BlueTreeAcoustics

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04/04/2024

F Dring and Sons Ltd
Double Roof
High Road
Moulton
Spalding
PE12 6NT

By email only: c/o Lewis Smith – l.smith@rdc-landplan.co.uk

Dear Sirs

Site: **Double Roof Farm, High Road, Moulton, Spalding**
Re: **Pre-works baseline noise survey and outline assessment**
Document ref. **03803-100100**

Further to our recent survey, please see our findings set out below.

Blue Tree Acoustics has been appointed to carry out a sound survey of the existing sound levels at the above development.

The sound survey is required following the planning permission granted for the site (ref. H13-0752-23 dated 18/12/2023), which permits Use Class B8 (storage and distribution) and Use Class E(g)(iii) (industrial processes that can be carried out in any residential area without detriment to the amenity of that area by reason of noise, vibration, etc.).

Condition 6 of the permission states:

> *"6 Prior to the first occupation of the use hereby approved, a noise assessment shall be carried* [sic] *in accordance with BS 4142:2014+A1(2019) and shall be submitted to and approved in writing by the Local Planning Authority. It shall assess the existing background noise levels and noise sensitive receptors of nearby residential properties.*
>
> *Regard shall be had to impulsive and short duration noise, including tools, air handling, extraction plant/equipment (mechanical and engineering). Noise from the site assessed in terms of LAeq experienced at the dwellings shall be limited to 5dB above the established background noise levels contained in the approved details.*
>
> *In the event of a significant observed adverse effect of noise, a package of mitigation measures shall be submitted to and approved in writing within 3 months of the observed noise impact event, to mitigate the noise impact to existing noise sensitive receptors. The approved mitigation measures shall be implemented within 6 months following approval.*

Reason: To ensure that there is no observed adverse additional noise impact to nearby residents as a result of that permitted over and above the existing lawful use.

This Condition is imposed in accordance with Policies 2, 3 and 30 of the South East Lincolnshire Local Plan, 2019."

Unattended external noise measurements were taken between around 1600 hours on Wednesday 21/02/2024 and 1700 hours on Friday 01/03/2024 to establish existing environmental noise levels. Measurements were made over a series of contiguous 15-minute periods. The measurements were taken at 3no accessible locations on the development site (indicated in Figure 1).

The instruments used during the surveys were 3no Rion NL-52 Type 1/Class 1 integrating sound level meters. Each meter was within a valid period of laboratory calibration. Calibration checks were carried out both before and after the measurements, with minimal variance observed and values being within 0.1dB of the stated reference value. A proprietary environmental windshield was fitted to each microphone. The measurements were made with each microphone mounted on a tripod at approximately 1.5m from local ground level.

Noise was measured in terms of broadband A-weighted indices and at 1/3 octave bands from 50Hz to 10kHz. Presented noise levels have been rounded to the nearest decibel, as fractions of a decibel are not perceptible. Noise survey data is presented in Appendix 1.

Weather conditions throughout the survey periods were variable, with some periods of increased wind and rainfall. Archival weather data from a local station is presented in Appendix 2. Noise level data collected during survey periods with wind speeds in excess of 5m/s have been excluded from the assessment, as have periods of significant rainfall.

It should be noted that the site activity during the survey was significantly reduced compared to the historic activity, as the current use is winding down. It is understood that the noise levels measured are most likely understated compared to the previous historical use.

Table 1: Location 1 – Average measured noise levels (free-field)

Period	dB L_{Aeq}	dB L_{Amax}	dB L_{A10}	dB L_{A90}
Daytime	51	63	52	43
Nighttime	48	58	47	34

At Location 1, the representative background sound level is taken to be 43dB L_{A90} in the day and 30dB L_{A90} at night.

Table 2: Location 2 – Average measured noise levels (free-field)

Period	dB L_{Aeq}	dB L_{Amax}	dB L_{A10}	dB L_{A90}
Daytime	50	63	50	42
Nighttime	44	57	44	33

At Location 2, the representative background sound level is taken to be 41dB L_{A90} in the day and 31dB L_{A90} at night.

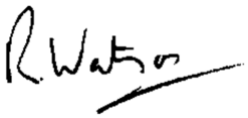
Table 3: Location 3 – Average measured noise levels (free-field)

Period	dB L_{Aeq}	dB L_{Amax}	dB L_{A10}	dB L_{A90}
Daytime	53	65	51	43
Nighttime	48	59	46	33

At Location 3, the representative background sound level is taken to be 41dB L_{A90} in the day and 29dB L_{A90} at night.

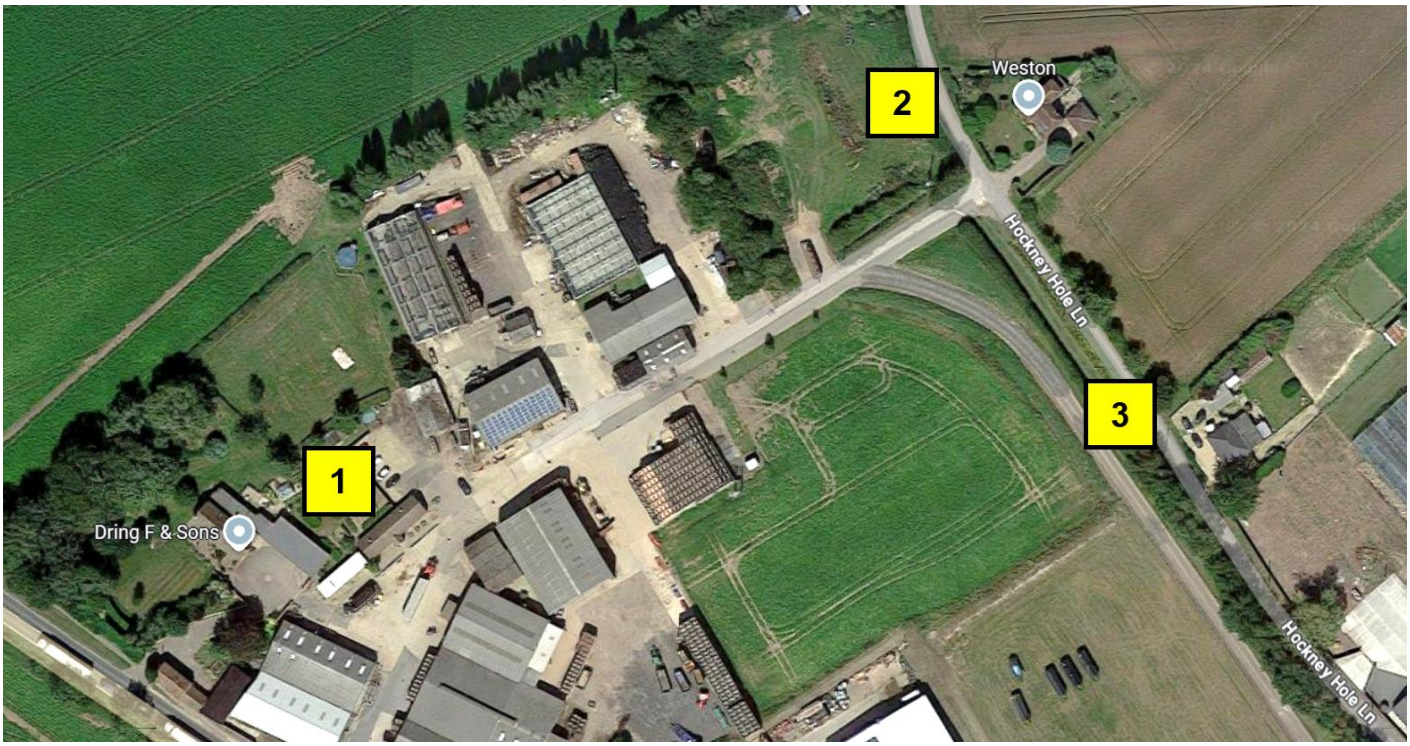
Please do not hesitate to email us if you require anything further.

Yours faithfully



Richard Watson BEng(Hons) CEng MIOA MAES MIEEE
Senior Consultant

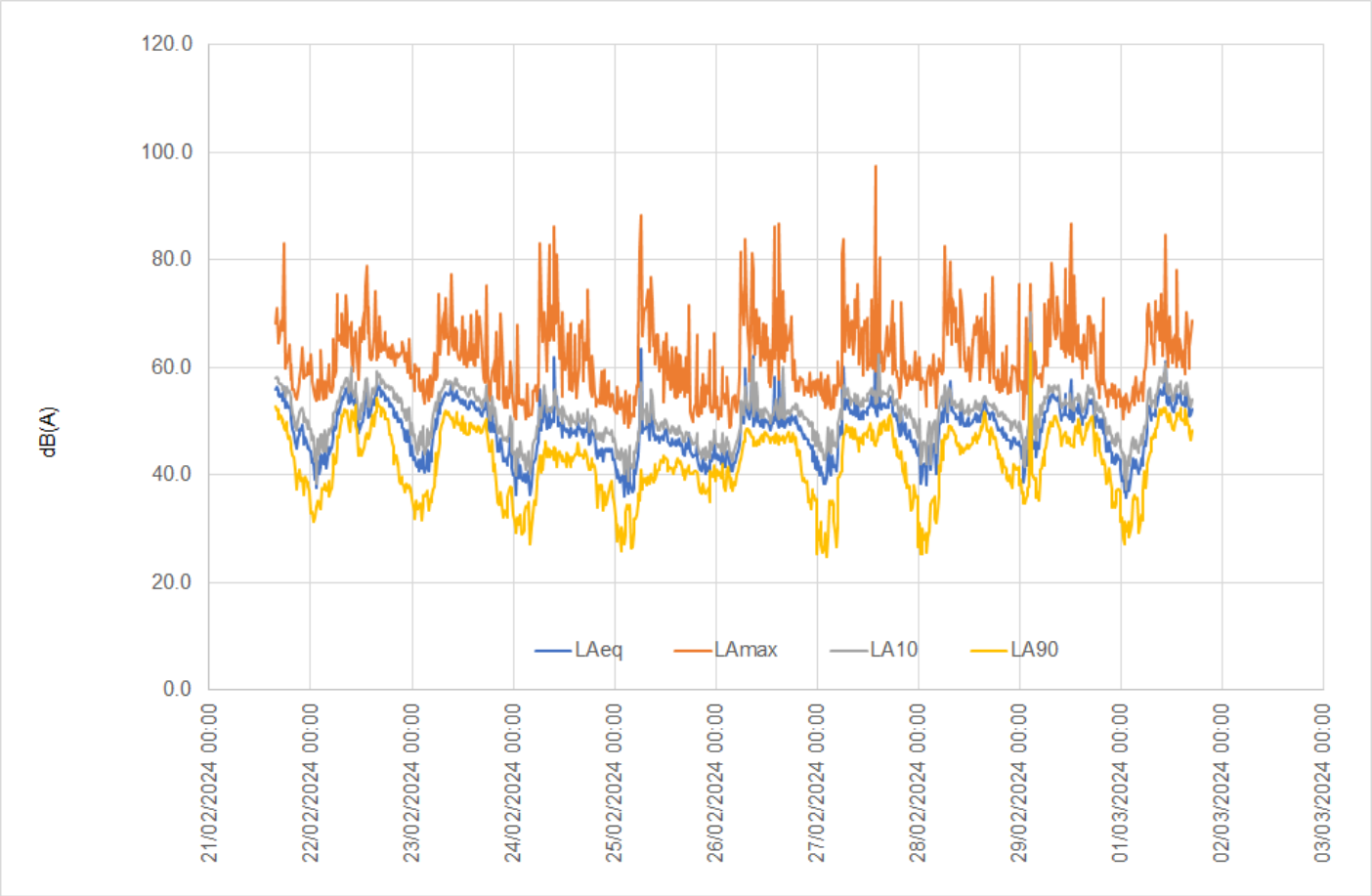
FIGURE 1 – SITE AERIAL VIEW AND APPROXIMATE MEASUREMENT LOCATIONS



APPENDIX 1 – NOISE SURVEY DATA

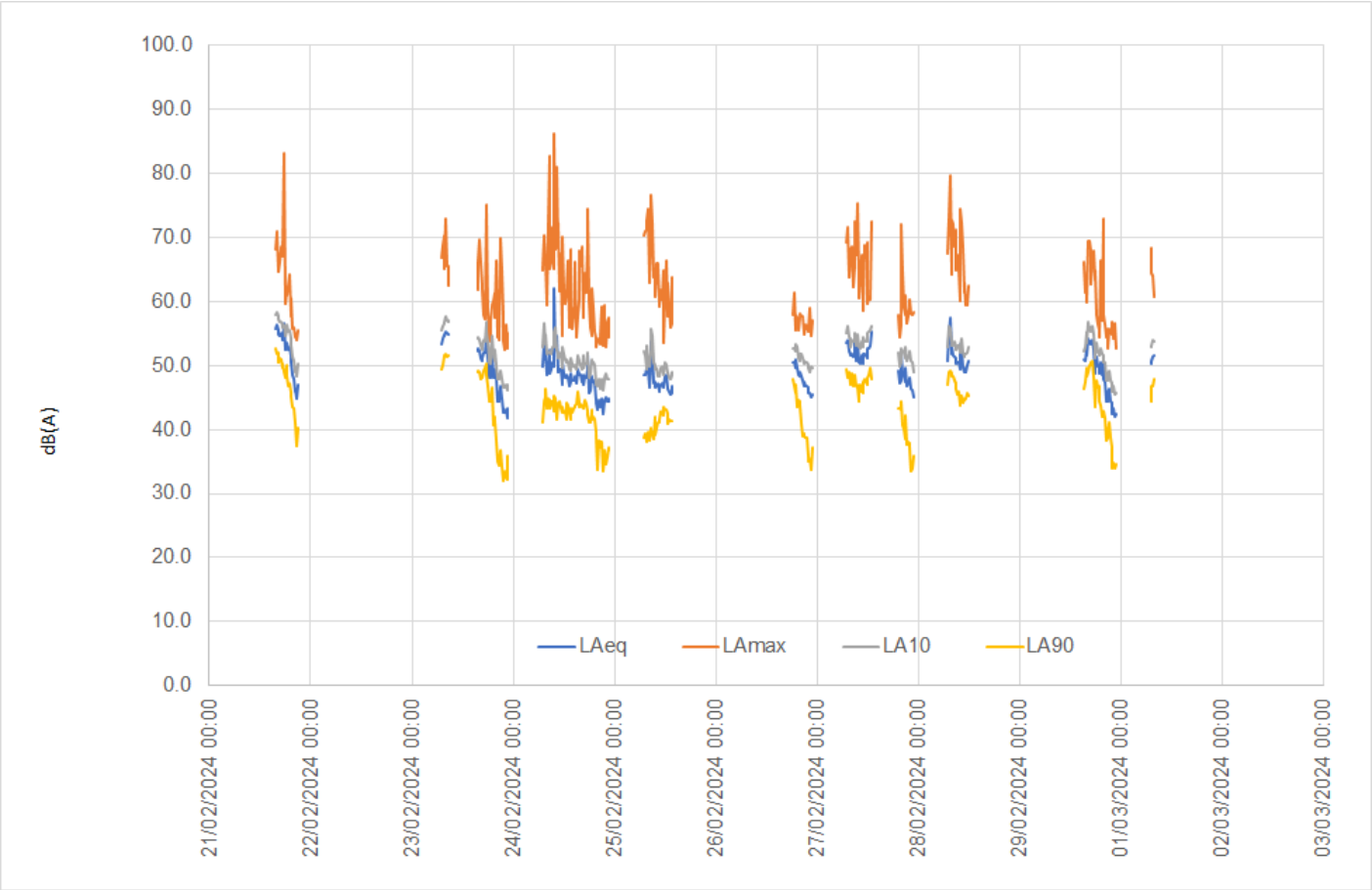
Location 1 – All data

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field



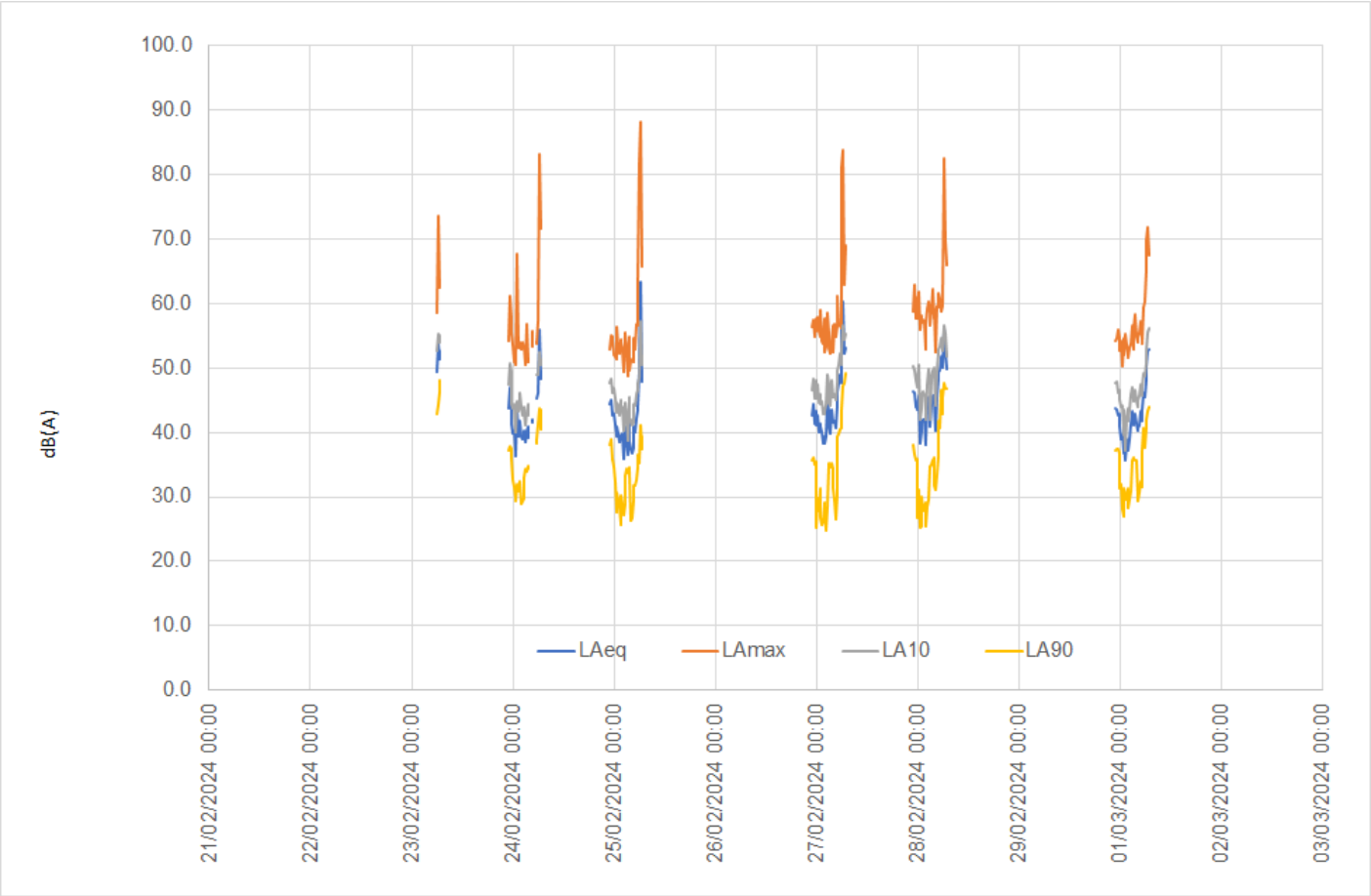
Location 1 – Adverse weather conditions excluded – Daytime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

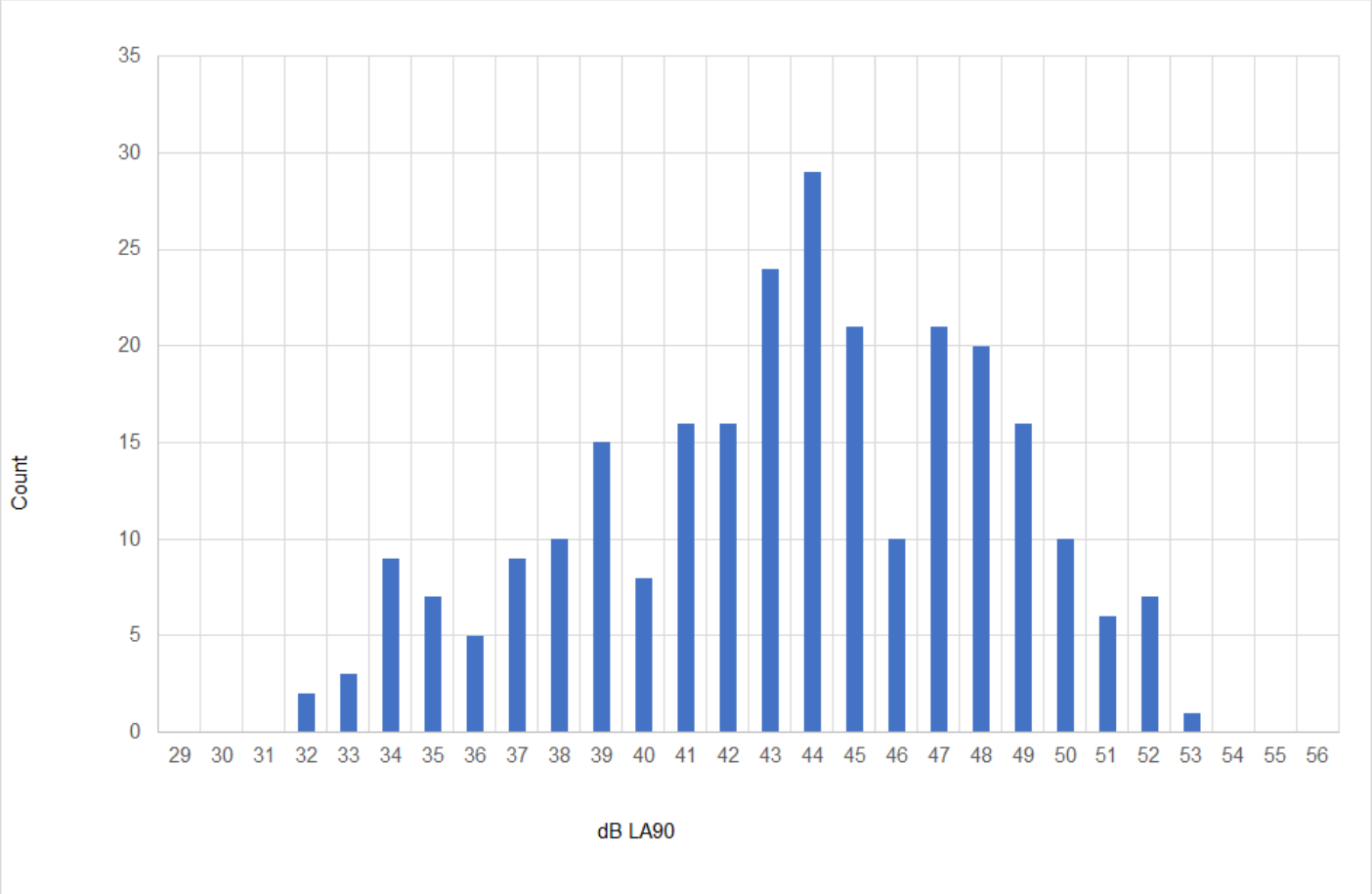


Location 1 – Adverse weather conditions excluded – Nighttime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

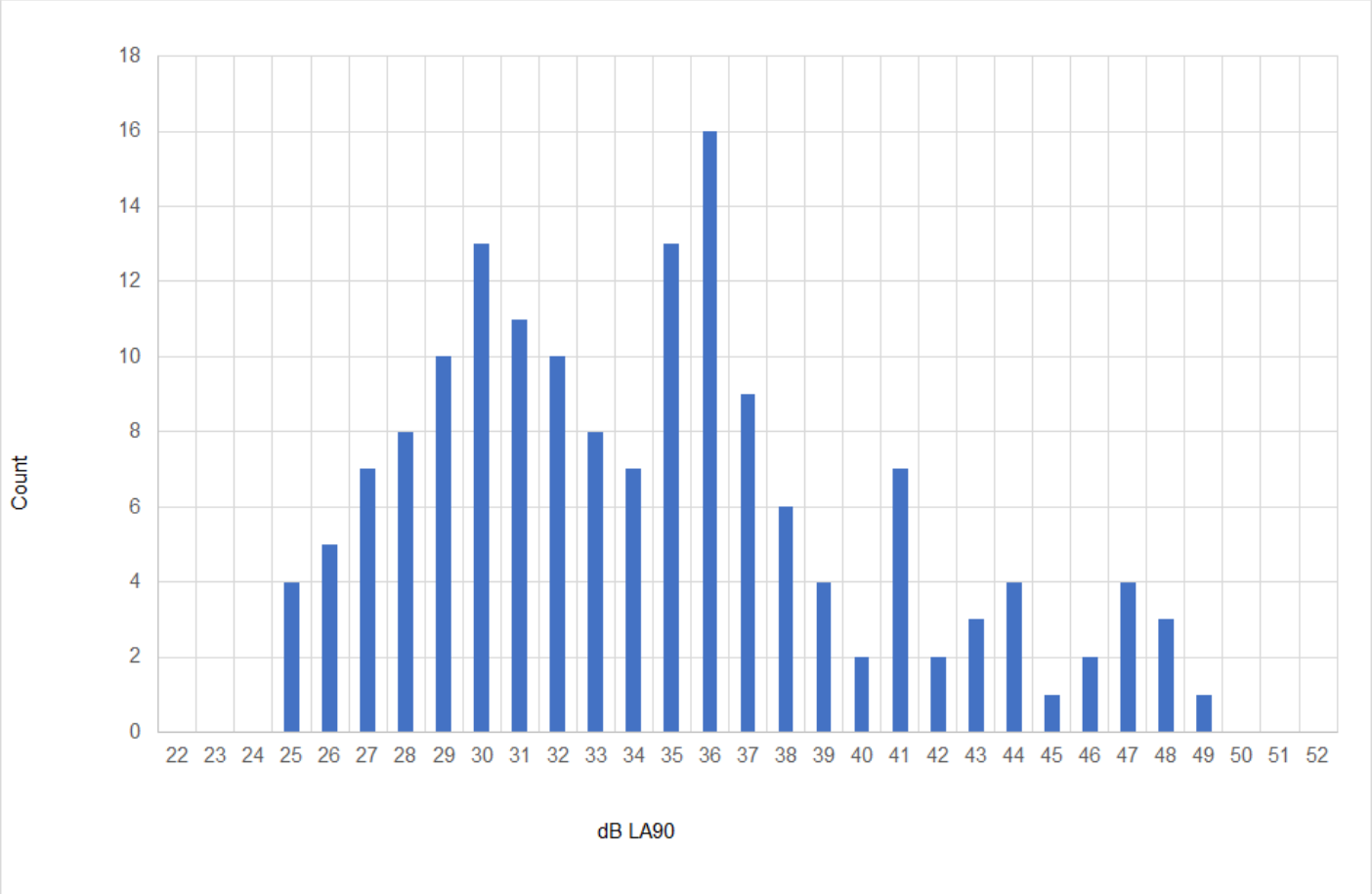


Location 1 dB L_{A90} count – Daytime



Representative value taken to be 43dB L_{A90}

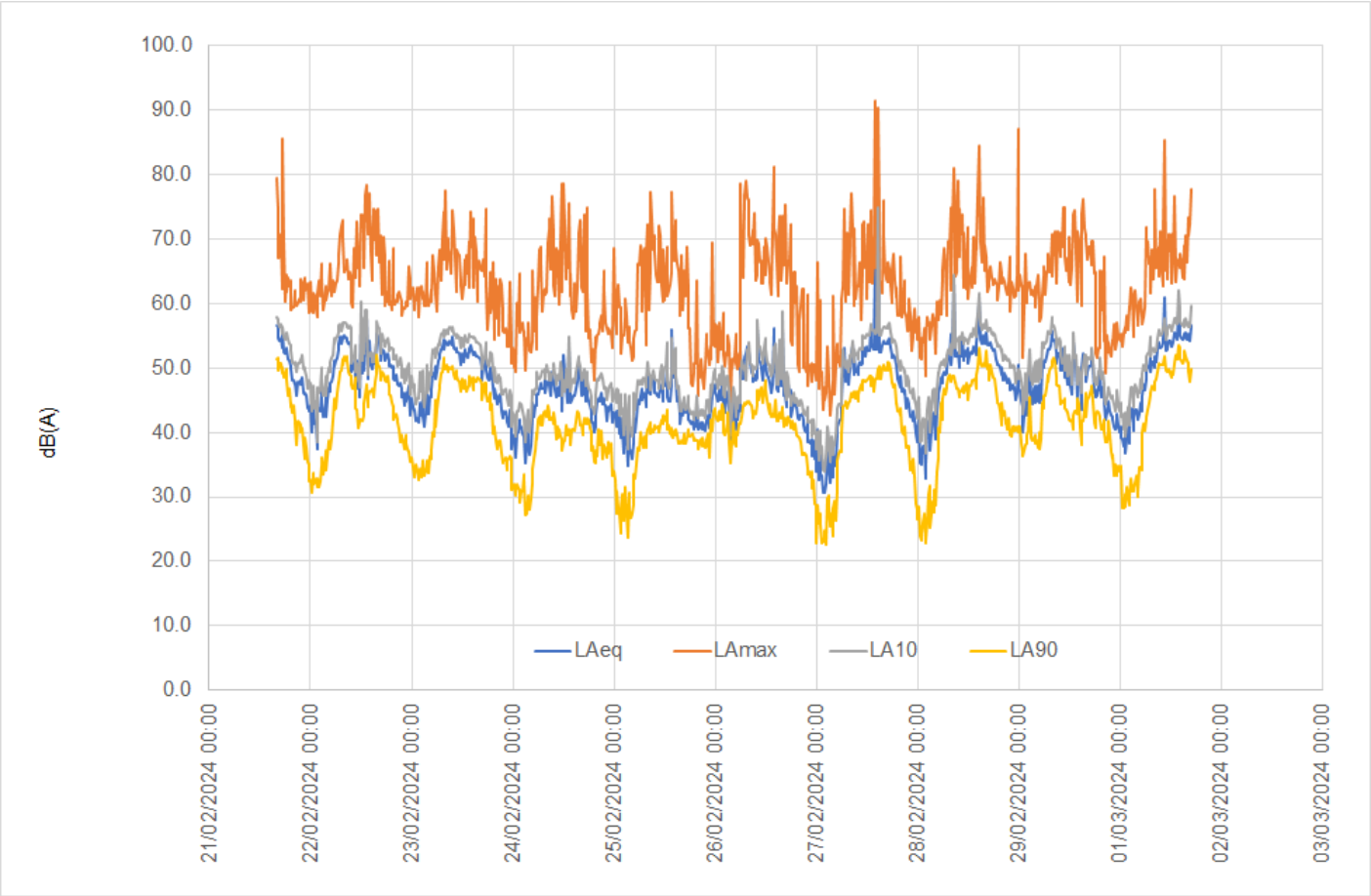
Location 1 dB L_{A90} count – Nighttime



Representative value taken to be 30dB L_{A90}

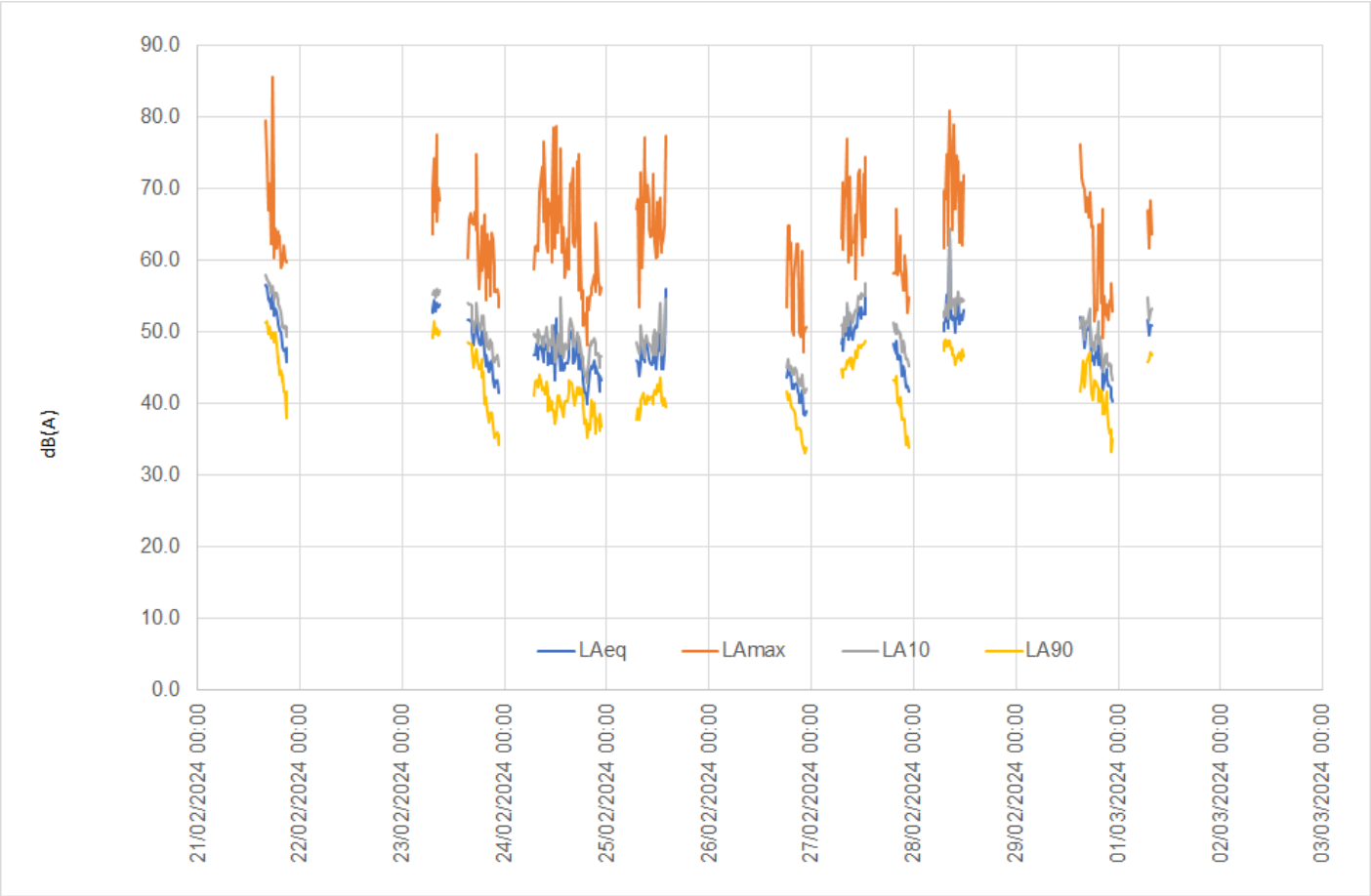
Location 2 – All data

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field



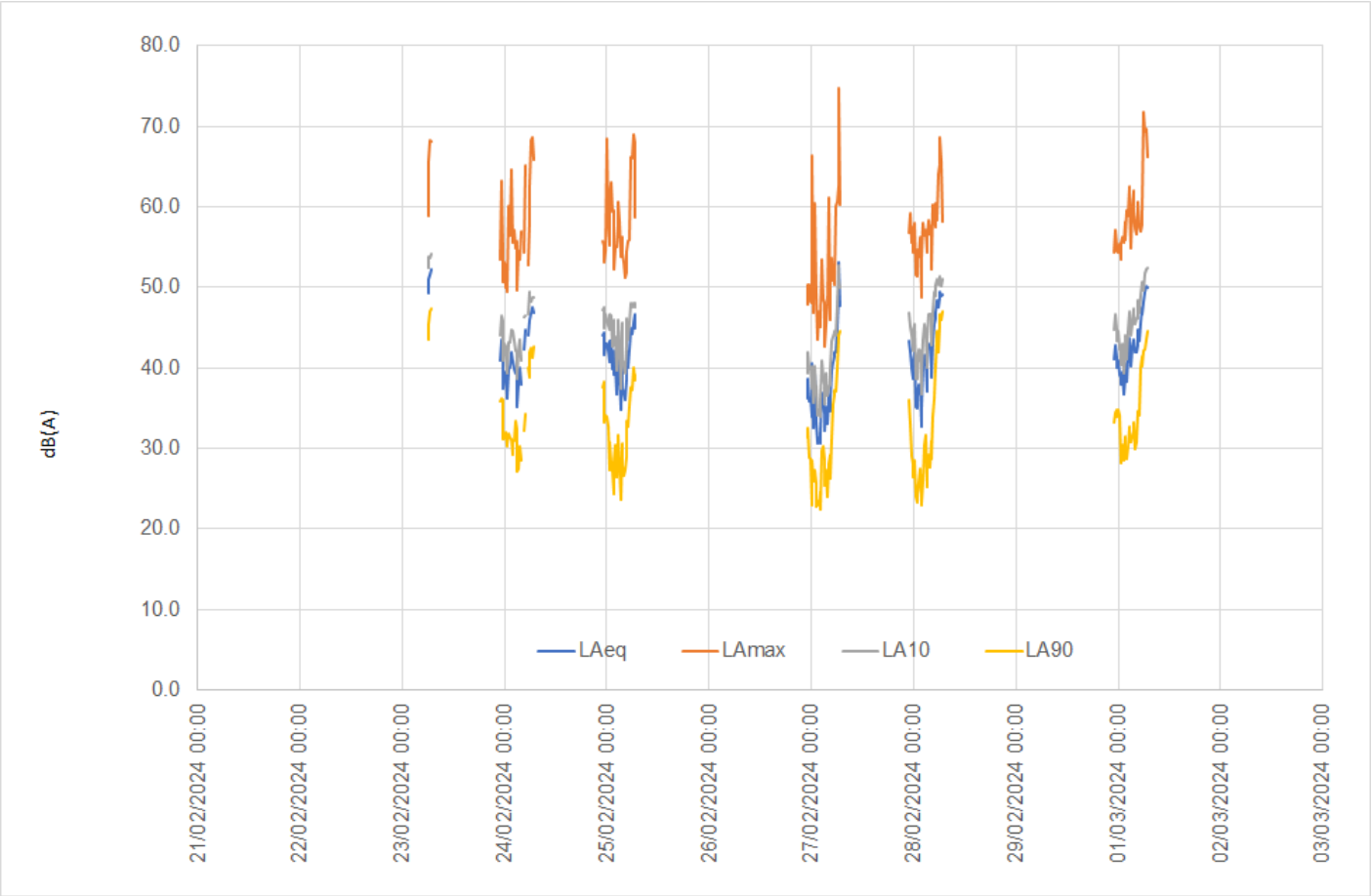
Location 2 – Adverse weather conditions excluded – Daytime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

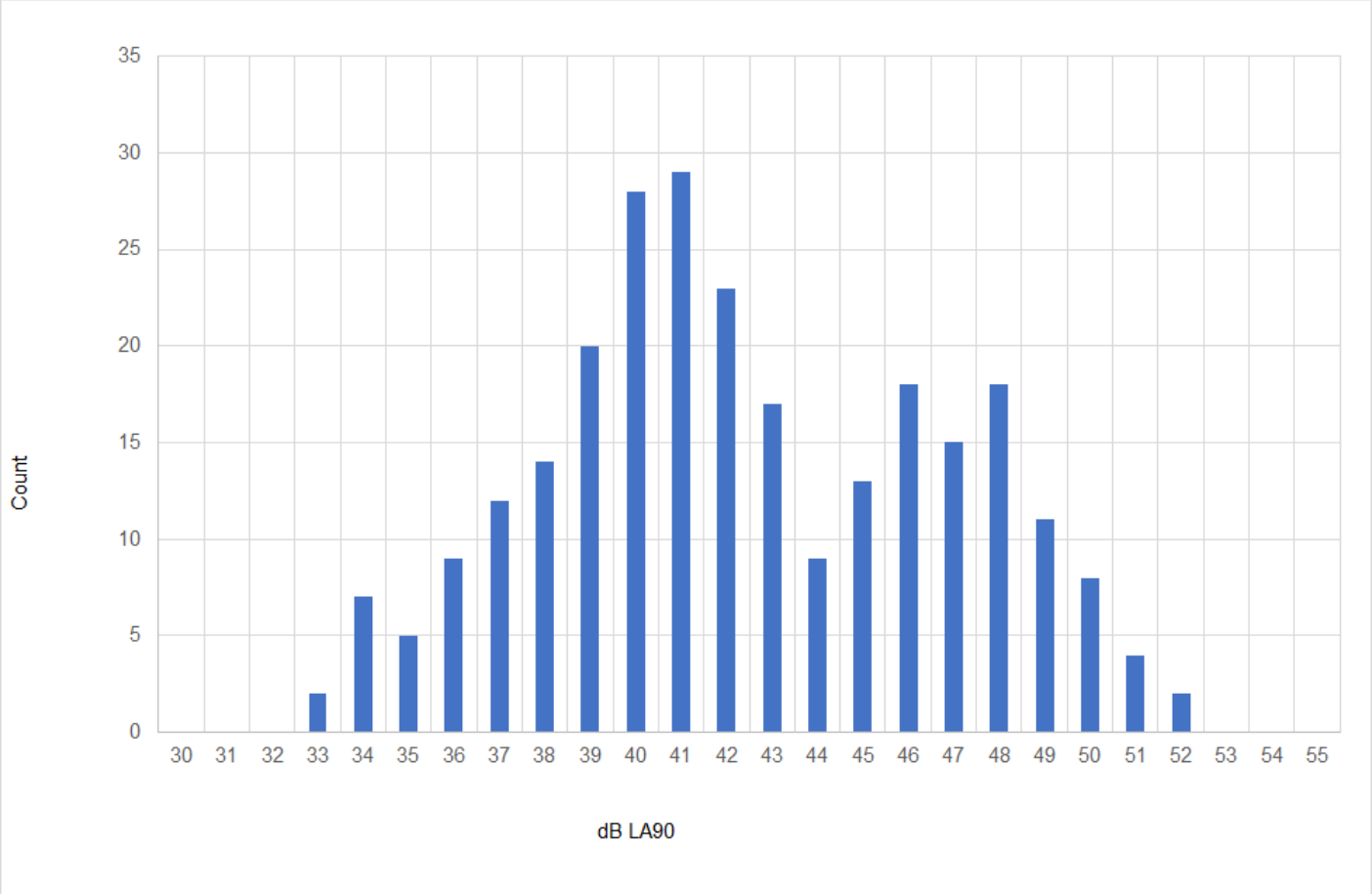


Location 2 – Adverse weather conditions excluded – Nighttime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

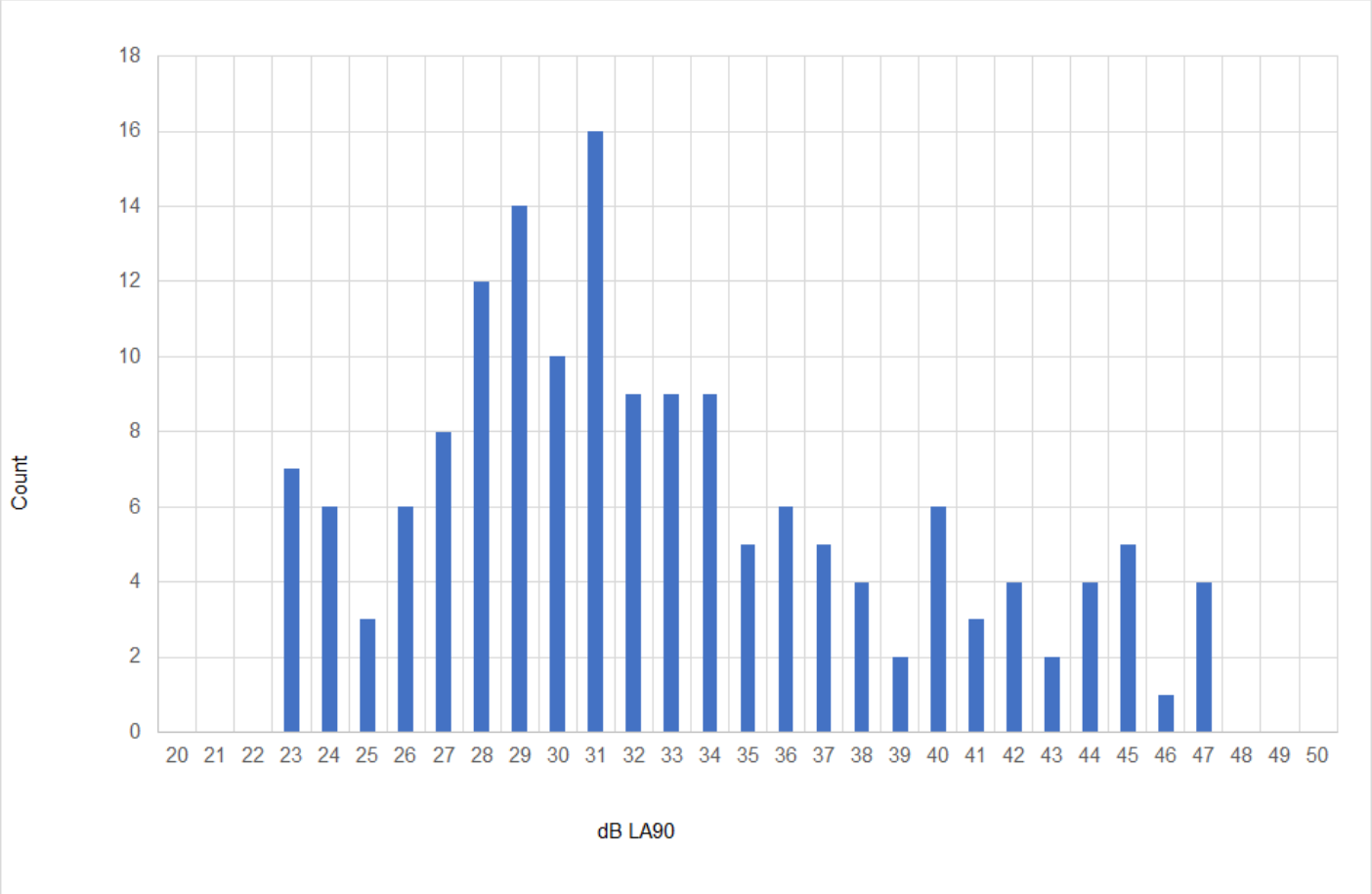


Location 2 dB L_{A90} count – Daytime



Representative value taken to be 41dB L_{A90}

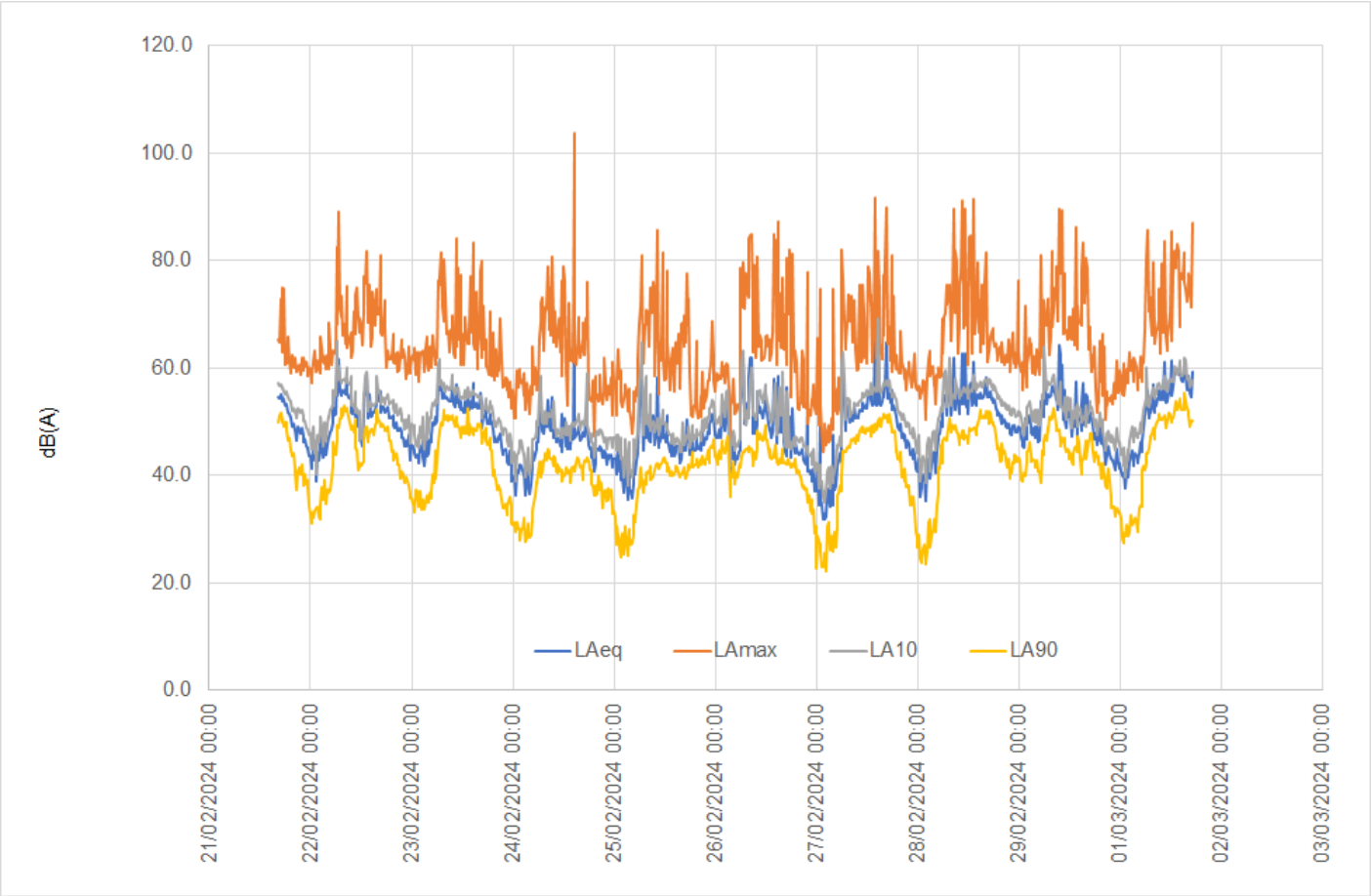
Location 2 dB L_{A90} count – Nighttime



Representative value taken to be 31dB L_{A90}

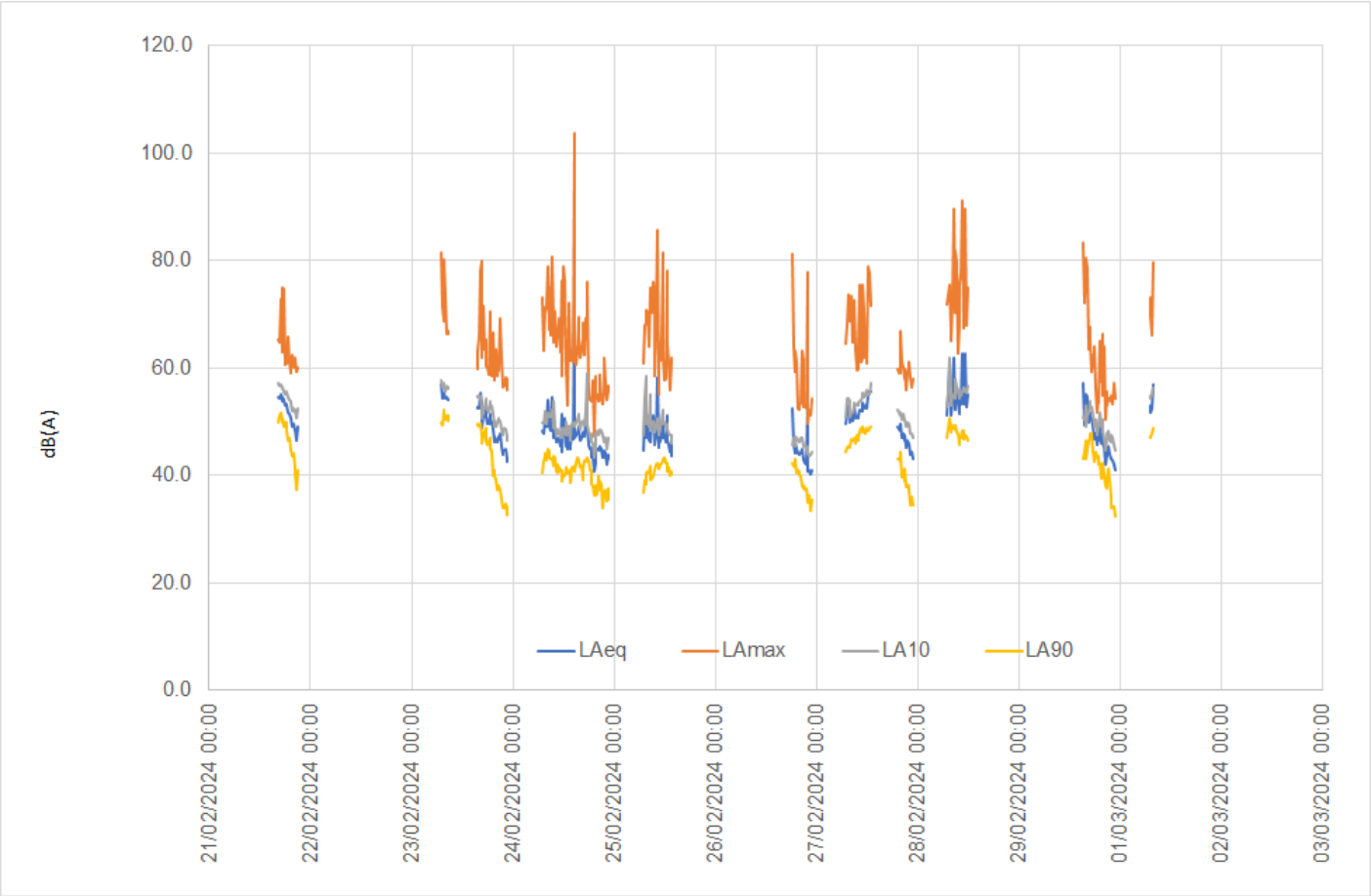
Location 3 – All data

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field



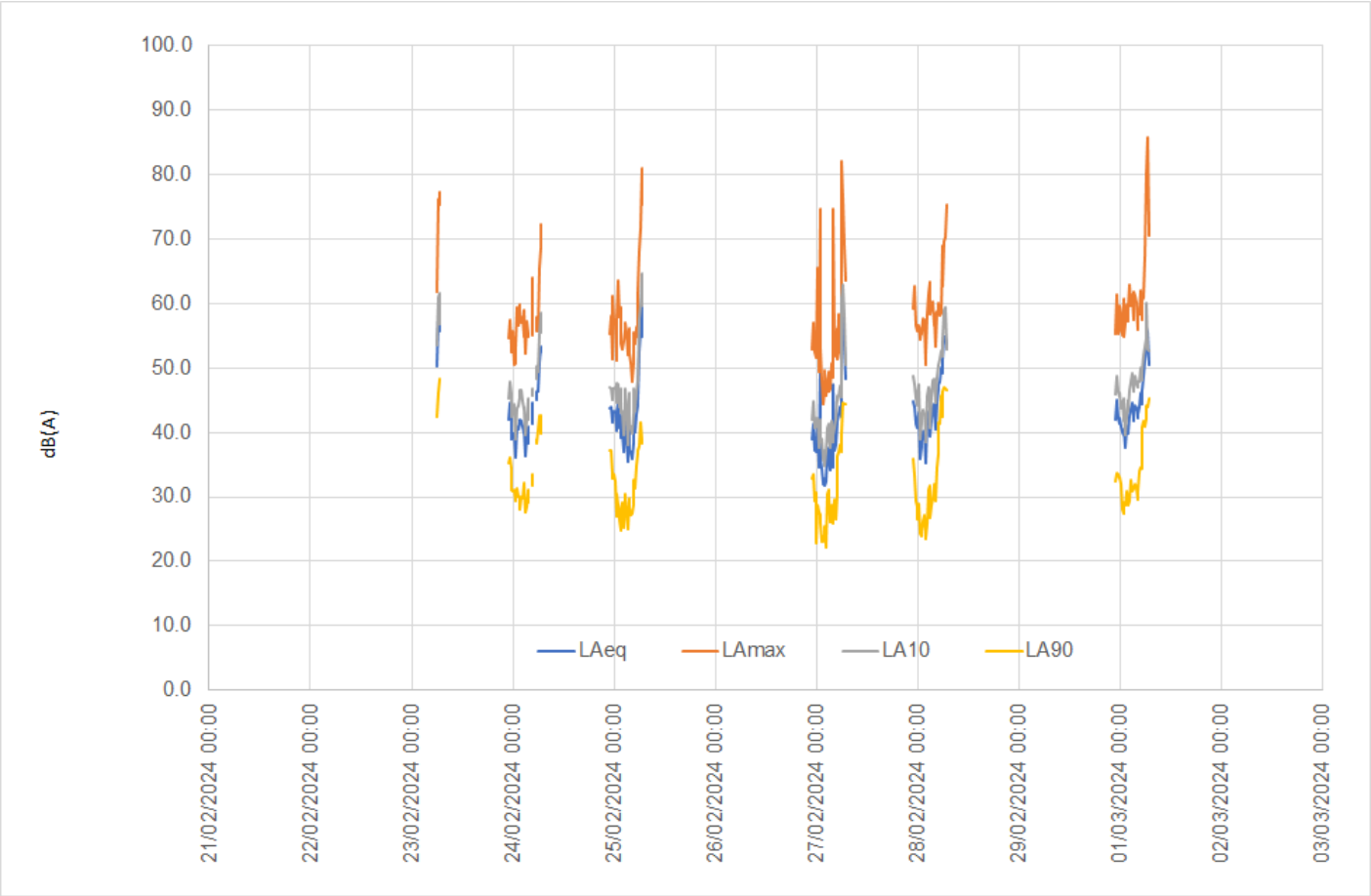
Location 3 – Adverse weather conditions excluded – Daytime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

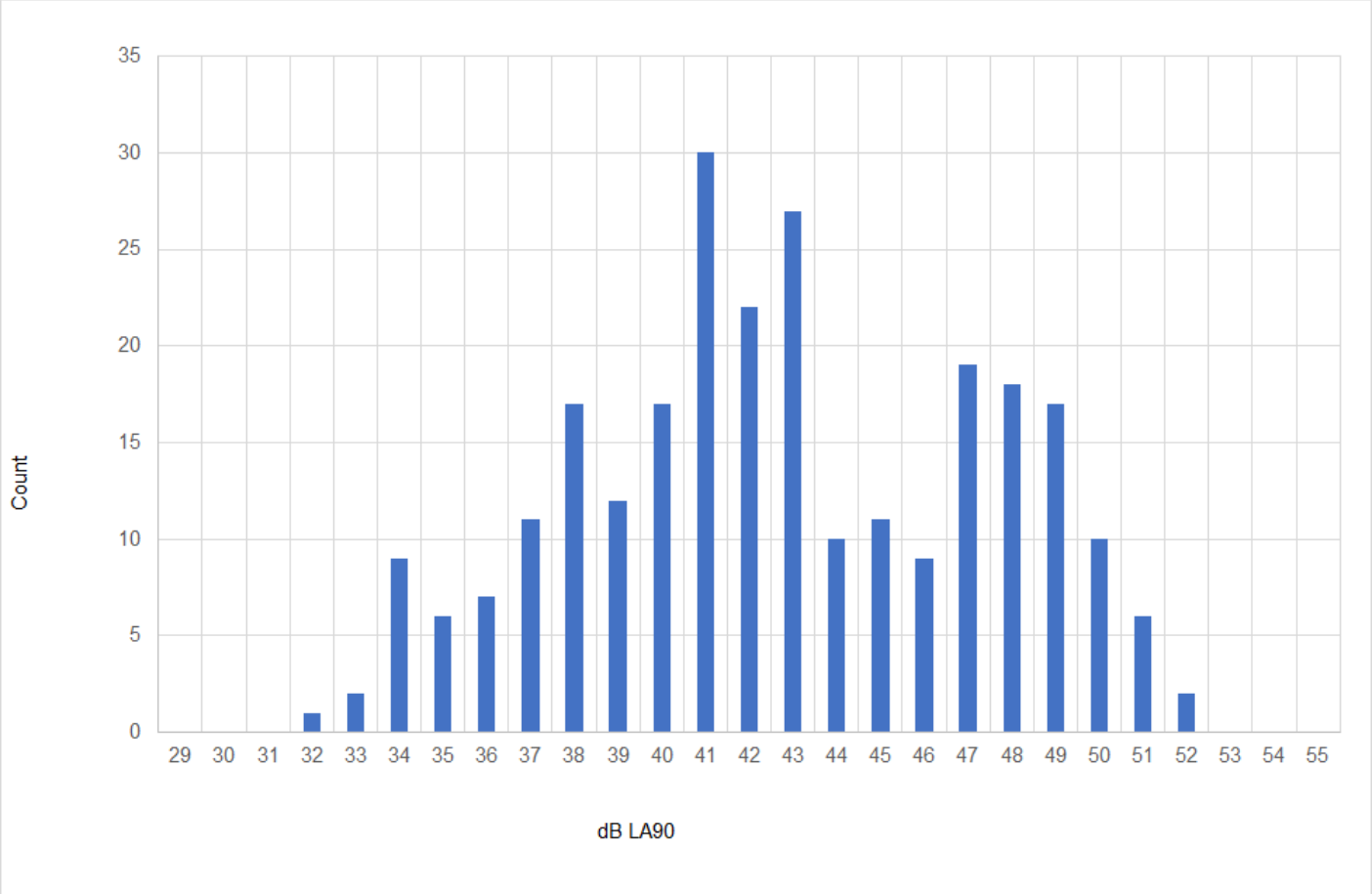


Location 3 – Adverse weather conditions excluded – Nighttime

Rion NL-52 sound level meter, all values dB(A), 15-minute duration, free-field

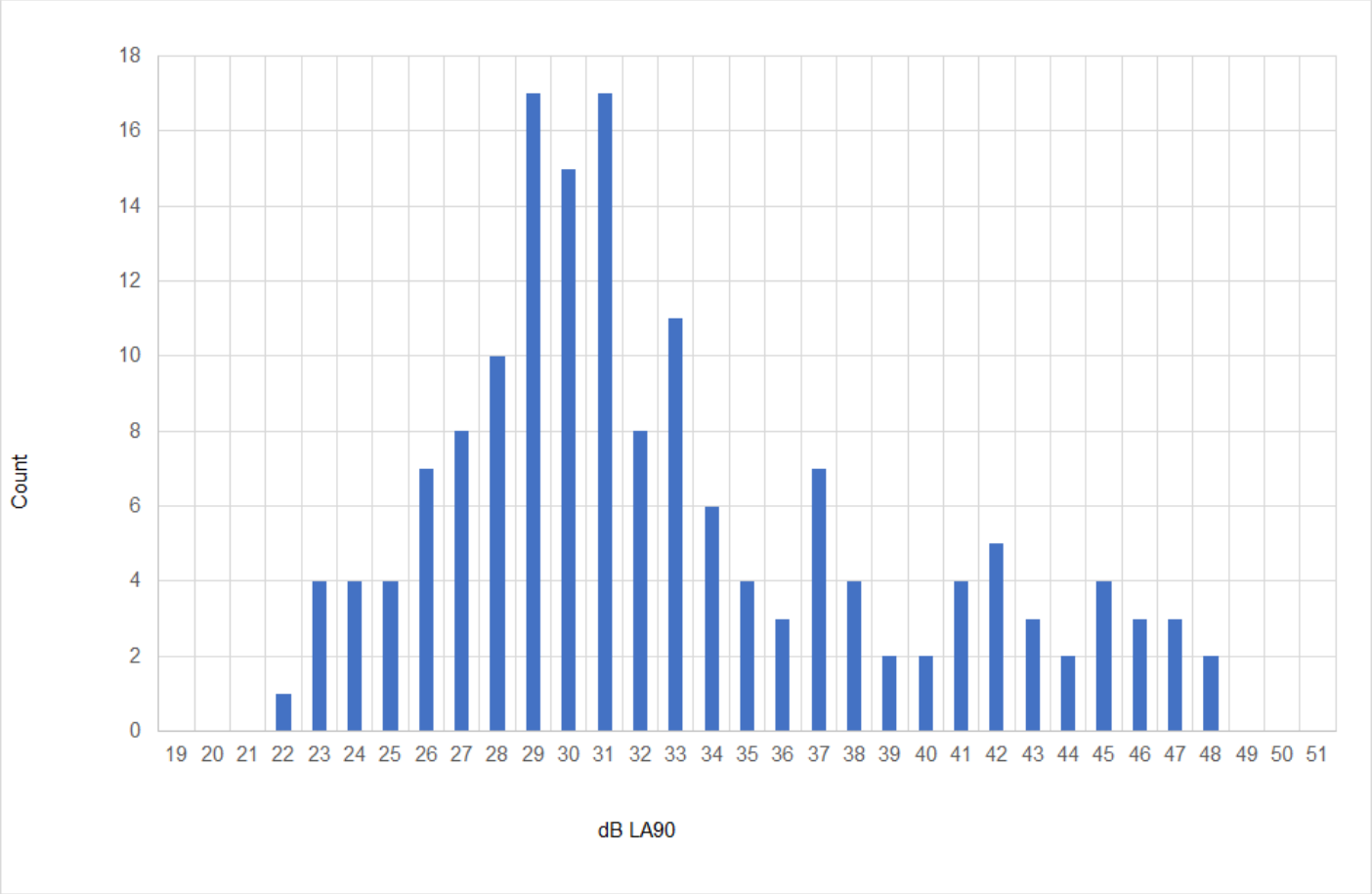


Location 3 dB L_{A90} count – Daytime



Representative value taken to be 41dB L_{A90}

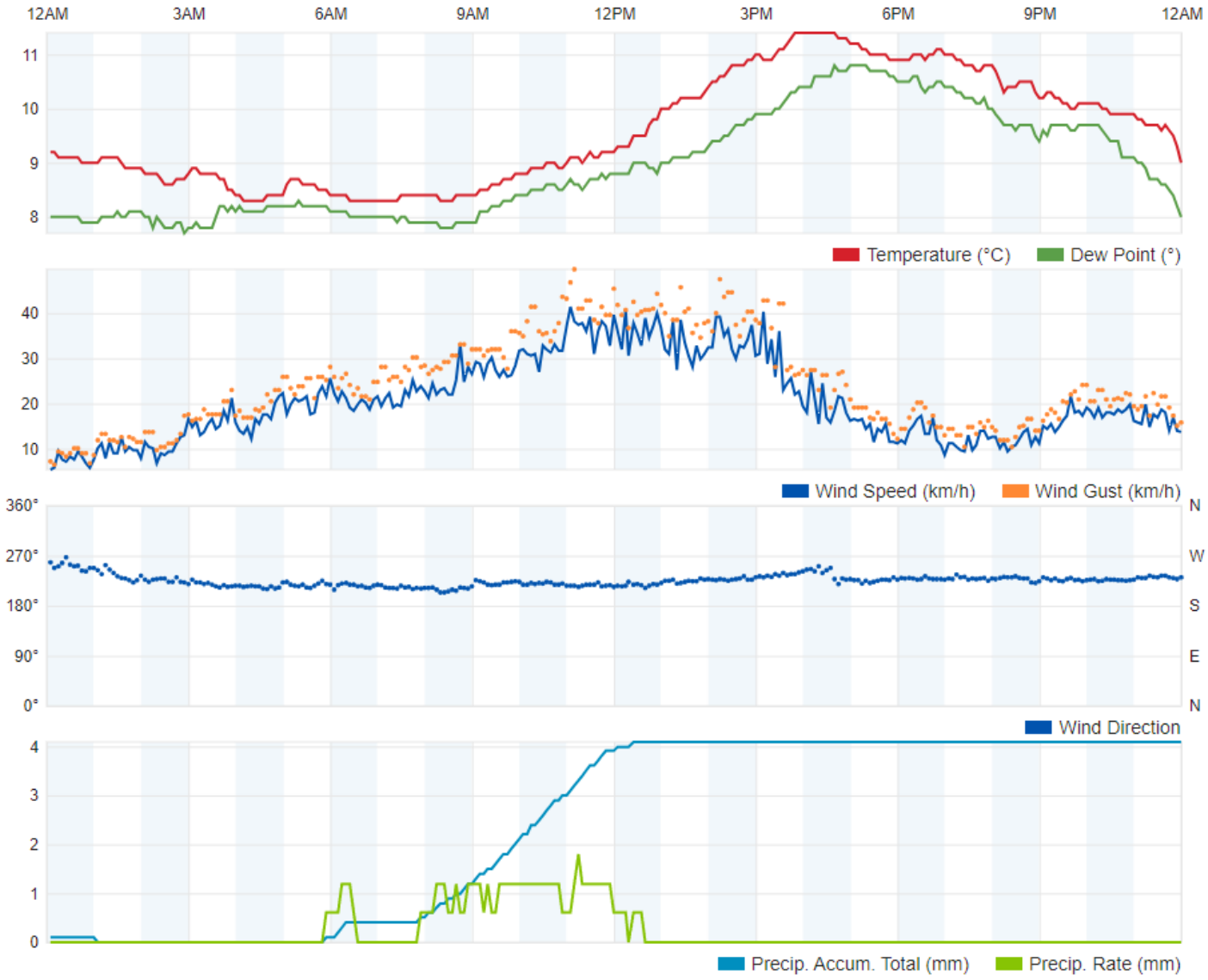
Location 3 dB L_{A90} count – Nighttime



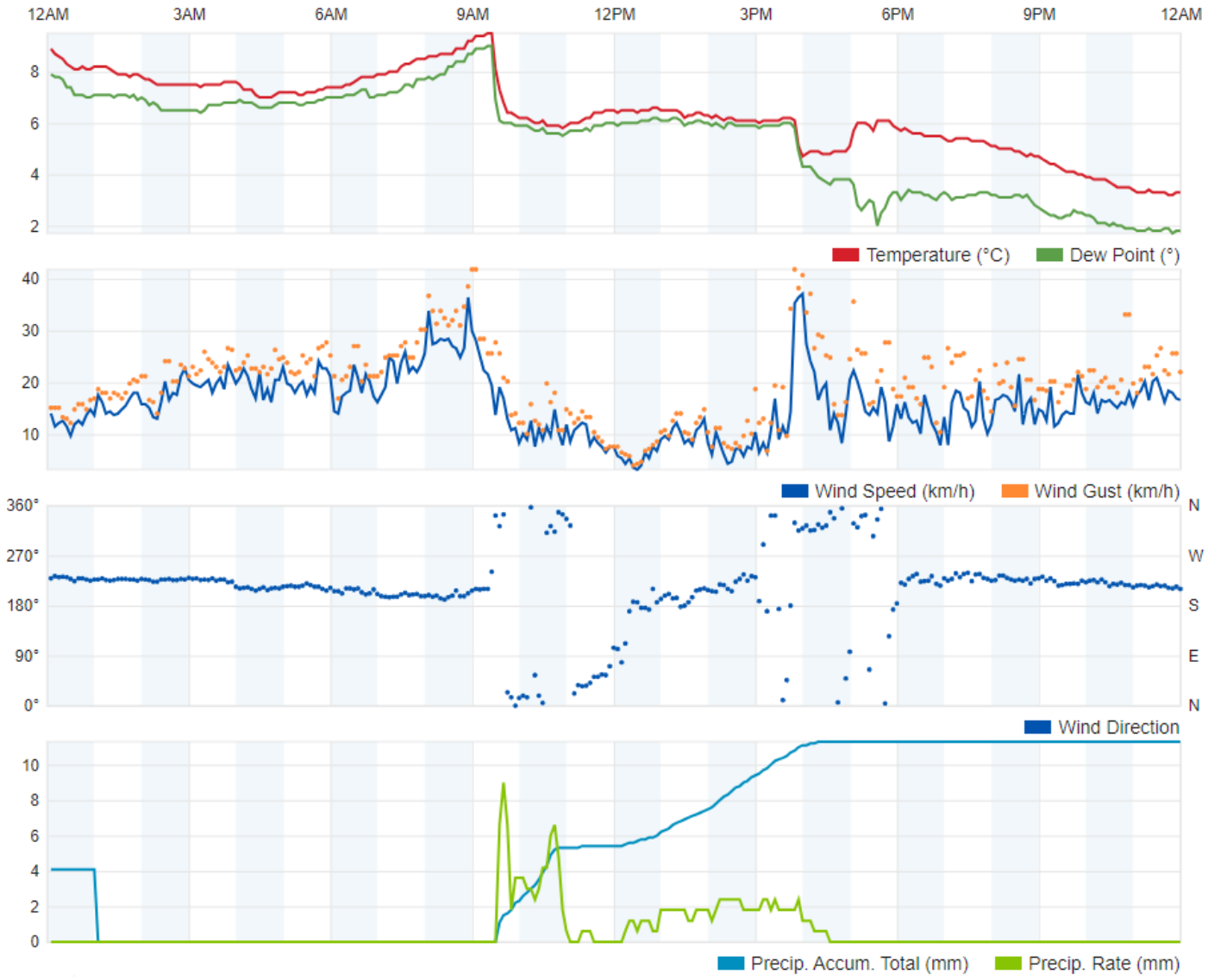
Representative value taken to be 29dB L_{A90}

APPENDIX 2 – WEATHER DATA

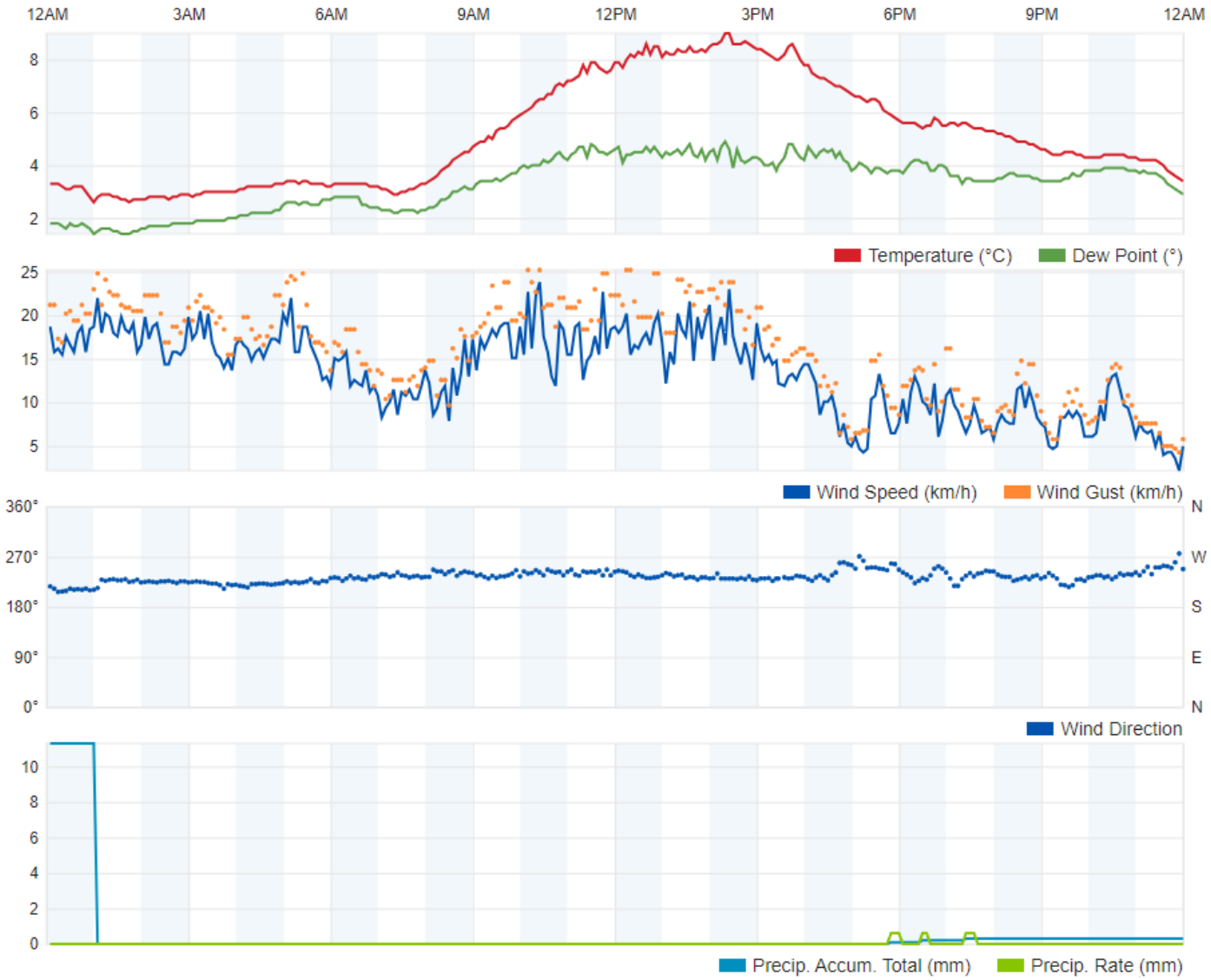
Wednesday 21/02/2024



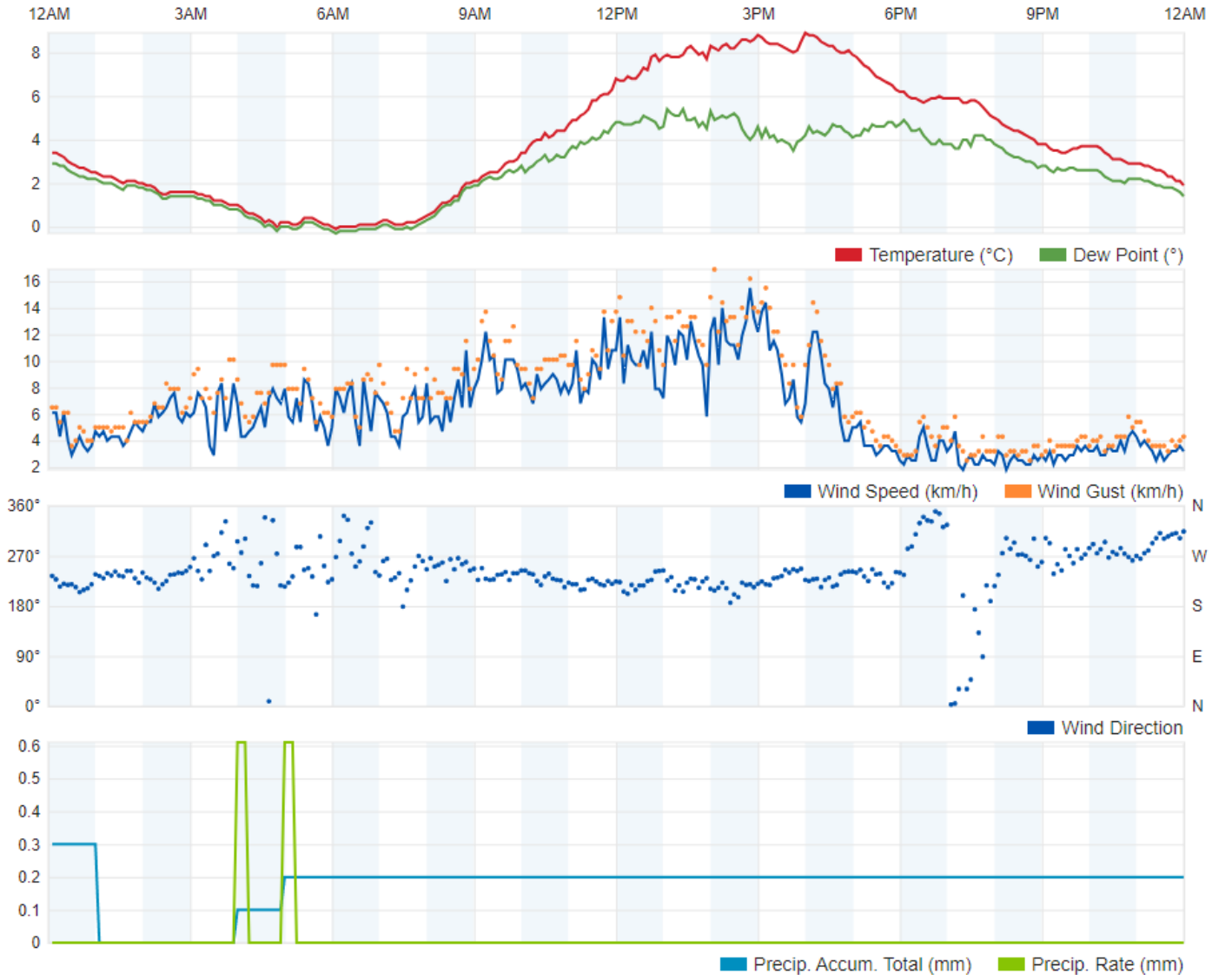
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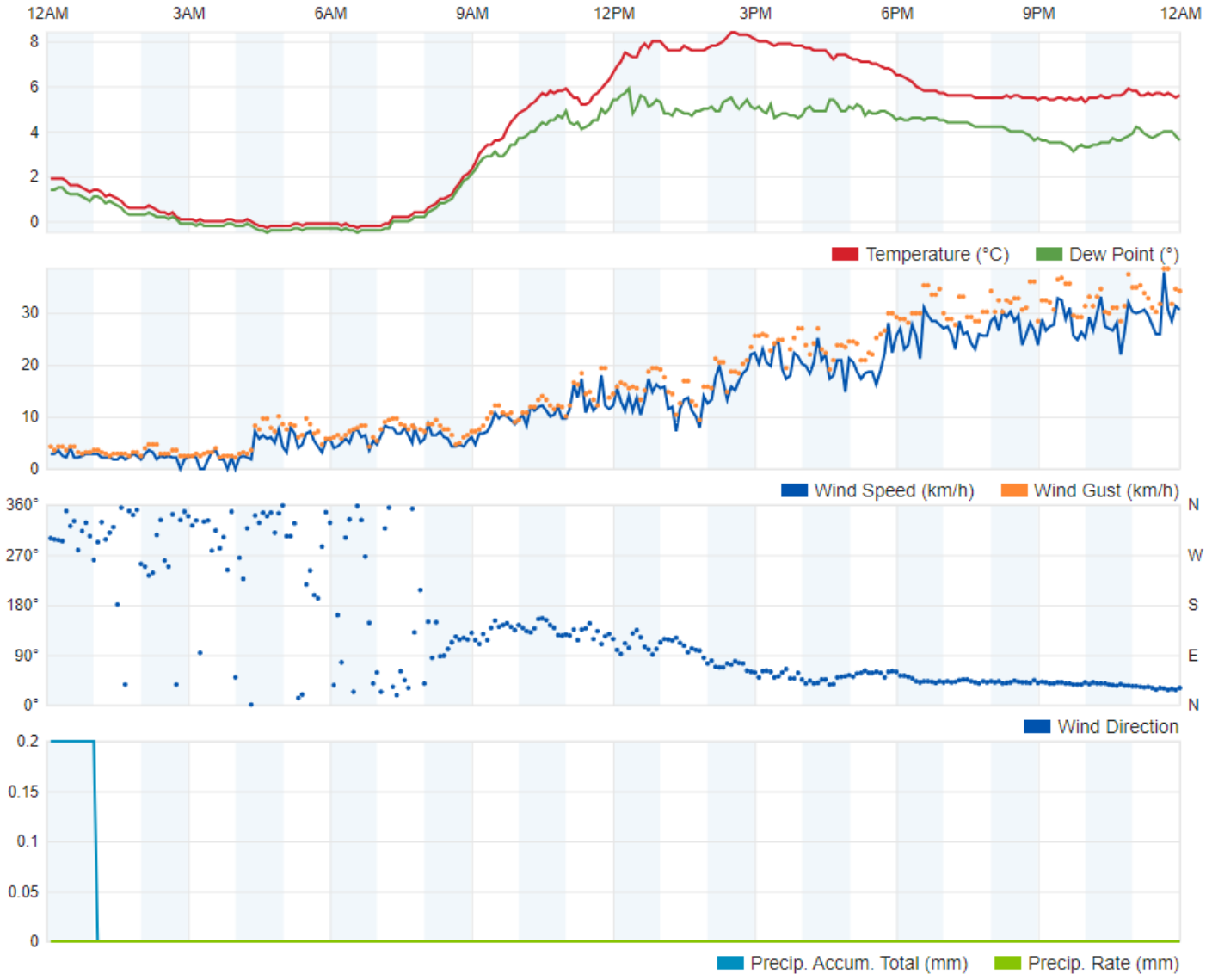
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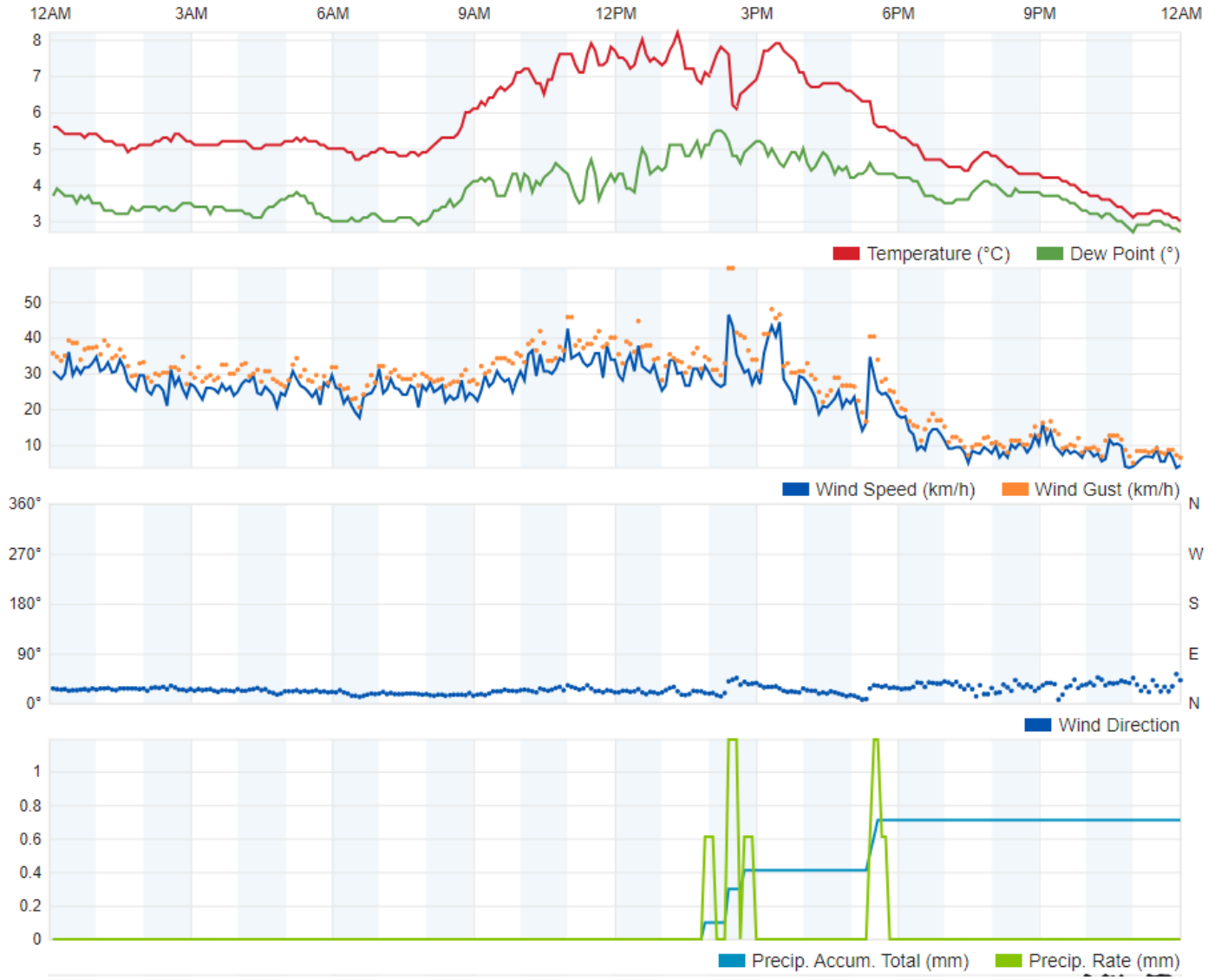
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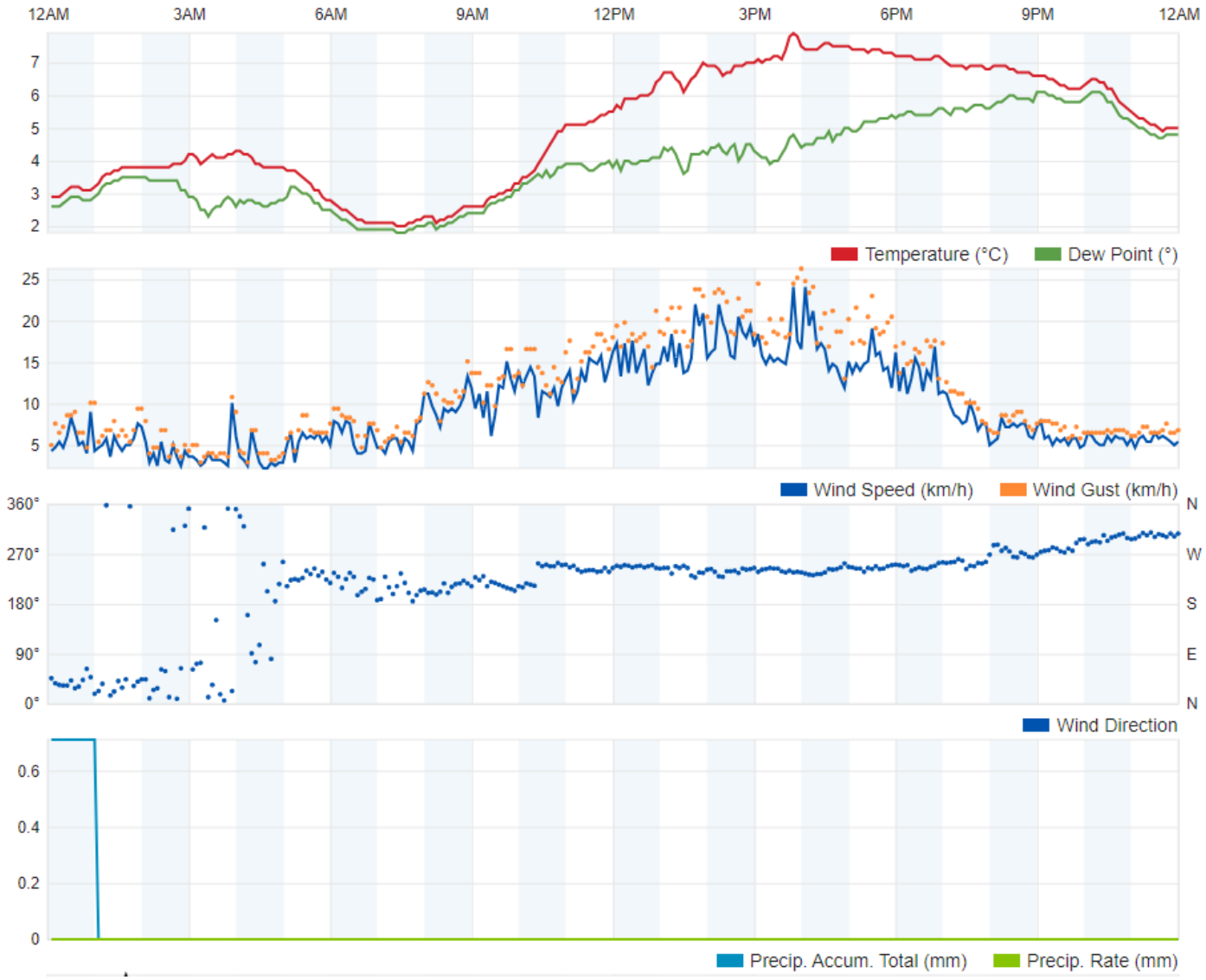
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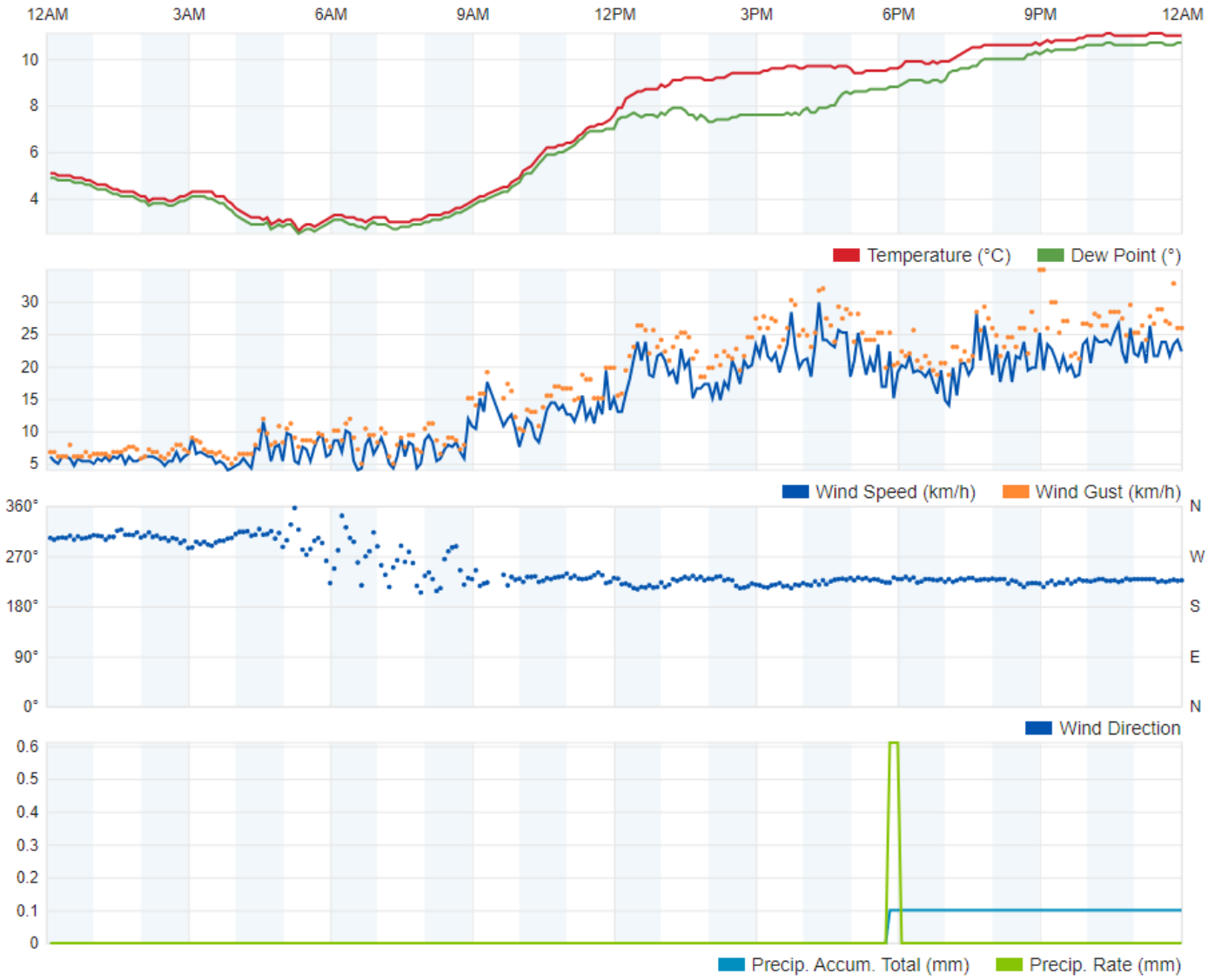
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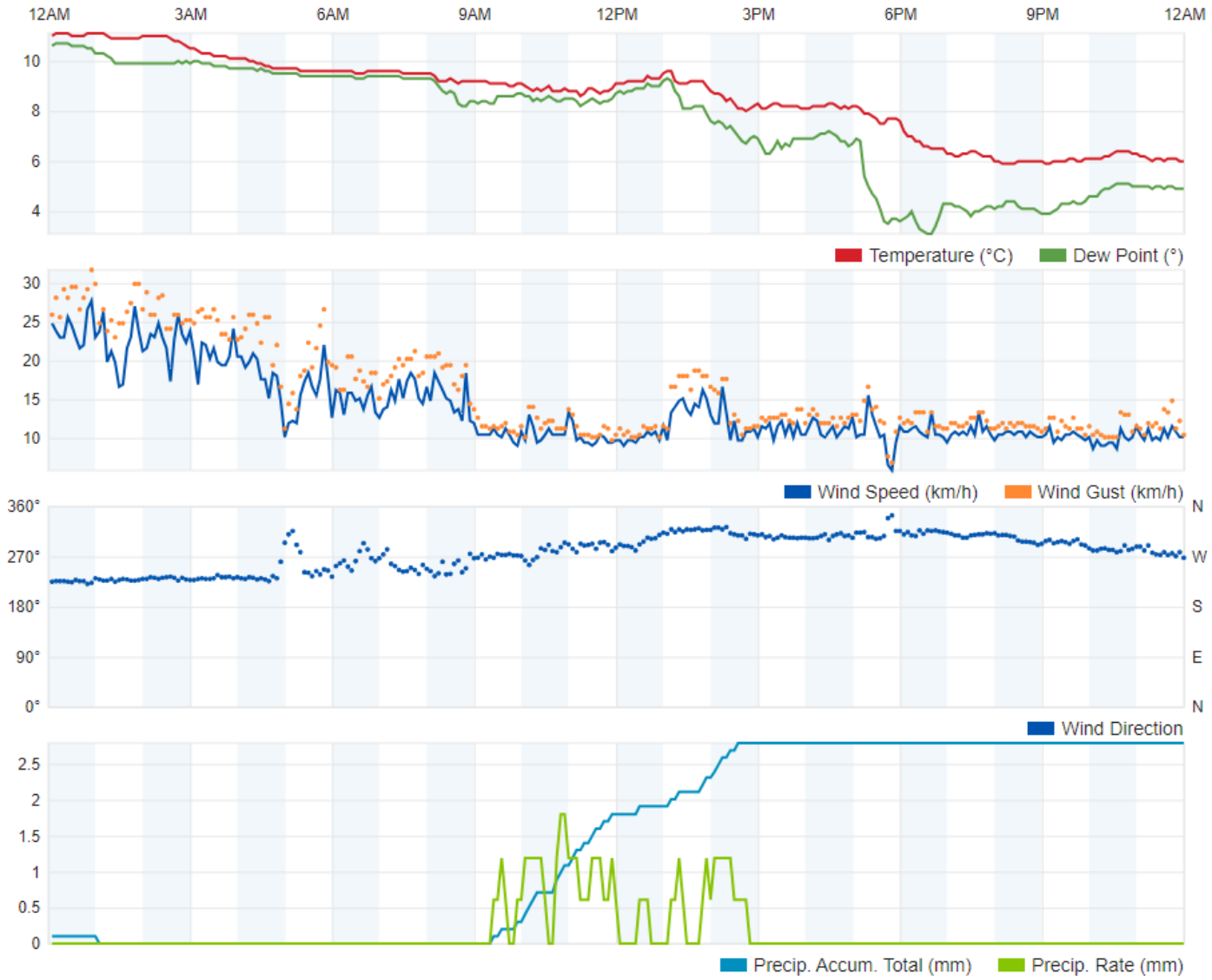
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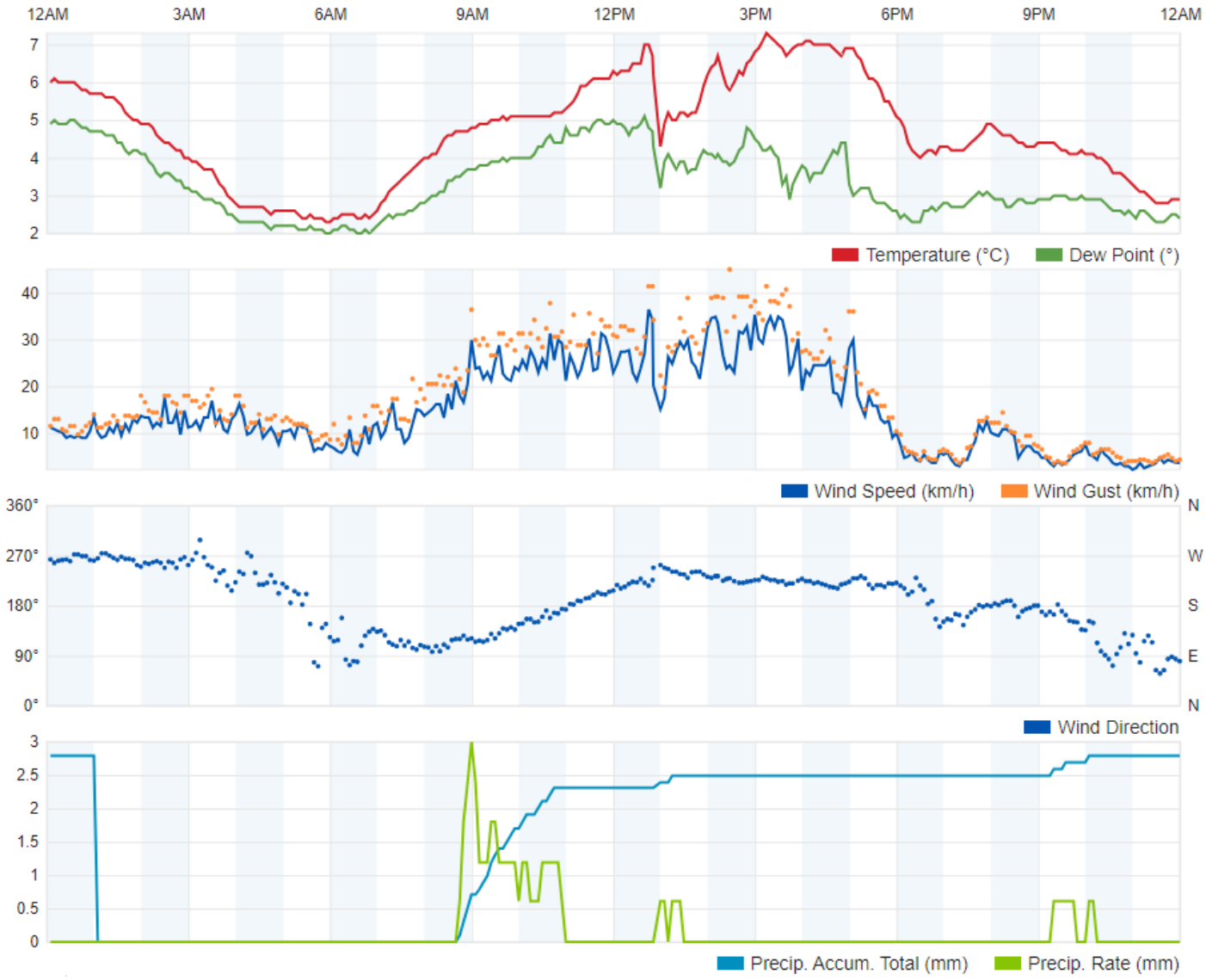
Wednesday 28/02/2024



Thursday 29/02/2024



Friday 01/03/2024



DISCLAIMER

a) This document is limited to addressing the specific acoustic issues contained herein, and its content is based on drawings and information provided to date by our Client/their Design Team.

b) All findings, comments, recommendations, etc., in this document are for acoustic purposes only; any and all other considerations and requirements, e.g. structural, airflow, thermal, fire safety, CDM compliance, determination of whether materials are dangerous, hazardous, deleterious, etc. (non-exhaustively), are the responsibility of other such suitably qualified specialists to check and advise on.

c) All findings, comments, recommendations, etc., in this document have been prepared with reasonable skill and care by BTA, within the scope of our Client's brief and timescales. Calculations and estimates upon which BTA's findings are elaborated are based on reasonable assumptions and industry practice that, by their nature, involve uncertainties that could cause future onsite results to differ materially from those predicted. BTA does not guarantee or warrant any calculation or estimate made, especially those based on data measured by third parties or information provided by third parties to BTA or otherwise relied upon by third parties. Any third-party information required and/or provided for the purpose of completing this document should not be considered as verified by BTA.

d) BTA's work may occasionally involve provision of acoustic performance advice and acoustic design recommendations that others may choose to regard as a "specification" under CDM 2015 (and thus others may occasionally choose to regard BTA to be a "Designer" under CDM 2015). Notwithstanding this, it is always the responsibility of others (Principal Designer) to approve/incorporate into their final design – or not – their final specification selections; although these may be based on BTA's acoustic performance advice, as BTA neither has control over how or whether BTA's acoustic advice is incorporated into the final design by others, nor any power to enforce that any such final specification selections made by others based on BTA's advice are appropriate in any regard beyond their acoustic performance qualities, it also remains the responsibility of others under CDM 2015 to ensure that any ancillary (non-acoustic) considerations in the course of selection, installation, maintenance, etc. of final specifications are advised upon by such relevantly qualified specialists (non-acoustic, and therefore non-BTA), and that any safety precautions identified in the course of their consideration by others are taken by others (the Principal Designer, Designers, Contractors, Client, etc.).

e) Products and materials that perform well acoustically tend to be heavier than standard products. Use of these products and materials may increase the weight of the element, and the CDM Principal Designer, Client, etc. must take care to ensure that this risk is mitigated as far as possible with appropriate changes to their design, and the Client, Principal Contractor, Contractor, Installer, Fitter, etc. must ensure that appropriate and safe lifting and installation techniques, maintenance, etc. are used to reduce any remaining risk. Wherever BTA advises that works such as acoustic barriers are desirable to attenuate noise, care must be taken by the CDM Principal Designer, Client, etc. to ensure that the risks associated with constructing and maintaining bunds, walls, fences, etc. are mitigated as far as possible with appropriate changes to their design, and the Client, Principal Contractor, Contractor, Installer, Fitter, etc. must ensure that appropriate and safe construction and installation techniques, maintenance, etc. are used to reduce any remaining risk.

f) This document has been prepared for the sole use, benefit, and information of our direct Client for the purposes agreed at the time of their formal instruction, and the information contained herein is the sole property of, and confidential to, our direct Client. The liability of BTA in respect of the information contained herein will not extend to any third party.