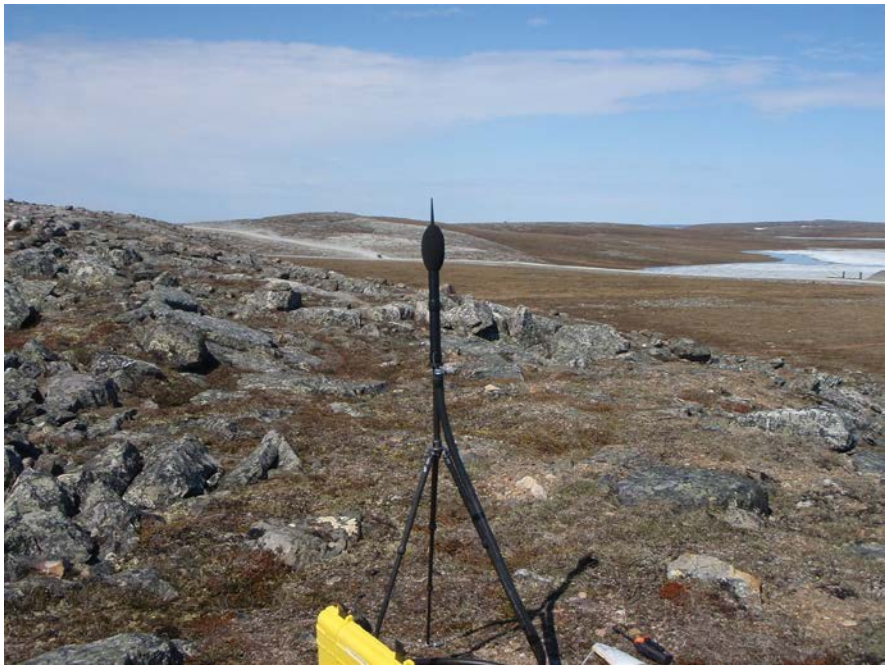


Figure -Apx 1: Monitoring location R1

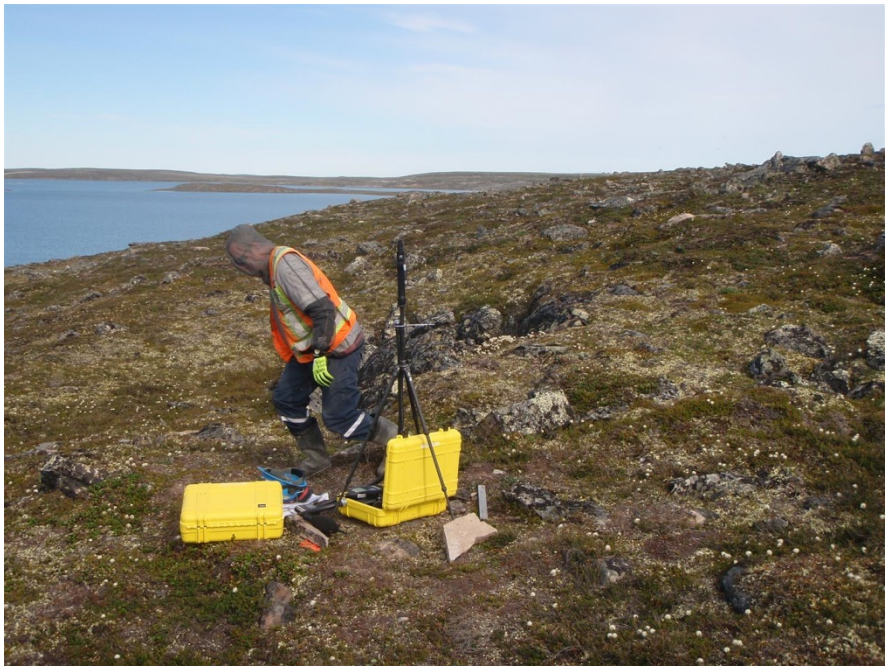


Figure -Apx 2: Monitoring location R2

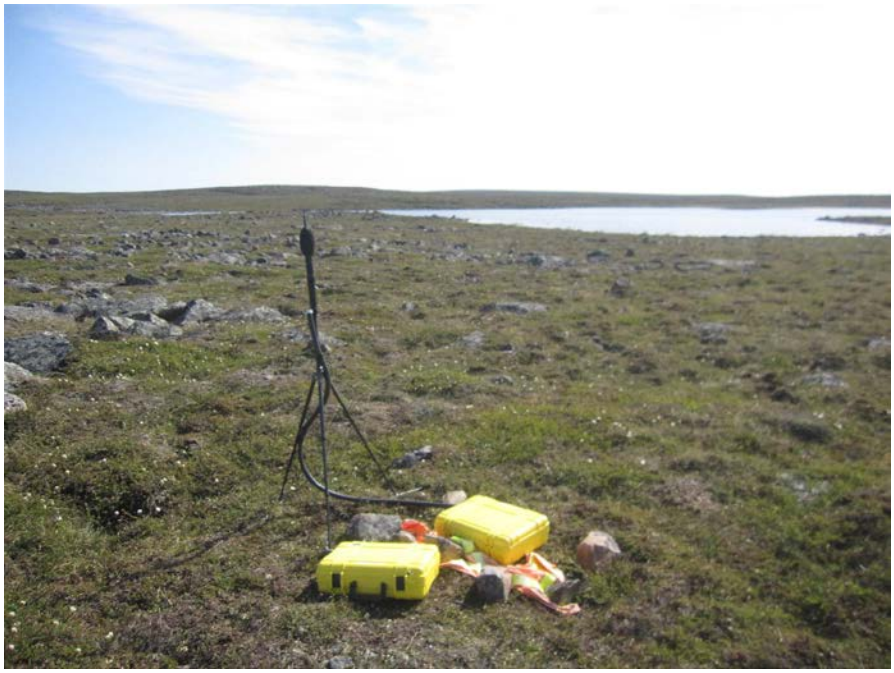


Figure -Apx 3: Monitoring location R3.

Figure -Apx 4: Monitoring location R4.

Figure -Apx 5: Monitoring location R5.

APPENDIX B

Field Logs

MONITORING STARTS

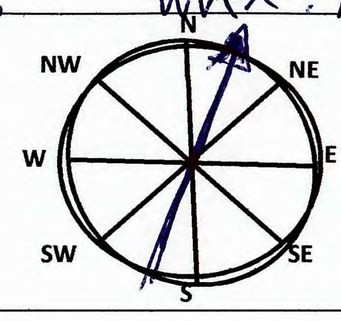
Operator: RA.	
Location: T21	
Noise Meter Start Time: 11h55	
Date: 2013/06/16	
Calibration complete ?: YES	
Sensitivity 45.98	
Derviation 0	
Time of Calibration: 11h45	
Battery Power Check:	Good (circled) Poor
Photographs of Setup (Y/N) YES	
Photographs of Surrounding (Y/N) YES	
Check available disk memory (Y/N) YES	

Cloud cover:	cloudy	partly cloudy	sunny (circled)
Height of cloud (feet):	0-10,000	10,000-25,000	25,000+ (circled)

Air Temperature (C): 25.5°C

Wind Speed (km/hr): AVG: 0.9 m/s MAX: 1.4 m/s

Wind Direction:
North wind (wind blows from North)



Barometric Pressure (kPa):

Relative Humidity (%) 24.5

Precipitation:	none (circled)	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	650248.4	9605279	

Type of Ground Surface: TUNDRA

Acoustic Environment:

- Traffic: ROAD EMULSION
- Human activities: EMULSION PLANT
- Animal: BIRDS

Other noise sources

RECLAIM ROAD WORK IN PROGRESS.

MONITORING ENDS

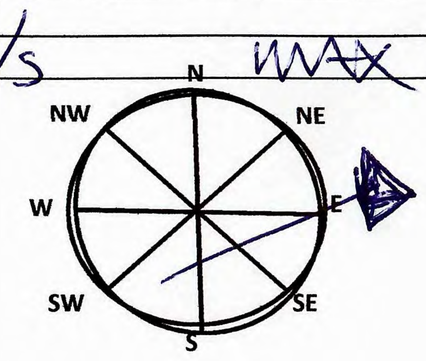
Operator: RA/ST	
Record Data File Name:	
Total Monitoring Period 3 DAYS 4 HOURS	
Noise Meter End Time: 16h45	
Date: 2013/06/19	
Calibration complete ?:	
Sensitivity 46.26	
Derviation 0.05	
Time of Calibration: 16h50	
Check file size (GB)	2.26 FREE / 14.6 TOTAL
Battery Power Check:	Good (circled) Poor

Cloud cover:	cloudy (circled)	partly cloudy	sunny
Height of cloud (feet):	0-10,000 (circled)	10,000-25,000	25,000 +

Air Temperature (C): 8.2°C

Wind Speed (km/hr): AVG: 4 m/s MAX: 6.1 m/s

Wind Direction:
North wind (wind blows from North)



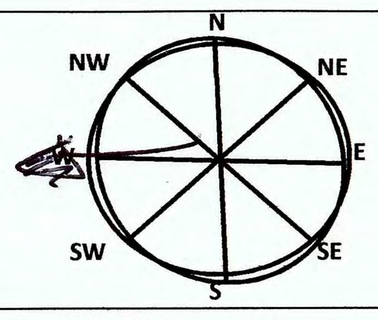
Barometric Pressure (kPa):

Relative Humidity (%) 43.4

Precipitation:	none (circled)	drizzle	rain

Depature Time: 17h05 2013/06/19

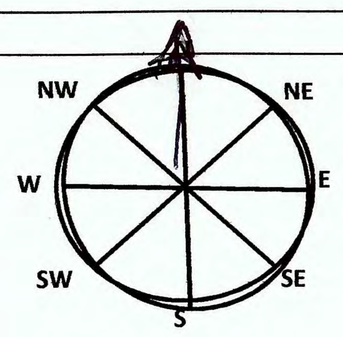
MONITORING STARTS

Operator:	ST/RA
Location:	R1
Noise Meter Start Time:	
Date:	2013/08/31
Calibration complete ?:	
Sensitivity	46.15
Derviation	-0.05
Time of Calibration:	10:05
Battery Power Check:	Good (circled) / Poor
Photographs of Setup (Y/N)	N
Photographs of Surrounding (Y/N)	N
Check available disk memory (Y/N)	Y
Cloud cover:	cloudy (circled) / partly cloudy / sunny
Height of cloud (feet):	0-10,000 (circled) / 10,000-25,000 / 25,000 +
Air Temperature (C):	7.9°
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	AVG: 2.3 m/s MAX: 3.2 m/s
	
Barometric Pressure (kPa):	
Relative Humidity (%)	56.5
Precipitation:	none (circled) / drizzle / rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14W636901	7216802	
Type of Ground Surface:			
Acoustic Environment:			
Traffic			
Human activities			
Animal			
Other noise sources	RECLAIM PUMP- AIR TRAFFIC GEESE		

MONITORING ENDS

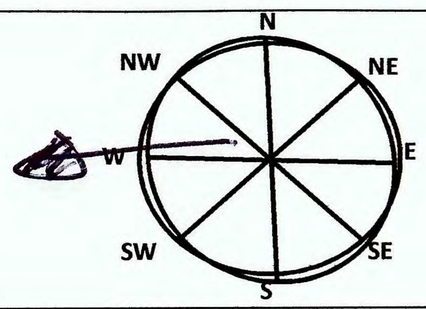
Operator:	ST/RA
Record Data File Name:	BATTERY CABLE ISSUES
Total Monitoring Period	ONLY RECORDED 11 HOURS
Noise Meter End Time:	2013/09/03
Date:	
Calibration complete ?:	
Sensitivity	46.10
Derviation	-0.01
Time of Calibration:	CABLE WAS BROKEN - INTERNAL BATTERY ONLY.
Check file size (GB)	
Battery Power Check:	Good / Poor (circled)
Cloud cover:	cloudy (circled) / partly cloudy / sunny
Height of cloud (feet):	0-10,000 (circled) / 10,000-25,000 / 25,000 +
Air Temperature (C):	0.7°
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	AVG: 7.8 m/s MAX: 9.3 m/s
	
Barometric Pressure (kPa):	100.8
Relative Humidity (%)	
Precipitation:	none (circled) / drizzle / rain
Depature Time:	

MONITORING STARTS

Operator:	RA/JK/RS
Location:	R2
Noise Meter Start Time:	
Date:	2013/07/07
Calibration complete ?:	
Sensitivity	46.2
Derviation	-0.01
Time of Calibration:	10h00.
Battery Power Check:	Good / Poor
Photographs of Setup (Y/N)	YES
Photographs of Surrounding (Y/N)	YES
Check available disk memory (Y/N)	OK

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C):	15.4°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	2.5 m/s AVG. 3.1 m/s MAX



Barometric Pressure (kPa):			
Relative Humidity (%)	52.6 %		
Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14W 0636786	72 14438	

Type of Ground Surface:	TUNDRA
Acoustic Environment:	
Traffic	ROADS
Human activities	AWPR / FRESH WATER BARGE
Animal	BIRDS

Other noise sources

WORK ON STORMWATER DYKE, JET. Q22 HAULING TO WTP.

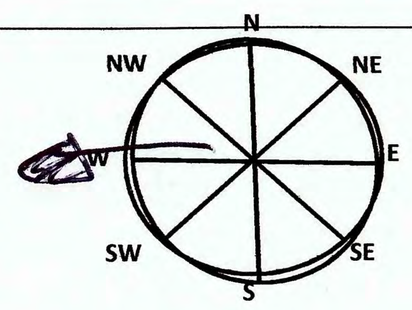
MONITORING ENDS

Operator:	RA/TT/RS
Record Data File Name:	
Total Monitoring Period	
Noise Meter End Time:	17h20
Date:	2013/07/10
Calibration complete ?:	
Sensitivity	46.16
Derviation	-0.01
Time of Calibration:	17h30
Check file size (GB)	OK.
Battery Power Check:	Good / Poor

SOME DRIZZLE DURING MONITORING PERIOD.

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C):	11.3°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	1.4 m/s AVG 2.4 m/s MAX



Barometric Pressure (kPa):			
Relative Humidity (%)	57.9		
Precipitation:	none	drizzle	rain
Depature Time:	17h35		

MONITORING STARTS

Operator:	TT / RA
Location:	RZ
Noise Meter Start Time:	13h45
Date:	2013/09/07
Calibration complete ?:	
Sensitivity	46.19
Derviation	0.02
Time of Calibration:	13h40
Battery Power Check:	Good (circled) / Poor
Photographs of Setup (Y/N)	N
Photographs of Surrounding (Y/N)	N
Check available disk memory (Y/N)	Y
Cloud cover:	cloudy (circled) / partly cloudy / sunny
Height of cloud (feet):	0-10,000 (circled) / 10,000-25,000 / 25,000 +
Air Temperature (C):	1.6°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	MAX: 21 m/s AVG: 1.7 m/s
Barometric Pressure (kPa):	
Relative Humidity (%)	70.3
Precipitation:	none (circled) / drizzle / rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14W0636789	7210037	

Type of Ground Surface:	
Acoustic Environment:	
Traffic	BARGE, ROAD
Human activities	AWPAR/BARGE
Animal	GEESE/BIRDS
Other noise sources	AIRPLANE.

MONITORING ENDS

Operator:	TT/RA.
Record Data File Name:	STAND + MICROPHONE WERE ON GROUND WHEN WE ARRIVED AT LOCATION
Total Monitoring Period	
Noise Meter End Time:	11h28
Date:	2013/09/10
Calibration complete ?:	
Sensitivity	46.13
Derviation	-0.01
Time of Calibration:	14h57
Check file size (GB)	OK
Battery Power Check:	Good (circled) / Poor
Cloud cover:	cloudy (circled) / partly cloudy / sunny
Height of cloud (feet):	0-10,000 (circled) / 10,000-25,000 / 25,000 +
Air Temperature (C):	0.1°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	MAX: 2.4 m/s AVG: 1.6 m/s
Barometric Pressure (kPa):	
Relative Humidity (%)	62.2
Precipitation:	none (circled) / drizzle / rain
Depature Time:	11h40

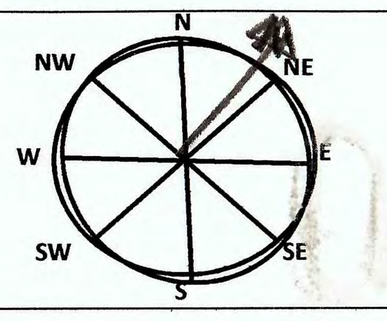
SOME SNOW/RAIN DURING PERIOD.

MONITORING STARTS

Operator:	RA TT RB
Location:	
Noise Meter Start Time:	10h25
Date:	2013/07/12
Calibration complete ?:	
Sensitivity	46.20
Derviation	±0.01
Time of Calibration:	10h20
Battery Power Check:	Good / Poor
Photographs of Setup (Y/N)	Y
Photographs of Surrounding (Y/N)	Y
Check available disk memory (Y/N)	02

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C):	11.4°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	3.9 m/s MAX 2.8 m/s AUG.
Barometric Pressure (kPa):	
Relative Humidity (%)	44.9 %



Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14W 0641121	7214917	

Type of Ground Surface:	TUNDRA
Acoustic Environment:	
Traffic	VAULT ROAD
Human activities	
Animal	BIRD, INSECTS

Other noise sources

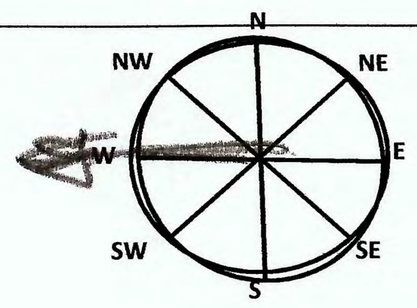
JET, VAULT ROAD.

MONITORING ENDS

Operator:	RA TT
Record Data File Name:	SOME RAIN DURING MONITORING PERIOD.
Total Monitoring Period	
Noise Meter End Time:	
Date:	2013/07/16 8h55 — HELICOPTER USED FOR REMOVAL.
Calibration complete ?:	
Sensitivity	45.93
Derviation	-0.05
Time of Calibration:	21h25
Check file size (GB)	02
Battery Power Check:	Good / Poor

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C):	11.8°C
Wind Speed (km/hr):	
Wind Direction: North wind (wind blows from North)	2.0 m/s MAX 1.2 m/s AUG
Barometric Pressure (kPa):	
Relative Humidity (%)	59.2



Precipitation:	none	drizzle	rain
Depature Time:	9h00.		

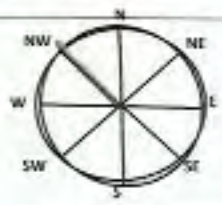
MONITORING STARTS

Operator:	M.T / S.T.		
Location:	R-4		
Noise Meter Start Time:	10h36		
Date:	2013-07-26		
Calibration complete ?:	Y		
Sensitivity	45.61		
Derviation	-0.06		
Time of Calibration:	10h35		
Battery Power Check:	(Good)		Poor
Photographs of Setup (Y/N)			
Photographs of Surrounding (Y/N)			
Check available disk memory (Y/N)	Y		
Cloud cover	cloudy	partly cloudy	(sunny)
Height of cloud (feet):	0-10,000	10,000-25,000	(25,000 +)
Air Temperature (C):	20.8		
Wind Speed (km/hr):	2 m/s max 2.8 m/s		
Wind Direction: SW North wind (wind blows from North)			
Barometric Pressure (kPa):			
Relative Humidity (%)	50.7		
Precipitation	(none)	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	14 W 0639442	7219749	
Type of Ground Surface:	Tundra, Rock		
Acoustic Environment:			
Traffic			
Human activities			
Animal			
Other noise sources			

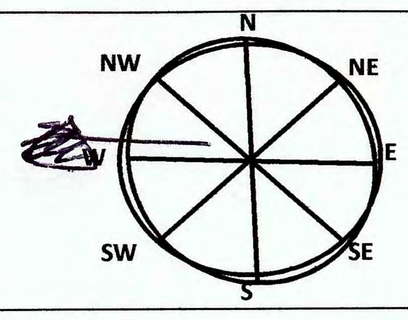
MONITORING ENDS

Operator:	M.T / S.T.		
Record Data File Name:			
Total Monitoring Period			
Noise Meter End Time:	8h35		
Date:	2013-07-29		
Calibration complete ?:			
Sensitivity	46.15		
Derviation	0.1		
Time of Calibration:	8h37		
Check file size (GB)			
Battery Power Check:	(Good)		Poor
Cloud cover	(cloudy)	partly cloudy	sunny
Height of cloud (feet):	(0-10,000)	10,000-25,000	25,000 +
Air Temperature (C):	9.9		
Wind Speed (km/hr):	Av 6 m/s max: 7 m/s		
Wind Direction: NW North wind (wind blows from North)			
Barometric Pressure (kPa):			
Relative Humidity (%)	75.1		
Precipitation:	(none)	drizzle	rain
Departure Time:	8h40		

MONITORING STARTS

Operator: RA TT CB DS	
Location:	
Noise Meter Start Time: 15h20	
Date: 2013/08/12	
Calibration complete ?:	
Sensitivity 45.83	CALIBRATION REPONE X3
Derviation 0.02	
Time of Calibration: 15h15	
Battery Power Check:	Good / Poor
Photographs of Setup (Y/N)	
Photographs of Surrounding (Y/N)	
Check available disk memory (Y/N)	

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 26.8	
Wind Speed (km/hr):	
Wind Direction:	
North wind (wind blows from North) MAX 2.9 m/s AVG 0.6 m/s	
Barometric Pressure (kPa):	
Relative Humidity (%) 35.8	

Precipitation:	none	drizzle	rain

GENERAL SITE DESCRIPTION

GPS Location	Latitude	Longitude	Altitude
	MW0633791	7214494	

Type of Ground Surface:	
Acoustic Environment:	
Traffic AMAR	
Human activities EXPLORATION CAMP	
Animal BIRDS / INSECTS	

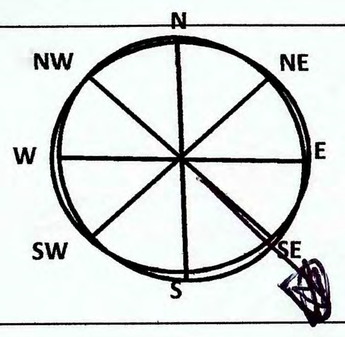
Other noise sources

EXPLO GENSET, ALSO EXPLO SHUT DOWN WORK.

MONITORING ENDS

Operator: RA TT	
Record Data File Name:	
Total Monitoring Period	
Noise Meter End Time: 9h40	
Date: 2013/08/15	SOME RAIN ON 2013/07/14.
Calibration complete ?:	
Sensitivity 45.86	
Derviation 0.01	
Time of Calibration: 9h45	
Check file size (GB) 8	
Battery Power Check:	Good / Poor

Cloud cover:	cloudy	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 19.0°	
Wind Speed (km/hr):	
Wind Direction:	
North wind (wind blows from North) MAX: 1.6 m/s AVG: 1.1 m/s	
Barometric Pressure (kPa):	
Relative Humidity (%) 57.9	

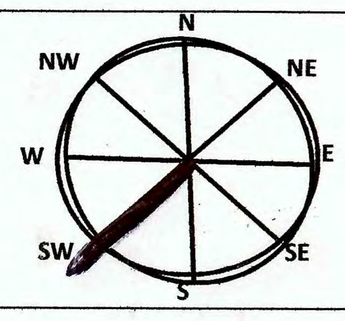
Precipitation:	none	drizzle	rain

Depature Time: 9h50

MONITORING STARTS

Operator: M.T	
Location: R-5	
Noise Meter Start Time: 11h35	
Date: 2013-09-19	
Calibration complete ?: Y	
Sensitivity Y 46.65	
Derviation 0.1	
Time of Calibration: 11h28	
Battery Power Check:	Good (circled) Poor
Photographs of Setup (Y/N) Y	
Photographs of Surrounding (Y/N) Y	
Check available disk memory (Y/N) Y	14.6 / 14.6

Cloud cover:	cloudy (circled)	partly cloudy	sunny
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): ~~-2.1~~ -5.7	
Wind Speed (km/hr): Av. 1.9 m 3.8 m/s	
Wind Direction: SW North wind (wind blows from North)	
Barometric Pressure (kPa):	
Relative Humidity (%) 79.9 %	
Precipitation: light snow	none (circled) drizzle rain

GENERAL SITE DESCRIPTION

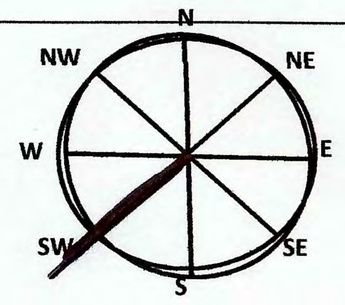
GPS Location	Latitude	Longitude	Altitude
	633777	7214493	131 m

Type of Ground Surface: toundra	
Acoustic Environment:	
Traffic helicopter, road truck	
Human activities	
Animal waves, fox, plane	
Other noise sources	

MONITORING ENDS

Operator: Martin Theriault	
Record Data File Name: R5-2013-09-19 ?	
Total Monitoring Period	
Noise Meter End Time: 13h42 ?	
Date: 2013-09-22	
Calibration complete ?: N meter froze	
Sensitivity	
Derviation	
Time of Calibration:	
Check file size (GB)	
Battery Power Check: OK	Good (circled) Poor

Cloud cover:	cloudy	partly cloudy	sunny (circled)
Height of cloud (feet):	0-10,000	10,000-25,000	25,000 +

Air Temperature (C): 14.8°	
Wind Speed (km/hr): max 6.7 m/s Av. 1.8 m/s	
Wind Direction: North wind (wind blows from North)	
Barometric Pressure (kPa):	
Relative Humidity (%) 60.8	
Precipitation: none	none (circled) drizzle rain
Depature Time: 13h50	