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APPENDIX 11

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APPENDIX 11-1

Glossary of Acoustic Terminology

Abbreviation / Descriptor Description

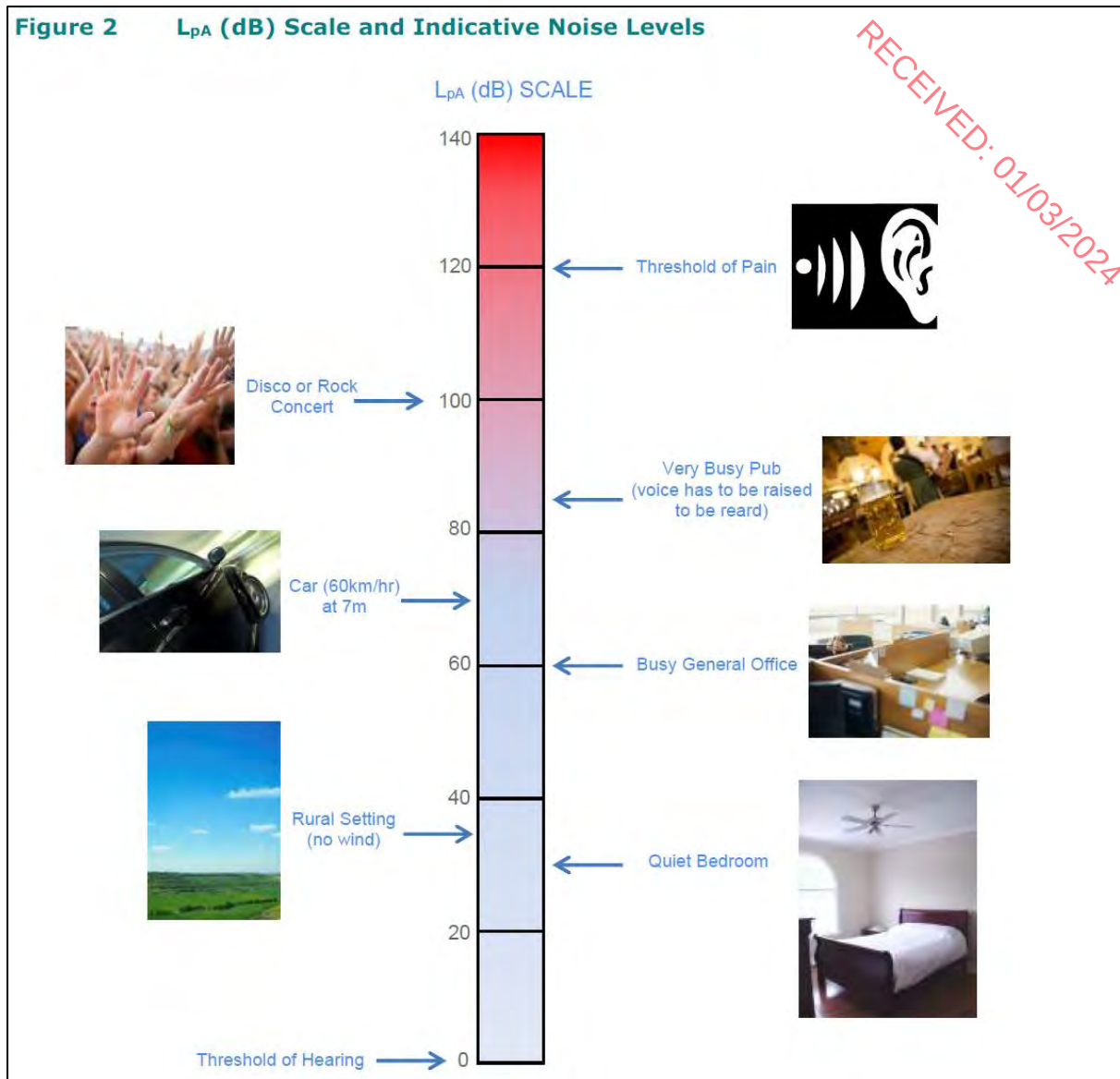
A Weighted	A time weighting given to noise values to amend the values to suit the human ear response to the various frequency components of the sound.
Day	A 24-hour period from midnight to midnight.
Daytime	A 12-hour period between 07:00 – 19:00 hours, as per NG4.
Evening-Time	A 4-hour period between 19:00 – 23:00 hours, as per NG4.
Night-Time	An 8-hour period between 23:00 – 07:00 hours, as per NG4.
dB (decibel)	A relative unit of measurements, based on a logarithmic scale to describe the ratio between the measured level and a reference or threshold level of 0dB. Unless otherwise stated 0dB within this report is 2×10^{-5} pascals (Pa).
$L_{AFN,T}$	The Fast interval, A-Weighted noise level in the for the 'N' percentile of the sampling interval 'T'.
$L_{A10,T}$	The A-Weighted noise level for the 10%ile of the sampling interval 'T', typically utilised to represent peak noise events such as intermittent passing traffic.
$L_{A90,T}$	The A-Weighted noise level in the lower 90 percentile of the sampling interval 'T', excludes intermittent features typical of traffic and typically utilised to describe background noise.
$L_{A95,T}$	The A-Weighted noise level for the 95%ile of the sampling interval 'T'. Representative of steady noise events at a monitoring location.
$L_{Aeq,T}$	The equivalent continuous sound level, used to describe the fluctuating noise in terms of a single noise level over the same sampling time period (T).
L_{den}	Day-evening-night equivalent level, calculated as: $L_{den} = 10 \log \frac{1}{24} \left(12 * 10^{\frac{L_{day}}{10}} + 4 * 10^{\frac{L_{evening} + 5}{10}} + 8 * 10^{\frac{L_{night} + 10}{10}} \right)$ Where the L_{day}, $L_{evening}$ and L_{night} are as defined in ISO1996-2:1987, and for the duration of 12 hours, 4 hours and 8 hours respectively, are A-weighted long term Leq sound level.
L_{day}	Day equivalent level. A-weighted Leq sound level measured over the 12-hour period from 07:00 hours to 19:00 hours.
$L_{evening}$	Evening equivalent level. A-weighted Leq sound level measured during the evening period of 19:00 hours to 23:00 hours.
L_{Amax}	The maximum RMS A-Weighted sound pressure level occurring within a specified time period.
L_{night}	Night equivalent level. A-weighted Leq sound level measured during the night period of 23:00 hours to 07:00 hours.
Noise Ambient	The totally encompassing sound in a given situation at a given time, usually composed of sound from many sources, near and far.
Noise Background	The steady existing noise level present without contribution from any intermittent sources, The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90 per cent of a given time interval, 'T' ($L_{AF90,T}$).

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Noise Specific	The sound arising from the source under investigation, disregarding all external and residual sources.
NSR	Noise Sensitive Receptor - an identified dwelling, amenity area, recreational zone or other such place where a change in noise may result in a nuisance impact.
RMS	Root Mean Squared, mathematical method to account for swells and troughs within wave forms, such as sound.
Sound Power Level (L_W)	The logarithmic measure of sound power in comparison to a referenced sound intensity level of one picowatt (1pW) per m ² . Utilised to express the intensity at source of a noise emission.
Sound Pressure Level (L_P)	Fluctuations in air pressure caused by the passage of a sound wave. The measurement of sound/noise through the use of a sound level meter, is a representation of these fluctuations in air pressure as they pass the instrument microphone.
Time Weighting	One of the averaging time for noise monitoring instrumentation: F – Fast, instrument samples every 125 milliseconds; S – Slow, instrument samples every 1 second; I – Impulsive, instrument samples every 35 milliseconds.

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Figure 2 L_{pA} (dB) Scale and Indicative Noise Levels



Source: Section 3, EPA Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4, January 2016).

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APPENDIX 11-2-1

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting facades, for method Industrial noise - LimA - ISO 9613

Name	Desc.	Height	Terrain L	HDef.	InOut	CDiffuse	Weighting	InputLw	DI	DI_Horz
door	roller door calciner	0.00	54.35	Relative	No	6	A	True	none	0
door	roller door calciner	0.00	54.35	Relative	No	6	A	True	none	0
door	roller door calciner	0.00	54.35	Relative	No	6	A	True	none	0
door	roller door calciner	0.00	54.35	Relative	No	6	A	True	none	0
door	roller door additives	0.00	54.35	Relative	No	6	A	True	none	0
calciner	calciner facade	0.00	54.35	Relative	No	6	A	True	none	0
AirFil01	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil02	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil03	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil04	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil05	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil06	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil07	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil08	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil09	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
AirFil10	Air filter	9.60	54.35	Relative	No	6	A	True	none	0
Roll door	Roller door	0.00	54.35	Relative	No	6	A	True	none	0
Roll door	Roller door	0.00	54.35	Relative	No	6	A	True	none	0
Roll door	Roller door	0.00	54.35	Relative	No	6	A	True	none	0
Roll door	Roller door	0.00	54.35	Relative	No	6	A	True	none	0
dryer fans	dryer fans	0.00	54.35	Relative	No	6	A	True	none	0

E2077 - Model A and B

Input - Sources and receivers

MORES

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Group: (main group)
Listing of: Emitting facades, for method Industrial noise - LimA - ISO 9613

Name	DI_Vert	DI (0)	DI (10)	DI (20)	DI (30)	DI (40)	DI (50)	DI (60)	DI (70)	DI (80)	DI (90)	DI (100)	DI (110)
door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
calciner	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil01	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil02	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil03	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil04	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil05	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil06	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil07	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil08	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil09	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AirFil10	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roll door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roll door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roll door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roll door	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
dryer fans	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E2077 - Model A and B

Input - Sources and receivers

MORES

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Group: (main group)
Listing of: Emitting facades, for method Industrial noise - LimA - ISO 9613

Name	DI (120)	DI (130)	DI (140)	DI (150)	DI (160)	DI (170)	DI (180)	Ca (D)	Ca (E)	Ca (N)	Height	Lp 63
door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	93.00
door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	93.00
door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	93.00
door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	93.00
door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	6.0	76.00
calciner	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	26.0	93.00
AirFil01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
AirFil10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	3.2	76.00
Roll door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	76.00
Roll door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	76.00
Roll door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	76.00
Roll door	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	12.0	76.00
dryer fans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	9.8	76.00

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Name	Lp 125	Lp 250	Lp 500	Lp 1k	Lp 2k	Lp 4k	Lp 8k	R 63	R 125	R 250	R 500	R 1k
door	93.00	93.00	93.00	93.00	93.00	93.00	93.00	8.00	11.00	10.00	10.00	18.00
door	93.00	93.00	93.00	93.00	93.00	93.00	93.00	8.00	11.00	10.00	10.00	18.00
door	93.00	93.00	93.00	93.00	93.00	93.00	93.00	8.00	11.00	10.00	10.00	18.00
door	93.00	93.00	93.00	93.00	93.00	93.00	93.00	8.00	11.00	10.00	10.00	18.00
door	76.00	76.00	76.00	76.00	76.00	76.00	76.00	8.00	11.00	10.00	10.00	18.00
calciner	93.00	93.00	93.00	93.00	93.00	93.00	93.00	0.00	0.00	0.00	0.00	0.00
AirFil01	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil02	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil03	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil04	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil05	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil06	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil07	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil08	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil09	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
AirFil10	76.00	76.00	76.00	76.00	76.00	76.00	76.00	0.00	0.00	0.00	0.00	0.00
Roll door	76.00	76.00	76.00	76.00	76.00	76.00	76.00	20.00	18.00	20.00	24.00	20.00
Roll door	76.00	76.00	76.00	76.00	76.00	76.00	76.00	20.00	18.00	20.00	24.00	20.00
Roll door	76.00	76.00	76.00	76.00	76.00	76.00	76.00	20.00	18.00	20.00	24.00	20.00
Roll door	76.00	76.00	76.00	76.00	76.00	76.00	76.00	20.00	18.00	20.00	24.00	20.00
dryer fans	76.00	76.00	76.00	76.00	76.00	76.00	76.00	20.00	18.00	20.00	24.00	20.00

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting facades, for method Industrial noise - LimA - ISO 9613

Name	R 2k	R 4k	R 8k	LwM2 63	LwM2 125	LwM2 250	LwM2 500	LwM2 1k	LwM2 2k	LwM2 4k	LwM2 8k
door	23.00	26.00	27.00	60.54	57.54	58.54	58.54	50.54	45.54	42.54	41.54
door	23.00	26.00	27.00	60.51	57.51	58.51	58.51	50.51	45.51	42.51	41.51
door	23.00	26.00	27.00	60.42	57.42	58.42	58.42	50.42	45.42	42.42	41.42
door	23.00	26.00	27.00	60.48	57.48	58.48	58.48	50.48	45.48	42.48	41.48
door	23.00	26.00	27.00	46.41	43.41	44.41	44.41	36.41	31.41	28.41	27.41
calciner	0.00	0.00	0.00	55.21	55.21	55.21	55.21	55.21	55.21	55.21	55.21
AirFil01	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil02	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil03	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil04	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil05	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil06	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil07	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil08	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil09	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
AirFil10	0.00	0.00	0.00	64.06	64.06	64.06	64.06	64.06	64.06	64.06	64.06
Roll door	29.00	39.00	47.00	31.44	33.44	31.44	27.44	31.44	22.44	12.44	4.44
Roll door	29.00	39.00	47.00	31.44	33.44	31.44	27.44	31.44	22.44	12.44	4.44
Roll door	29.00	39.00	47.00	31.44	33.44	31.44	27.44	31.44	22.44	12.44	4.44
Roll door	29.00	39.00	47.00	31.44	33.44	31.44	27.44	31.44	22.44	12.44	4.44
dryer fans	29.00	39.00	47.00	20.42	22.42	20.42	16.42	20.42	11.42	1.42	-6.58

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Name	Lw 63	Lw 125	Lw 250	Lw 500	Lw 1k	Lw 2k	Lw 4k	Lw 8k	Red 63	Red 125	Red 250	Red 500
door	79.00	76.00	77.00	77.00	69.00	64.00	61.00	60.00	0.00	0.00	0.00	0.00
door	79.00	76.00	77.00	77.00	69.00	64.00	61.00	60.00	0.00	0.00	0.00	0.00
door	79.00	76.00	77.00	77.00	69.00	64.00	61.00	60.00	0.00	0.00	0.00	0.00
door	79.00	76.00	77.00	77.00	69.00	64.00	61.00	60.00	0.00	0.00	0.00	0.00
door	62.00	59.00	60.00	60.00	52.00	47.00	44.00	43.00	0.00	0.00	0.00	0.00
calciner	87.00	87.00	87.00	87.00	87.00	87.00	87.00	87.00	0.00	0.00	0.00	0.00
AirFil01	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil02	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil03	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil04	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil05	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil06	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil07	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil08	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil09	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
AirFil10	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	0.00	0.00	0.00	0.00
Roll door	50.00	52.00	50.00	46.00	50.00	41.00	31.00	23.00	0.00	0.00	0.00	0.00
Roll door	50.00	52.00	50.00	46.00	50.00	41.00	31.00	23.00	0.00	0.00	0.00	0.00
Roll door	50.00	52.00	50.00	46.00	50.00	41.00	31.00	23.00	0.00	0.00	0.00	0.00
Roll door	50.00	52.00	50.00	46.00	50.00	41.00	31.00	23.00	0.00	0.00	0.00	0.00
dryer fans	50.00	52.00	50.00	46.00	50.00	41.00	31.00	23.00	0.00	0.00	0.00	0.00

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting facades, for method Industrial noise - LimA - ISO 9613

Name	Red 1k	Red 2k	Red 4k	Red 8k
door	0.00	0.00	0.00	0.00
door	0.00	0.00	0.00	0.00
door	0.00	0.00	0.00	0.00
door	0.00	0.00	0.00	0.00
door	0.00	0.00	0.00	0.00
calciner	0.00	0.00	0.00	0.00
AirFil01	0.00	0.00	0.00	0.00
AirFil02	0.00	0.00	0.00	0.00
AirFil03	0.00	0.00	0.00	0.00
AirFil04	0.00	0.00	0.00	0.00
AirFil05	0.00	0.00	0.00	0.00
AirFil06	0.00	0.00	0.00	0.00
AirFil07	0.00	0.00	0.00	0.00
AirFil08	0.00	0.00	0.00	0.00
AirFil09	0.00	0.00	0.00	0.00
AirFil10	0.00	0.00	0.00	0.00
Roll door	0.00	0.00	0.00	0.00
Roll door	0.00	0.00	0.00	0.00
Roll door	0.00	0.00	0.00	0.00
Roll door	0.00	0.00	0.00	0.00
dryer fans	0.00	0.00	0.00	0.00

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E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	Desc.	Height	Terrain L	HDef.	InOut	CDiffuse	Weighting	InputLw	DI	DI_Horz
cal roof	calciner roof	0.10	80.35	Relative to Objects	No	6	A	True	none	0

E2077 - Model A and B
Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	DI_Vert	DI(0)	DI(10)	DI(20)	DI(30)	DI(40)	DI(50)	DI(60)	DI(70)	DI(80)	DI(90)	DI(100)	DI(110)
cal roof	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	DI (120)	DI (130)	DI (140)	DI (150)	DI (160)	DI (170)	DI (180)	Ca (D)	Ca (E)	Ca (N)	Lp 63	Lp 125
cal roof	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	93.00	93.00

E2077 - Model A and B
Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	Lp 250	Lp 500	Lp 1k	Lp 2k	Lp 4k	Lp 8k	R 63	R 125	R 250	R 500	R 1k	R 2k
cal roof	93.00	93.00	93.00	93.00	93.00	93.00	0.00	0.00	0.00	0.00	0.00	0.00

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	R 4k	R 8k	LwM2 63	LwM2 125	LwM2 250	LwM2 500	LwM2 1k	LwM2 2k	LwM2 4k	LwM2 8k	Lw 63	Lw 125
cal roof	0.00	0.00	55.71	55.71	55.71	55.71	55.71	55.71	55.71	55.71	87.00	87.00

E2077 - Model A and B
Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	Lw 250	Lw 500	Lw 1k	Lw 2k	Lw 4k	Lw 8k	Red 63	Red 125	Red 250	Red 500	Red 1k	Red 2k
cal roof	87.00	87.00	87.00	87.00	87.00	87.00	0.00	0.00	0.00	0.00	0.00	0.00

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Emitting roofs, for method Industrial noise - LimA - ISO 9613

Name	Red 4k	Red 8k
cal roof	0.00	0.00

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E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Moving source, for method Industrial noise - LimA - ISO 9613

Name	Desc.	ISO H	ISO Terr.	HDef.	Weighting	Flow(D)	Flow(E)	Flow(N)	Avg.speed	Lw 63	Lw 125
HGV In		0.75	--	Relative	A	408	136	272	15	74.80	89.90
HGV Out		0.75	--	Relative	A	--	--	--	10	--	--

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E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Moving source, for method Industrial noise - LimA - ISO 9613

Name	Lw 250	Lw 500	Lw 1k	Lw 2k	Lw 4k	Lw 8k	Red 63	Red 125	Red 250	Red 500	Red 1k	Red 2k
HGV In	97.40	102.80	102.00	102.20	97.00	92.90	0.00	0.00	0.00	0.00	0.00	0.00
HGV Out	--	--	--	--	--	--	0.00	0.00	0.00	0.00	0.00	0.00

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Moving source, for method Industrial noise - LimA - ISO 9613

Name	Red 4k	Red 8k
HGV In	0.00	0.00
HGV Out	0.00	0.00

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E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Point sources, for method Industrial noise - LimA - ISO 9613

Name	Desc.	Height	Terrain L	HDef.	Type	DI	DI_Horz	DI_Vert
Exhs. Stac	Exhaust Stack (no.5)	1.50	64.23	Relative to Objects	Normal point source	none	0	0
Exhs. Stac	Exhaust Stack (no.5(	1.50	64.23	Relative to Objects	Normal point source	none	0	0
Calc fan	Calciner fan	1.50	80.35	Relative to Objects	Normal point source	none	0	0

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Point sources, for method Industrial noise - LimA - ISO 9613

Name	DI(0)	DI(10)	DI(20)	DI(30)	DI(40)	DI(50)	DI(60)	DI(70)	DI(80)	DI(90)	DI(100)	DI(110)	DI(120)
Exhs. Stac	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exhs. Stac	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calc fan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Point sources, for method Industrial noise - LimA - ISO 9613

Name	DI(130)	DI(140)	DI(150)	DI(160)	DI(170)	DI(180)	Ca(D)	Ca(E)	Ca(N)	Weighting	No refl.
Exhs. Stac	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No
Exhs. Stac	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No
Calc fan	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No

E2077 - Model A and B Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Point sources, for method Industrial noise - LimA - ISO 9613

Name	No building	No ind.site	Lw 63	Lw 125	Lw 250	Lw 500	Lw 1k	Lw 2k	Lw 4k	Lw 8k	Red 63
Exhs. Stac	No	No	83.99	83.99	83.99	83.99	83.99	83.99	83.99	83.99	0.00
Exhs. Stac	No	No	83.99	83.99	83.99	83.99	83.99	83.99	83.99	83.99	0.00
Calc fan	No	No	94.99	94.99	94.99	94.99	94.99	94.99	94.99	94.99	0.00

E2077 - Model A and B
Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Point sources, for method Industrial noise - LimA - ISO 9613

Name	Red 125	Red 250	Red 500	Red 1k	Red 2k	Red 4k	Red 8k
Exhs. Stac	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exhs. Stac	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calc fan	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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E2077 - Model A and B

Input - Sources and receivers

MORES

Model: v2 Model B - Proposed Development with TRaffic
version 0B - Proposed Development with BERM
Group: (main group)
Listing of: Receivers, for method Industrial noise - LimA - ISO 9613

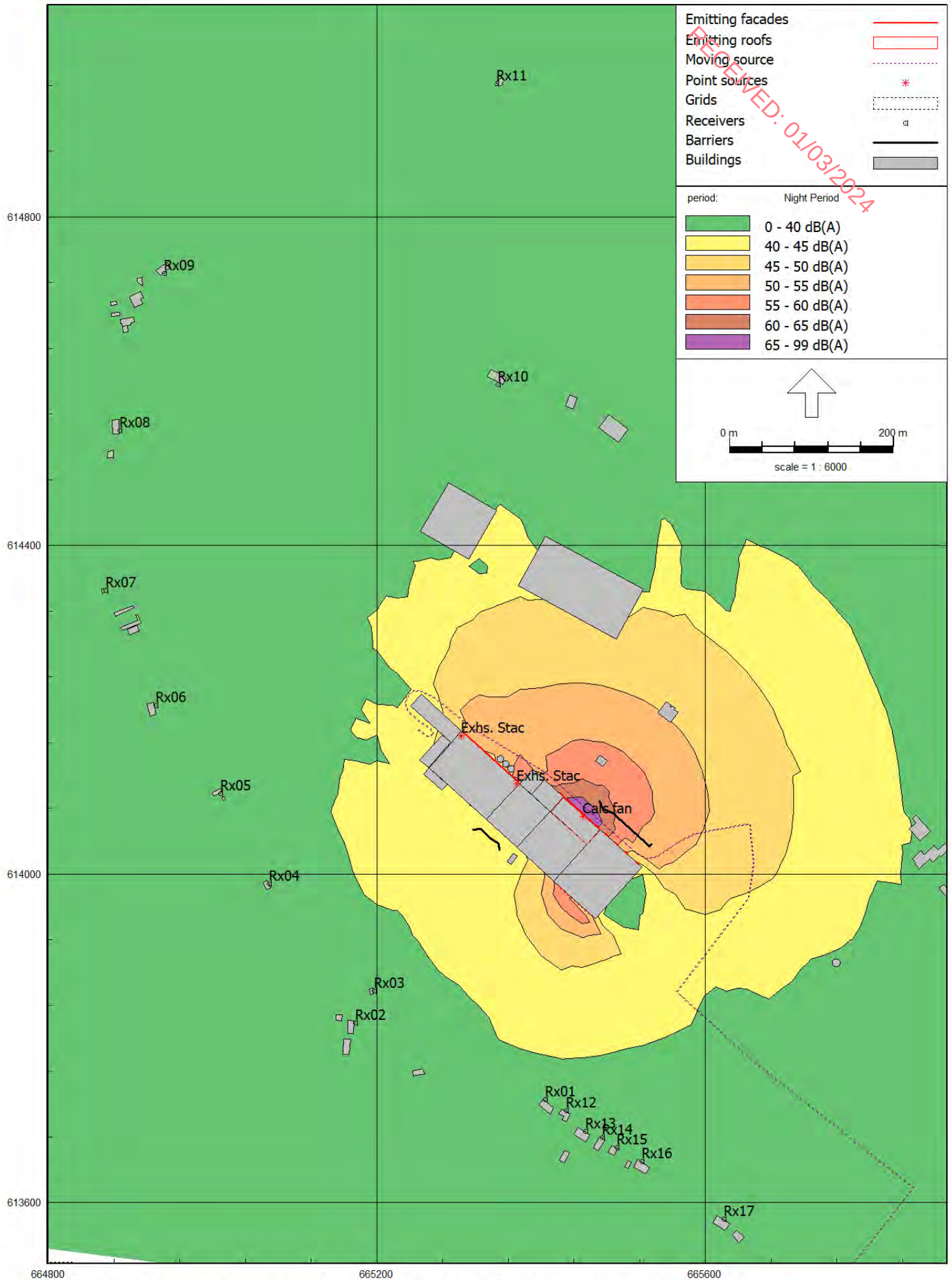
Name	Desc.	Terrain L	HDef.	Height A	Height B	Height C	Height D	Height E	Height F
Rx01	NSR01	36.73	Relative	1.50	4.00	--	--	--	--
Rx02	NSR02	34.36	Relative	1.50	4.00	--	--	--	--
Rx03	NSR03	37.02	Relative	1.50	4.00	--	--	--	--
Rx06		41.41	Relative	1.50	4.00	--	--	--	--
Rx07		41.37	Relative	1.50	4.00	--	--	--	--
Rx08	NSR05	39.01	Relative	1.50	4.00	--	--	--	--
Rx09		34.01	Relative	1.50	4.00	--	--	--	--
Rx11		11.98	Relative	1.50	4.00	--	--	--	--
Rx10	NSR06	27.72	Relative	1.50	4.00	--	--	--	--
Rx04		38.44	Relative	1.50	4.00	--	--	--	--
Rx05	NSR04	40.71	Relative	1.50	4.00	--	--	--	--
Rx12		36.27	Relative	1.50	4.00	--	--	--	--
Rx13		35.19	Relative	1.50	4.00	--	--	--	--
Rx14		35.35	Relative	1.50	4.00	--	--	--	--
Rx15		34.61	Relative	1.50	4.00	--	--	--	--
Rx16		34.13	Relative	1.50	4.00	--	--	--	--
Rx17		31.32	Relative	1.50	4.00	--	--	--	--

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APPENDIX 11-2-2

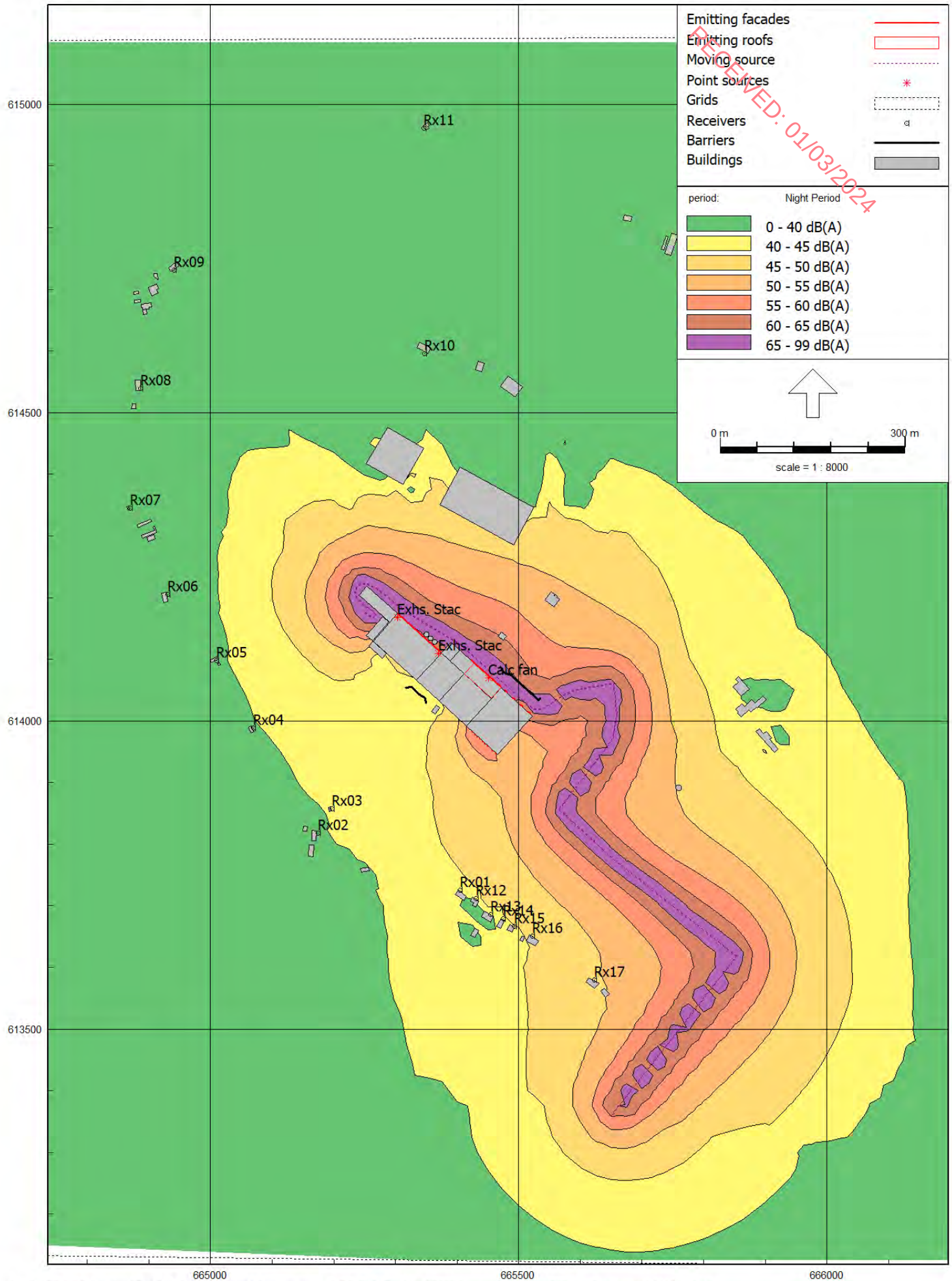
16 Feb 2024, 11:22



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APPENDIX 11-2-3

16 Feb 2024, 11:21



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APPENDIX 11-3

NOISE CHARTS AND PLATES

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INTRODUCTION

This document supplies the Frequency Analysis Charts for each monitoring event.

CALIBRATION OF SOUND LEVEL METER

The sound level meter used was:

- NTi XL2 Audio Acoustic Hand-held Analyser SLM

The SLM is Type 1 and equipped with Frequency Analysis Software.

The monitoring equipment was calibrated prior to and following the measurement period using a:

- BK 4231 field calibrator

Broadband noise levels were measured using the A-weighted network, and a fast-sampling interval, unless otherwise stated.

Table 1: Calibration of the Sound Level Meter

SLM	Calib. Time	Calib. Input	Calib. Type	Sensitivity [mV/Pa]	dB Range]	Calibrator Used	Serial No.
NTi	19/04/2023 12:45	Top Socket	External reference	41.5	0-100	BK4231	2217952

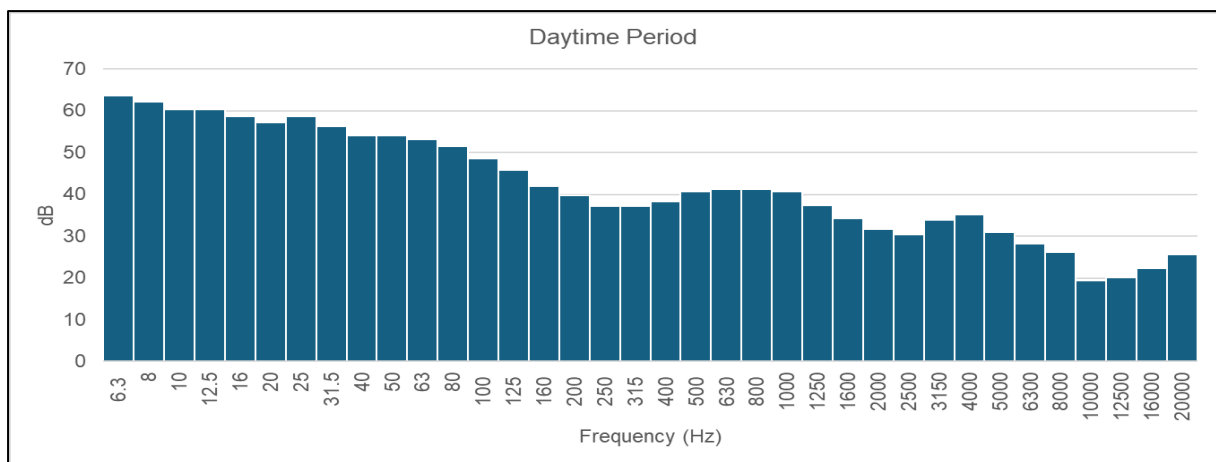
Appendix C

NM1

Plate 1: NM1 Location



Chart 1: NM1 Day 19/04/23-26/04/23 1/3 Octave Frequency Analysis



Appendix C

Chart 2: NM1 Evening 19/04/23-25/04/23 1/3 Octave Frequency Analysis

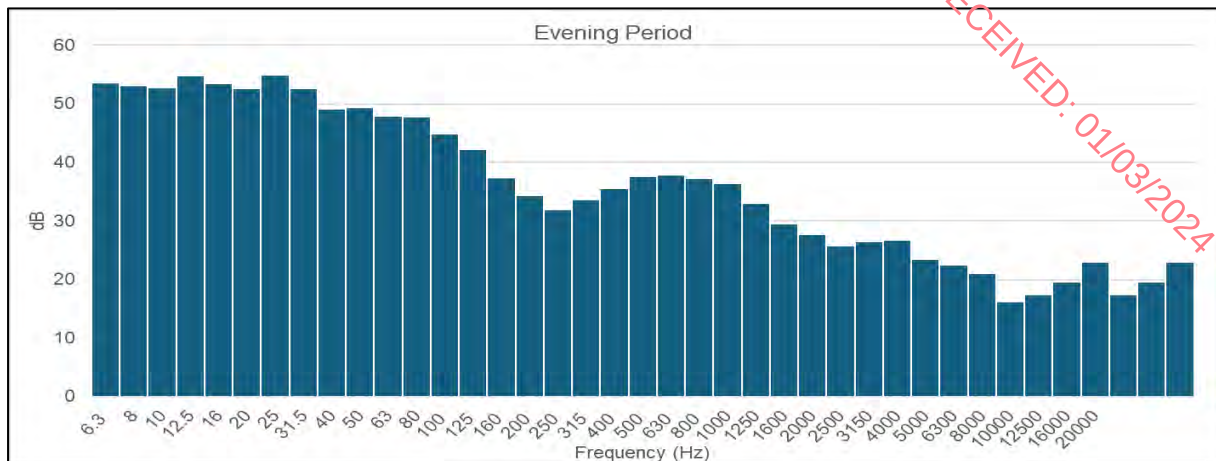
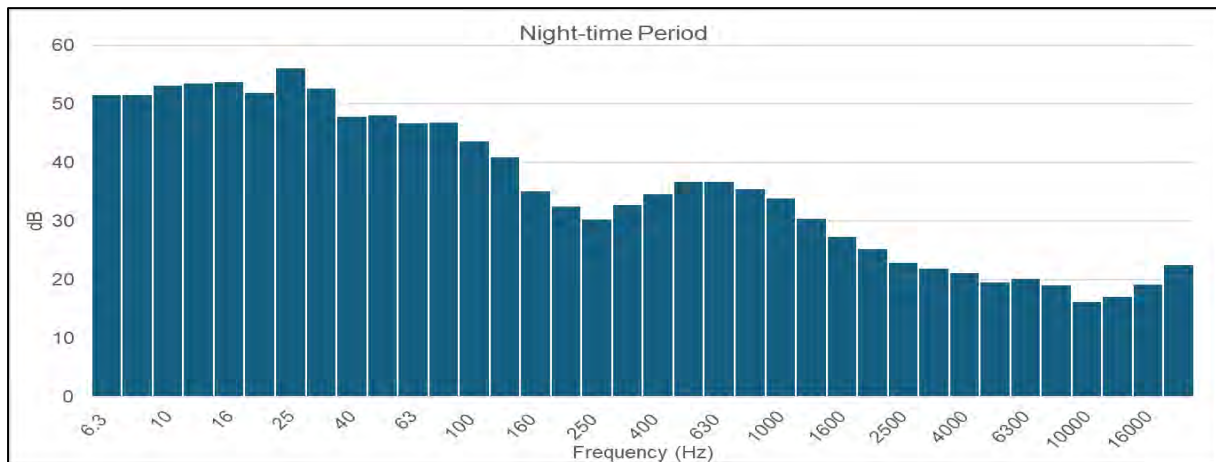


Chart 3: NM1 Night 19/04/23-25/04/23 1/3 Octave Frequency Analysis

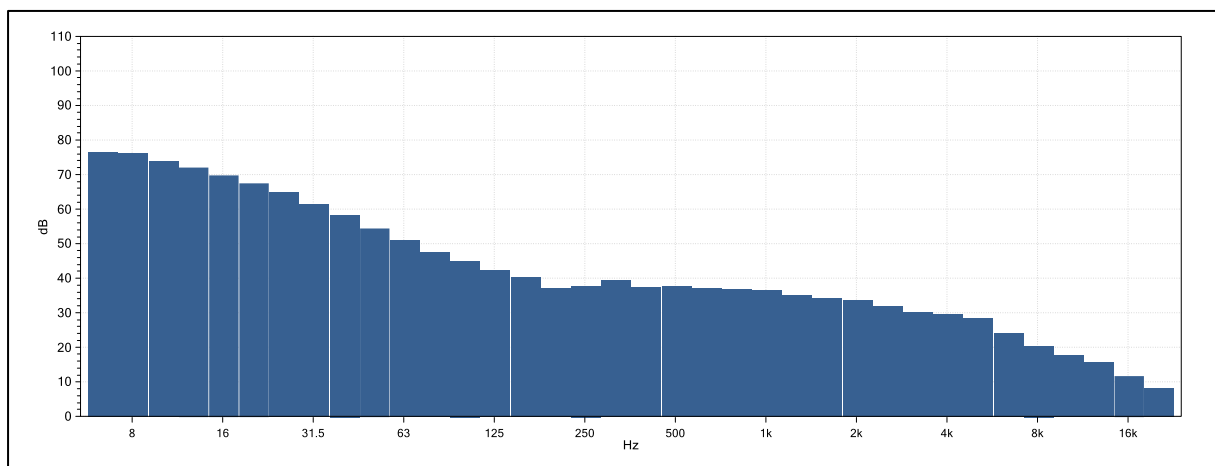


NM2

Plate 2: NM2 Location



Chart 4: NM2 Day Run 1 1/3 Octave Frequency Analysis



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Chart 5: NM2 Day Run 2 1/3 Octave Frequency Analysis

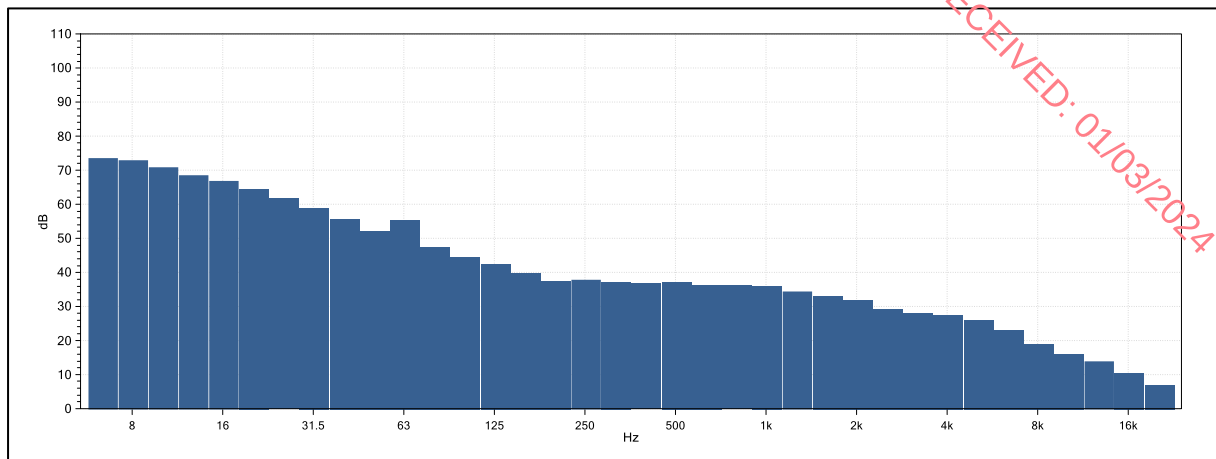


Chart 6: NM2 Evening 1/3 Octave Frequency Analysis

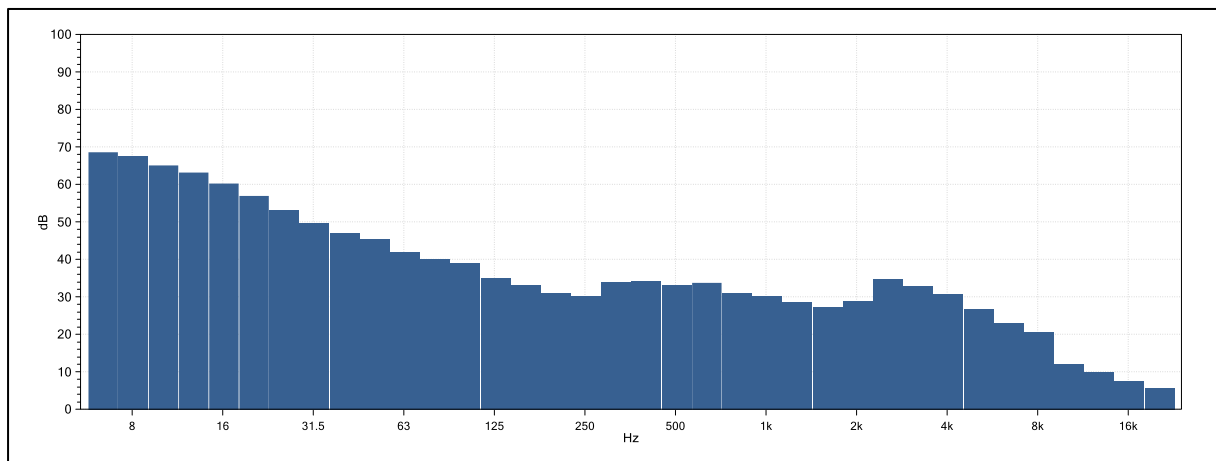
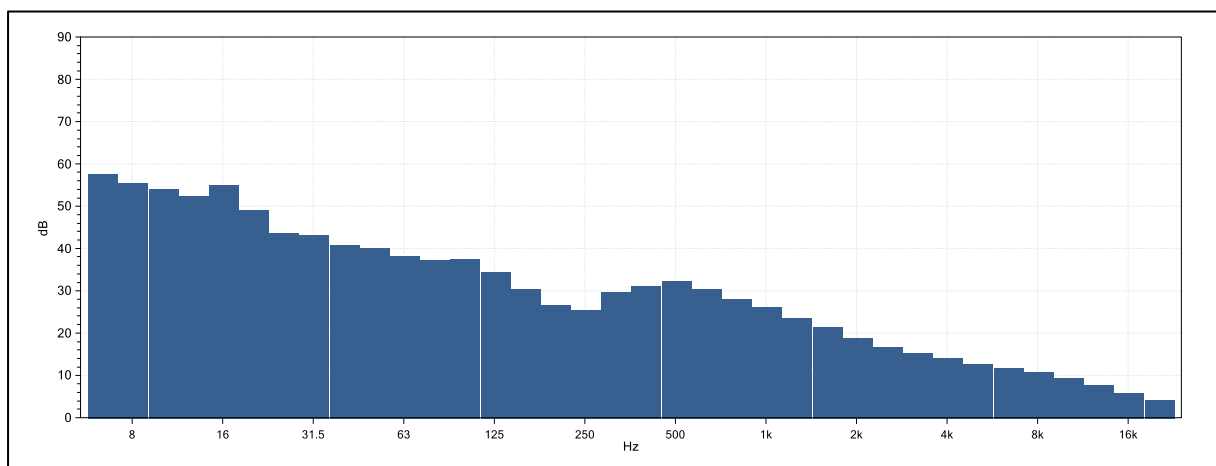
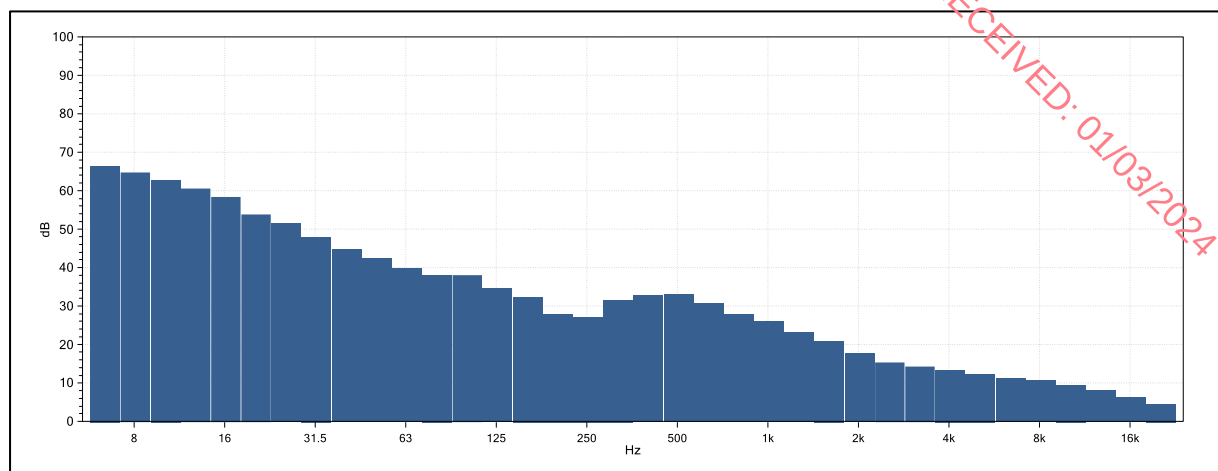


Chart 7: NM2 Night Run 1 1/3 Octave Frequency Analysis



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Chart 8: NM2 Night Run 2 1/3 Octave Frequency Analysis

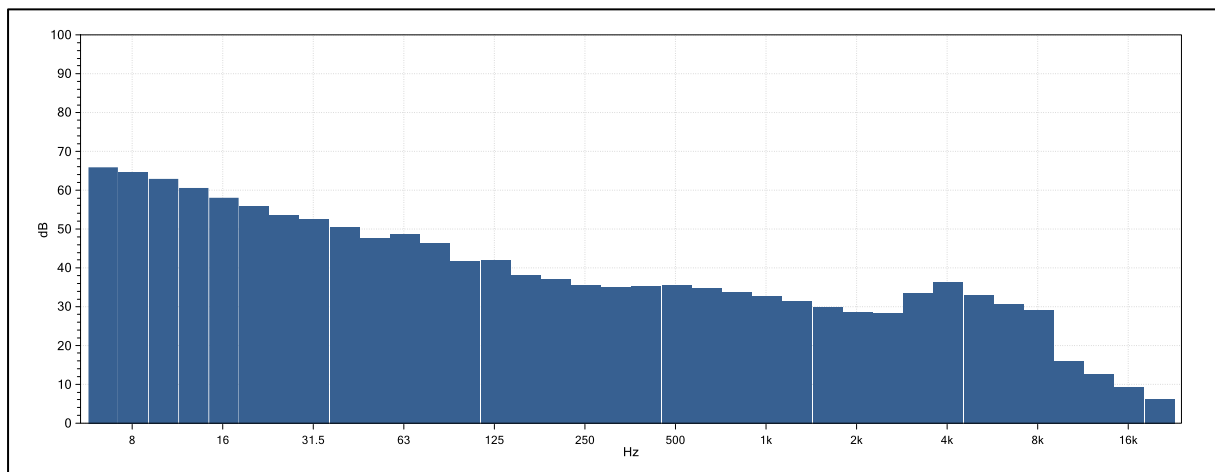


NM3

Plate 3: NM3 Location



Chart 9: NM3 Day Run 1 1/3 Octave Frequency Analysis



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Chart 10: NM3 Day Run 2 1/3 Octave Frequency Analysis

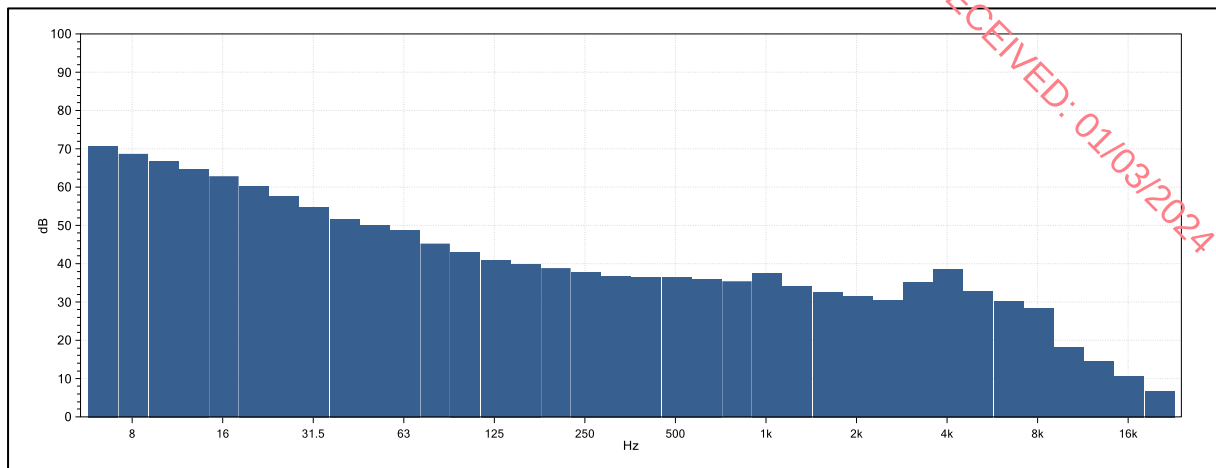


Chart 11: NM3 Evening 1/3 Octave Frequency Analysis

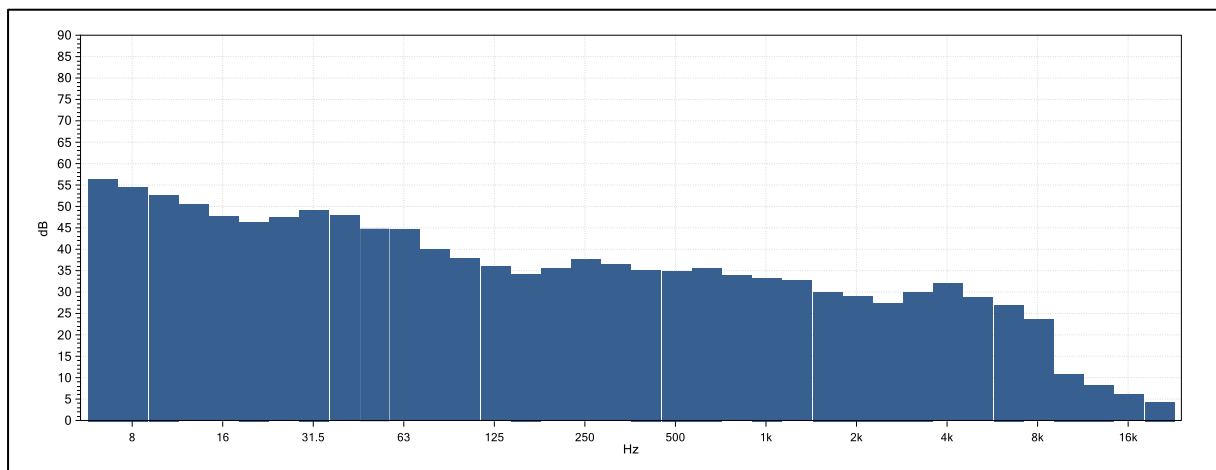
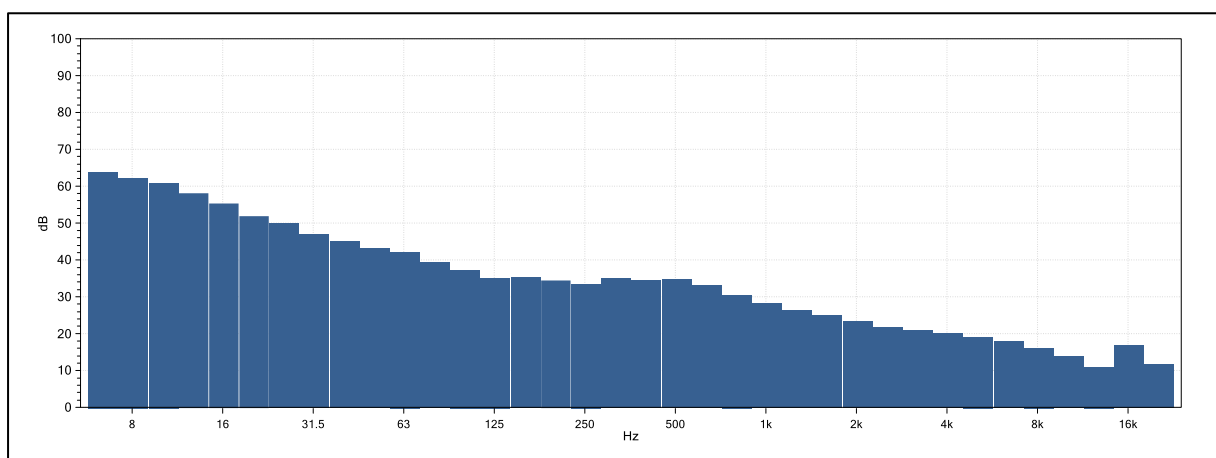
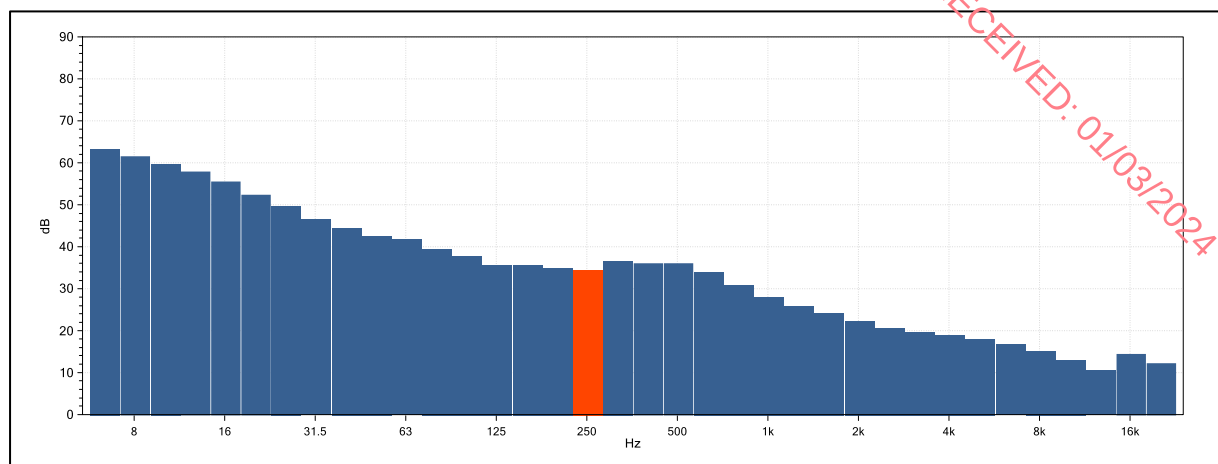


Chart 12: NM3 Night Run 1 1/3 Octave Frequency Analysis



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Chart 13: NM3 Night Run 2 1/3 Octave Frequency Analysis

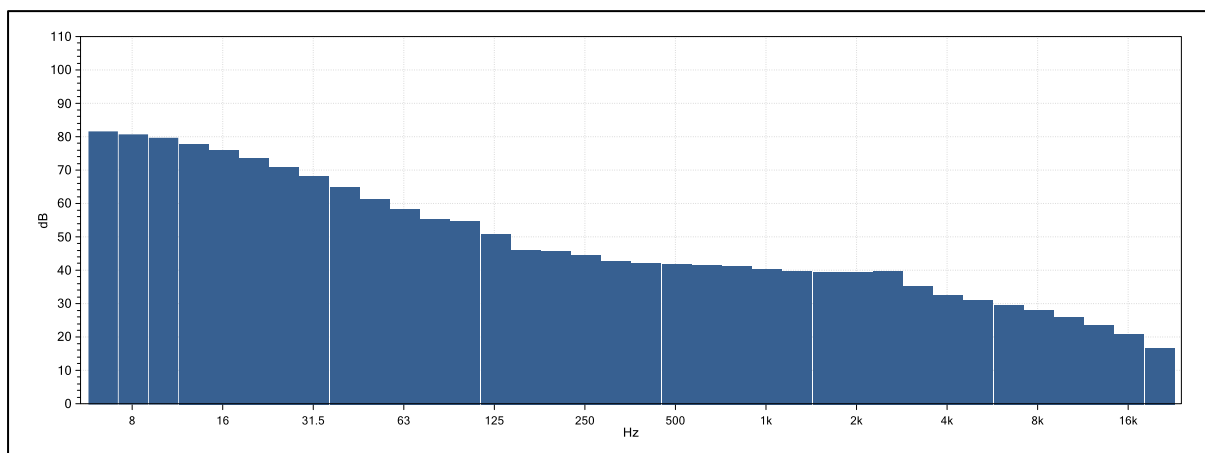


NM4

Plate 4: NM4 location



Chart 14: NM4 Day Run 1 1/3 Octave Frequency Analysis



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Chart 15: NM4 Day Run 2 1/3 Octave Frequency Analysis

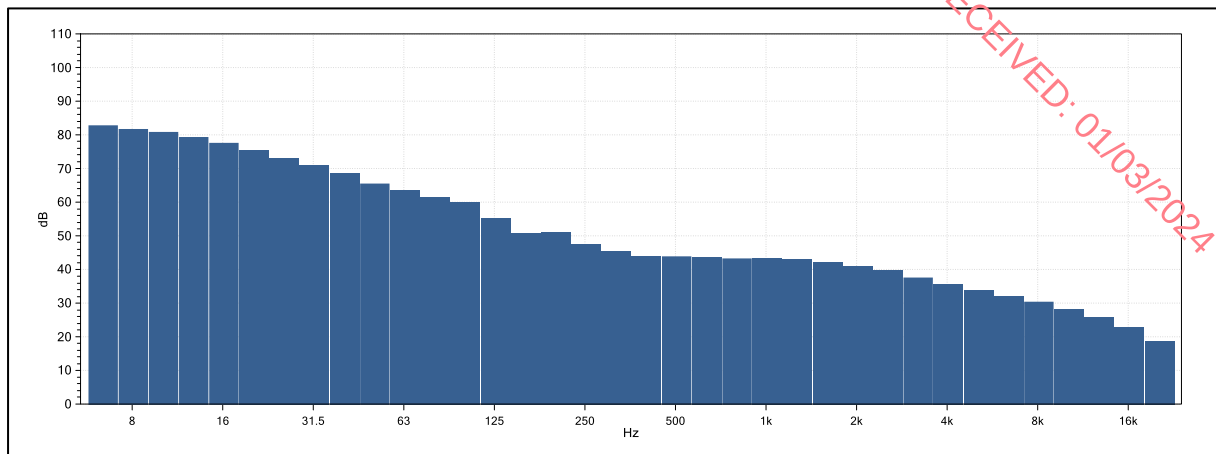


Chart 16: NM4 Evening 1/3 Octave Frequency Analysis

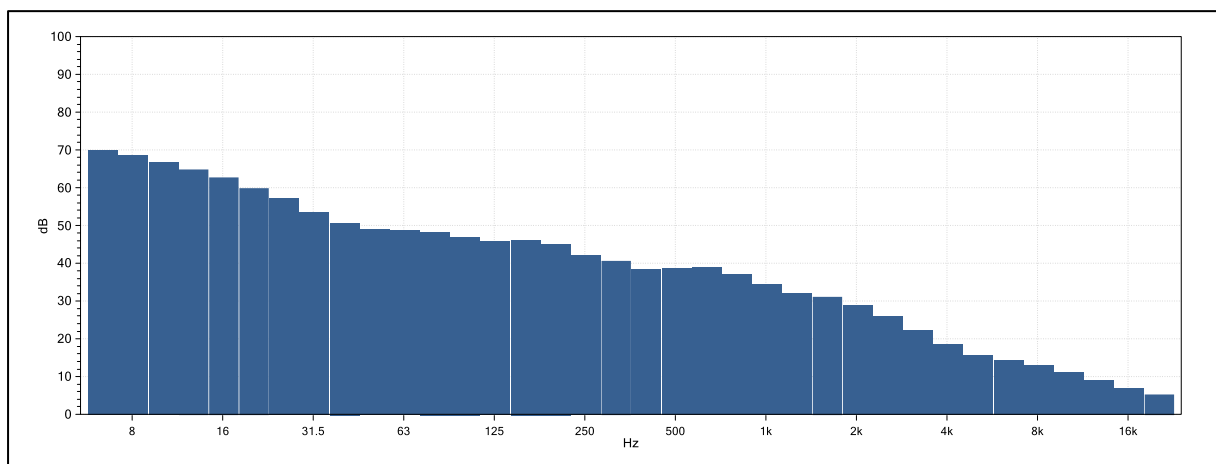
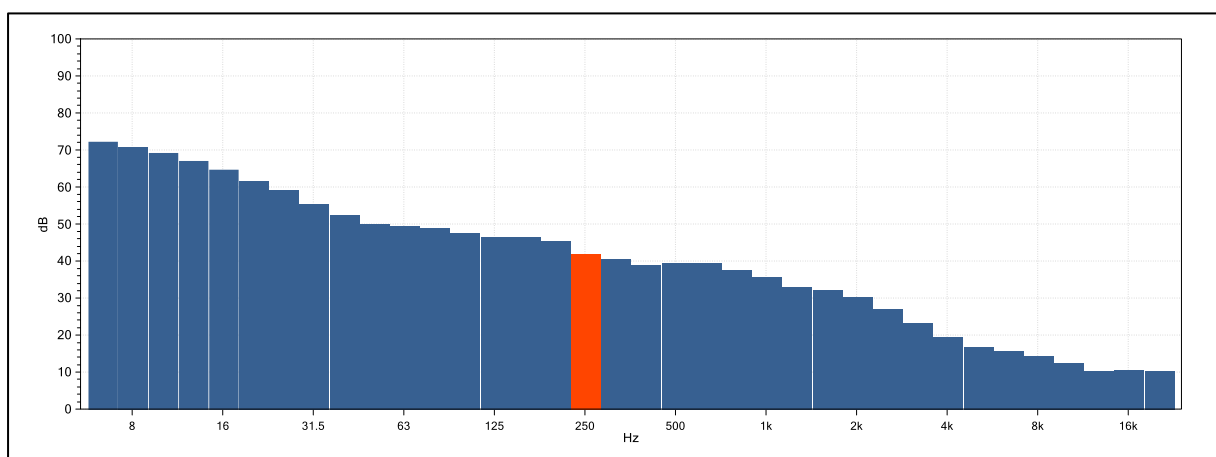


Chart 17: NM4 Night Run 1 1/3 Octave Frequency Analysis



Appendix C

Chart 18: NM4 Night Run 2 1/3 Octave Frequency Analysis

