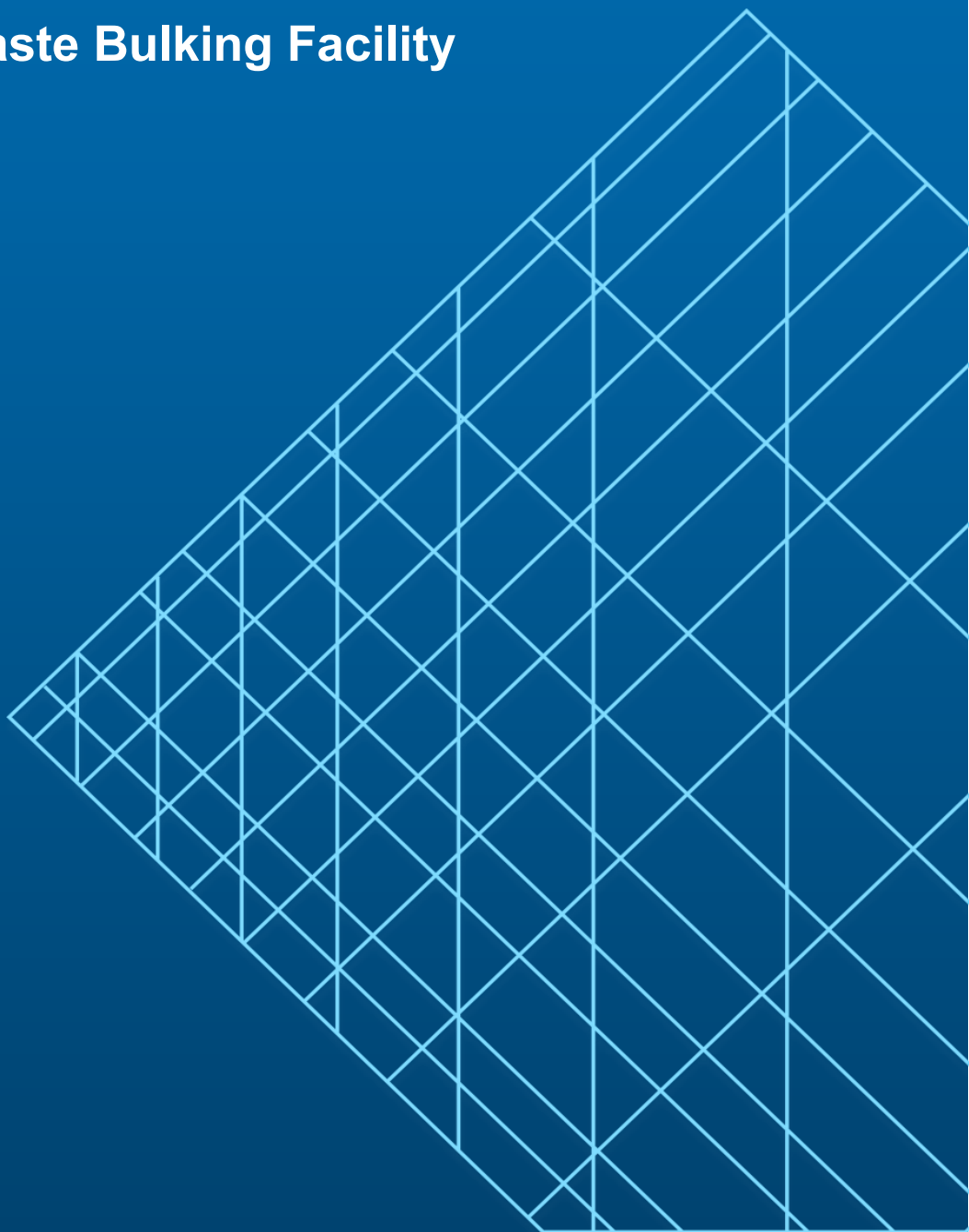
Hunter ACOUSTICS

Independent Acoustic Consultancy Practice

Noise Impact Assessment

Temporary Waste Bulking Facility
Blaenavon

8043/NIA1



© Hunter Acoustics Ltd

Hunter ACOUSTICS

Independent Acoustic Consultancy Practice

Henstaff Court Business Centre
Llantrisant Road, Cardiff
CF72 8NG

t: +44(0)2920 891020

e: enquiries@hunteracoustics.co.uk

w: www.hunteracoustics.co.uk

Noise Impact Assessment

Project:	**Temporary Waste Bulking Facility**
Site Address:	Kays & Kears Industrial Estate Blaenavon NP4 9AZ
HA Reference:	8043/NIA1
Date:	15/07/2026
Client:	Torfaen CBC Tŷ Blaen Torfaen Panteg Way, New Inn, Pontypool NP4 0LS
Contact:	Lauren.Walker@torfaen.gov.uk

ANC ACOUSTICS & NOISE CONSULTANTS

Constructionline Gold Member

smas worksafe consultant www.smasltd.com as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT

© Hunter Acoustics Ltd

ISSUE / REVISION

Rev	Date			
0	15 July 2026	**Filename**	26.8043_NIA1	
		Description	First issue	
			Prepared by:	**Checked by:**
		Name	Paul McGrath BSc(Hons) MIOA	Meirion Townsend BSc(Hons) MIOA
		Signature		

DOCUMENT CONTROL

Hunter Acoustics has prepared this report for Torfaen CBC ("the Client"), under the agreed terms of appointment for acoustic consultancy services. This report is for the sole and specific use of the Client, and Hunter Acoustics shall not be responsible for any use of this report or its contents for any purpose other than that for which it was prepared and provided.

Should the Client wish to distribute copies of this report to other parties for information, the whole report should be copied, however no professional liability or warranty shall be extended to other parties by Hunter Acoustics in this connection without the explicit written agreement thereto by Hunter Acoustics.

ACCESSIBILITY HELP

- Zoom in or out by holding down CTRL and turning the mouse wheel.
- CTRL and click on the table of contents or references to tables/figures/sections to navigate.
- Press CTRL and Home key to return to the top of the document.
- Press Alt-left arrow to return to your previous location.

TABLE OF CONTENTS

EXECUTIVE SUMMARY **5**

1. INTRODUCTION **6**

2. CRITERIA **7**

2.1 Planning Policy Wales 7
2.2 Technical Advice Note (Wales) 11 8
2.3 British Standard 4142:2014+A1:2019 9
2.4 British Standard 8233:2014 11

3. SOUND SENSITIVE RECEIVERS **12**

4. ENVIRONMENTAL NOISE SURVEY **13**

4.1 Procedures 13
4.2 Meteorological Conditions 13
4.3 Measurement Equipment 14
4.4 Results 14

5. SOURCE SAMPLE MEASUREMENTS **15**

5.1 Procedure 15
5.2 Equipment Used 16
5.3 Results 17

6. NOISE MODELLING **18**

6.1 Source Plant Noise Data 18
6.2 Barriers 18
6.3 Noise Model Scenarios 18
6.4 Noise Model Results 20

7. ASSESSMENT OF NOISE IMPACT **21**

7.1 Scenario 1 21
7.2 Scenario 2 22
7.3 Context 23
7.4 Initial Recommendations 23
7.5 Mitigated Assessment 25

8. GOOD PRACTICE GUIDE **25**

9. CONCLUSION **26**

APPENDIX A - ACOUSTIC TERMINOLOGY 27

APPENDIX B - DIAGRAMS, GRAPHS AND TABLES 28

APPENDIX C - NOISE MODELLING 38

C.1 Noise Model Input Data 38
C.2 Noise Model Scenarios 38
C.3 Noise Model 3D Views 39
C.4 Noise Model Contour Plots 41

APPENDIX D – BS 4142:2014+A1:2019 ASSESSMENTS 43

APPENDIX E - DRAWING LISTS 47

EXECUTIVE SUMMARY

This is a preliminary noise impact assessment for the planning application for a Temporary Waste Bulking Facility at Kays & Kears Industrial Estate, Blaenavon.

The temporary facility is proposed as an interim measure while Torfaen County Borough Council (TCBC) proceeds with plans to construct a longer-term solution.

The proposal will comprise the development of three bays for the bulking of household collected cardboard, paper and glass, as well as a temporary welfare cabin.

Glass is to be deposited on site from kerbside collection vehicles and then pushed into the glass bay by a JCB shovel. Waste glass from the bays is to be loaded into HGV collections twice a week.

Glass noise is indicated to be the significant noise factor, with card and paper generating very little noise. Due to the high glass noise levels, the prominent noise characteristics, the very low existing background sound levels and the topography of the land, a significant impact is indicated likely.

Initial recommendations are set out in this report including:

- On-site screening/structures
- Reduced shovelling periods
- Liaison with local residents on glass shovelling and loading schedules

1. INTRODUCTION

A Temporary Waste Bulking Facility is proposed at Kays & Kears Industrial Estate, Blaenavon, NP4 9AZ.

The proposed facility is to handle card, paper and glass waste. The recycling facility is proposed to operate on a Monday to Friday schedule, with standard opening hours set from 0700 to 1700hrs. During the winter months, operational activities will be adjusted to take place between 0800 and 1600hrs daytime during weekdays only. However, depending on future demand, weekend operation may be required. No evening or night-time operations are proposed.

A noise impact assessment is submitted to accompany the planning application.

This report has therefore been commissioned to determine existing background sound levels and predict noise levels from proposed activities, allowing an assessment of the impact to be made.

2. CRITERIA

2.1 Planning Policy Wales

The Welsh Government's Planning Policy Wales (Edition 12) dated February 2024 sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters which together with PPW provide the national planning policy framework for Wales.

Reference to noise is made in Paragraph 6.74: Framework for Addressing Air Quality and Soundscape, which states that:

"6.74 The planning system should maximise its contribution to achieving the well – being goals, and in particular a healthier Wales, by aiming to reduce average population exposure to air and noise pollution. In doing so, it should consider the long – term effects of current and predicted levels of air and noise pollution on individuals, society and the environment and identify and pursue any opportunities to reduce, or at least, minimise population exposure to air and noise pollution".

Reference is also made to noise in Paragraphs 6.7.15 - 17:

"Location of Commercial, Industrial and other Potentially Polluting Development

6.7.15 For the purposes of this section, potentially polluting development includes commercial, industrial, energy and agricultural or transport infrastructure. Such development should be located in areas where there is low potential for public exposure, or where its impact can be minimised. Novel or new development types may potentially cause pollution and should be carefully considered, and where appropriate, decisions should be based on the precautionary principle.

6.7.16 Relevant considerations in making planning decisions for potentially polluting development are likely to include:

- *location, including the reasons for selecting the chosen site itself;*
- *impact on health and amenity;*
- *effect of pollution on the natural and built environment and the enjoyment of areas of landscape and historic and cultural value;*
- *impact on groundwater and surface water quality;*
- *effect on biodiversity and ecosystem resilience, including where there may be cumulative impacts on air or water quality which may have adverse consequences for biodiversity and ecosystem resilience;*
- *the risk and impact of potential pollution from the development, insofar as this might lead to the creation of, or worsen the situation in, an air quality*

management area, a noise action planning priority area or an area where there are sensitive receptors; and

- *impact on the road and other transport networks, and in particular on traffic generation, particularly where the proposed development is not transport infrastructure itself.*

6.7.17 The location of potentially polluting development adjacent to sensitive receptors will be unacceptable where health and amenity impacts cannot be minimised through appropriate design and mitigation measures. It is the overall expectation that levels of pollution should be reduced as far as possible and for this reason the location of potentially polluting development should be taken into account as part of overall strategies in development plans to ensure it can be appropriately located and maximum environmental benefits can be gained through measures such as green infrastructure."

2.2 Technical Advice Note (Wales) 11

The below summarises the advice given TAN11 (1997) regarding new noise generating developments.

"3. This note provides advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business. It outlines some of the main considerations which local planning authorities should take into account in drawing-up development plan policies and when determining planning applications for development which will either generate noise or be exposed to existing noise sources.

4. Local authorities should adopt a corporate approach and ensure close co-operation between planning and environmental health departments when considering noise and noise generating developments.

Development Control
Noise generating development
8. Local planning authorities must ensure that noise generating development does not cause an unacceptable degree of disturbance. They should also bear in mind that if subsequent intensification or change of use results in greater intrusion, consideration should be given to the use of appropriate conditions.

9. Noise characteristics and levels can vary substantially according to their source and the type of activity involved. In the case of industrial development, for example, the character of the noise should be taken into account as well as its level. Sudden impulses, irregular noise or noise which contains a distinguishable continuous tone will require special consideration. In addition to noise from aircraft landing and taking off, noise from aerodromes is likely to result from engine testing as well as ground movements. The impact of noise from sport, recreation and entertainment will depend to a large extent

on frequency of use and the design of facilities. Advice on assessing noise and on factors to consider in relation to the major noise sources including roads, railways, airports, industrial and recreational noise and their measurement is given in Annex B.

Noise from industrial and commercial developments
B17. The likelihood of complaints about noise from industrial development can be assessed, where the Standard is appropriate, using guidance in BS 4142: 1990. Tonal or impulsive characteristics of the noise are likely to increase the scope for complaints and this is taken into account by the "rating level" defined in BS 4142. This "rating level" should be used when stipulating the level of noise that can be permitted. The likelihood of complaints is indicated by the difference between the noise from the new development (expressed in terms of the rating level) and the existing background noise. The Standard states that, 'A difference of around 10 dB or higher indicates that complaints are likely. A difference of around 5 dB is of marginal significance'. Since background noise levels vary throughout a 24 hour period it will usually be necessary to assess the acceptability of noise levels for separate periods (e.g. day and night) chosen to suit the hours of operation of the proposed development. Similar considerations apply to developments that will emit significant noise at the weekend as well as during the week. In addition, general guidance on acceptable noise levels within buildings can be found in BS 8233: 1987."

TAN11 refers to BS 4142:1997 and BS 8233:1987. These have been superseded by BS 4142:2014+A1:2019 (see Section 2.3 below) and BS 8233:2014 (see Section 2.4 below).

2.3 British Standard 4142:2014+A1:2019

British Standard 4142:2014+A1:2019 "Methods for rating and assessing industrial and commercial sound", provides current guidance for the assessment of industrial noise affecting residential receivers.

This standard describes a rating method comparing L_{Aeq} noise levels from the industrial source with pre-existing background L_{A90} levels at the residential receiver. It advises at a difference (industrial noise - background) of:

- +10dB or higher, likely to be an indication of a significant adverse impact, depending on the context.
- A difference of + 5dB, likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

A sliding scale of penalties can be applied to industrial/commercial sound levels which have acoustically distinguishing characteristics, including tonality, impulsivity and intermittency.

Tonality – A penalty of 2dB for a tone which is just perceptible at the noise receptor, 4dB where it is clearly perceptible, and 6dB where it is highly perceptible.

Impulsivity – A penalty of 3dB for impulsivity which is just perceptible at the noise receptor, 6dB where it clearly perceptible, and 9dB where it is highly perceptible.

Other sound characteristics – Where the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied

Intermittency – If intermittency is readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied.

BS 4142:2014 states under Section 11;

"Where the initial estimate of the impact needs to be modified due to the context, take all pertinent factors into consideration, including the following.

1) *The absolute level of sound. For a given difference between the rating level and the background sound level, the magnitude of the overall impact might be greater for an acoustic environment where the residual sound level is high than for an acoustic environment where the residual sound level is low.*

   Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.

   Where residual sound levels are very high, the residual sound might itself result in adverse impacts or significant adverse impacts, and the margin by which the rating level exceeds the background might simply be an indication of the extent to which the specific sound source is likely to make those impacts worse.

2) *The character and level of the residual sound compared to the character and level of the specific sound. Consider whether it would be beneficial to compare the frequency spectrum and temporal variation of the specific sound with that of the ambient or residual sound to assess the degree to which the specific sound source is likely to be distinguishable and will represent an incongruous sound by comparison to the acoustic environment that would occur in the absence of the specific sound. Any sound parameters, sampling periods and averaging time periods used to undertake character comparisons should reflect the way in which sound of an industrial and/ or commercial nature is likely to be perceived and how people react to it.*

NOTE 3 Consideration should be given to evidence on human response to sound and, in particular, industrial and/or commercial sound where it is available. A number of studies are listed in the "Effects on humans of industrial and commercial sound" portion of the "Further reading" list in the Bibliography.

3) *The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions, such as:*

i) facade insulation treatment;
ii) ventilation and/or cooling that will reduce the need to have windows open so as to provide rapid or purge ventilation; and
iii) acoustic screening."

In addition to the above, the Association of Noise Consultants (ANC) have produced a Technical Note to BS 4142:2014+A1:2019, dated March 2020 (v1.0).

It states under 'Other Contextual Matters' – *"The assessor may also wish to consider matters such as the:*

- *character of a particular neighbourhood;*
- *former uses at or close to a site;*
- *legitimacy of the industrial use, e.g. planning permissions or environmental permits;*
- *implementation of best practicable means for a given process or activity; or*
- *local convention or perceptions.*

When relying on such matters, it is incumbent for the assessor to make clear all elements of context."

It goes on to say, *"There is no theoretical limit to how the context can or should influence the impact assessment, but any alteration of the conclusions of an assessment due to context should be sufficiently explained and justified for the specific circumstances in question."*

2.4 British Standard 8233:2014

British Standard 8233:2014 'Guidance on sound insulation and noise reduction for buildings' includes internal noise criteria of habitable rooms in residential dwellings, as shown below;

Table 2.1 – BS 8233:2014 Internal Ambient Noise Criteria for Habitable Rooms

Location	Desired		Reasonable *	
	07:00 to 23:00	23:00 to 07:00	07:00 to 23:00	23:00 to 07:00
Living room	35 dB $L_{Aeq,16hr}$	-	40 dB $L_{Aeq,16hr}$	-
Dining room/area	40 dB $L_{Aeq,16hr}$	-	45 dB $L_{Aeq,16hr}$	-
Bedroom	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$	40 dB $L_{Aeq,16hr}$	35 dB $L_{Aeq,8hr}$

* *NOTE 7 states "Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5dB and reasonable internal conditions still achieved.*

3. SOUND SENSITIVE RECEIVERS

In order to assess impact, it is first necessary to define the existing ambient and background sound climate at the agreed nearest Sound Sensitive Receivers (SSRs).

Figure 3.1 below shows the development site and the closest existing SSRs.

Figure 3.1 – Site Plan Showing Nearest SSRs & Measurement Locations

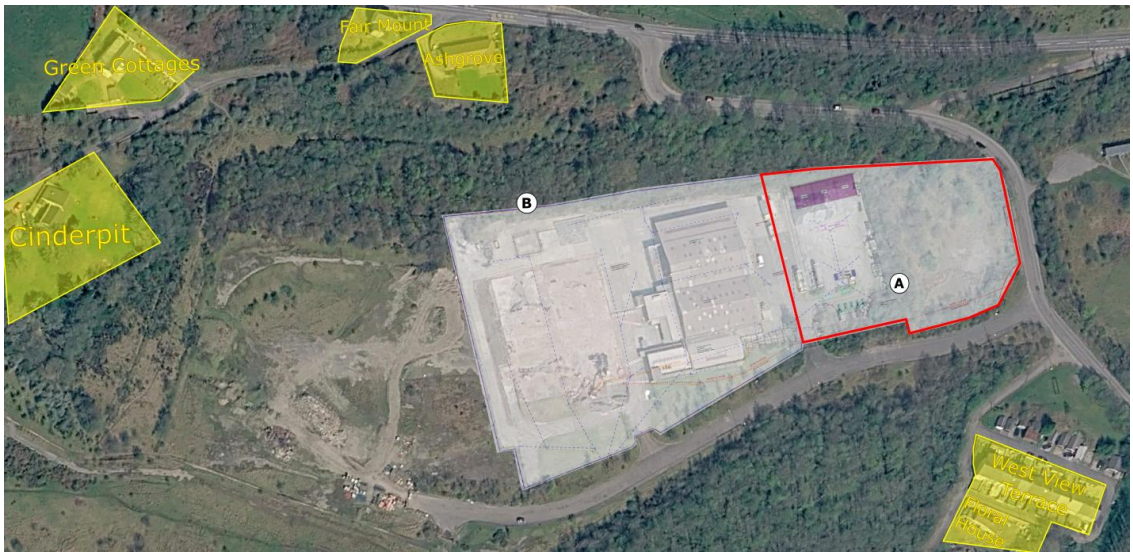


Table 3.1 – Nearest Sound Sensitive Receivers (Distance to Nearest Boundary)

Description	Distance (m)
Residential dwellings to the south of the site: West View Terrace & Floral House	65m from site boundary 130m from waste bays
Residential dwellings to the north-west: Ashgrove and Fair Mount	150m from site boundary & waste bays
Residential dwellings to the west: Green Cottages and Cinderpit	300m from site boundary & waste bays

4. ENVIRONMENTAL NOISE SURVEY

4.1 Procedures

Continuous noise monitoring was carried out from 1110hrs on Friday, 19 June 2026 to 1430hrs on Tuesday, 23 June 2026 at positions A and B.

Data including L_{Amax}, L_{Aeq} and background L_{A90} was logged at 1 minute intervals over the monitoring period, along with continuous audio and 100ms data to allow source identification and further detailed analysis of results if required.

Site plan in Figure 3.1 above shows the development site and continuous monitoring positions used, namely:

Table 4.1 – Continuous Monitoring Location Details

Position	Description
A	Located on south-eastern boundary of the site. Representative of ambient and background sound levels at West View Terrace
B	Located on north-western boundary of the site. Representative of ambient and background sound levels at Ashgrove.

Note: All microphone positions approximately 1.5m above local ground level.

4.2 Meteorological Conditions

Approximate weather conditions are shown in time history graphs in Figure B.1 to Figure B.5 of Appendix B.

To summarise, the weather conditions during the monitoring period were dry with a light northerly breeze. A couple of rain showers occurred during the evening of the 19th and morning of the 20th.

4.3 Measurement Equipment

The following measurement equipment was used during the surveys:

Table 4.2 – Noise Monitoring Equipment List

Make	Description	Model	Serial Number	Last Calibrated	Certificate No.
NTi	Type 1 - Sound Level Meter	XL2-TA	A2A-10021-E0	28 August 2025	UK-25-112
	Preamplifier	MA220	5435	28 August 2025	UK-25-112
	Microphone Capsule	MC230	8547	28 August 2025	UK-25-112
NTi	Type 1 - Sound Level Meter	XL2-TA	A2A-19813-E0	23 October 2025	UK-25-143
	Preamplifier	MA220	10302	23 October 2025	UK-25-143
	Microphone Capsule	MC230A	A21824	23 October 2025	UK-25-143
Larson Davis	Calibrator (94.00dB / 114.03dB @ 1kHz)	CAL200	19047	29 August 2025	45898-19047-CAL200

Measurement systems were calibrated before and after the surveys and no variation occurred.

Note: Copies of traceable calibration certificates for all equipment are available upon request.

4.4 Results

Time history graphs in Figure B.6 and Figure B.7 of Appendix B show L_{Amax}, L_{Aeq} and L_{A90} sound pressure levels measured at positions A and B

The following range of $L_{Aeq,1hr}$ noise levels were measured across the daytime (0700-1700hrs) periods.

Table 4.3 – Summary of Hourly $L_{Aeq,1hr}$ Noise Levels

	$L_{Aeq,1hr}$ (dB)	
	Range	Modal
Position A	42 - 50	47
Position B	39 - 50	44

Graphs in Figure B.8 to Figure B.11 of Appendix B show statistical analysis of background sound levels measured at positions A and B.

The following minimum consistent daytime and night-time background L_{A90} sound levels have been determined;

Table 4.4 – Minimum Consistent Daytime and Night-time Background L_{A90} Results

Period	Position	
	A	B
Weekday Daytime (0700-1900hrs) $L_{A90,1hr}$ (dB)	43	39
Weekend Daytime (0700-1900hrs) $L_{A90,1hr}$ (dB)	40	35

The background sound climate was controlled by distant road traffic noise.

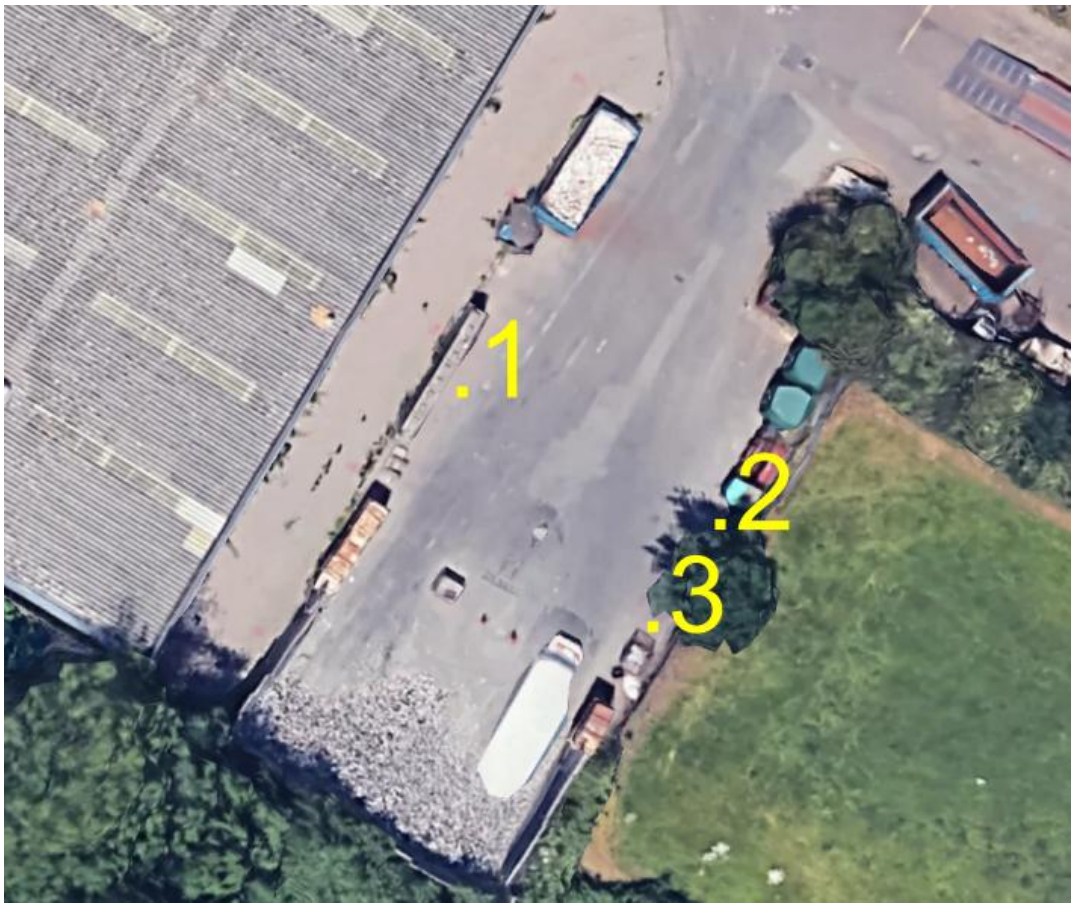
5. SOURCE SAMPLE MEASUREMENTS

5.1 Procedure

Noise measurements of proposed activities were undertaken on Tuesday, 30 June 2026 at a Torfaen CBC's Ty Coch facility to gather source data for use in the prediction model.

This consisted of external measurements of glass tipping and loading glass into waste removal HGVs. Measurements were taken at Positions 1-3:

Figure 5.1 - Sample Measurement Positions



Parameters logged included duration, $L_{Amax,F}$, L_{Aeq}, L_{A90} and third octave band spectra, along with continuous audio and 100ms data to allow detailed post analysis of results.

5.2 Equipment Used

The following measurement equipment was used during the surveys:

Table 5.1 – Equipment List

Make	Description	Model	Serial Number	Last Calibrated	Certificate No.
NTi	Type 1 - Sound Level Meter	XL2-TA	A2A-08723-E0	11 June 2025	UK-25-074
	Preamplifier	MA220	1820	11 June 2025	UK-25-074
	Filters	XL2-TA	A2A-08723-E0	11 June 2025	UK-25-074
	Microphone Capsule	MC230	9381	11 June 2025	UK-25-074
NTi	Type 1 - Sound Level Meter	XL2-TA	A2A-10021-E0	28 August 2025	UK-25-112
	Preamplifier	MA220	5435	28 August 2025	UK-25-112
	Microphone Capsule	MC230	8547	28 August 2025	UK-25-112
NTi	Type 1 - Sound Level Meter	XL2-TA	A2A-14577-E0	24 June 2026	UK-26-082
	Preamplifier	MA220	7485	24 June 2026	UK-26-082
	Microphone Capsule	MC230	A15594	24 June 2026	UK-26-082

Measurement systems were calibrated before and after the surveys and no variation occurred.

Note: Copies of traceable calibration certificates for all equipment are available upon request.

5.3 Results

The following details results of sample measurements undertaken:

Table 5.2 – Source Sample Measurement Results

Position	Description	Duration (mm:ss)	Distance (m)	L_{Aeq} (dB)	$L_{Amax,F}$ (dB)
2	Glass lorries tipping glass into pile, driver getting out to sweep remnants into pile, forklift with sweeper attachment brushes the area to clear glass into the pile	08:25	10	74.7	89.8
2	Loading shovel arriving and pushing glass into the pile to raise the height of the pile to make space for vehicles and ready for loading into waste removal	07:41	16	85.3	99.7
3	HGV glass removal arrives and is loaded with glass from the pile via the loading shovel which drops it in from the top, white noise beeper on loading shovel	18:47	12	86.3	103.3
1	Glass lorries tipping glass into pile, driver getting out to sweep remnants into pile, forklift with sweeper attachment brushes the area to clear glass into the pile	08:26	10	74.1	91.8
1	Loading shovel arriving and pushing glass into the pile to raise the height of the pile to make space for vehicles and ready for loading into waste removal	07:41	16	86.5	99.2
2	HGV glass removal arrives and is loaded with glass from the pile via the loading shovel which drops it in from the top, white noise beeper on loading shovel	18:47	12	87.5	103.7
2	Kerbside Collection Vehicle depositing glass	00:04	10	84.3	89.8
2	Kerbside vehicle pass-by	00:05	10	73.5	75.4
2	Kerbside vehicle reversing	00:27	10	70.6	79
2	JCB Shovel	-	10	72.9	83.4
3	JCB Shovel Reversing (Broadband Bleeper)	up to 10s	12	84.6	100.6
3	JCB Shovel loading glass into HGV	5-15s	12	91.8	103.3
2	JCB Shovel pushing glass into bays	5-20s	16	91.2	99.7
3	HGV approach	00:10	12	66.5	69.5
3	HGV Idling		12	59.7	65.1

Octave band data is included in Table B.1 in Appendix B.

6. NOISE MODELLING

Our analysis has used the proprietary iNoise(v2026 v0.1) computer modelling software, in conjunction with procedures of ISO 9613-2:2024.

This model allows noise levels from noise sources (including building facades) to be predicted over large distances and varying terrain. Attenuation is included accounting for distance, air absorption, ground absorption and screening losses from site topography/local structures. Standard LiDAR DTM 1m data has been used for terrain modelling. The analysis predicts resultant noise levels at the SSRs.

Drawings used in our assessment are referenced in Appendix E.

6.1 Source Plant Noise Data

Source noise data used in the model for the various activities is detailed in Appendix C.1, taken from measured levels on site as discussed in Section 5.

6.2 Barriers

Waste bays are to be constructed using Legato interlocking 800mm wide concrete blocks, to a height of 4m.

6.3 Noise Model Scenarios

The following proposals are outlined in the site Method Statement:

Kerbside recycling and Trade recycling vehicles are scheduled to arrive on site for tipping activities two times per day. The first tipping session generally occurs between 09:00 and 11:00, with a second session typically taking place between 12:30 and 14:30. The average number of daily visits is shown in Table 1. Haulage collections are scheduled as follows: paper will be collected once a week; cardboard collections will occur between eight and ten times per week; and glass will be collected twice a week as shown in Table 2. No waste will remain on site for longer than seven days. The combined number of HGV trips in and out of site is shown in Table 3.

Vehicles will enter the site and follow a strict one-way system.

The material will be ejected from the vehicle onto the floor. The vehicle will then be guided into the second bay to tip the second material, and then the third bay to tip the third material. When the vehicle has reversed into the third bay, the next vehicle will be able to reverse into the first bay. There will be a maximum of two vehicles tipping at any one time, the middle bay will be a buffer between manoeuvring vehicles.

After each vehicle deposits waste, the JCB shovel will reposition the glass to minimize the risk of punctures. No more than three vehicles may deposit cardboard and paper before these materials are loaded into a standing trailer.

Table 1: Inward Vehicle Movement – deposit waste

Vehicles	**Numbers**	**Operating days[2]**
Kerbside Collection Vehicles	18	Monday to Friday
Trade Glass	1	Monday
Trade Cardboard	1	Monday to Wednesday

Table 2: Outward Vehicle Movement – collect waste

Collection	**Frequency**	**Operating Days**
Cardboard	10 per week	Daily + 2nd On Request
Paper	1 per week	On Request
Glass	2 per week	On Request

Table 3: Current HGV Vehicle Two-way Trips

Day	**In**	**Out**	**Two-Way**
Monday	40	40	80
Tuesday	40	40	80
Wednesday	40	40	80
Thursday	40	40	80
Friday	38	38	76
Weekly Average[3]	**40+13**	**40+13**	**79+26**

We have been advised by Torfaen CBC Waste & Recycling Operations team that the activities would occur as follows:

6.3.1 Scenario 1

Kerbside Vehicles depositing glass: as per the flows and hours above, 10no vehicles an hour. Forklift with brush to gather glass deposits (before glass waste is shovelled into bay).

Glass Shovelled into Bay: advised to take place 6no times a day and is likely to happen 3no times within each 2-hour tipping period. Typical duration measured around 5mins. 2no per hour has therefore been allowed in the model.

6.3.2 Scenario 2

Shovel loading glass from bay into HGV: takes place twice a week. 15-minute duration. Takes place separately from kerbside vehicles. Based on sample measurements this process contained approx. 5mins of glass tipping and 5mins of the JCB shovel manoeuvring (including broadband reversing bleepers)

Table C.3 sets out activities including flows/speeds of mobile plant, percentage on-times for fixed plant/activities and source heights.

6.4 Noise Model Results

6.4.1 Scenario 1

Predicted levels at critical receiver locations are shown in Table 6.1 below;

Table 6.1 – Scenario 1 Noise Map Predictions

Sound Sensitive Receiver (SSR)	Level Above Ground	Predicted $L_{Aeq,1hr}$ (dB)	Kerbside Vehicle Glass Predicted $L_{Amax,F}$ (dB)	JCB Shovelling Glass into Tip $L_{Amax,F}$ (dB)
Floral House	1.5m	45	42	61
	4.5m	46	43	62
West View Terrace	1.5m	46	44	62
	4.5m	50	45	64
Ashgrove	1.5m	50	55	64
Fair Mount	1.5m	39	38	55
	4.5m	40	45	56
Green Cottages	1.5m	42	49	55
	4.5m	46	53	56
Cinderpit	1.5m	38	37	54
	4.5m	43	37	59

The noise map model in Figure C.3 of Appendix C shows the predicted daytime noise contour plot across the surrounding area to critical SSRs at 1.5m above local ground height.

6.4.2 Scenario 2

Predicted levels at critical receiver locations are shown in Table 6.2 below;

Table 6.2 – Scenario 2 Noise Map Predictions

Sound Sensitive Receiver (SSR)	Level Above Ground	Predicted $L_{Aeq,1hr}$ (dB)	JCB Loading Glass into HGV $L_{Amax,F}$ (dB)	JCB Reversing Bleeper $L_{Amax,F}$ (dB)
Floral House	1.5m	39	60	57
	4.5m	42	63	59
West View Terrace	1.5m	40	61	59
	4.5m	45	66	63
Ashgrove	1.5m	53	75	65
Fair Mount	1.5m	32	53	51
	4.5m	37	59	54
Green Cottages	1.5m	37	58	55
	4.5m	39	60	56
Cinderpit	1.5m	33	54	52
	4.5m	37	58	54

The noise map model in Figure C.4 of Appendix C shows the predicted night-time noise contour plot across the surrounding area to critical SSRs at 1.5m above local ground height.

7. ASSESSMENT OF NOISE IMPACT

7.1 Scenario 1

7.1.1 Acoustic Character Correction

Measured glass noise at source exhibited impulsive characteristics, but no clear tonal characteristics, as assessed using the reference methods of BS4142. However, impulsive characteristics are not indicated to be clearly perceptible at SSRs.

However, based on predicted L_{max} levels at the receptors the very high frequencies of glass noise are likely to be highly perceptible from shovelling glass into the tip. Glass from kerbside vehicles is not indicated to be clearly perceptible except at Ashgrove.

A +3dB correction for readily distinguishable sound characteristics, and a +3dB correction for intermittency have therefore been included at the receptors.

7.1.2 BS 4142:2014+A1:2019 Assessments

Results of the noise impact assessments at SSRs summarised in Table 7.1 below;

Table 7.1 – Predicted Rating Levels at SSRs – Scenario 1

Sound Sensitive Receiver (SSR)	Predicted Daytime Rating Level at Ground Floor Level $L_{Ar,1hr}$ (dB)	Daytime Background Sound Level L_{A90} (dB)	Rating Level above background
Floral House	51	43	+8
West View Terrace	52	43	+9
Ashgrove	56	39	+17
Fairmount	45	39	+6
Green Cottages	48	39	+9
Cinderpit	44	39	+5

BS 4142 assessments for West View Terrace and Ashgrove are included in Table D.1 and Table D.2 of Appendix D.

Overall rating levels over background are indicated at up to+17dB. BS4142 advises a likely significant adverse impact at the majority of SSRs, depending on context.

7.2 Scenario 2

7.2.1 Acoustic Character Correction

Measured glass noise at source exhibited just perceptible impulsive characteristics, but no clear tonal characteristics, as assessed using the reference methods of BS4142. However, impulsive characteristics are not indicated to be clearly perceptible at SSRs. Broadband reversing alarms are neither tonal nor impulsive.

However, based on predicted L_{max} levels at the receptors the very high frequencies of glass noise are likely to be highly perceptible from shovelling glass into the HGV as well as reversing alarms. (*It should be investigated if reversing alarm noise levels can safely be reduced?)*

A +3dB correction for sound characteristics, and a +3dB correction for intermittency have therefore been included at the receptors.

7.2.2 BS 4142:2014+A1:2019 Assessments

Results of the noise impact assessments at SSRs summarised in Table 7.2 below:

Table 7.2 – Predicted Rating Levels at SSRs – Scenario 2

Sound Sensitive Receiver (SSR)	Predicted Daytime Rating Level at Ground Floor Level $L_{Ar,1hr}$ (dB)	Daytime Background Sound Level L_{A90} (dB)	Rating Level above background
Floral House	45	43	+2
West View Terrace	46	43	+3
Ashgrove	59	39	+20
Fairmount	38	39	-1
Green Cottages	43	39	+4
Cinderpit	39	39	+0

BS 4142 assessments for West View Terrace and Ashgrove are included in Table D.3 and Table D.4 of Appendix D.

Overall rating levels over background are indicated at up to+20dB at Ashgrove. BS4142 advises a likely significant adverse impact, depending on context.

Rating levels at other SSRs are indicated at between 0 and +4. BS4142 advises an adverse impact is less likely, depending on context.

7.3 Context

The main context of the proposed Waste Bulking Facility is that it will be a temporary solution as the adjacent land is developed for a permanent indoor facility.

The facility is to operate daytime hours during weekdays, except for occasional weekends (for example Christmas catch-up period).

7.3.1 Kerbside Vehicle Waste Glass Depositing

Glass Waste depositing is proposed to take place in two 2-hour periods per day offering some respite periods.

However, based on absolute noise levels and the sound characteristics a significant impact is assessed.

7.3.2 HGV Waste Glass Collection

HGV Waste Glass Collection would only occur twice a week and lasts approximately 15 minutes. This can be considered an occasional event.

Based on this contextual factor it is considered that the impact can be modified to significant adverse impact less likely.

7.4 Initial Recommendations

7.4.1 Control of Noise at Source

It is not possible to mitigate this kind of glass tipping noise at source.

The following non-physical mitigation measures should be considered:

<u>Glass Shovelling</u>

Glass shovelling into the bays is indicated to be the controlling noise source. The following is recommended in order of priority:

- Alternative site for glass tipping
- Glass tipping and shovelling to take place fully within a building
- Alternative (quieter) methods of collecting glass into bay

However, it is understood that the above options are unlikely to be practical.

Reducing the number of glass shovelling events could be considered in conjunction with careful site management and good relations with local residents. A schedule of glass shovelling periods could be agreed.

Loading Glass into HGVs

As this is only proposed to take place twice a week for 15min each, it is recommended that days and timings are agreed, and residents notified.

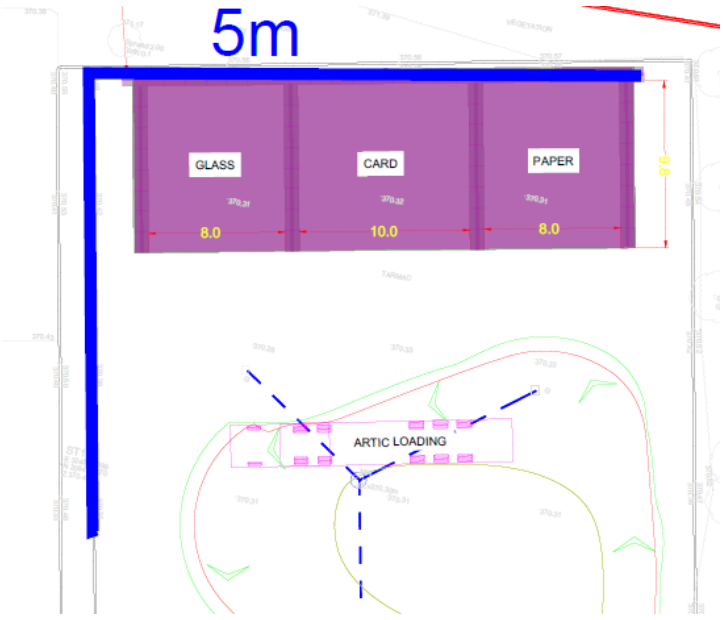
It is recommended that drop-heights from the shovel into the HGV are reduced as much as possible.

Eliminating or reducing the volume on JCB reversing alarms should also be investigated, depending on the site H&S requirements. Investigate whether site H&S could be managed to use visual alarms, rather than acoustic alarms for this activity.

7.4.2 Screening

Properties to the north-west are elevated by around 15m above the site and screening is likely to be limited. Properties to the south-east are around 10m below the site and screening is already provided by the ground topography; additional screening is not indicated to be effective.

Initial site screening options have been investigated. A minimum 5m high structure located as close as possible to the glass tip as indicated on the plan below.



The structure may be an increased Legato concrete block structure to the rear bay wall. To the return a proprietary acoustic fence structure with an absorbent face should be utilised.
A reduction of 5dB to the L_{Aeq} level and 3dB to L_{Amax} levels for Scenario 1 are indicated at Ashgrove, Green Cottages and Cinderpit with the 5m barrier in place.

A reduction of 3dB to the L_{Aeq} level and 5dB to L_{Amax} levels for Scenario 2 are also indicated at Ashgrove with the 5m barrier in place.

7.5 Mitigated Assessment

7.5.1 Scenario 1

With a 5dB reduction at Ashgrove the rating level over background would reduce to +12dB. A further 3dB reduction could be achieved by reducing the shovelling to 2 in each 2hours, resulting in +9dB at Ashgrove.

We would advise +9dB in the context of a temporary facility that an adverse impact is less likely.

7.5.2 Scenario 2

With a 3dB reduction at Ashgrove the rating level over background would reduce to +17dB. The BS4142 assessment does not change. The contextual factor of occasional occurrence remains and a significant adverse impact is indicated less likely.

8. GOOD PRACTICE GUIDE

BS 5228-1:2009+A1:2014 gives general information on control of noise at source.

A summary of practical measures in the choice and use of plant to reduce noise is given below:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Ensure plant and vehicles are properly maintained, check silencers and bearings.
- If the noise is directional, point the source away from noise-sensitive locations.
- Keep internal haul routes well maintained and avoid steep gradients.
- Use rubber linings in, for example, chutes and dumpers to reduce impact noise.
- Minimise drop height of glass into HGV
- Limit the use of particularly noisy plant or vehicles.
- Start-up plant and vehicles sequentially rather than together.
- Ensure the plant and vehicles are operated with noise control hoods closed.

9. CONCLUSION

A noise impact assessment has been carried out for the proposed Temporary Waste Bulking Facility, Kays & Kears Industrial Estate, Blaenavon, NP4 9AZ.

Noise predictions have been carried out based on proposed activities, with noise impact assessments carried out at the closest sound sensitive receptors.

Although taking the context of a temporary facility, a significant adverse impact is indicated for glass tipping and shovelling glass into the bays. Initial recommendations have been made on possible noise control and mitigation options including screening to reduce rating noise levels.

An adverse impact is advised as less likely for the twice-weekly HGV glass loading, due to its occasional occurrence and 15min duration. However good site management and liaison with residents is recommended.

APPENDIX A - ACOUSTIC TERMINOLOGY

Human response to noise depends on a number of factors including loudness, frequency content and variations in level with time. Various frequency weightings and statistical indices have been developed in order to objectively quantify 'annoyance'.

The following units have been used in this report:

dB(A)	The sound pressure level A-weighted to correspond with the frequency response of the human ear and therefore a persons' subjective response to frequency content.
L_{eq}	The equivalent continuous sound level is a notional steady state level which over a quoted time period would have the same acoustic energy content as the actual fluctuating noise measured over that period.
L_{max}	The highest instantaneous sound level recorded during the measurement period.
L_{10}	The sound level which is exceeded for 10% of the measurement period. i.e. The level exceeded for 6 minutes of a 1 hour measurement.
L_{90}	The sound level which is exceeded for 90% of the measurement period. i.e. The level exceeded for 54 minutes of a 1 hour measurement - used as a measure of background noise.
$L_{Ar,Tr}$	The 'rating' level, as described in BS 4142:2014 – the specific noise plus any adjustment for the characteristic features of the noise.
SSR	Sound sensitive receiver

APPENDIX B - DIAGRAMS, GRAPHS AND TABLES

Figure B.1 – Approximate Weather History for Friday, 19 June 2026

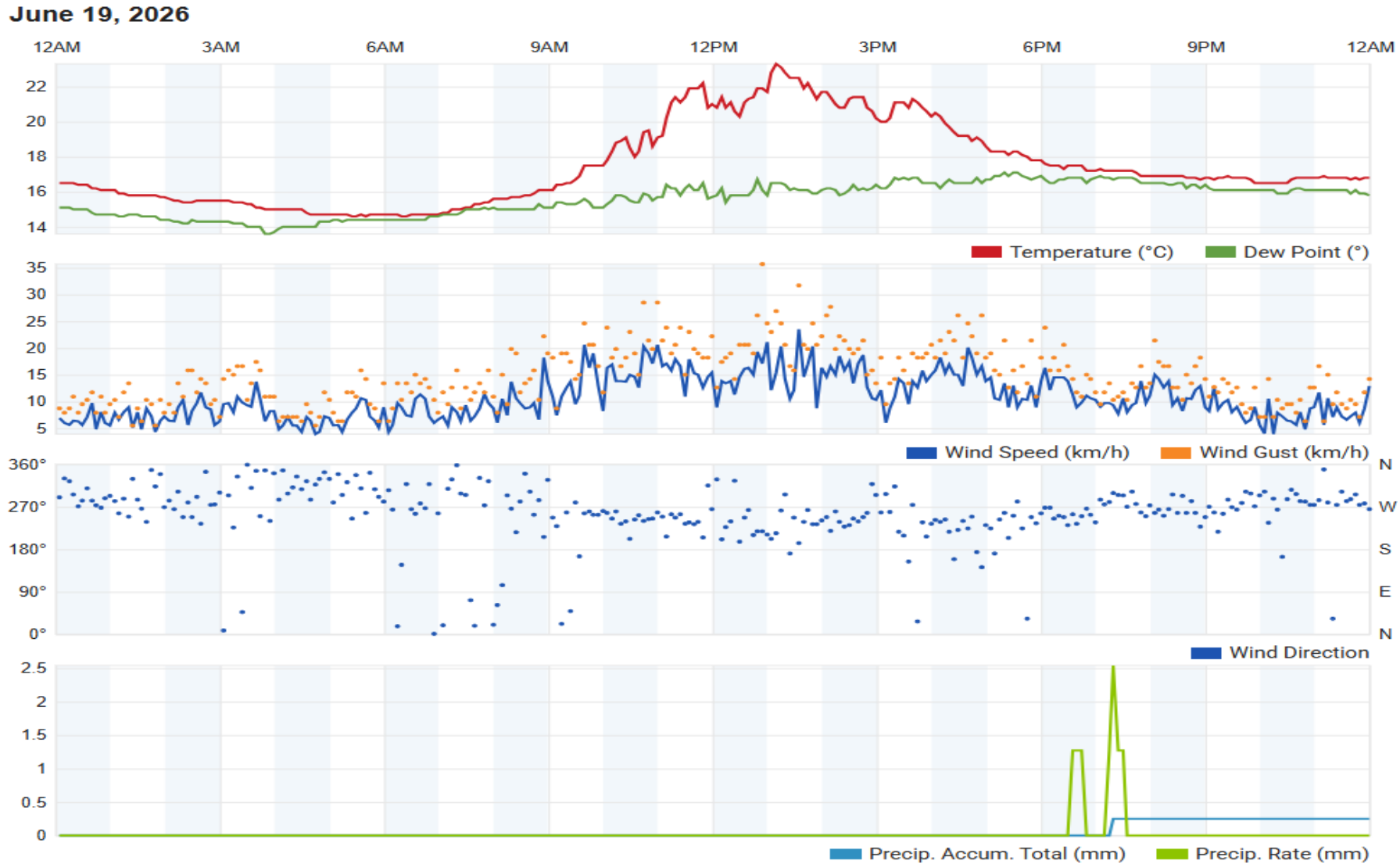


Figure B.2 – Approximate Weather History for Saturday, 20 June 2026

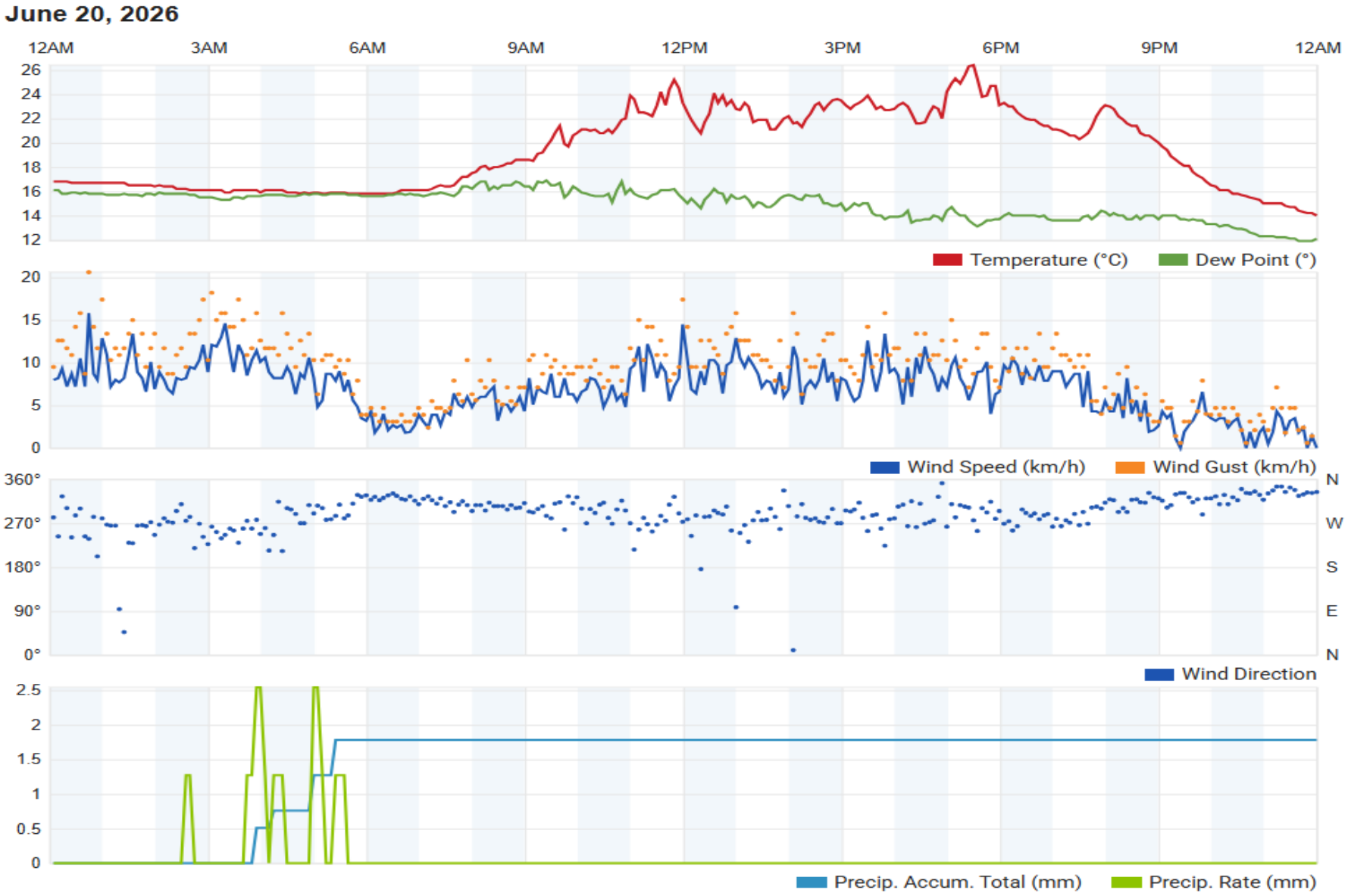


Figure B.3 – Approximate Weather History for Sunday, 21 June 2026

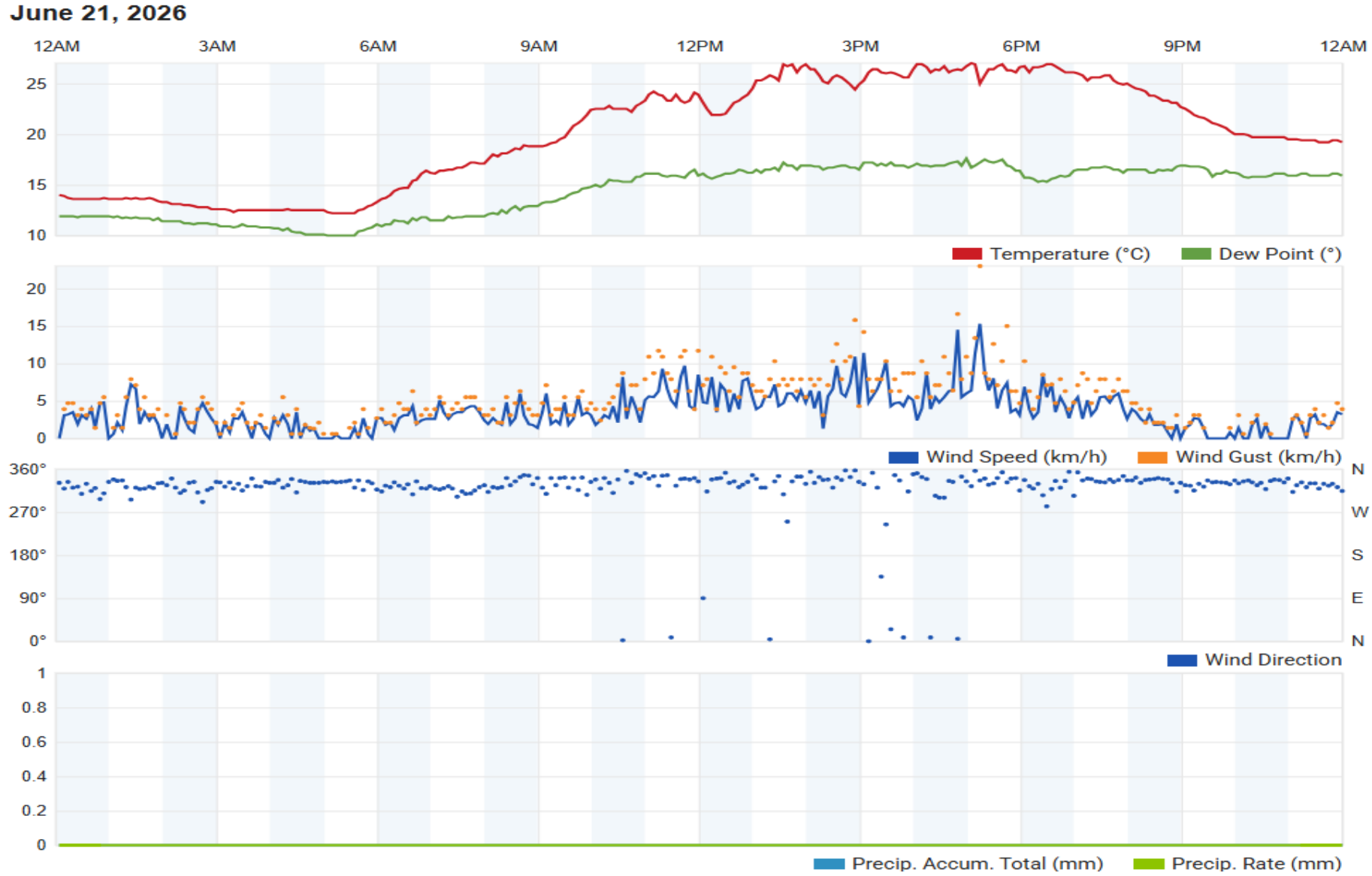


Figure B.4 – Approximate Weather History for Monday, 22 June 2026

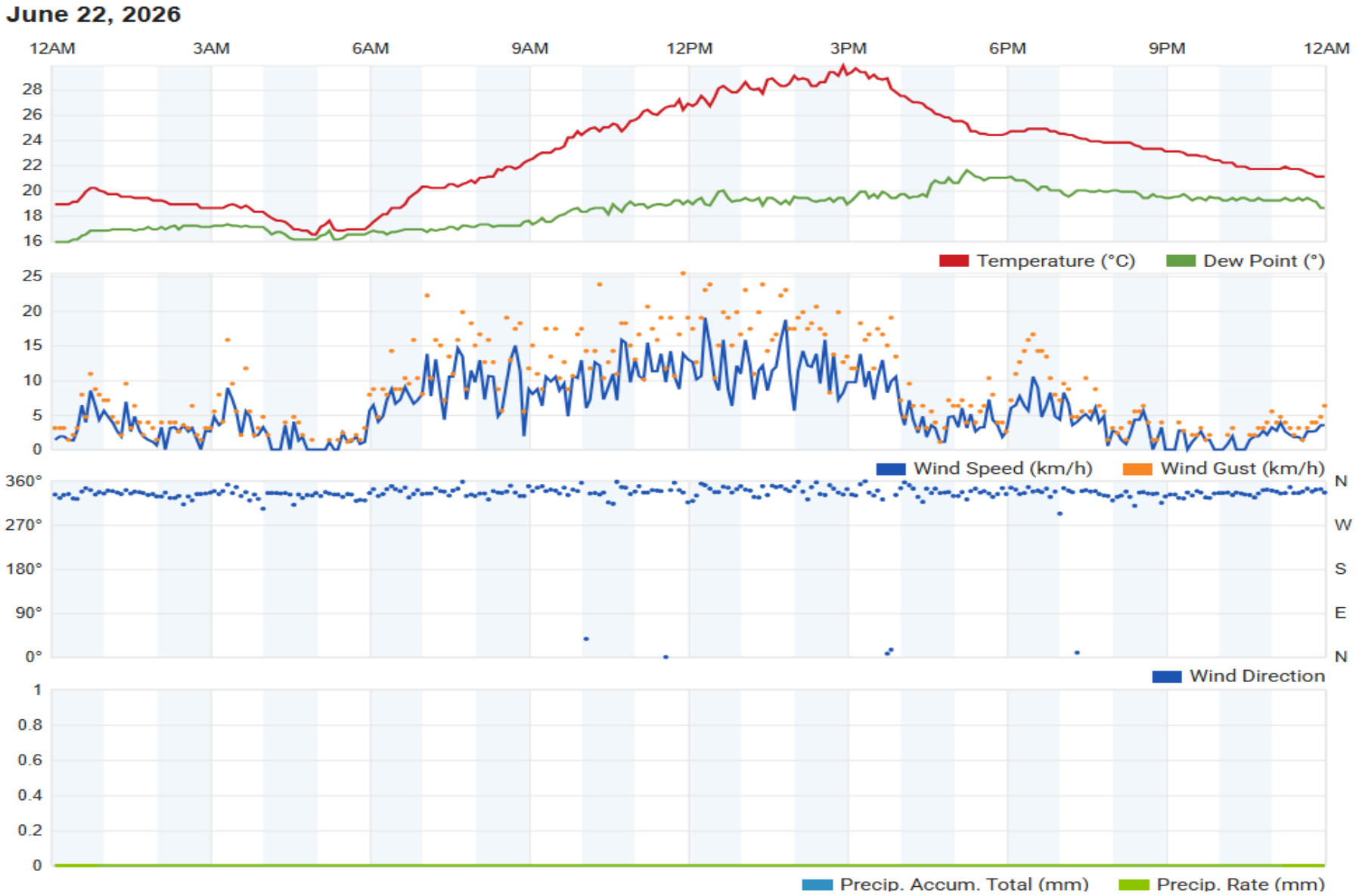
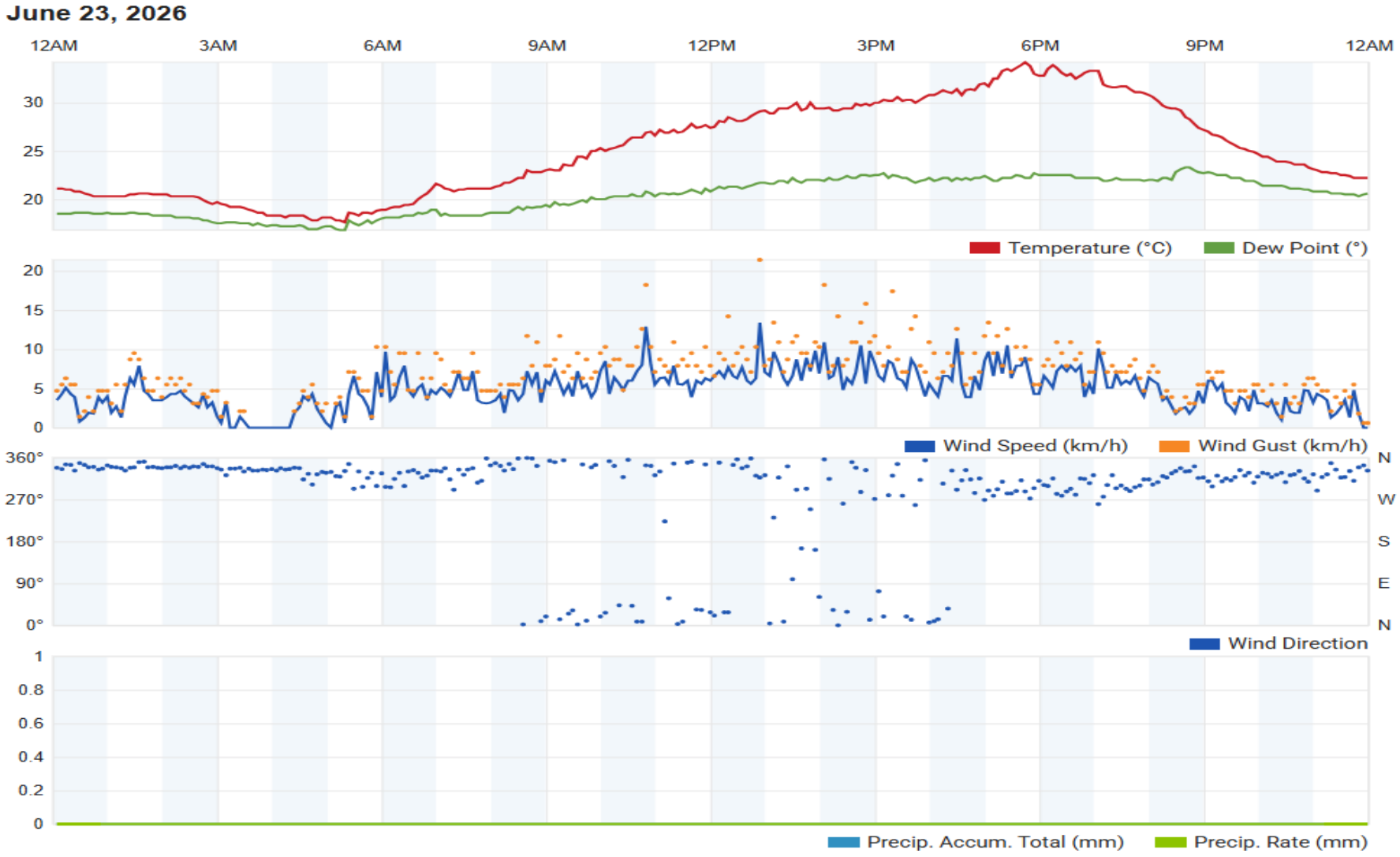


Figure B.5 – Approximate Weather History for Tuesday, 23 June 2026



Note: Taken from www.wunderground.com - ***Weather Station ID: IPONTY64 Station Name:****Griffy 1* ***Latitude / Longitude:****51.776° N, 3.081° W* ***Elevation:****122* ***City:****Blaenavon*

Figure B.6 – Time History at Position A (Friday, 19 June 2026 to Tuesday, 23 June 2026)

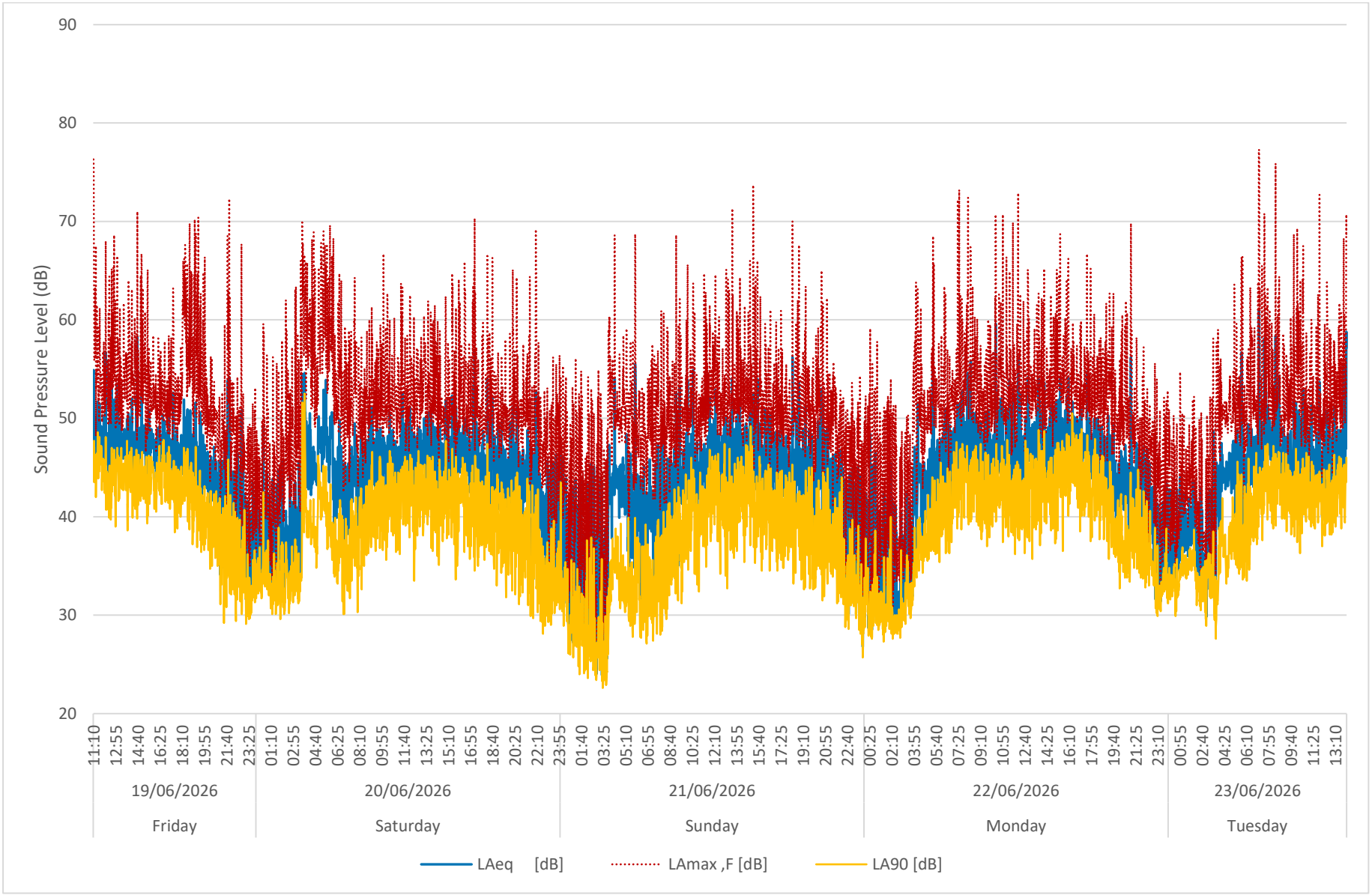


Figure B.7 – Time History at Position B (Friday, 19 June 2026 to Tuesday, 23 June 2026)

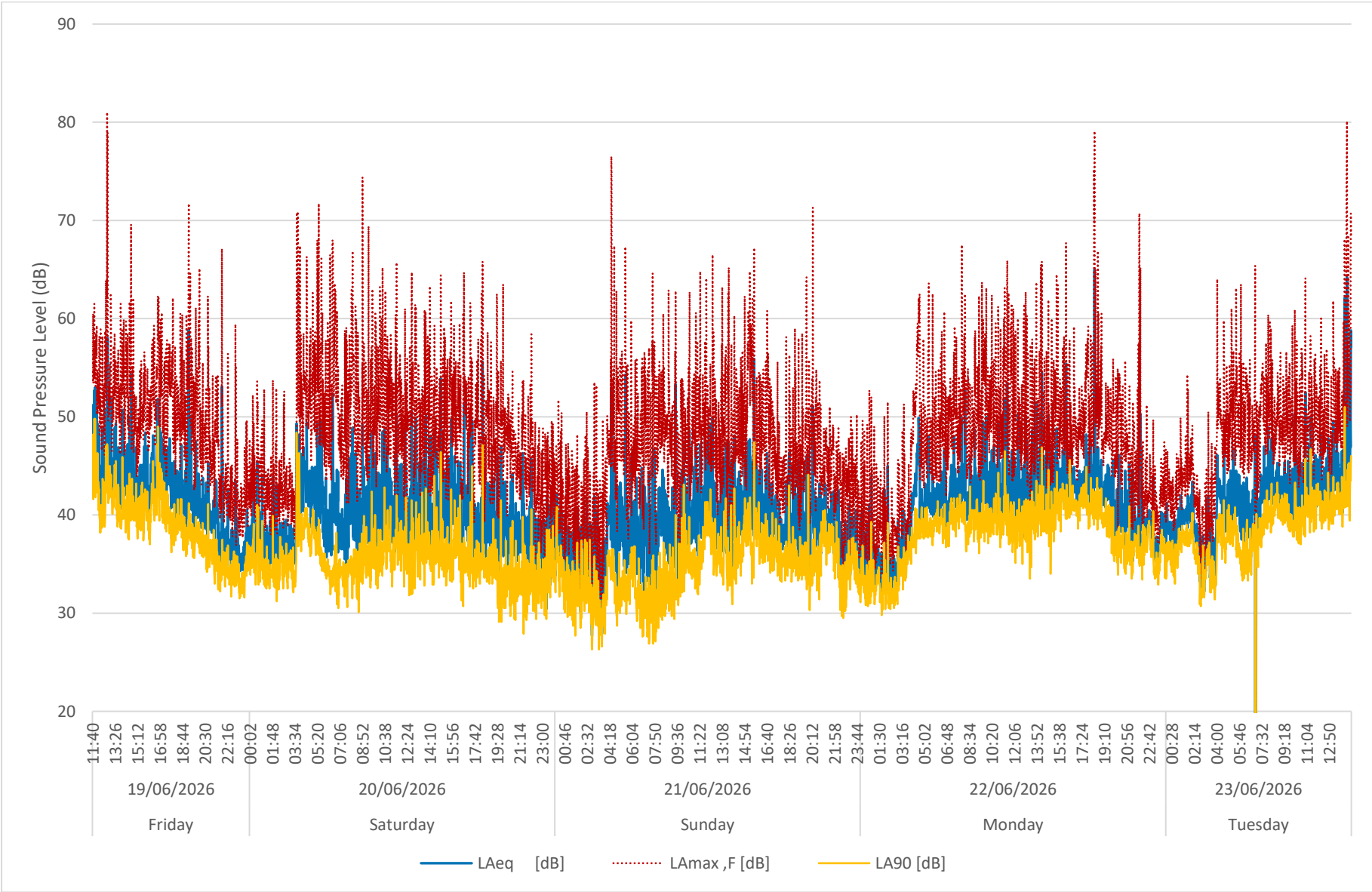


Figure B.8 – Statistical Analysis of Weekday Background Sound Levels Measured at Position A

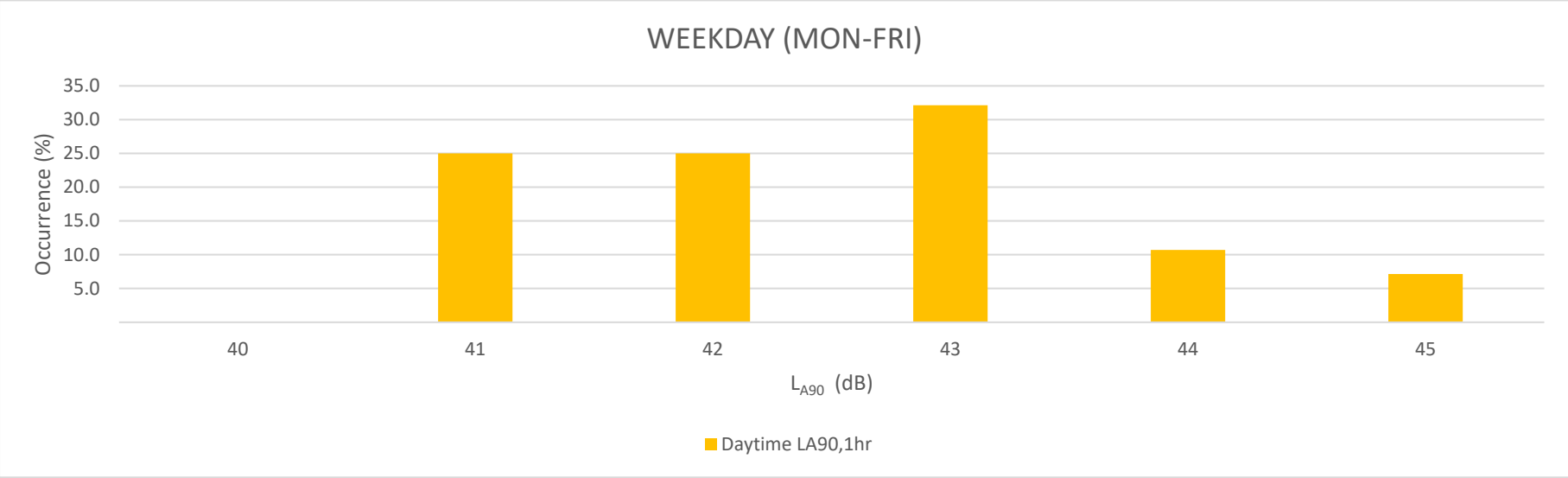


Figure B.9 – Statistical Analysis of Weekend Background Sound Levels Measured at Position A

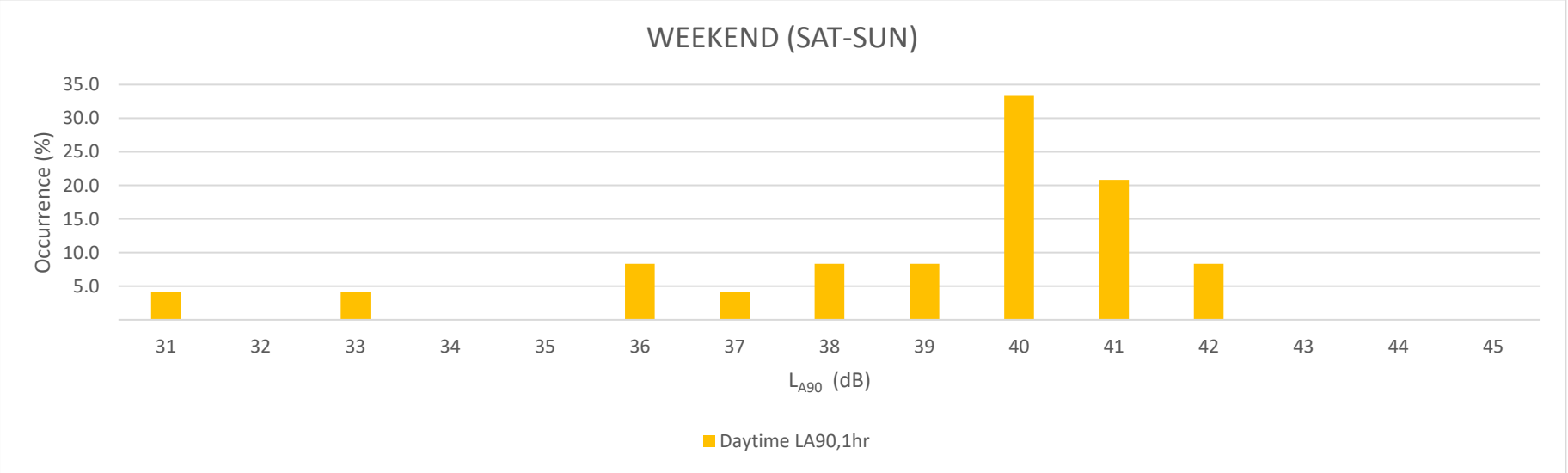


Figure B.10 – Statistical Analysis of Weekday Background Sound Levels Measured at Position B

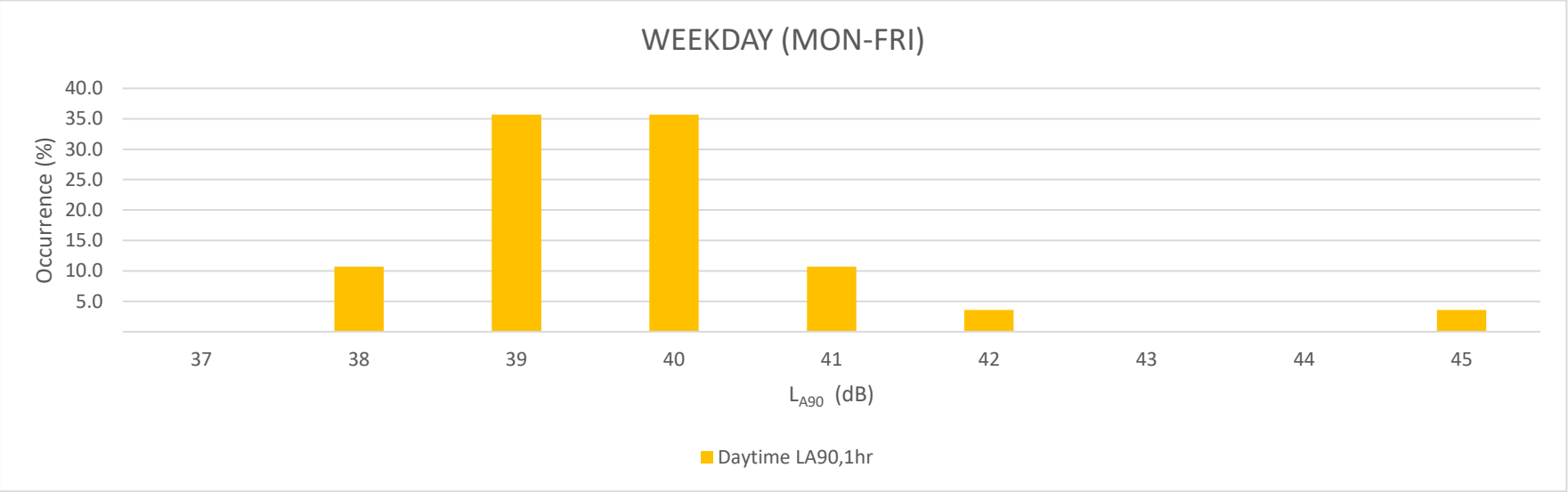


Figure B.11 – Statistical Analysis of Weekend Background Sound Levels Measured at Position B

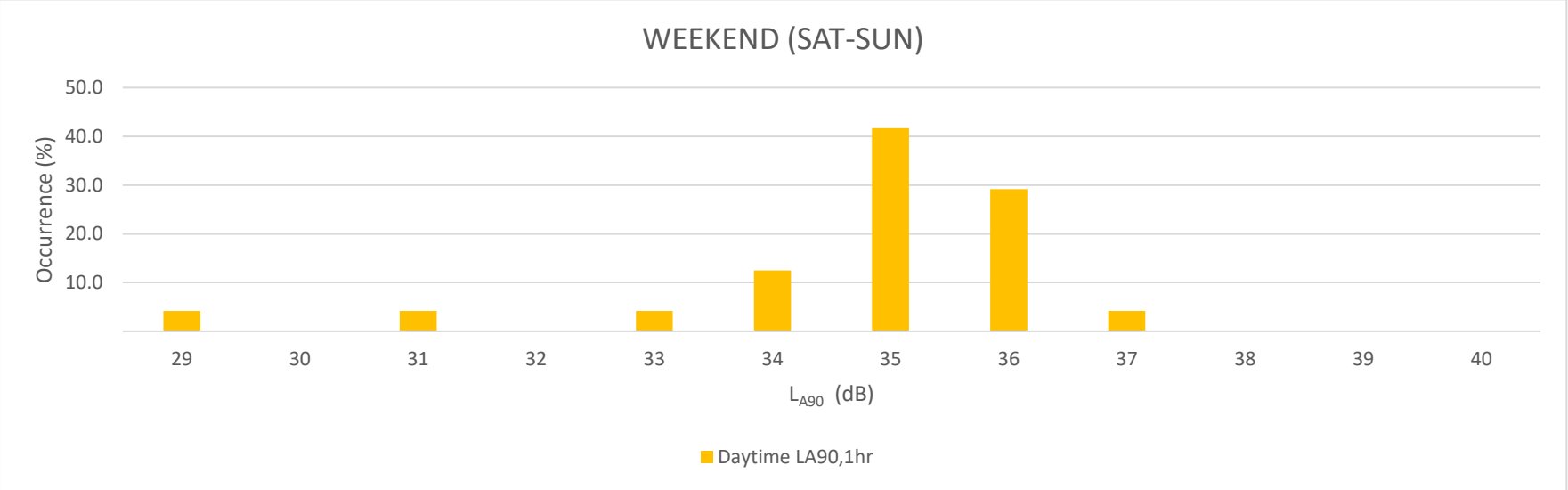


Table B.1 – Source Sample Measurement Results including Octave Band Spectra

Position	Description	Duration (mm:ss)	Distance (m)	L_{Aeq} (dB)	$L_{Amax,F}$ (dB)	L_{eq} at Octave Band Centre Frequencies (dB)							
						63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
2	Glass lorries tipping glass into pile, driver getting out to sweep remnants into pile, forklift with sweeper attachment brushes the area to clear glass into the pile	08:25	10	74.7	89.8	68.3	65.7	67.5	67.8	66.6	69.2	68.9	60.7
2	Loading shovel arriving and pushing glass into the pile to raise the height of the pile to make space for vehicles and ready for loading into waste removal	07:41	16	85.3	99.7	75.3	74.2	69.6	68.5	75.3	80.4	80.4	73.1
3	HGV glass removal arrives and is loaded with glass from the pile via the loading shovel which drops it in from the top, white noise beeper on loading shovel	18:47	12	86.3	103.3	79.7	78.2	74.7	74.2	78.2	80.4	80.8	78.4
1	Glass lorries tipping glass into pile, driver getting out to sweep remnants into pile, forklift with sweeper attachment brushes the area to clear glass into the pile	08:26	10	74.1	91.8	67.7	64.7	66.8	67.0	65.8	69.2	67.9	58.7
1	Loading shovel arriving and pushing glass into the pile to raise the height of the pile to make space for vehicles and ready for loading into waste removal	07:41	16	86.5	99.2	78.3	71.9	71.7	70.1	75.8	81.8	81.7	73.8
2	HGV glass removal arrives and is loaded with glass from the pile via the loading shovel which drops it in from the top, white noise beeper on loading shovel	18:47	12	87.5	103.7	80.3	77.9	74.8	74.3	80.3	82.0	81.3	79.2
2	Kerbside Collection Vehicle depositing glass	00:04	10	84.3	89.8	68.3	68.3	69.2	71.7	74.7	79.2	79.6	71.1
2	Kerbside vehicle pass-by	00:05	10	73.5	75.4	70.5	69.9	71.5	73.9	66.9	65.0	60.4	52.1
2	Kerbside vehicle reversing	00:27	10	70.6	79	70.5	66.2	62.3	56.9	56.8	69.2	49.9	44.7
2	JCB Shovel	-	10	72.9	83.4	78.5	76.7	71.7	69.6	66.8	65.8	62.6	61.0
3	JCB Shovel Reversing (Broadband Bleeper)	up to 10s	12	84.6	100.6	79.4	77.3	72.0	70.2	80.3	80.0	74.9	69.6
3	JCB Shovel loading glass into HGV	5-15s	12	91.8	103.3	81.9	81.1	78.4	78.8	82.6	85.8	86.8	84.4
2	JCB Shovel pushing glass into bays	5-20s	16	91.2	99.7	75.5	75.7	70.3	71.4	79.5	86.3	86.8	79.3
3	HGV approach	00:10	12	66.5	69.5	71.0	68.3	65.0	61.9	61.3	60.5	55.7	48.6
3	HGV Idling		12	59.7	65.1	63.9	62.0	57.3	54.5	54.3	54.3	47.8	36.8

APPENDIX C - NOISE MODELLING

C.1 Noise Model Input Data

Table C.1 – Mobile Plant Noise Data Used in Model

Plant Item / Activity	L_w at Octave Band Centre Frequencies, Hz (dB)								L_{wA}
	63	125	250	500	1000	2000	4000	8000	(dB)
HGV Enter/Exit	100.6	97.9	94.6	91.5	90.9	85.3	78.2	78.2	96.3
Kerbside Collection Vehicle Enter/Exit	98.5	97.9	99.5	101.9	94.9	93.0	88.4	80.1	101.9
JCB Shovel (forwards)	106.5	104.7	99.7	97.6	94.8	93.8	90.6	89.0	101.2
JCB Shovel (reverse - with broadband alarm)	107.3	105.3	100.0	98.2	108.3	108.0	102.9	97.6	112.7

Table C.2 – Fixed Plant Noise Data Used in Model

Plant Item / Activity	L_w at Octave Band Centre Frequencies, Hz (dB)								L_{wA}
	63	125	250	500	1000	2000	4000	8000	(dB)
Kerbside vehicle emptying glass	96.3	96.3	97.2	99.7	102.7	107.2	107.6	99.1	112.3
HGV Idling while being loaded	93.5	91.6	86.9	84.1	83.9	83.9	77.4	66.4	89.4
Shovel loading glass into HGV	111.5	110.7	107.8	108.4	112.2	115.4	116.4	114.4	121.5
Shovel pushing glass into bin*	98.5	98.7	93.3	94.4	102.5	109.3	109.8	102.3	114.2

** L_w/m^2 (area source)*

C.2 Noise Model Scenarios

Table C.3 – Daytime Modelled Scenario (Worst Case 1hr Period)

Activity	% On-time	Flow	Speed (km/h)	Source Height (m)
HGV	-	1	10	1.0
JCB Shovel moving between glass bin and HGV	10	-	5	1.0
Kerbside Collection Vehicle	-	5	10	1.0
Kerbside Collection Vehicle emptying glass onto floor	1.6	-	-	0.0
HGV idling while being loaded	25	-	-	1.0
JCB shovel pushing glass into bin	15	-	-	1.0
JCB shovel loading glass into HGV	7	-	-	2.0

C.3 Noise Model 3D Views

Figure C.1 – 3D Model of Scenario 1

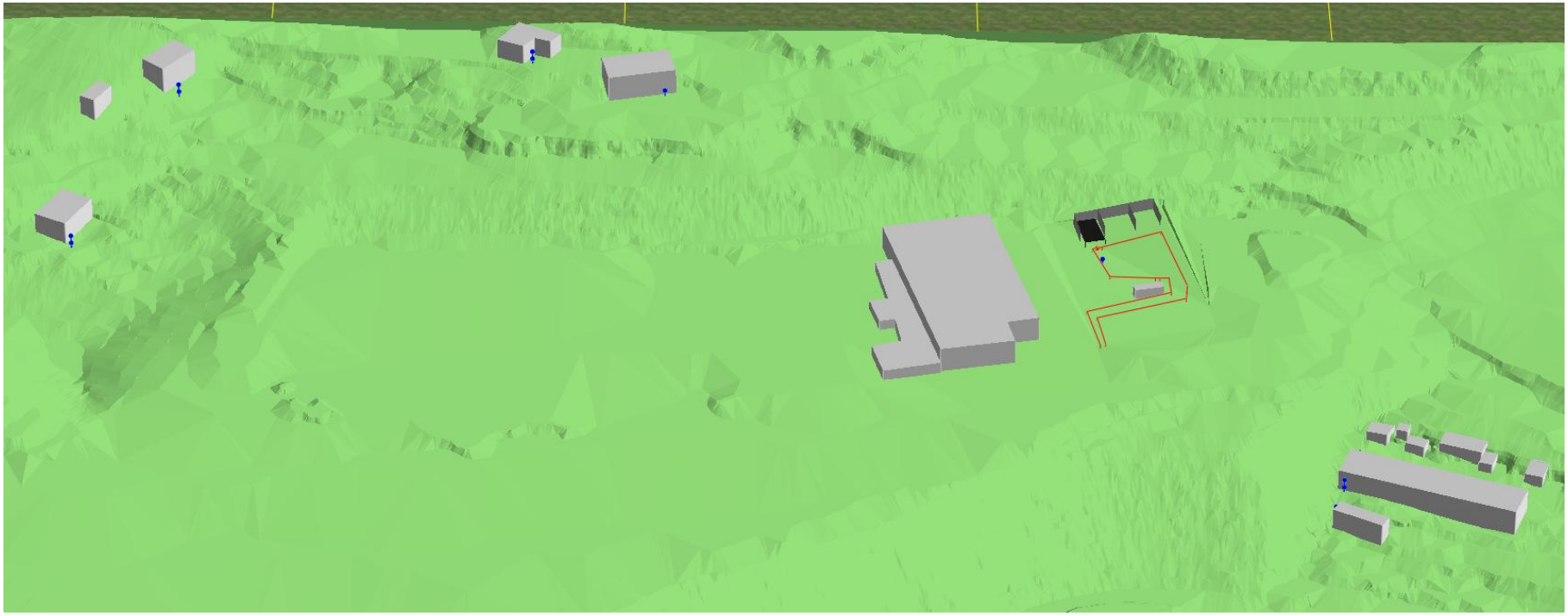
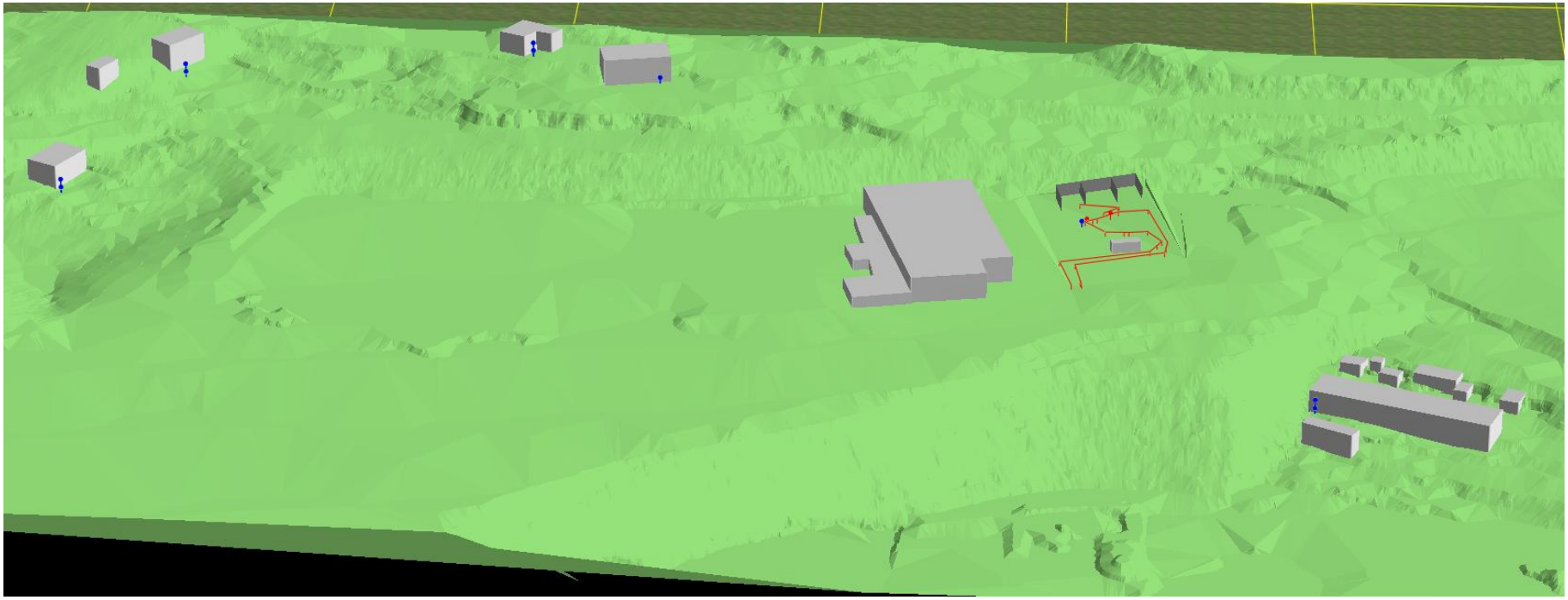


Figure C.2 – 3D Model of Scenario 2



C.4 Noise Model Contour Plots

Figure C.3 – Scenario 1: Noise Model $L_{Aeq,1hr}$ Contours at 1.5m Height

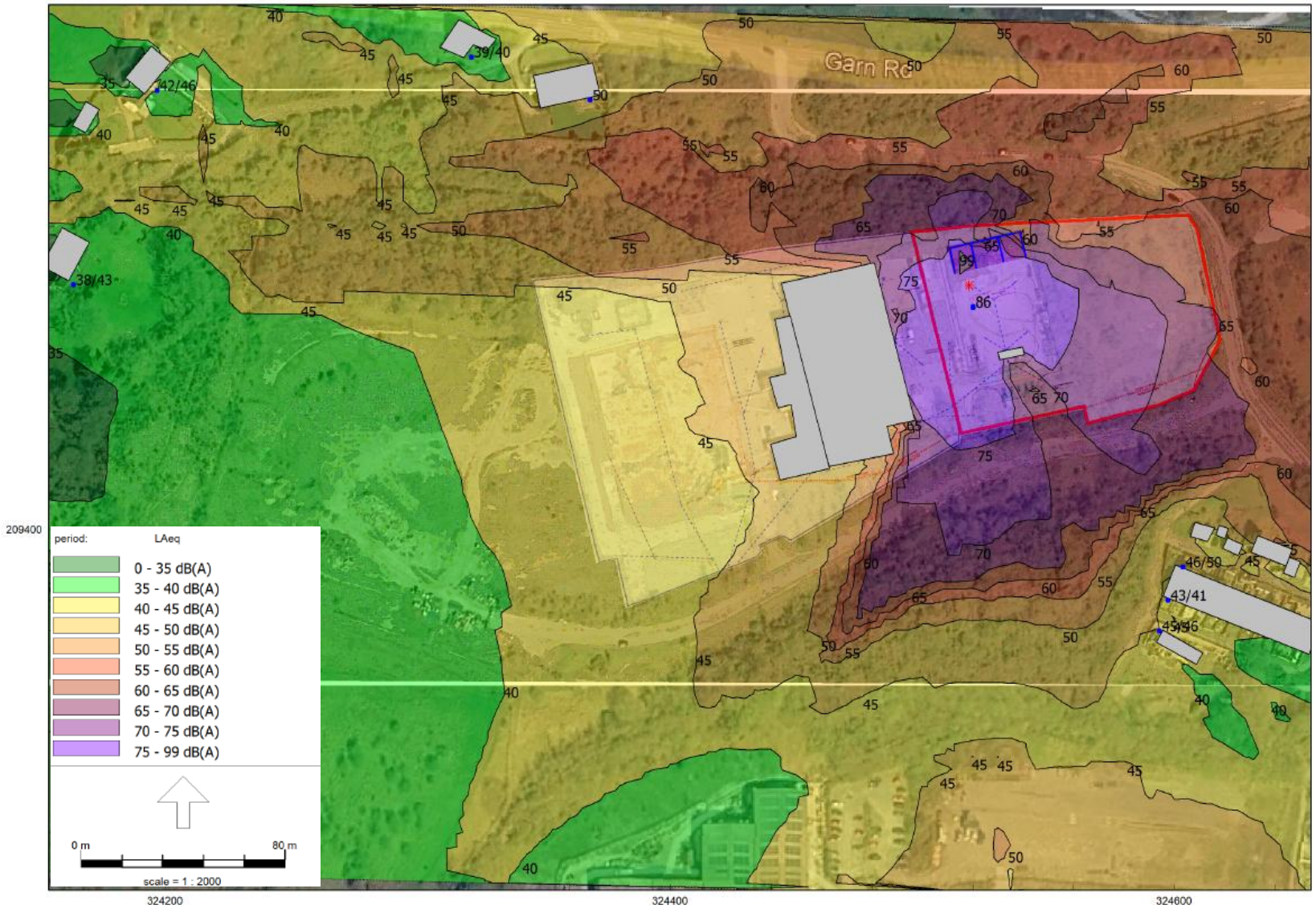
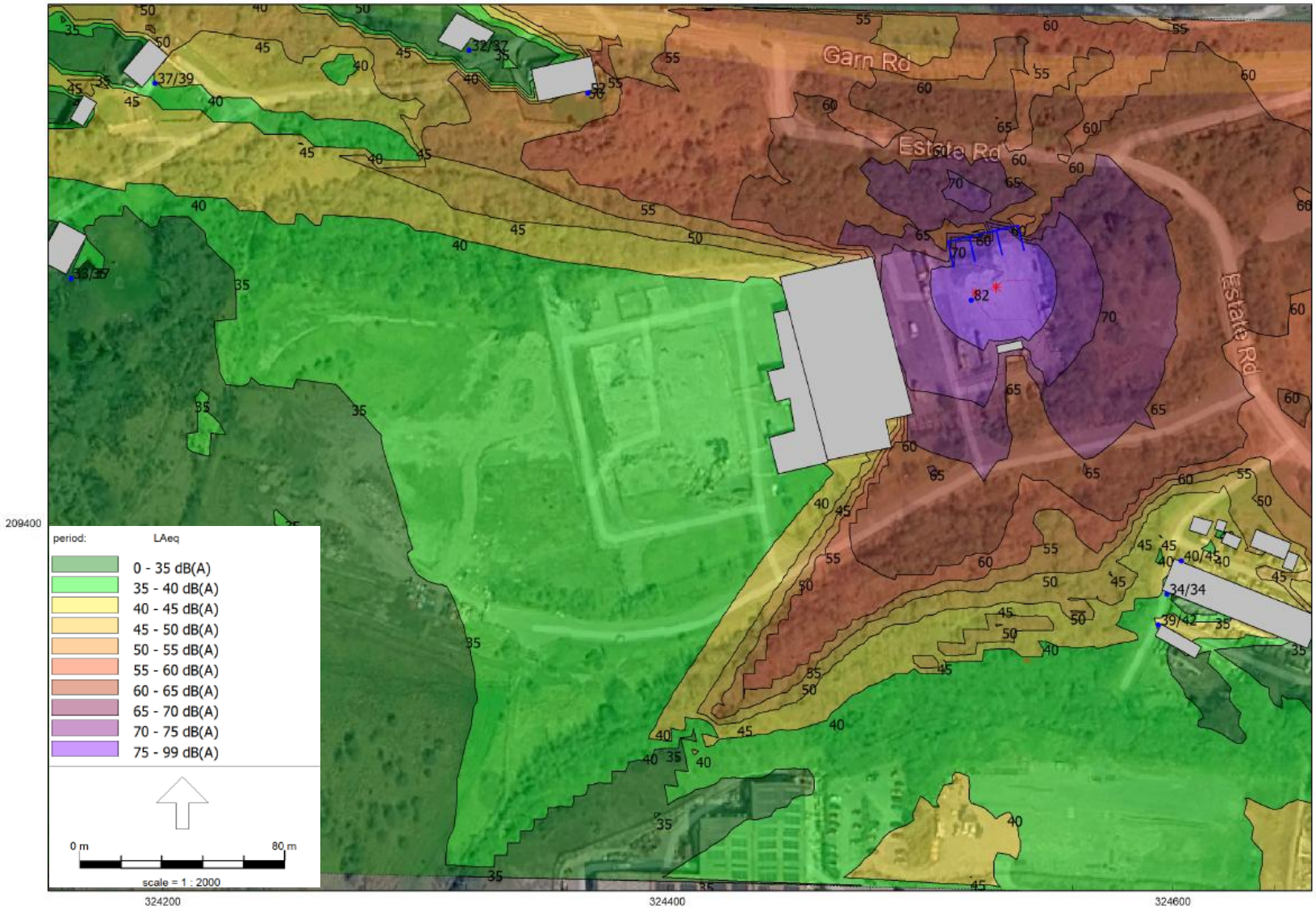


Figure C.4 – Scenario 2: Noise Model $L_{Aeq,1hr}$ Contours at 1.5m Height



APPENDIX D – BS 4142:2014+A1:2019 ASSESSMENTS

Table D.1 – BS 4142 Assessment at West View Terrace – Scenario 1

Results		Relevant Clause	Commentary
Predicted Industrial Activity Noise Level at Receiver	L_{Aeq} = 45dB	7.3.2	Predicted from Noise Model
Residual sound level	L_{Aeq} = N/A	7.3.3	Predicted specific sound level
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 43dB	8.1.1 8.1.3 8.3	Background sound level measured at Position A
Acoustic feature correction	+6dB	9.2	+3dB for sound character +3dB for intermittency
Rating Level	(45 + 6) = 51dB		
Background sound level (daytime)	$L_{A90(0700\text{-}2300hrs)}$ = 43dB	8.3	
Excess of rating over background sound level	(51 - 43) dB = 8dB	11	
Assessment indicates likely adverse impact, depending on context		11	At 8dB above background BS 4142:2014 advises: "is likely to be an indication of an adverse impact, depending on the context"
Uncertainty of assessment		10	Uncertainty in background noise measurements is considered low.

Table D.2 – BS 4142 Assessment at Ashgrove – Scenario 1

Results		Relevant Clause	Commentary
Predicted Industrial Activity Noise Level at Receiver	L_{Aeq} = 50dB	7.3.2	Predicted from Noise Model
Residual sound level	L_{Aeq} = N/A	7.3.3	Predicted specific sound level
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 39dB	8.1.1 8.1.3 8.3	Background sound level measured at Position B
Acoustic feature correction	+6dB	9.2	+3dB for sound character +3dB for intermittency
Rating Level	(50+ 6) = 56dB		
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 39dB	8.3	
Excess of rating over background sound level	(56 - 39) dB = 17dB	11	
Assessment indicates likely significant adverse impact, depending on context		11	At 17dB above background BS 4142:2014 advises: "is likely to be an indication of a significant adverse impact, depending on the context"
Uncertainty of assessment		10	Uncertainty in background noise measurements is considered low.

Table D.3 – BS 4142 Assessment at West View Terrace – Scenario 2

Results		Relevant Clause	Commentary
Predicted Industrial Activity Noise Level at Receiver	L_{Aeq} = 40dB	7.3.2	Predicted from Noise Model
Residual sound level	L_{Aeq} = N/A	7.3.3	Predicted specific sound level
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 43dB	8.1.1 8.1.3 8.3	Background sound level measured at Position A
Acoustic feature correction	+6dB	9.2	+3dB for sound character +3dB for intermittency
Rating Level	(40 + 6) = 46dB		
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 43dB	8.3	
Excess of rating over background sound level	(46 - 43) dB = 11dB	11	
Assessment indicates adverse impact less likely, depending on context		11	At 3dB above background BS 4142:2014 advises: "is less likely to be an indication of an adverse impact, depending on the context"
Uncertainty of assessment		10	Uncertainty in background noise measurements is considered low.

Table D.4 – BS 4142 Assessment at Ashgrove – Scenario 2

Results		Relevant Clause	Commentary
Predicted Industrial Activity Noise Level at Receiver	L_{Aeq} = 53dB	7.3.2	Predicted from Noise Model
Residual sound level	L_{Aeq} = N/A	7.3.3	Predicted specific sound level
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 39dB	8.1.1 8.1.3 8.3	Background sound level measured at Position B
Acoustic feature correction	+6dB	9.2	+3dB for sound character +3dB for intermittency
Rating Level	(53 + 6) = 59dB		
Background sound level (daytime)	$L_{A90(0700\text{-}1900hrs)}$ = 39dB	8.3	
Excess of rating over background sound level	(59 - 39) dB = 20dB	11	
Assessment indicates likely significant adverse impact, depending on context		11	At 20dB above background BS 4142:2014 advises: "is likely to be an indication of a significant adverse impact, depending on the context"
Uncertainty of assessment		10	Uncertainty in background noise measurements is considered low.

APPENDIX E - DRAWING LISTS

The following SLR Consulting drawing has been used in our assessment;

Table E.1 – Drawing List

Drawing Number	Rev	Date	Drawing Title
402.065983.00001 001	P0	Mar 2026	Phase 1 Option 2 – Proposed Site Layout