August 2023

Environmental Report – Volume 2

Proposed 2No. 110kV Substations and Grid Connection

On behalf of
Hazelboro Limited

Toomes and Monvallet Co. Louth

MALONE O'REGAN ENVIRONMENTAL

QUALITY
I.S. EN ISO 9001:2015
NSAI Certified

MALONE O'REGAN

Form ES - 04

MALONE O'REGAN ENVIRONMENTAL

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Title: Environmental Report – Volume 2, Proposed 2No. 110kV Substations and Grid Connection, Hazelboro Limited

Job Number: E2090

Prepared By: Adam Bermingham **Signed:** Adam Bermingham

Checked By: Kevin O'Regan **Signed:** KOR

Approved By: Kevin O'Regan **Signed:** KOR

Revision Record

Issue No.	Date	Description	Remark	Prepared	Checked	Approved
01	04/08/'23	ER Vol. 2	Final	AB	KOR	KOR

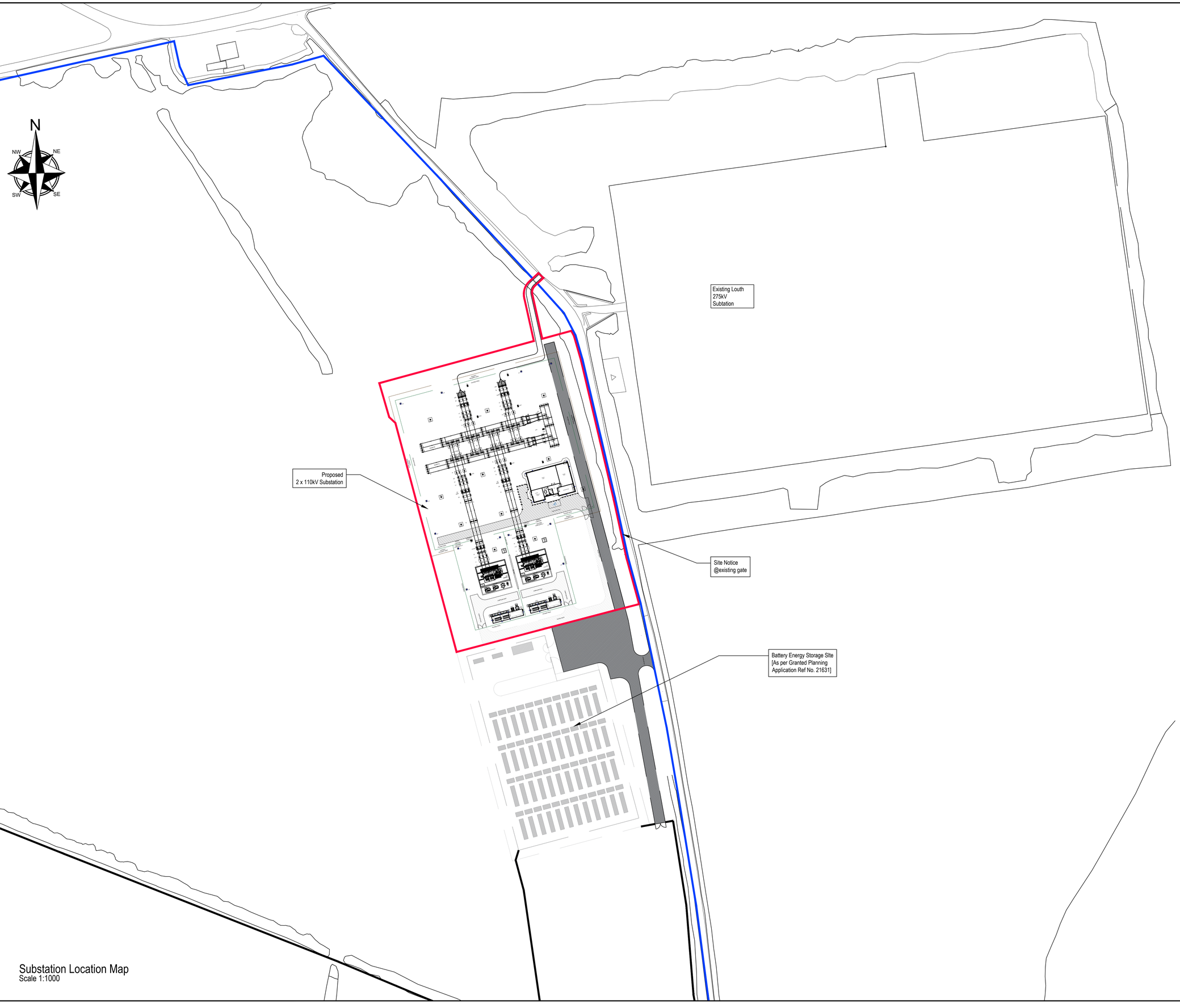
Environmental Report – Volume 2

Proposed 2No. 110kV Substations and Grid Connection

Hazelboro Limited

Contents

APPENDIX A



Substation Location Map
Scale 1:1000

NOTES:

LEGEND:

Red Line Planning Boundary shown thus

Land under control of Applicant shown thus

Rev	Date	Description	CHK	APP
03	08/08/2023	BLUE LINE SENT BEHIND THE RED LINE	PS	ES
02	02/08/2023	BLUE BOUNDARY LINE ADDED BACK	PS	ES
01	20/07/2023	BACKGROUND MAP AND LABEL UPDATED	PS	ES
00	12/07/2023	FOR PLANNING	PS	ES

Revisions

H&MV ENGINEERING
High Voltage Specialists
Unit 35, McLoughlin Road, National Technology Park,
Castletroy, Limerick
Tel: 061 357496 Fax: 061 514736
www.hmveng.ie
Email: info@hmveng.ie

Project:
MONVALLET HYBRID SOLAR & BESS
110 kV SUBSTATION

Title:
SUBSTATION LOCATION MAP 1:1000

Date:	Drawn:	Designed By:	Checked By:	Approved By:
08/08/2023	AB	AB	PS	ES

Scale:	Project No:	Project Status:
1:1000	A10XX	-

Project Code	Originator	Zone/ Volume	Level	Type	Disc	Doc. No
A10XX	HMV	XX	XX	DR	E	0009

Status Code:	Suitability Description:	Revision:
-	-	03

APPENDIX B

Our Case Number: ABP-315972-23

Your Reference: Strategic Power Projects Limited

An Bord Pleanála

Peter Thomson
Peter Thomson Planning Solutions
4 Priory Grove
Kells
Co. Kilkenny

Date: 06 June 2023

Re: Proposed 2 number 110kV substations and grid connection in lieu of 2 number 37kV substations and grid connection granted by Louth County Council (Planning Reference: 21/61) to facilitate permitted solar and battery storage system development and proposed extensions Toomes and Monvallet, Co. Louth

Dear Sir,

Please be advised that following consultations under section 182E of the Planning and Development Act, 2000, as amended, the Board hereby serves notice that it is of the opinion that the proposed development falls within the scope of section 182A of the Planning and Development Act, 2000 as amended. Accordingly, the Board has decided that the proposed development would be strategic infrastructure within the meaning of section 182A of the Planning and Development Act, 2000, as amended. Any application for approval for the proposed development must therefore be made directly to An Bord Pleanála under section 182A(1) of the Act.

In accordance with the fees payable to the Board and where not more than one pre-application meeting is held in the determination of a case, a refund of €3,500 is payable to the person who submitted the pre-application consultation fee. As a meeting was not required in this case, a refund of €3,500 will be sent to you in due course.

Please also be informed that the Board considers that the pre-application consultation process in respect of this proposed development is now closed.

In accordance with section 146(5) of the Planning and Development Act, 2000, as amended, the Board will make available for inspection and purchase at its offices the documents relating to the decision within 3 working days following its decision. This information is normally made available on the list of decided cases on the website on the Wednesday following the week in which the decision is made.

The attachment contains information in relation to challenges to the validity of a decision of An Bord Pleanála under the provisions of the Planning and Development Act, 2000, as amended.

If you have any queries in relation to the matter please contact the undersigned officer of the Board.

Teil	**Tel**	(01) 858 8100
Glao Áitiúil	**LoCall**	1800 275 175
Facs	**Fax**	(01) 872 2684
Láithreán Gréasáin	**Website**	www.pleanala.ie
Ríomhphost	**Email**	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

Sarah Caulfield

Sarah Caulfield
Executive Officer
Direct Line: 01-8737287

VC11

Teil	**Tel**	(01) 858 8100
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D01 V902

64 Marlborough Street
Dublin 1
D01 V902

List of Prescribed Bodies to be Notified of Application

1. Minister of Housing, Local Government and Heritage
2. Minister for Environment, Climate and Communications
3. Minister for Agriculture, Food and the Marine
4. Louth County Council
5. EirGrid
6. ESB
7. Commission for Regulation of Utilities
8. Irish Water
9. An Chomhairle Ealaíon
10. Fáilte Ireland
11. An Taisce
12. Heritage Council

Additional notifications should also be made where considered appropriate.

Teil	**Tel**	(01) 858 8100
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APPENDIX C

APPENDIX C-1

Glossary of Acoustic Terminology

Abbreviation / Description Descriptor	
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.
Acoustic environment	Sound from all sound sources as modified by the environment (BS ISO 12913-1:2013).
Ambient sound	Totally encompassing sound in a given situation at a given time, usually composed of sound from many sources, near and far. *Note: The ambient sound comprises the residual sound and the specific sound when present.*
Ambient sound level, L_a = $L_{Aeq,\,T}$	Equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time, usually from many sources near and far, at the assessment location over a given time interval, T. *Note: the ambient sound level is a measure of the residual sound and the specific sound when present.*
Background sound level, $L_{A90,\,T}$	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
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 $2x10^{-5}$ pascals (Pa).
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
Equivalent continuous A-weighted sound pressure level, $L_{Aeq,\,T}$	Value of the A-weighted sound pressure level in decibels of continuous steady sound that, within a specified time interval, $T=t_2-t_1$, has the same mean-squared sound pressure as a sound that varies with time, and is given the following equation: $$L_{AeqT} = 10\lg_{10}\left\{(1/T)\int_{t_1}^{t_2}[p_A(t)^2/p_0^2]dt\right\}$$ where: p_0 is the reference sound pressure (20 μPa); and $p_A(t)$ is the instantaneous A-weighted sound pressure (Pa) at time t *Note: The equivalent continuous A-weighted sound pressure level is quoted to the nearest whole number of decibels.*
$L_{AN,T}$	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. See also background sound level.
$L_{A95,T}$	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). Also see ambient sound.
L_{den}	Day-evening-night equivalent level, calculated as: $Lden = 10Log\frac{1}{24}\left(12*10\frac{Lday}{10}+4*10\frac{Levening+5}{10}+8*10\frac{Lnight+10}{10}\right)$ 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.
Measurement time interval, T_m	total time over which measurements are taken. *Note: This may consist of the sum of a number of non-contiguous, short-term measurement time intervals.*
Rating level, $L_{Ar,\,Tr}$	specific sound level plus any adjustment for the characteristic features of the sound.
Reference time interval, T_r	specified interval over which the specific sound level is determined. *Note: This is 1 h during the day from 07:00 h to 23:00 h and a shorter period of 15 min at night from 23:00 h to 07:00 h*
Residual sound	ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.
Residual sound level, L_r = $L_{Aeq,T}$	equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval, T.
Specific sound level, L_s = $L_{Aeq,Tr}$	equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, T_r.
Specific sound source	sound source being assessed.
Night-Time	An 8 hour period between 23:00 – 07:00 hours, as per NG4
Noise Ambient	The totally encompassing sound in a given situation at a given time, usually composed of sound from many sources, near and far. Also see ambient sound.
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' ($L_{AF90,T}$). Also see background sound level, $L_{A90,\,T}$.
Noise Specific	The sound arising from the source under investigation, disregarding all external and residual sources. Also see specific sound source.
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 m2. 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.

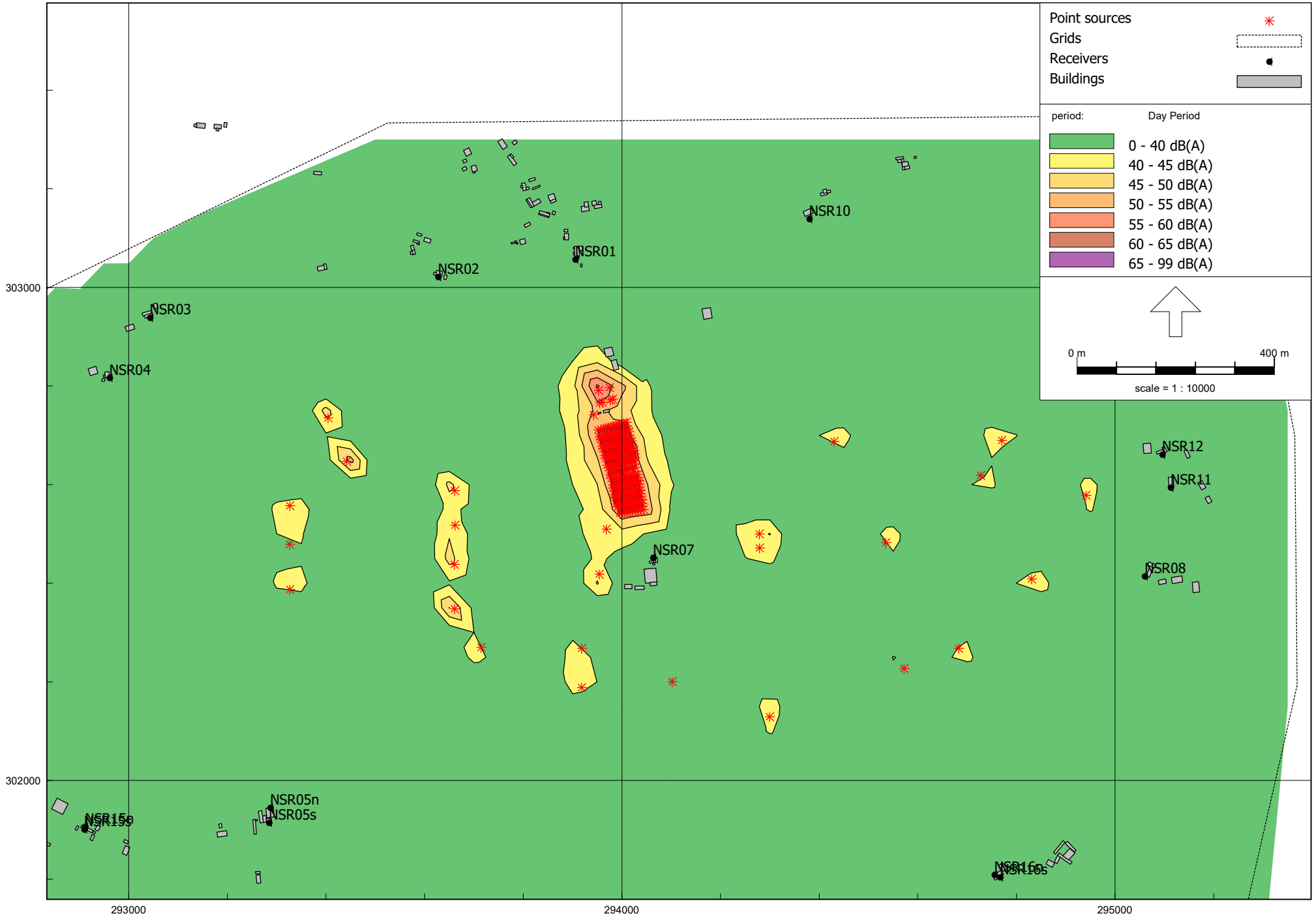
Note:

Unless otherwise stated all broadband noise values are A-weighted with a fast response.

Where 0dB is referenced it refers to the threshold of hearing – $2x10^{-5}$Pa.

All 1/3 octave values are unweighted/linear. (z-weighted on the Bruel and Kjaer software)

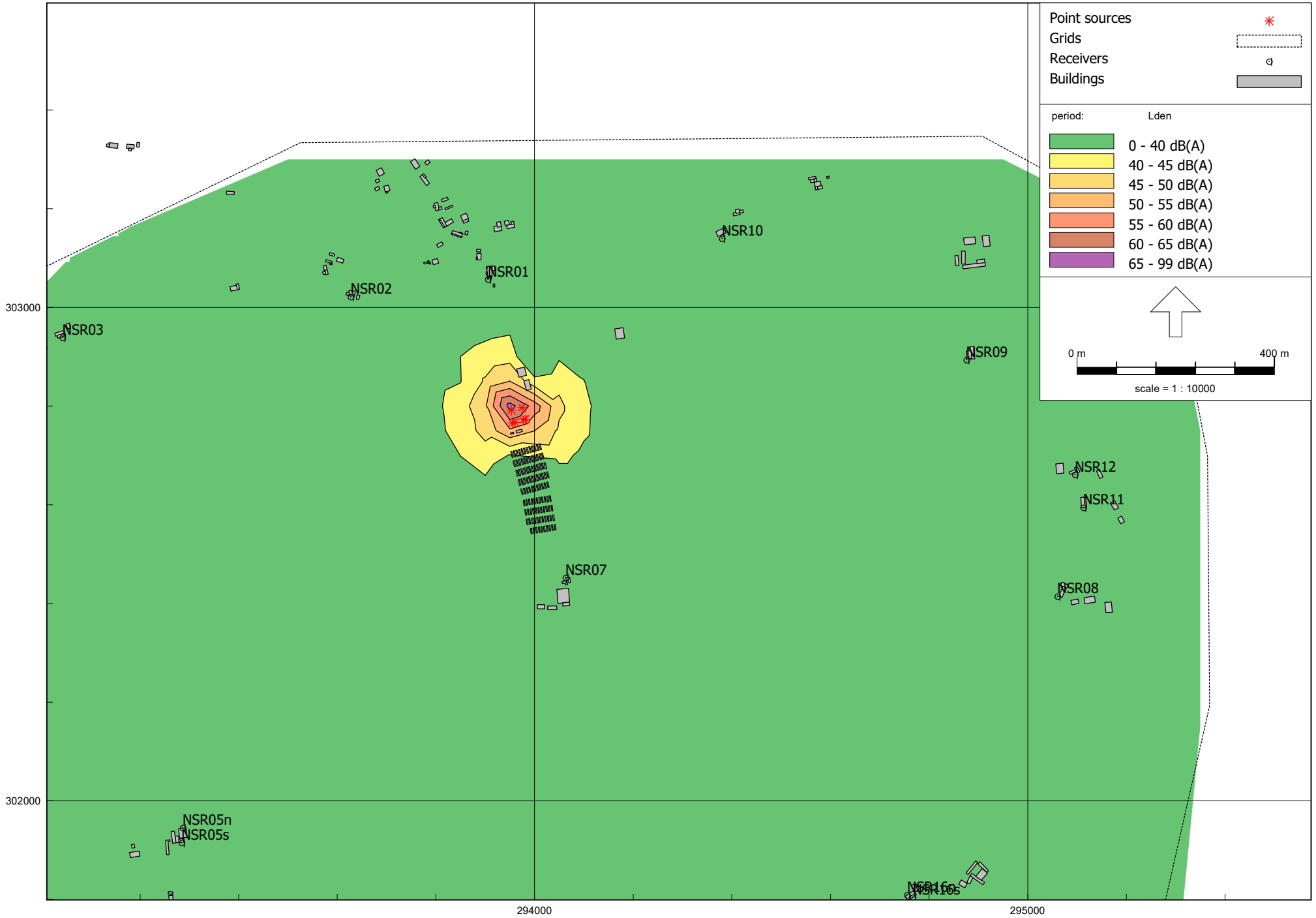
APPENDIX C-2



220616 Monvallet Cumulative
20 Jun 2022, 08:04

Malone O'Regan Consulting Engineers, Ireland

ISO 9613, [version July 2023 - 230306 - SID + Monvallet 1 and 2] , Predictor V2023 Licensed to Malone O'Regan Environmental Ltd., Ireland



ISO 9613, [version July 2023 - 230720 - SID] , Predictor V2023 Licensed to Malone O'Regan Environmental Ltd., Ireland

230720 - SID
21 Jul 2023, 10:59

Malone O'Regan Environmental Ltd., Ireland

Model: 230720 - SID
version July 2023 - Area
Group: (main group)
Listing of: Point sources, for method Industrial noise - ISO 9613

Name	Desc.	Height	Terrain L	HDef.	Type	DI	DI_Horz	DI_Vert	DI(0)	DI(10)	DI(20)	DI(30)	DI(40)	DI(50)	DI(60)	DI(70)	DI(80)
Trans2	Power Transformer 2	1.50	35.00	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trans3	House Transformer 3	0.00	35.00	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trans4	House Transformer 4	0.00	35.00	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trans5	House Transformer 5	0.00	35.00	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trans6	House Transformer 6	0.00	35.00	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trans1	Power Transformer 1	1.50	35.34	Relative	Normal point source	none	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Sources and receivers

Model: 230720 - SID
version July 2023 - Area
Group: (main group)
Listing of: Point sources, for method Industrial noise - ISO 9613

Name	DI(90)	DI(100)	DI(110)	DI(120)	DI(130)	DI(140)	DI(150)	DI(160)	DI(170)	DI(180)	Ca(D)	Ca(E)	Ca(N)	Weighting	No refl.	No building	No ind.site	Lw 31
Trans2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--
Trans3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--
Trans4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--
Trans5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--
Trans6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--
Trans1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	A	No	No	No	--

Model: 230720 - SID
version July 2023 - Area
Group: (main group)
Listing of: Point sources, for method Industrial noise - ISO 9613

Name	Lw 63	Lw 125	Lw 250	Lw 500	Lw 1k	Lw 2k	Lw 4k	Lw 8k	Red 31	Red 63	Red 125	Red 250	Red 500	Red 1k	Red 2k	Red 4k	Red 8k
Trans2	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trans3	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trans4	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trans5	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trans6	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trans1	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Model: 230720 - SID
version July 2023 - Area
Group: (main group)
Listing of: Receivers, for method Industrial noise - ISO 9613

Name	Desc.	Terrain L	HDef.	Height A	Height B	Height C	Height D	Height E	Height F	Façade
NSR01	Mon#1&2	38.40	Relative	1.50	4.00	--	--	--	--	No
NSR02	Mon#1&2	35.00	Relative	1.50	4.00	--	--	--	--	No
NSR03	Mon#1&2	36.00	Relative	1.50	4.00	--	--	--	--	No
NSR04	Mon#1&2	38.00	Relative	1.50	4.00	--	--	--	--	No
NSR05n	Mon#1&2	39.00	Relative	1.50	4.00	--	--	--	--	No
NSR06	Mon#1&2	34.41	Relative	1.50	4.00	--	--	--	--	No
NSR07	Mon#1&2	39.27	Relative	1.50	4.00	--	--	--	--	No
NSR08	Mon#1&2	33.46	Relative	1.50	4.00	--	--	--	--	No
NSR09	Mon#1&2	38.00	Relative	1.50	4.00	--	--	--	--	No
NSR10	Mon#1&2	37.00	Relative	1.50	4.00	--	--	--	--	No
NSR11	Mon#1&2	33.63	Relative	1.50	4.00	--	--	--	--	No
NSR12	Mon#1&2	34.00	Relative	1.50	4.00	--	--	--	--	No
NSR13	Mon#1&2	36.00	Relative	1.50	4.00	--	--	--	--	No
NSR14	Mon#1&2	42.80	Relative	1.50	4.00	--	--	--	--	No
NSR15n	Mon#1&2	43.34	Relative	1.50	4.00	--	--	--	--	No
NSR16s	Mon#1&2	37.00	Relative	1.50	4.00	--	--	--	--	No
NSR15s	Mon#1&2	43.27	Relative	1.50	4.00	--	--	--	--	No
NSR16n	Mon#1&2	37.00	Relative	1.50	4.00	--	--	--	--	No
NSR05s	Mon#1&2	39.33	Relative	1.50	4.00	--	--	--	--	No

APPENDIX C-3

DAILY DATA

Weather station Data is available from 16/10/2015 to 03/11/2021

Select Station & Date:

Station

Ballyhaise

Date

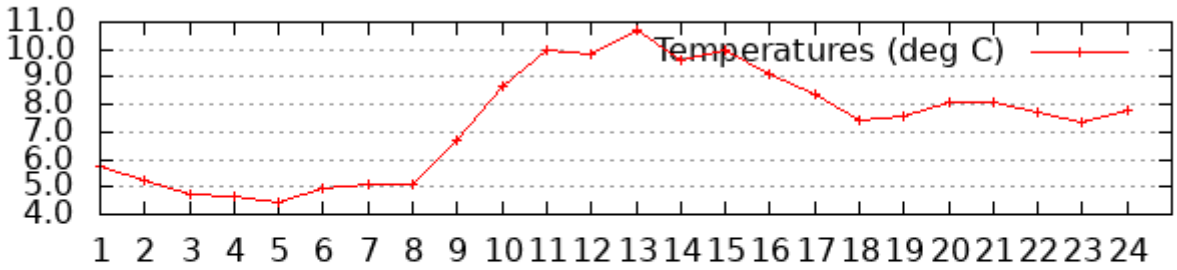
21/10/2021

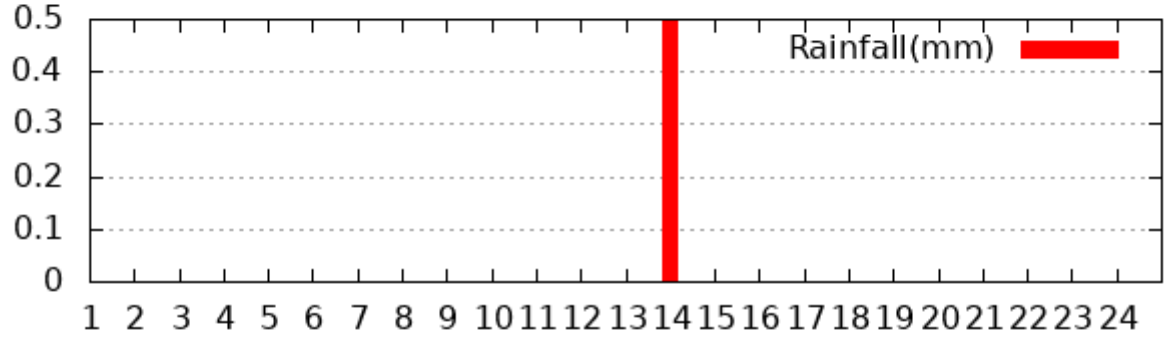
GO

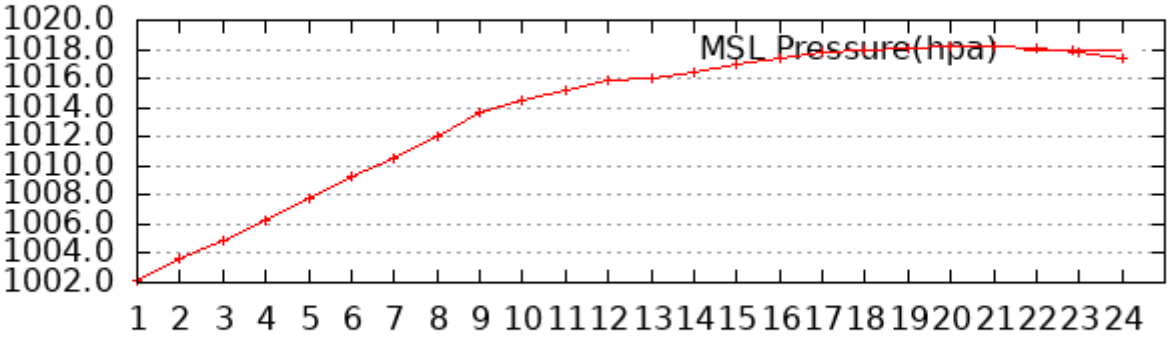
WEATHER STATION REPORTS FROM BALLYHAISE

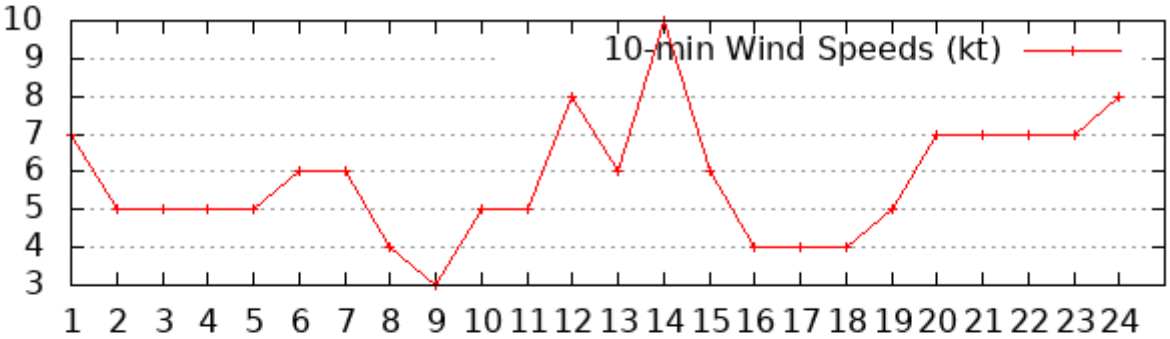
Date	**Rainfall** (mm)	**Max Temp** (°C)	**Min Temp** (°C)	**Grass Min Temp** (°C)	**Mean Wind Speed** (knots)	**Max Gust** (>= 34 knots)	**Sunshine** (hours)
21/10/2021	0.5	10.9	4.0	3.2	5.6		

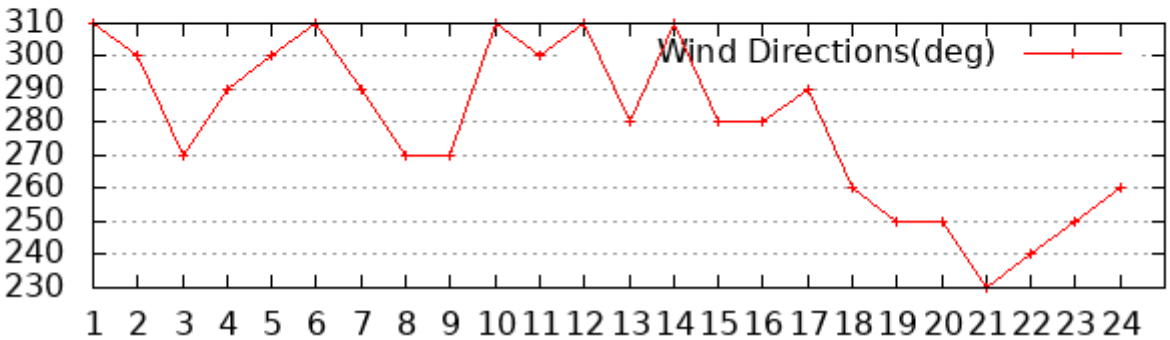
HOURLY VALUES (UTC) 21Oct2021 BALLYHAISE











DAILY DATA

Weather station Data is available from 16/10/2015 to 03/11/2021

Select Station & Date:

Station

Ballyhaise

Date

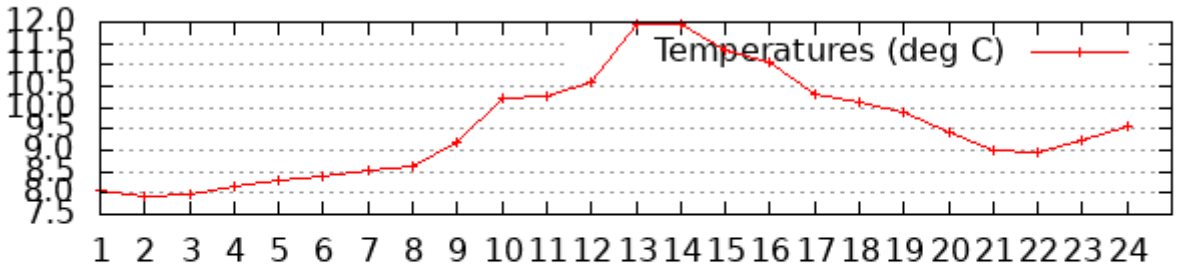
22/10/2021

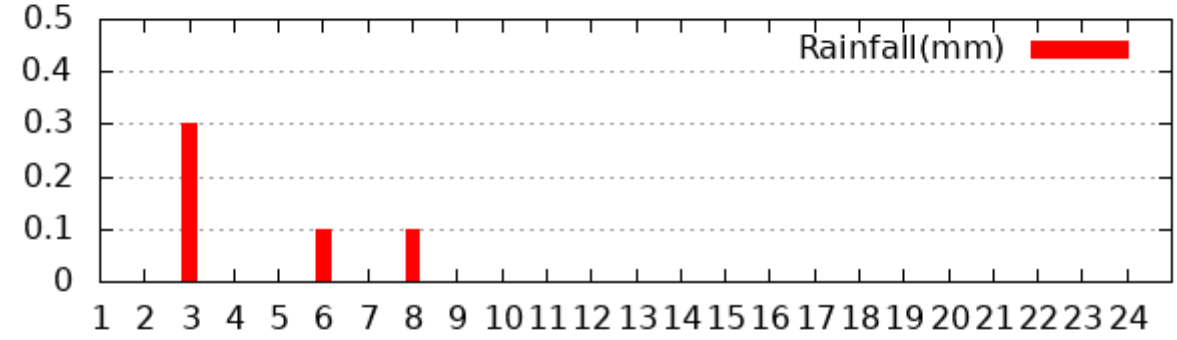
GO

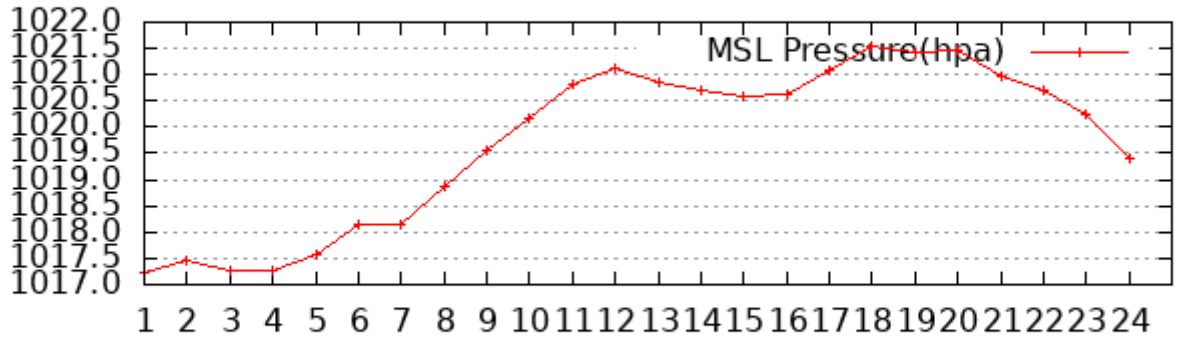
WEATHER STATION REPORTS FROM BALLYHAISE

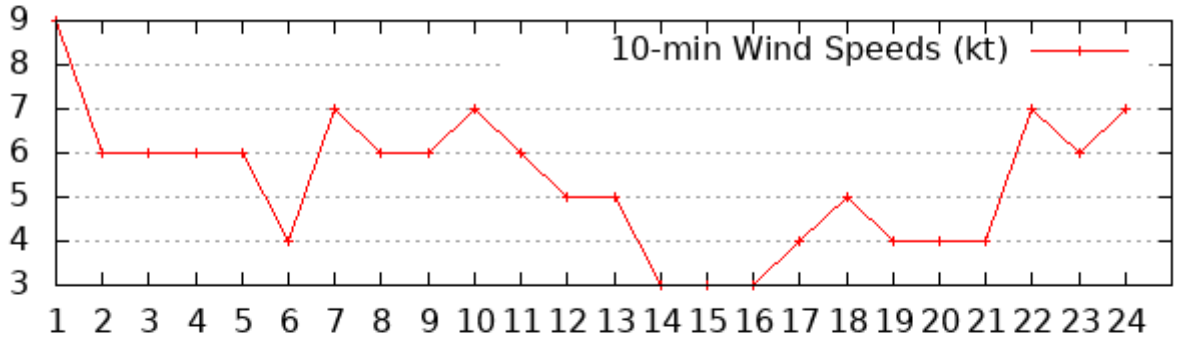
Date	**Rainfall** (mm)	**Max Temp** (°C)	**Min Temp** (°C)	**Grass Min Temp** (°C)	**Mean Wind Speed** (knots)	**Max Gust** (>= 34 knots)	**Sunshine** (hours)
22/10/2021	0.5	12.5	7.8	7.1	5.4		

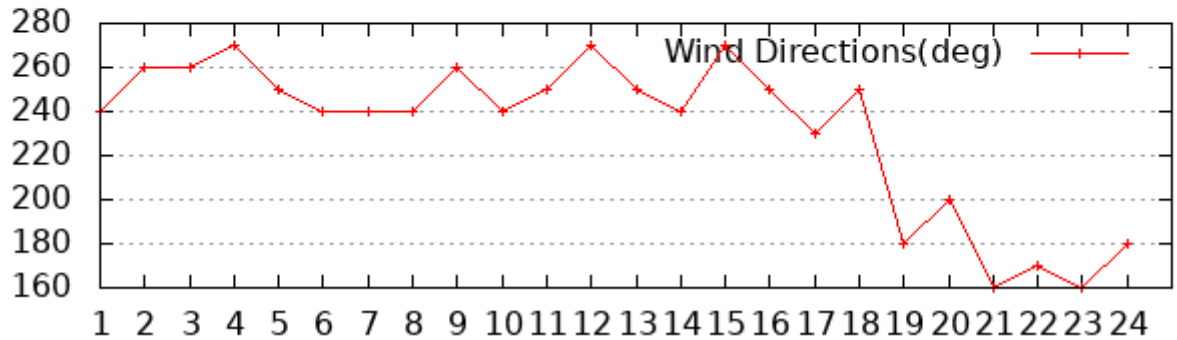
HOURLY VALUES (UTC) 22Oct2021 BALLYHAISE











DAILY DATA

Weather station Data is available from 16/10/2015 to 03/11/2021

Select Station & Date:

Station

Ballyhaise

Date

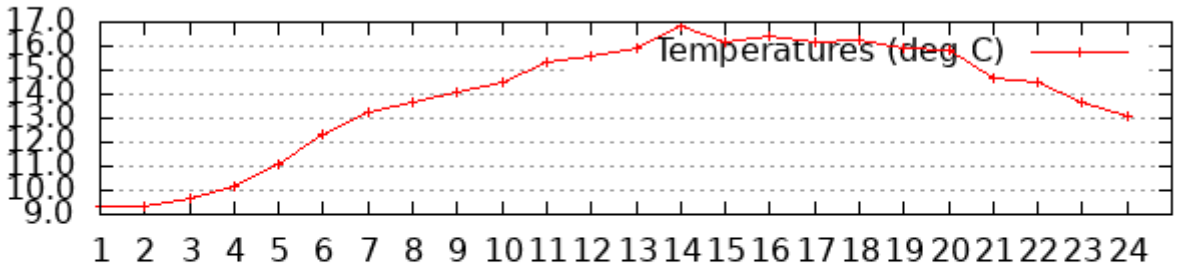
26/10/2021

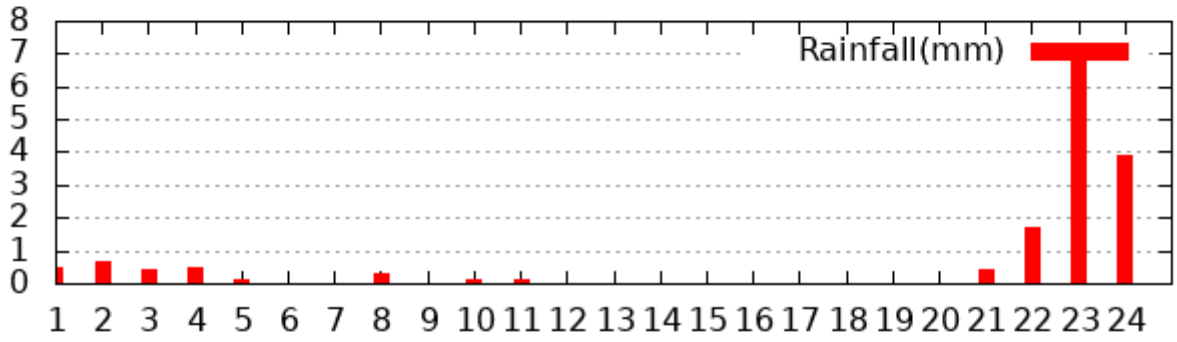
GO

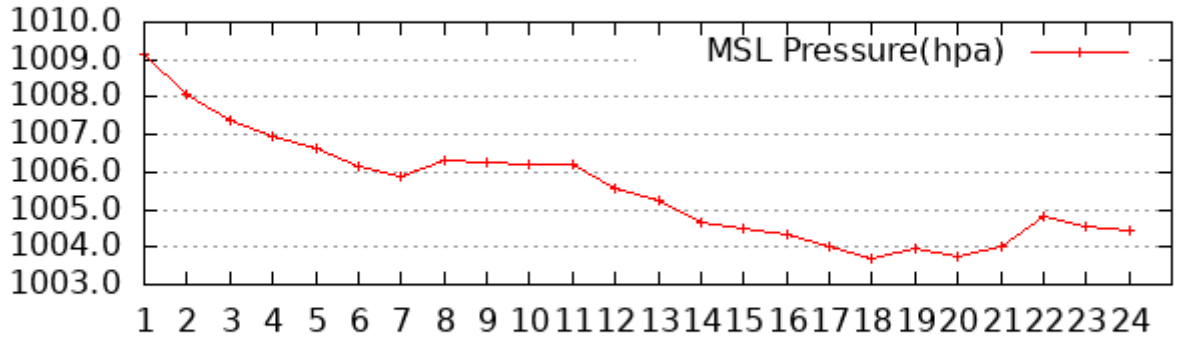
WEATHER STATION REPORTS FROM BALLYHAISE

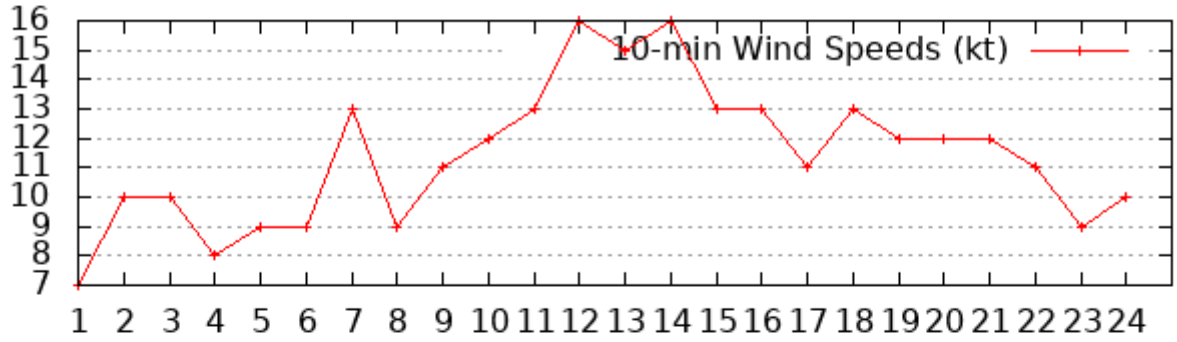
Date	**Rainfall** (mm)	**Max Temp** (°C)	**Min Temp** (°C)	**Grass Min Temp** (°C)	**Mean Wind Speed** (knots)	**Max Gust** (>= 34 knots)	**Sunshine** (hours)
26/10/2021	16.0	16.9	9.2	8.4	11.2		

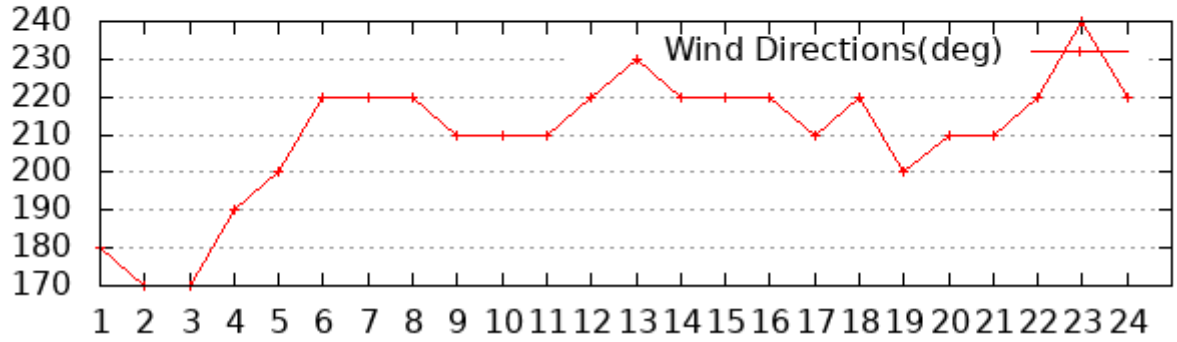
HOURLY VALUES (UTC) 26Oct2021 BALLYHAISE











APPENDIX C-4

NOISE PLATES AND CHARTS

Table of Contents

Table of Plates

Table of Charts

INTRODUCTION

Malone O'Regan Environmental (MOR) was commissioned to conduct noise monitoring at Toomes and Monvallet, Co. Louth. The survey was undertaken on the 21st, 22nd and 26th October 2021. This document supplies the Frequency Analysis Charts for each monitoring event.

CALIBRATION OF SOUND LEVEL METER

The sound level meters used were:

- Bruel and Kjaer 2250 Sound Level Meter (SLM) Type 1. This SLM was equipped with Frequency Analysis software (BZ7223) and Logging software (BZ7224); and
- Cirrus Optimus Green Sound Level Meter (SLM) Type 1. This SLM was equipped with Frequency Analysis software and Logging software.

The SLMs were calibrated prior to and following the measurement period using:

- Bruel and Kjaer sound level calibrator Type 4231.

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 Meters

SLM	Calib. Time	Calib. Input	Calib. Type	Sensitivity [mV/Pa]	Deviation from last [dB]	Calib. User	Serial No.	Calib. Preamp ID No
BK	21/10/2021 11:18	TopSocket	External reference	51.673	0.105799843	~	3003910	19780
	22/10/2021 05:19	TopSocket	External reference	51.208	-0.050900088	~	3003910	19780
	26/10/2021 05:55	TopSocket	External reference	51.85969919	0.076899626	~	3003910	19780
Cirrus	21/10/2021 10:18	TopSocket	External reference	~	-0.43	~	G302676	~

NOISE MONITORING LOCATION 1

Plate 1: NM1 Noise Monitoring Location

Chart 1: NM1 - Day Run 1 1/3 Octave Frequency Analysis

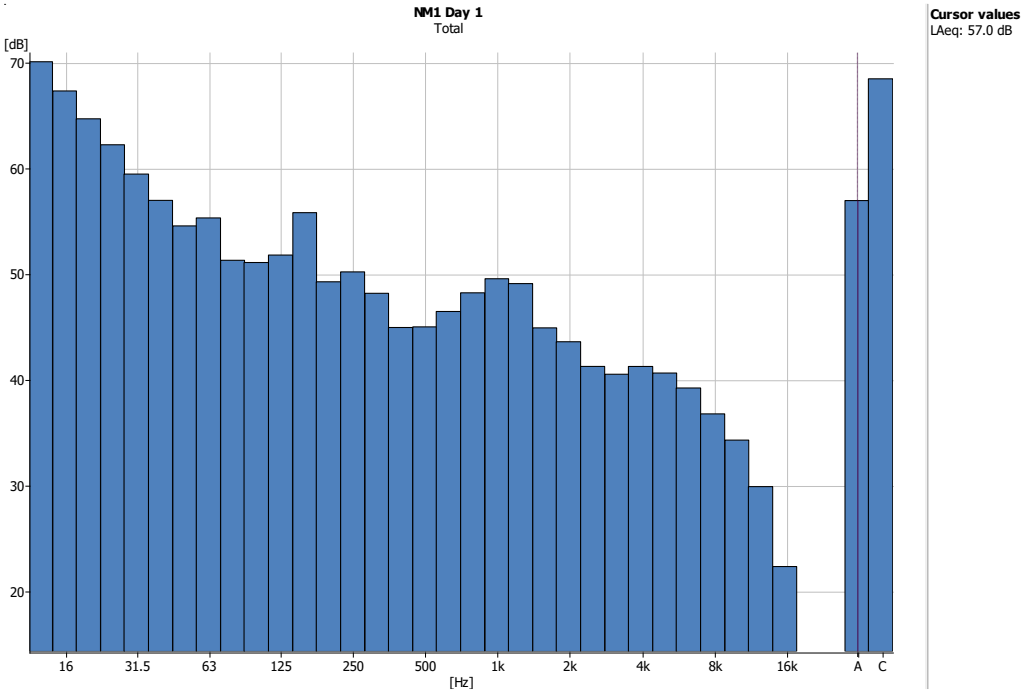


Chart 2: NM1 - Day Run 2 1/3 Octave Frequency Analysis

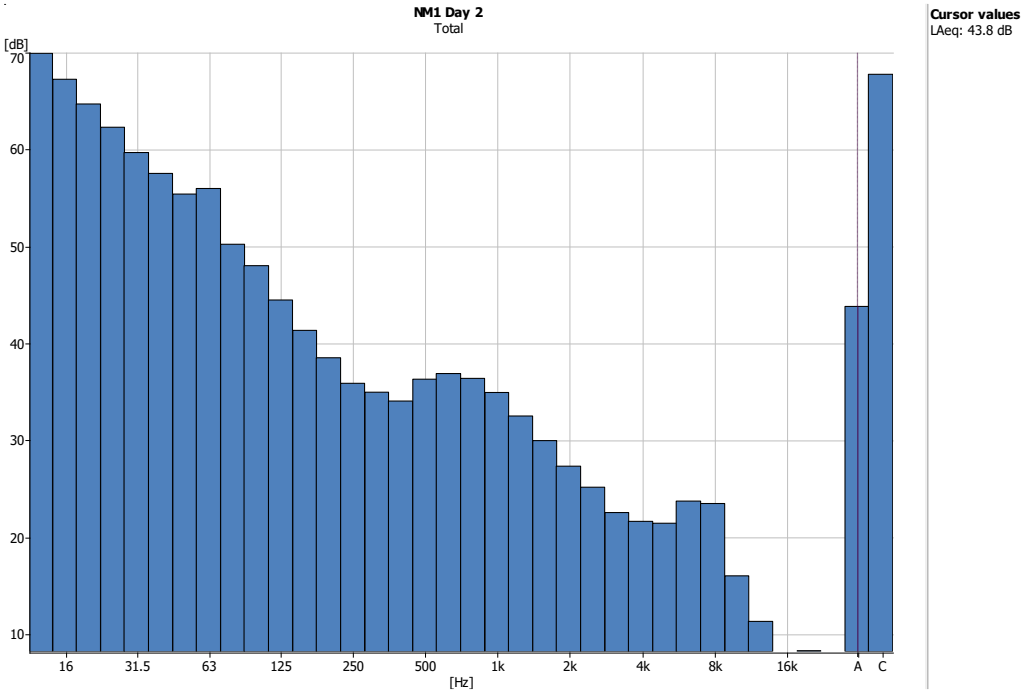


Chart 3: NM1 - Night 1 1/3 Octave Frequency Analysis

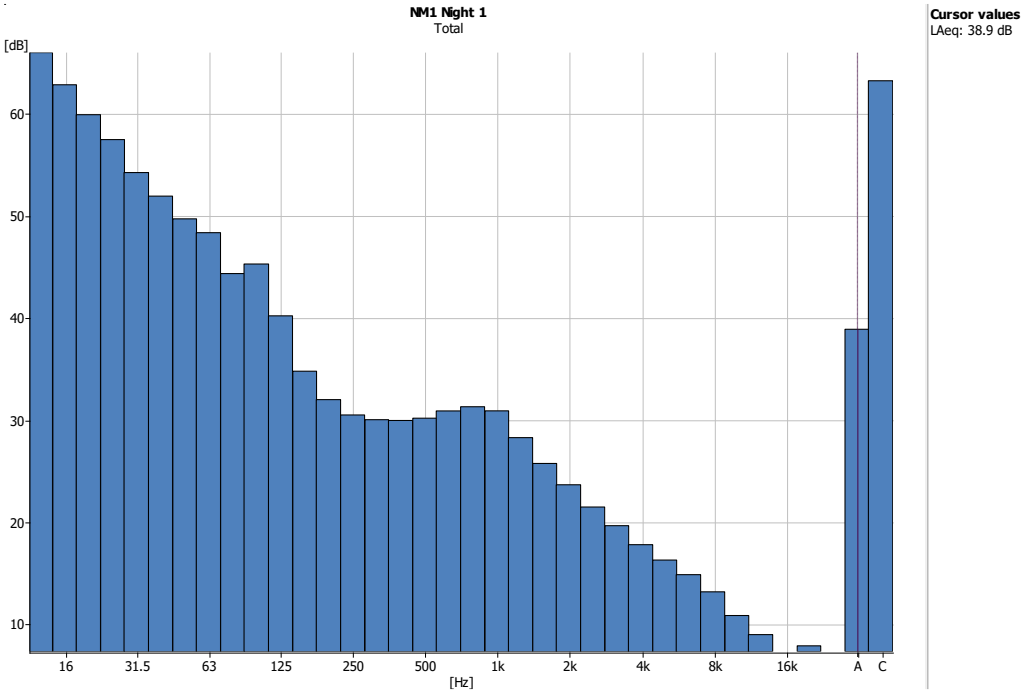
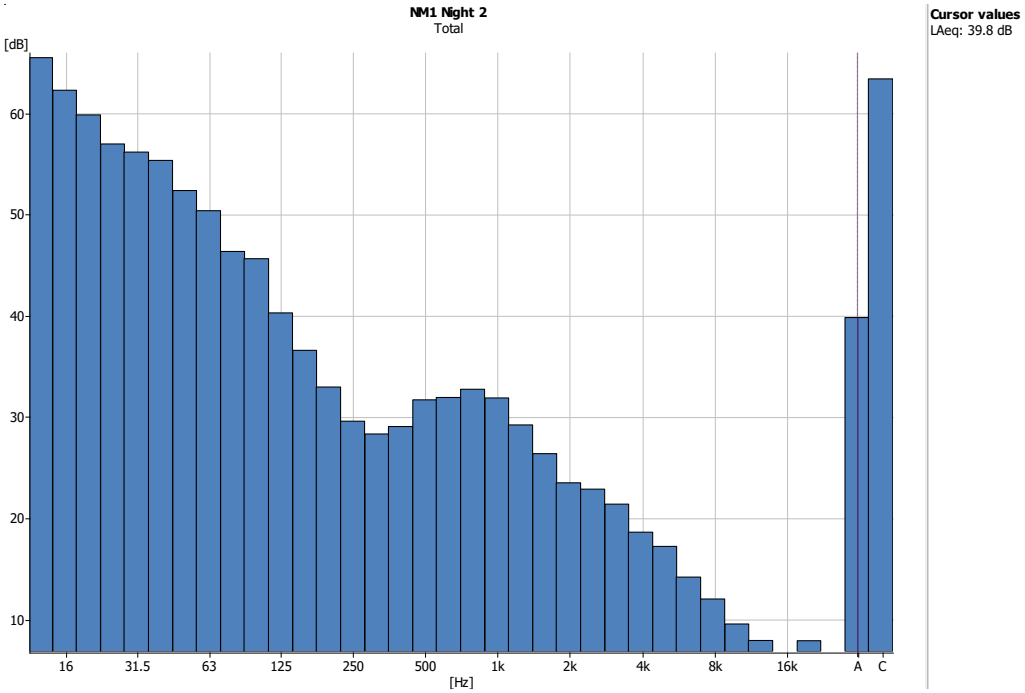


Chart 4: NM1 - Night 2 1/3 Octave Frequency Analysis



NOISE MONITORING LOCATION 2

Plate 2: NM2 Noise Monitoring Location

Chart 5: NM2 Day 1 - 1/3 Octave Frequency Analysis

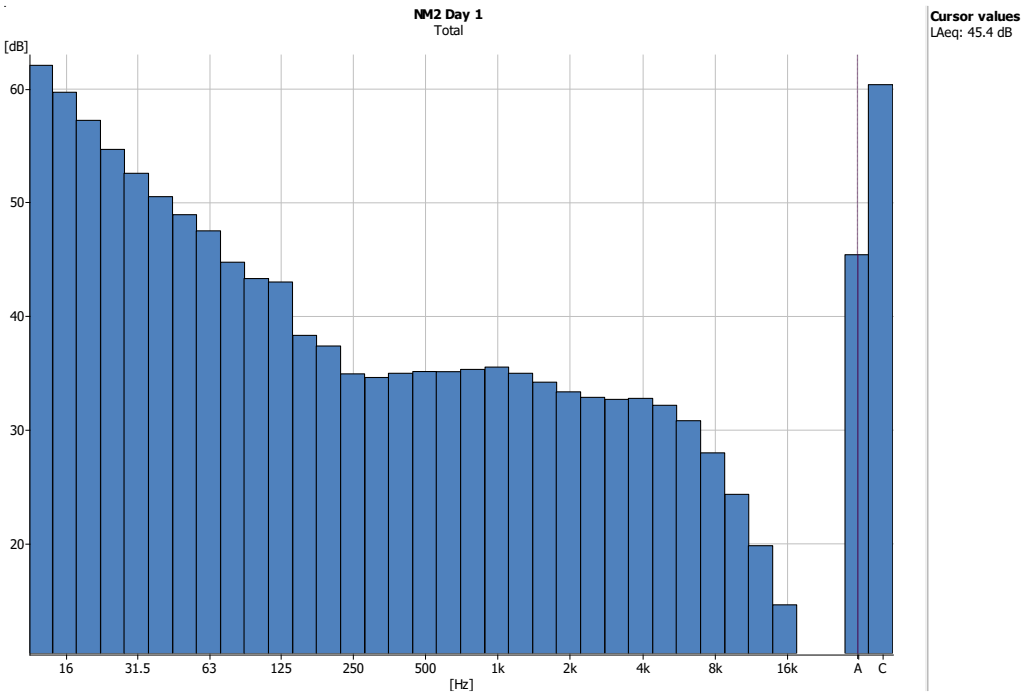


Chart 6: NM2 Day 2 - 1/3 Octave Frequency Analysis

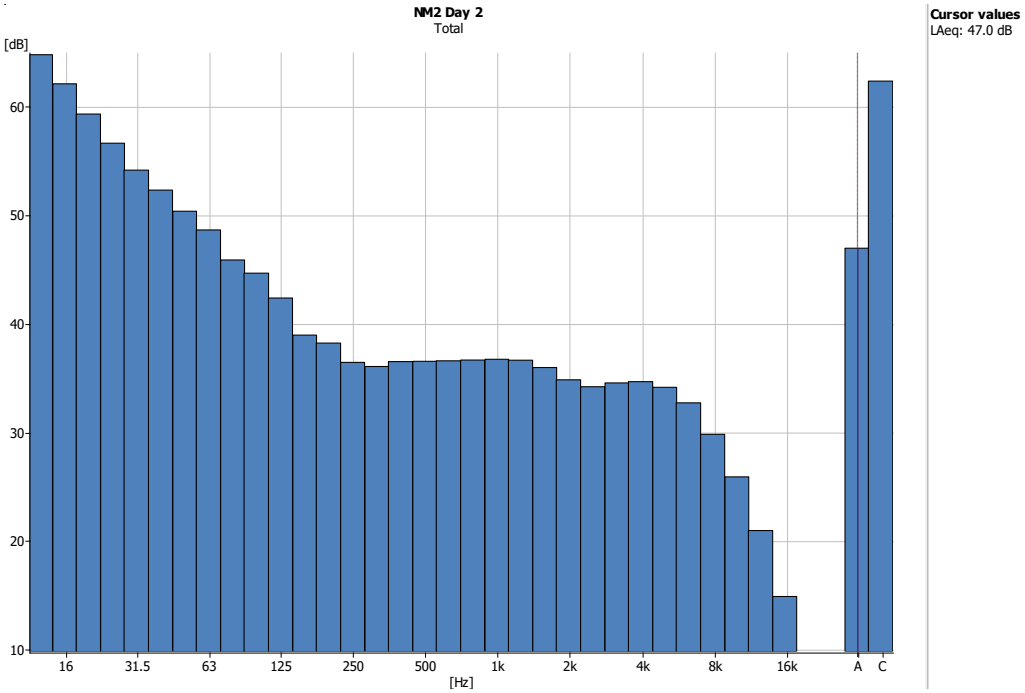


Chart 7: NM2 Night 1 1/3 Octave Frequency Analysis

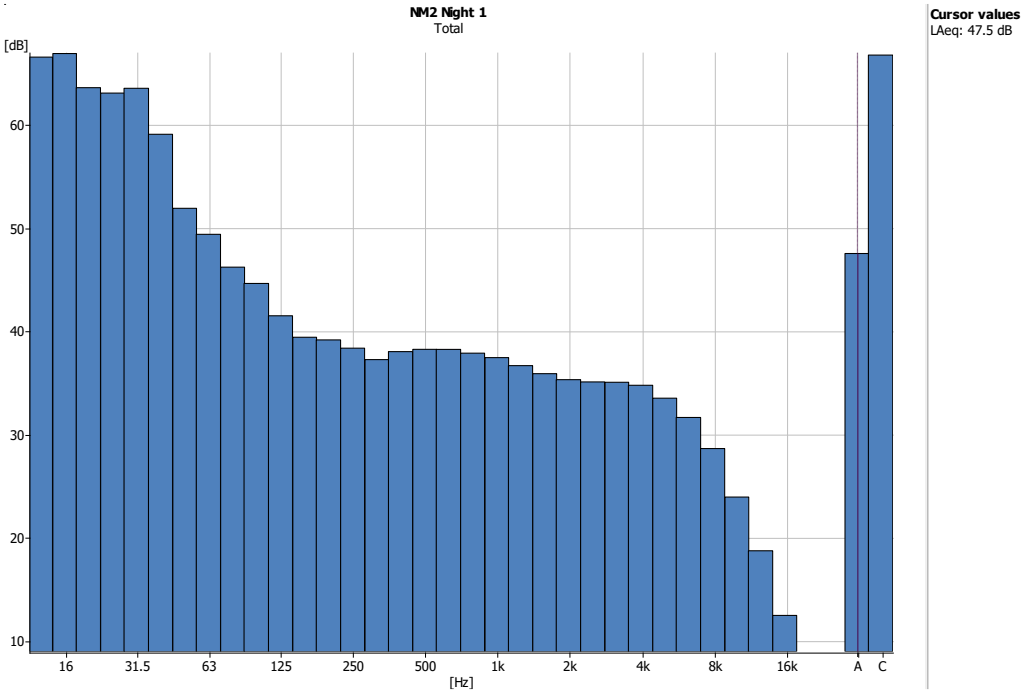
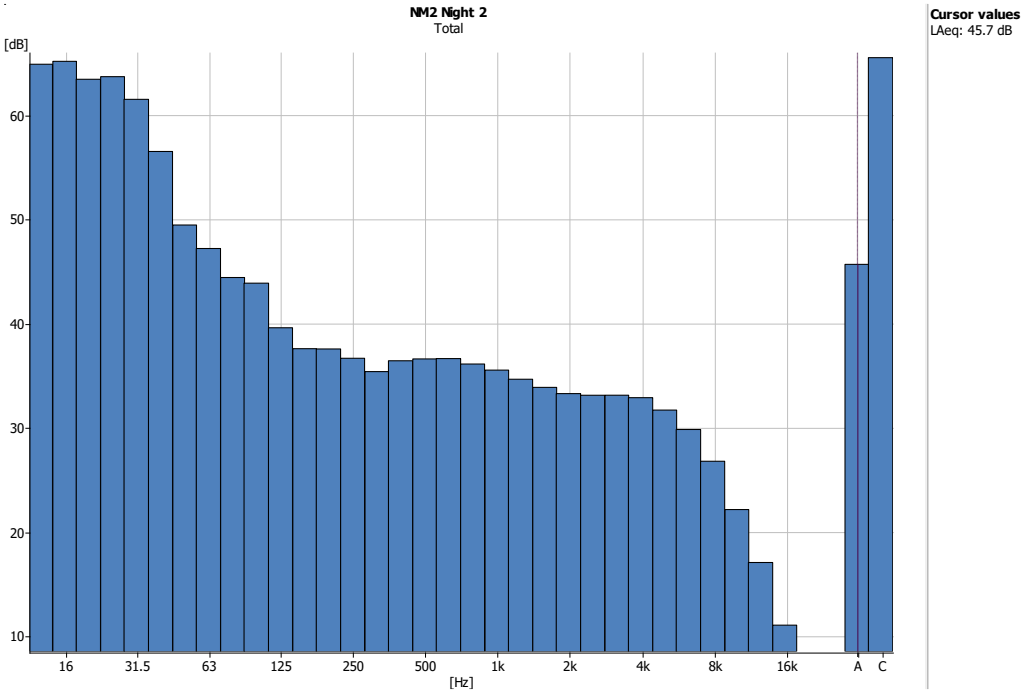


Chart 8: NM2 Night 2 1/3 Octave Frequency Analysis



NOISE MONITORING LOCATION 3

Plate 3: NM3 Noise Monitoring Location

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

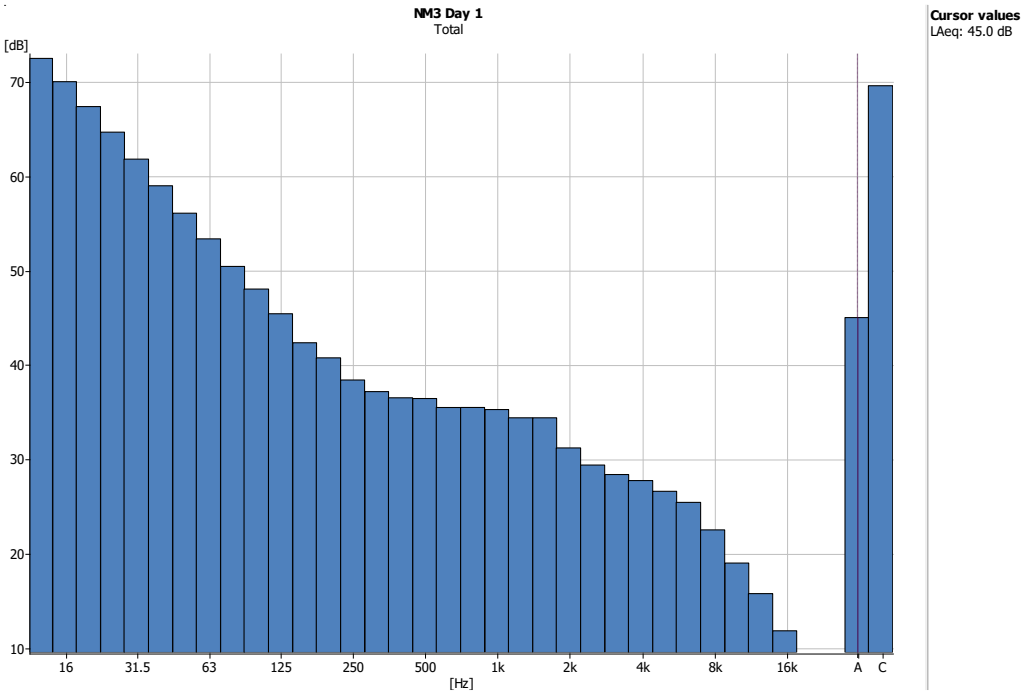


Chart 10: NM3 Day 2 - 1/3 Octave Frequency Analysis

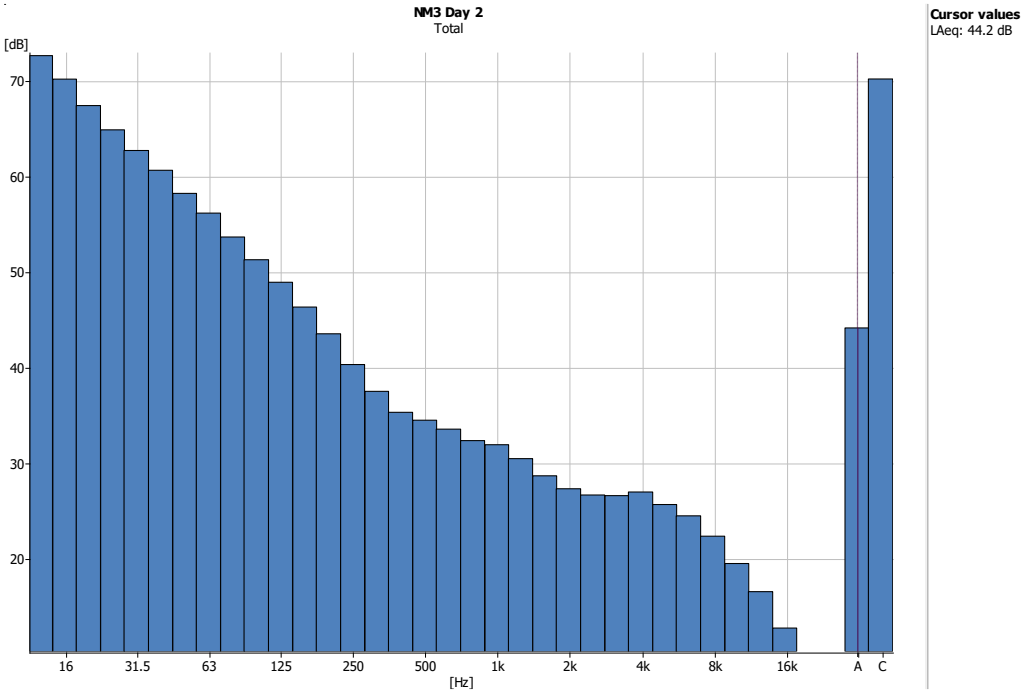


Chart 11: NM3 Night 1- 1/3 Octave Frequency Analysis

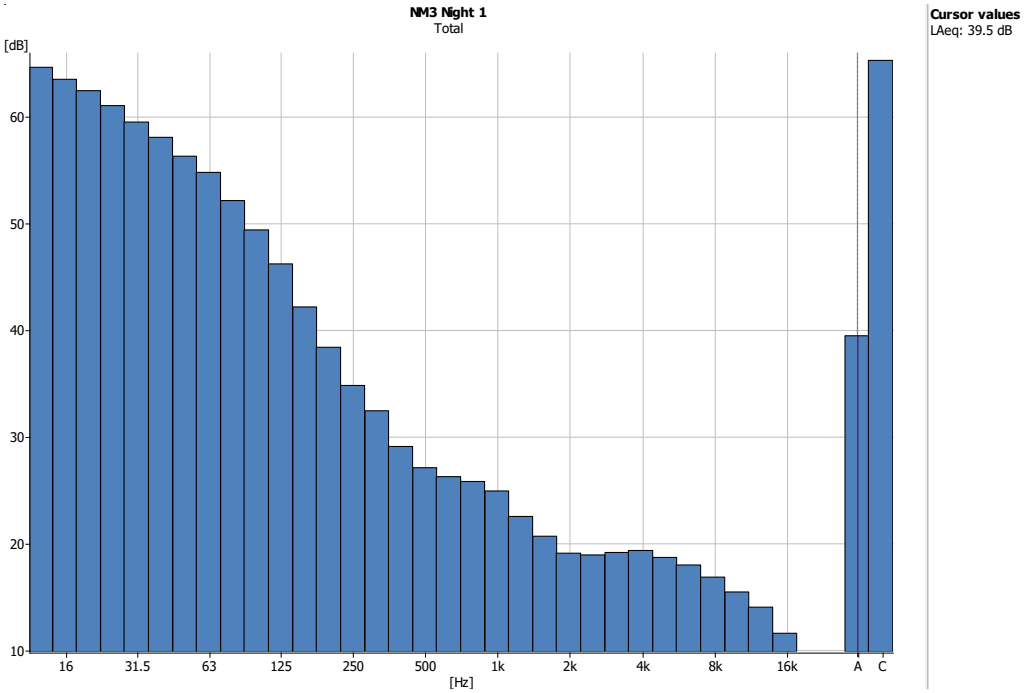
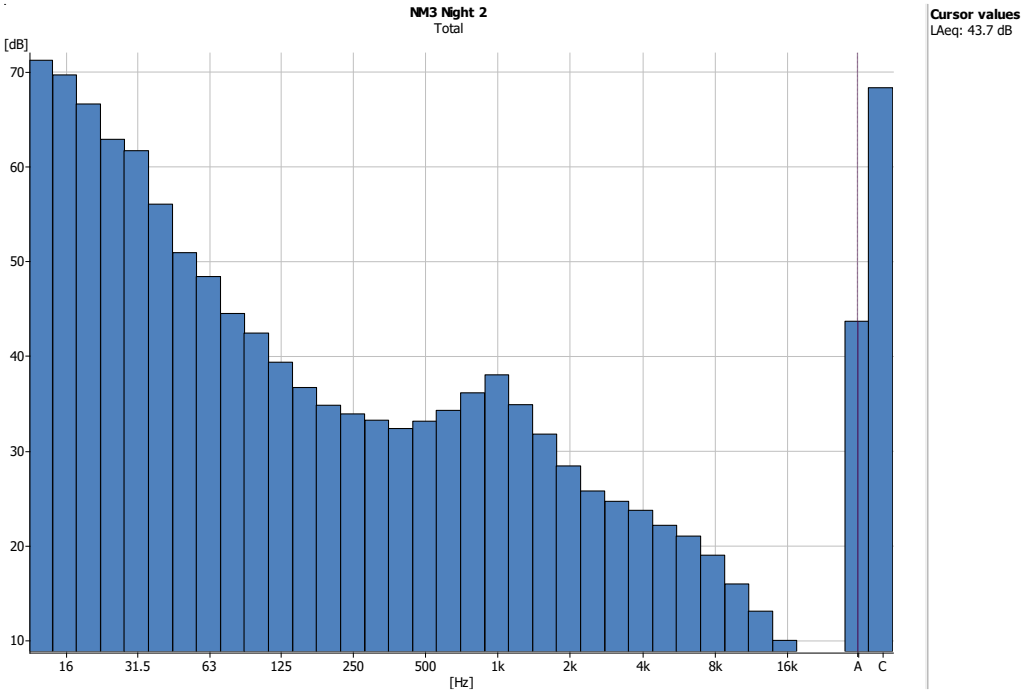


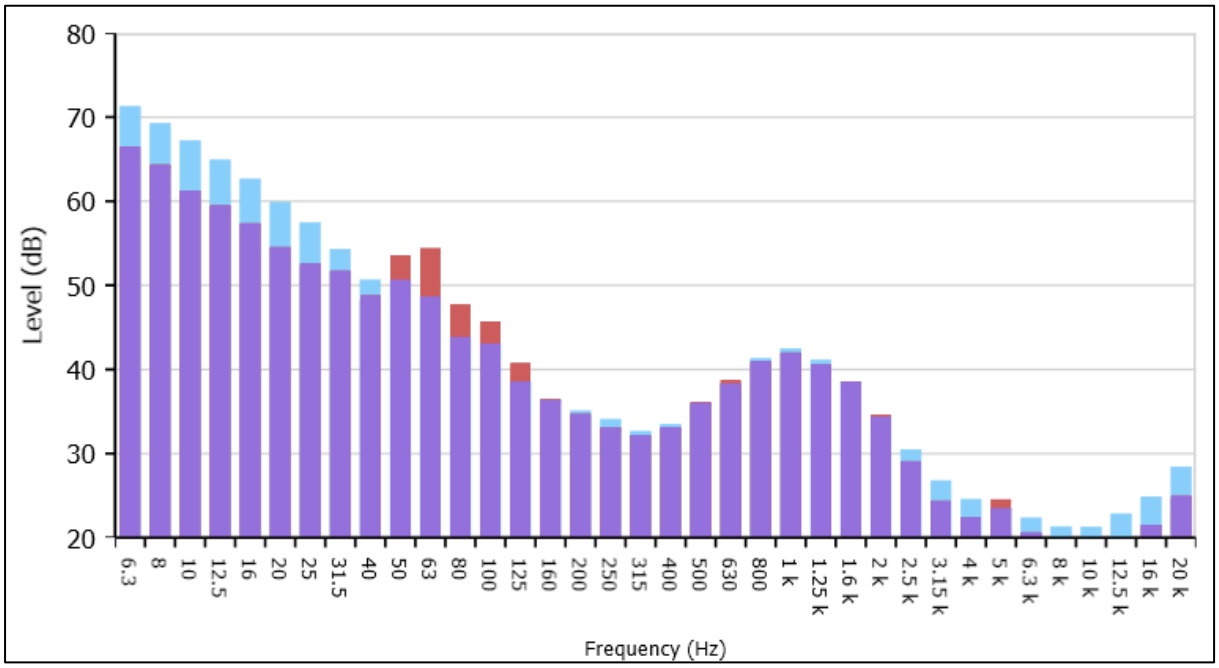
Chart 12: NM3 Night 2- 1/3 Octave Frequency Analysis



NOISE MONITORING LOCATION 4

Plate 4: NM4 Noise Monitoring Location

Chart 13: NM4 Continous 1/3 Octave Frequency Analysis



APPENDIX D

Monvallet SID 2x 110kV Substation

LVIA Photomontages

This book contains imagery for the
viewpoints chosen for the LVIA study

July 2023

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INDEX

Viewpoint 1 - Imminent Baseline View + Outline View
Viewpoint 1 - Montage View + Mitigated View

Viewpoint 2 - Imminent Baseline View + Outline View
Viewpoint 2 - Montage View + Mitigated View

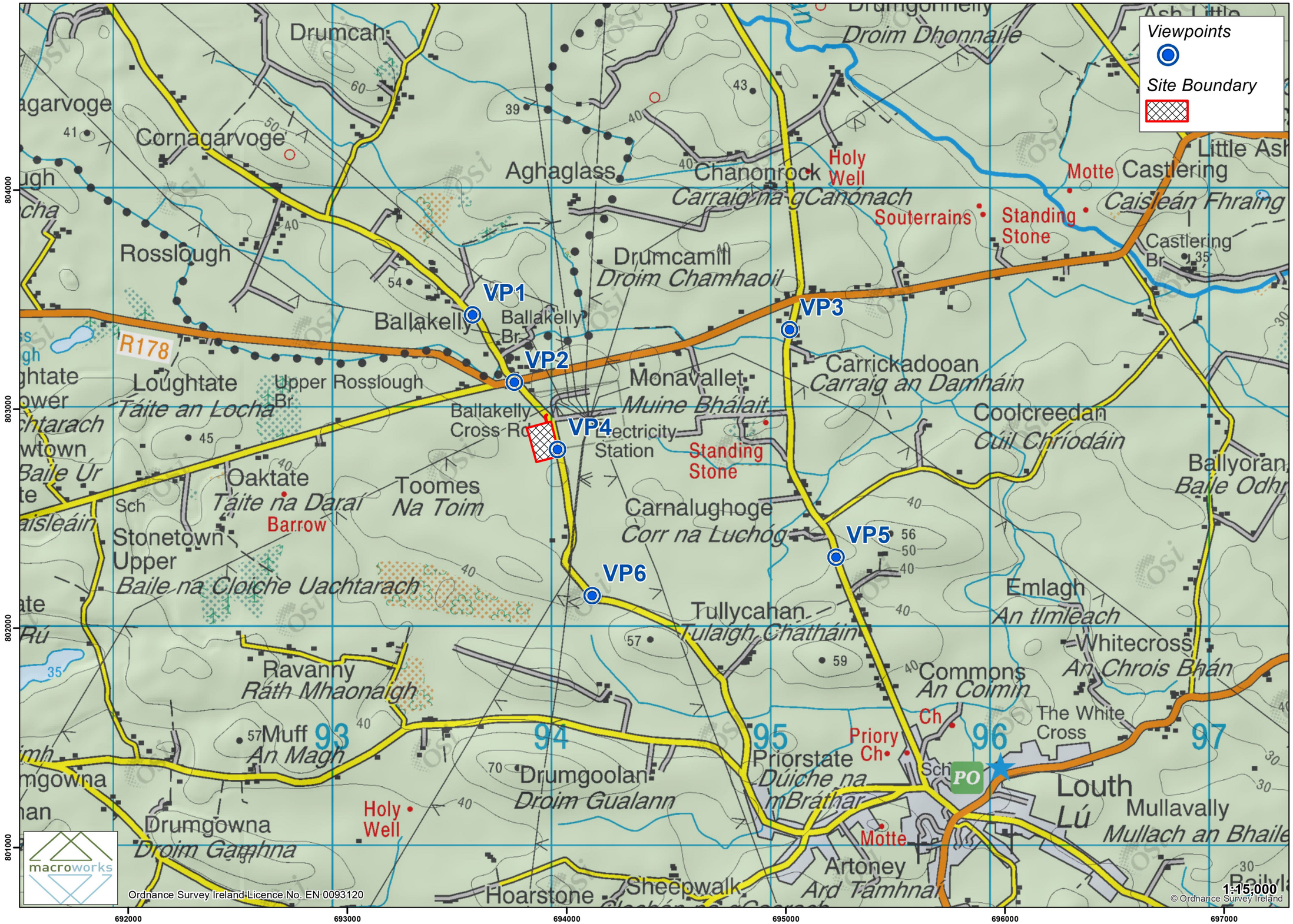
Viewpoint 3 - Imminent Baseline View + Outline View
NB - There are no Montage or Mitigated Montage Views for this viewpoint

Viewpoint 4 - Imminent Baseline View + Outline View
Viewpoint 4 - Montage View + Mitigated View
Viewpoint 4 - Contextual Views (x4)

Viewpoint 5 - Existing View + Outline View
NB - There are no Montage or Mitigated Montage Views for this viewpoint

Viewpoint 6 - Existing View + Outline View
NB - There are no Montage or Mitigated Montage Views for this viewpoint

LVIA viewpoint locations selected for the Monvallet SID project



Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Local road north of Ballakelly Bridge VP1

These are 100° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 60°.

Easting (IG):	293640	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	303418	Camera:	Canon 1-D Mark II digital SLR	Time:	15:51
Direction of View 163°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	100°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Montage pre- and post-mitigation establishment)

Local road north of Ballakelly Bridge VP1

These are 100° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 60 °.

Easting (IG):	293640	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	303418	Camera:	Canon 1-D Mark II digital SLR	Time:	15:51
Direction of View 163°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	100°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Cross roads settlement at Ballakelly Bridge VP2

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (IG):	293830	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	303110	Camera:	Canon 1-D Mark II digital SLR	Time:	15:36
Direction of View 167°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Montage pre- and post-mitigation establishment) Cross roads settlement at Ballakelly Bridge VP2

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40 °.

Easting (IG):	293830	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	303110	Camera:	Canon 1-D Mark II digital SLR	Time:	15:36
Direction of View 167°	E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Cross roads settlement at Carrickadooan VP3

Imminent Baseline View

includes the permitted Monvallet I and Monvallet II solar farms

Outline View

indicating physical position and scale of the proposed substation irrespective of screening

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (IG):	295085	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	303350	Camera:	Canon 1-D Mark II digital SLR	Time:	15:21
Direction of View	126° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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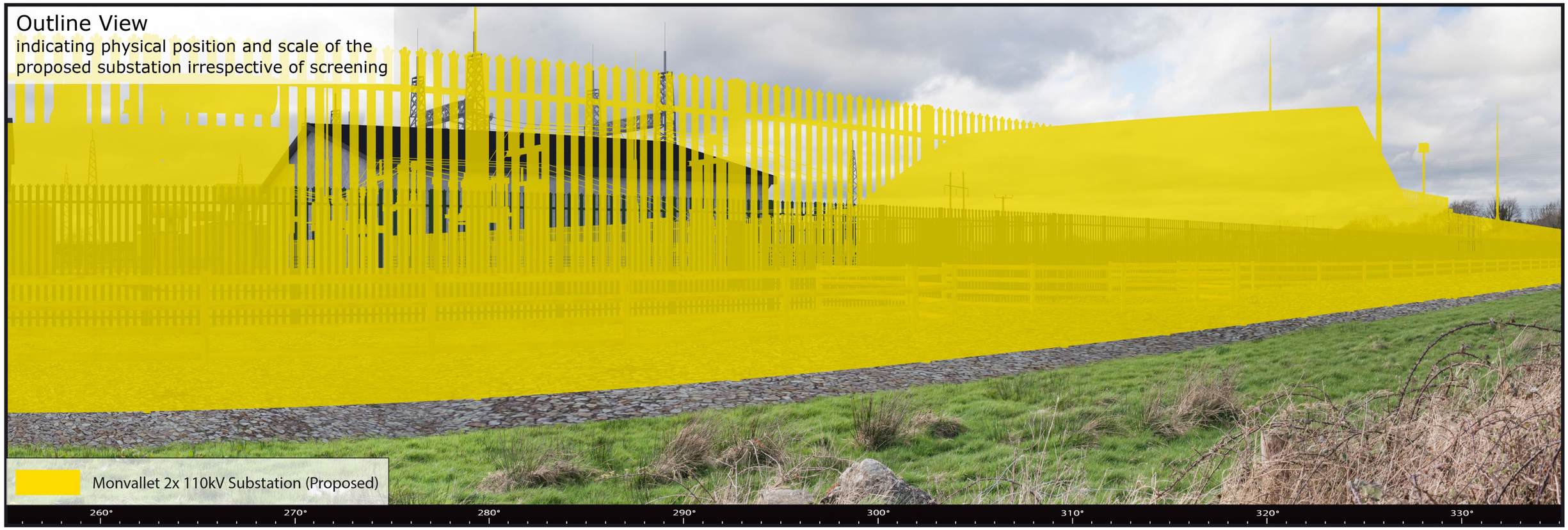
Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Local road adjacent to Monvallet substation VP4



These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (IG):	294027	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	302804	Camera:	Canon 1-D Mark II digital SLR	Time:	16:54
Direction of View	65°W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40 °.

Easting (IG):	294027	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	302804	Camera:	Canon 1-D Mark II digital SLR	Time:	16:54
Direction of View	65°W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	120°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline, Outline, Montage pre- and post-mitigation establishment)

Local road adjacent to Monvallet substation

VP4

The 180° panoramic montages are captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.
In this instance , a wider field of view has been created for contextual purposes.
To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 20cm. To see this entire panoramic scene in reality would necessitate turning one's head through 140°.

Easting (IG):	294027.30	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	302804.33	Camera:	Canon 1-D Mark II digital SLR	Time:	16:54
Direction of View	106° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	180°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Local road south east at Carnalughoge VP5

Imminent Baseline View

includes the permitted Monvallet I and Monvallet II solar farms

Outline View

indicating physical position and scale of the proposed substation irrespective of screening

These are 80° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 40°.

Easting (IG):	295297	Lens:	50mm / Full Frame Sensor	Date:	29/03/21
Northing (IG):	302312	Camera:	Canon 1-D Mark II digital SLR	Time:	15:15
Direction of View	75° W of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	80°				

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Monvallet SID 2x 110kV Substation

Imagery depicting the view towards the site (Imminent Baseline and Outline)

Local road to the southeast of the site VP6

Imminent Baseline View

includes the permitted Monvallet I and Monvallet II solar farms

Outline View

indicating physical position and scale of the proposed substation irrespective of screening

These are 160° panoramic montages captured and presented in accordance with the guidance set by the British Landscape Institute 2011 - Advice Note 01/11.

To view these panoramas on a flat surface one must move from left to right along its length whilst maintaining a perpendicular viewing direction and the specified correct viewing distance of 30cm. To see this entire panoramic scene in reality would necessitate turning one's head through 120°.

Easting (IG):	294185	Lens:	50mm / Full Frame Sensor	Date:	22/09/21
Northing (IG):	302137	Camera:	Canon 1-D Mark II digital SLR	Time:	10:32
Direction of View	37° E of Grid North	Camera Height:	1.7m Above Ground Level		
Angle of View:	160°				

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