



Environmental Noise Report



Project: 290 Bradford Rd, Batley

Client: AABA Enterprises Ltd

Revision: -
Job Number: 2026-03-27 A0276

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Revision	Date of issue	Purpose of issue
-	02/04/2026	First issue
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1.1 Project overview

Noise Harvest has been commissioned by AABA Enterprises Ltd to carry out an environmental noise survey, to establish limiting noise levels and assess the noise from the proposed fixed items of plant at the following address:

290 Bradford Rd,
Batley
WF17 5PW

The location of the restaurant is shown in red below:



Figure 1 Location of the restaurant

The purpose of this report is to:

- Document existing noise levels around the site;
- Set limiting noise levels for new items of building services plant;
- Assess the noise from the proposed fixed items of plant;
- Suggest mitigation measures if necessary.

2.0 Assessment Criteria

The building is yet to have the new items of fixed plant installed. In order to ensure that complaints are not made after the installation and the existing noise climate does not suffer from noise creep an environmental noise survey and assessment has been requested by the client.

2.1 BS 4142

BS 4142:2014 provides a method for rating and assessing sound of an industrial and/or commercial nature, which includes sound from industrial and manufacturing processes, fixed services plant, sound generated by the loading and unloading of goods and sound from mobile plant / vehicles associated with industrial / commercial premises (e.g. fork-lift trucks).

The standard utilises various descriptors to assess the likelihood of complaints and the impact of sound associated with proposed industrial / commercial activities.

The magnitude of impact is assessed by subtracting the measured background sound level (dB L_{A90}) at a location representative of the nearest noise-sensitive receiver, from the 'rating level' (dB $L_{Ar,Tr}$) – the specific sound source to be introduced into the locality, corrected for acoustically distinguishing characteristics which may make it more subjectively prominent, over a reference time interval of 1 hour during the day and 15 minutes at night.

As a guideline, BS 4142 states that:

- "a) Typically, the greater this difference, the greater the magnitude of the impact.
- b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
- d) The lower the rating level 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."

For reference, the following terms are introduced in BS 4142:

- **Specific sound** – the commercial / industrial sound source under consideration;
- **Residual sound** – the sound level at the sound-sensitive receivers in the absence of the specific sound;
- **Ambient sound** – the sound level at the sound-sensitive receivers in the presence of the specific sound (i.e. ambient = residual + specific);
- **Background level** - the sound pressure level which is exceeded by the residual sound for 90% of the measurement period;
- **Rating level** – the specific sound, corrected for acoustically distinguishing characteristics.

3.0 Site description

3.1 General

The proposed location of the restaurant is on Bradford Street which is a busy road.

It is understood the ground floor is currently vacant and will be converted into a restaurant. The proposed building is set within a row of shops and commercial properties. With the exception of the adjacent residential dwelling, 288 Bradford Road, which is understood to be the nearest noise sensitive receptor. Above the site is understood to be vacant office spaces.

The noise climate is predominantly loud due to road noise

The nearest noise sensitive receptors is shown on the image below in red.

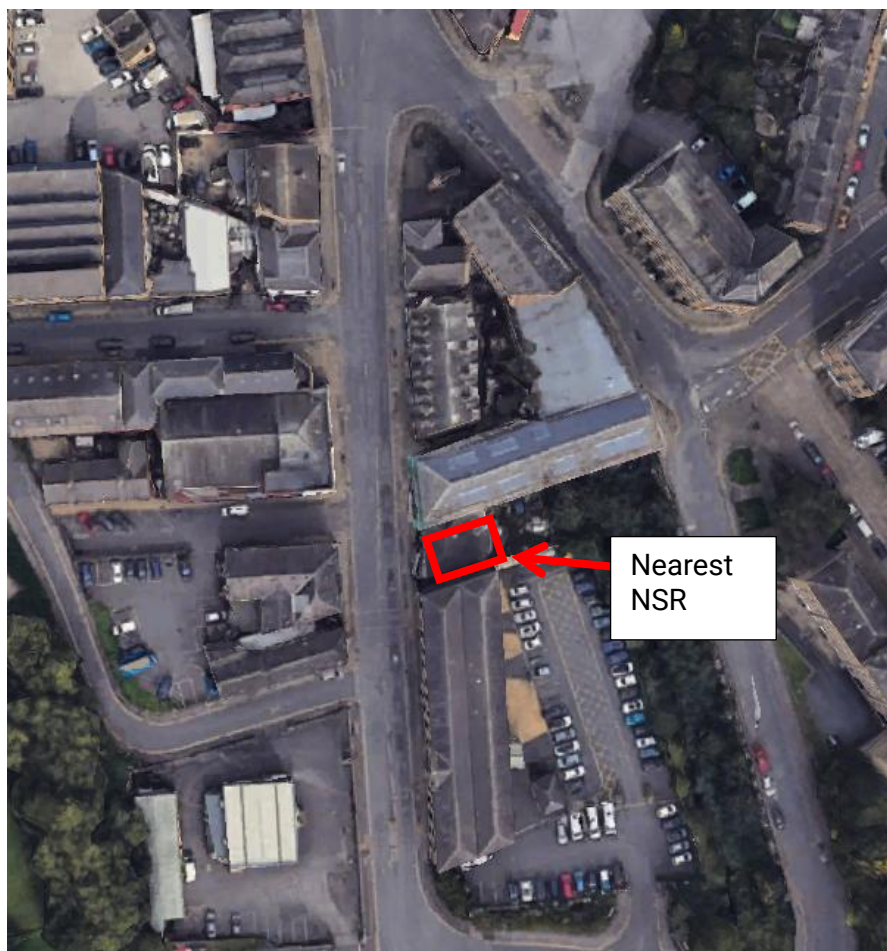


Figure 2 Location of the NSR's

4.0 Noise survey

An attended noise survey was carried out between the following dates, Wednesday 31st March 2026 starting at approximately 19:00 hours until Wednesday 18th of March 2026 ending at approximately 23:00 hours.

The engineer who carried out the survey was under direct supervision of C J Biggs, who is a full member of the Institute of Acoustics and holds the Institute of acoustics diploma and a master's in applied acoustics. He has eighteen years of experience in acoustics.

4.1 Equipment and measurement locations

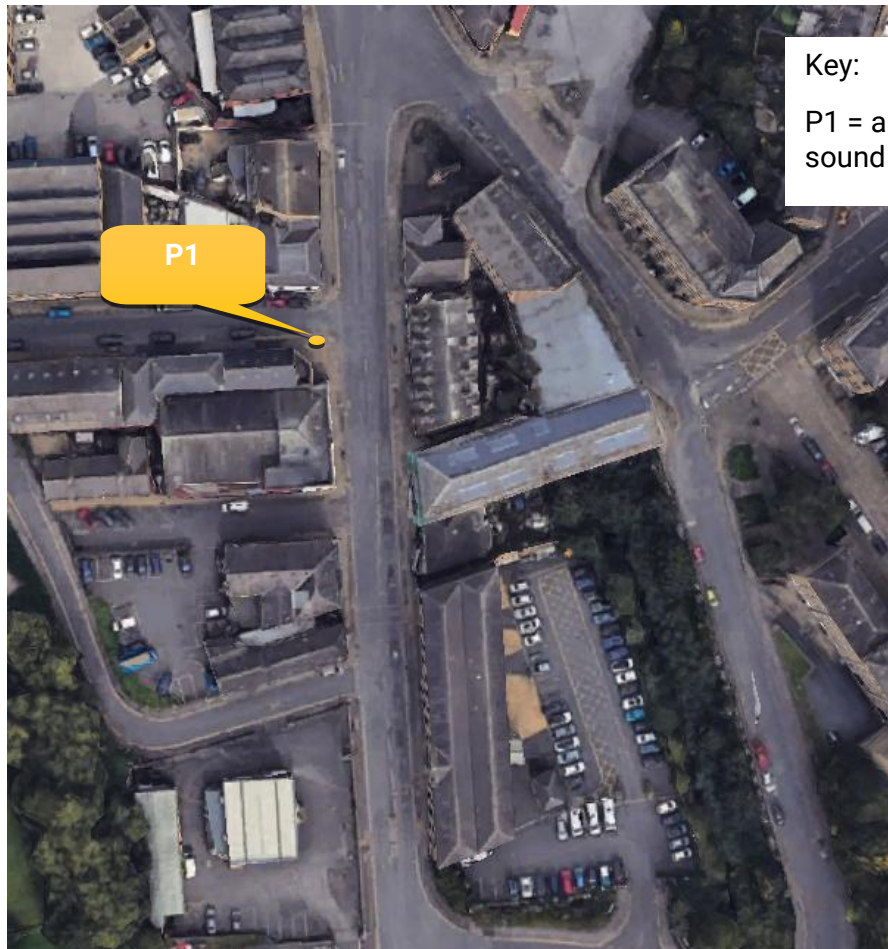
A single measurement position for the noise survey was chosen which was representative of the Nearest Noise Sensitive Receptor generally in accordance with guidance given in BS 7445: 1993.

Due to people burning rubbish an alternative location was used on the opposite side of the road.

The sound level meter was field-calibrated before and after use with no significant drift witnessed. Laboratory calibration certificates for all measurement equipment used are available upon request.

The meter was setup on a tripod at a height of 1.5m on the pavement to the rear of the property.

The approximate survey location is indicated in the Figure below.



Key:

P1 = approximate position of
sound level meter

Figure 3 Approximate survey location

The Table below summarises the equipment used and shows an image of the microphone position.

Position	Make and model	Image
P1	Sound level meter Rion (serial number: 00710357)	

Table 1 List of equipment used

At the start and end of the survey the engineer noted the following subjective impressions:

Noise: The general noise conditions were high due to the area due to road traffic. The dominant noise source was road traffic noise.

4.2 Weather conditions

The Table below shows highest and lowest temperatures and the precipitation.

Day	Date	Temp (°C)		Precipitation
		Low	High	
Wednesday	18/03/2026	9	10	None

Table 2 Recorded weather during survey

As can be seen in the Table above there was no precipitation. It should be noted that due to the location of the meter it was shielded from direct wind. It is anticipated that the wind was lower than 5 m/s.

5.0 Survey results

5.1 Noise survey

The Table below shows a summary of the daytime and night-time ambient noise levels. The values are the logarithmically averaged L_{Aeq} , the maximum $L_{AF,max}$ and the typical L_{A90} . All figures have been rounded to the nearest integer value (as fractions of a decibel are imperceptible).

Date	Period	Averaged L_{Aeq} (dB)	Maximum $L_{AF,max}$ (dB)	Typical L_{A90} (dB)
18/03/2026	Day	69	103	60

Table 3 Summary of measured noise levels

As can be seen above the noise climate is moderate for both daytime and night time due to the fact the building is within a commercial area.

6.0 Noise emission limits – building services plant

Based on fixed items of plant achieving equal to or below the measured background noise level the following table summarises the maximum rating level (when penalties such as tonality and impulsiveness are applied) for all new items of fixed services plant associated with the proposed development when assessed at 1 m from the nearest noise-sensitive receptor:

Date	Period	Measured L_{A90} (dB)	Maximum sound pressure level for items of plant ($L_{A,Tm}$)
18/03/2026	Day	60	60

Table 4 Summary of limiting noise levels

The above limit applies to all new items of services plant, running simultaneously at the appropriate design duty.

The following sub-sections provide assessment of noise impacts associated with the fixed items of plant associated with the restaurant in accordance with BS 4142.

The opening times of the restaurant are from 11:00 to 23:00 every day. As the restaurant will not operate past 23:00 hours the kitchen extract will be assessed against only the daytime scenarios.

7.1 Nearest noise sensitive receptors

The image below shows what is understood to be the nearest noise sensitive receptor, a residential dwelling 288 Bradford Road, the assessment will be carried out at 1.5 and 4.5 metres for daytime.



Figure 4 Nearest noise sensitive receivers

7.2 Specific Noise level and Background Level

The tables below show the proposed item of fixed plant that are associated with the restaurant and insertion loss of the attenuator and image below shows the location.

The data for the kitchen extract (TCBT x2 560) below.

Item	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound power of fan							
TCBTx2 560	74	86	85	91	94	88	81	75

Table 5 Summary of noise from kitchen extract

The Table below shows the dynamic insertion loss from the proposed attenuators for the extract.

Item	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Systemair Cylindrical Silencers LP 560 2D (before fan)	3	5	9	19	18	14	12	11
Systemair Cylindrical Silencers LP 560 2D (after fan)	3	5	9	19	18	14	12	11

Table 6 Summary of insertion loss from attenuator

The data for the kitchen supply (Ruck 355) below.

Item	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound power of fan							
Ruck 355	-	47	65	69	74	73	71	64

Table 7 Summary of sound from kitchen supply

The Table below shows the dynamic insertion loss from the proposed attenuator for the supply.

Item	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
LP 355 1D (before fan)	1	2	4	10	12	10	9	7
LP 355 1D (after fan)	1	2	4	10	12	10	9	7

Table 8 Insertion loss from kitchen supply attenuator

The image below shows the approximate location for the proposed plant.

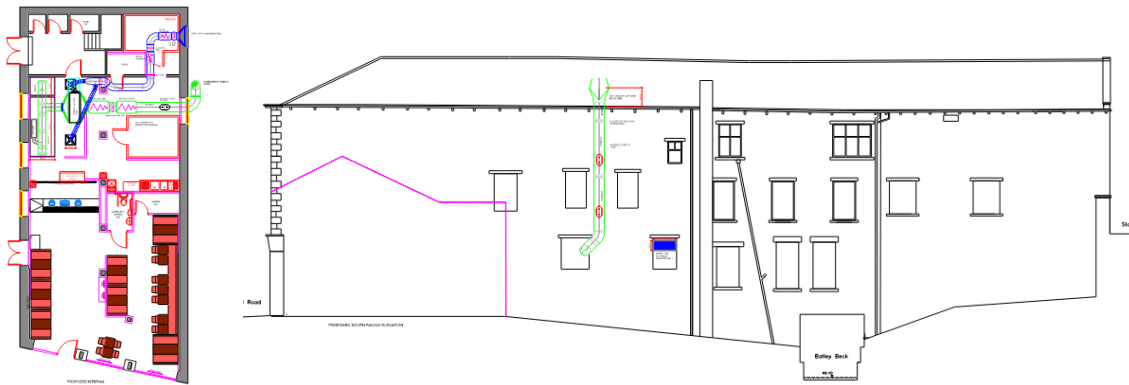


Figure 5 Proposed plant location

7.3 Assessment after duct work and silencer

It is understood that the kitchen extract and supply fans are installed at the rear of the unit and will have flues with a silencers and several bends. Calculations have been carried out to assess the attenuation of the distance and the flue. The Table below shows the predicted sound power of the extract fan leaving the flue alongside the predicted sound power level of the supply.

Item	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound power of fan							
Kitchen Extract	60	75	72	69	72	70	65	60
Kitchen supply	-	38	57	54	59	61	60	55

Table 9 Summary of noise at flue

7.4 Background level

The Table below shows the typical background level that has been measured without the restaurant operating together with the histogram.

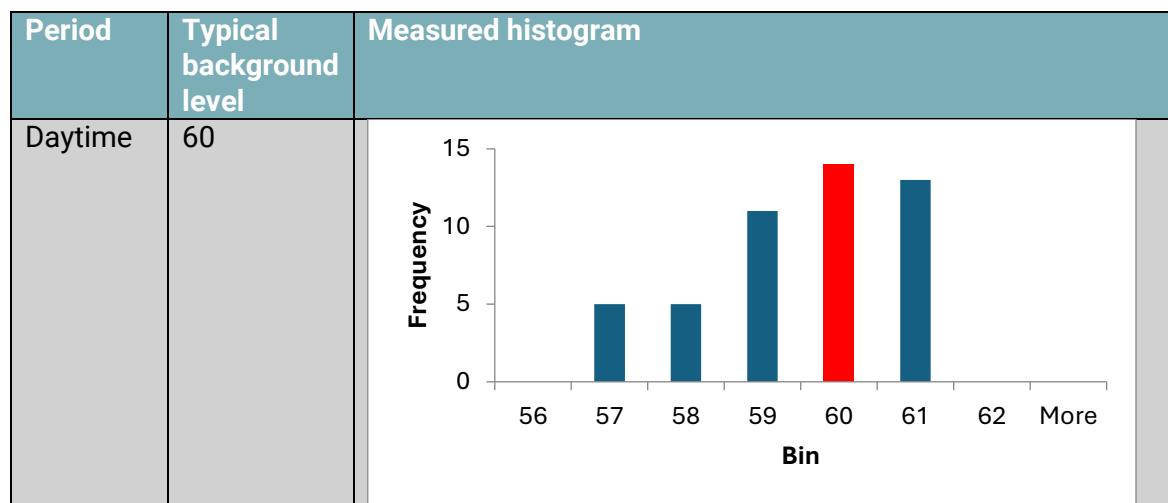


Table 10 Summary of background noise levels

7.5 Penalties for acoustic characteristics of activity noise

As discussed in Section 2, it is a requirement of BS 4142 that the subjective prominence of the specific sound is considered when assessing the likely impact at nearby sound sensitive receivers, based on the likelihood of any acoustically distinguishing characteristics of the specific sound which may attract attention (whilst considering the existing residual sound climate).

Noise Harvest have experience of assessing industrial sound, and the staff are (minimum) degree-qualified engineering consultants in acoustics or a related discipline. All staff are members of the Institute of Acoustics and are therefore considered suitably qualified to make the following assessments.

7.6 Tonality

Annex C of BS 41412 provides the following guidance with respect to assessing a noise source for the presence of prominent, spectral components:

For a prominent, discrete tone to be identified as present, the time-averaged sound pressure level in the octave band of interest is required to exceed the time-averaged sound pressure levels of both adjacent one-third-octave bands by some constant level difference.

The level differences between adjacent octave bands that identify a tone are:

- 15 dB in the low-frequency one-third-octave bands (25 Hz to 125 Hz);
- 8 dB in the middle-frequency one-third-octave bands (160 Hz to 400 Hz);

And

- 5 dB in the high-frequency one-third-octave bands (500 Hz to 10 000 Hz).

The figure below presents the linear octave band values from the data supplied for each of the items of plant:

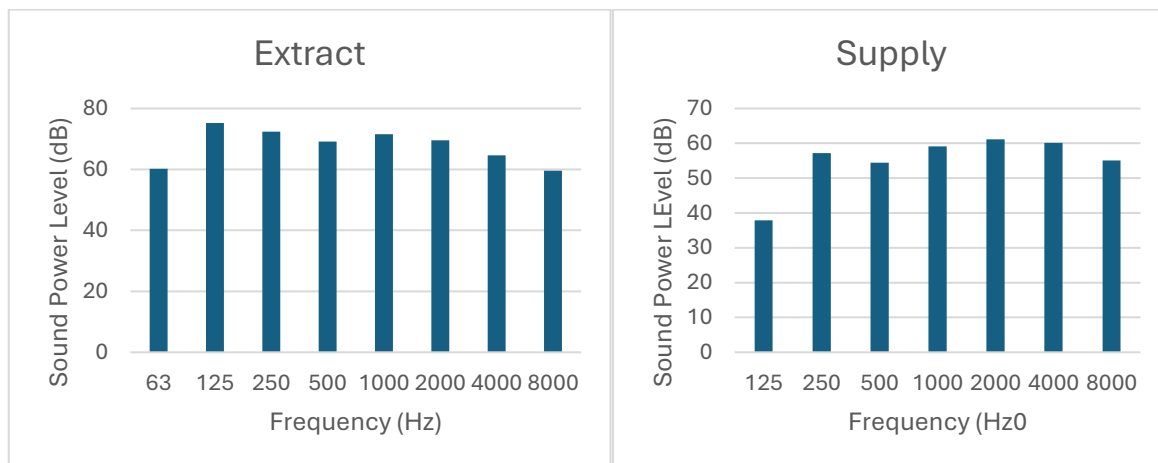


Figure 6 Octave band data for plant

As can be seen from the Figure above, none of the frequencies could be perceived as being tonal. On this basis, no correction for tonality is needed. It should be noted that one third octave band data was not present, so the above principals have been applied to octave bands.

7.7 Impulsivity and Intermittency

It is understood that the items of plant will run continuously during the hours of operation. As the items of plant will be continuous no acoustic correction will be applied for impulsiveness.

7.8 BS4142 Assessment

A 3D computer noise modelling software (iNoise Pro version 2026) which complies with BS EN ISO 9613:2024 was used to assess the noise levels at the nearest noise sensitive receptor.

The table below shows the scenario, the predicted single point receptor, the typical background noise level and difference between the corrected rating level and background.

Scenario	Receptor	Receptor height	Predicted noise at receptor (dB)	BS 4142 correction	Rating level	Background (dB)	Difference (dB)
Daytime	288 Bradford Road	1.5 m	46	0	46	60	-14
		4.5m	47	0	47	60	-13

Table 11 Summary of BS4142 assessment

As can be seen from the Table above the rating level is below the daytime background noise levels for both BS 4142. This would indicate that the plant would not likely cause an adverse impact.



8.0 Uncertainty

The following subsections focus on the potential uncertainty of the measurements and calculation.

8.1 Measurements

The measurement position potentially may be marginally different to the nearest noise sensitive receptor as there may be more of a direct line of sight to a noise source that may not be seen.

One measurement position was selected due to the security of the site.

8.2 Calculations

Unknown errors in the software may adversely influence the predicted noise levels.

Measured noise levels for the specific noise may not be accurate due to external noise levels increasing them.

Meteorological conditions such as wind diffraction or temperature inversions have not been taken into account.

9.0 Conclusion

A noise assessment has been undertaken as part of the planning application for the new kitchen extract and supply on the proposed restaurant at 290 Bradford Road, Batley.

An assessment of the proposed kitchen extract and supply has taken place and has found that there is likely to be no adverse impact on the nearest noise sensitive receptor.

10.1 Environmental noise survey data

Date and Time	L _{Aeq,5min}	L _{AfMax, 5min}	L _{A90, 5min}
31/03/2026			
31/03/2026 19:00	68.4	80.9	60.9
31/03/2026 19:05	67.4	83.3	59.1
31/03/2026 19:10	66.7	75.8	60.7
31/03/2026 19:15	67.7	78.1	61.0
31/03/2026 19:20	69.6	90.2	61.1
31/03/2026 19:25	67.5	81.3	58.8
31/03/2026 19:30	67.4	77.8	60.9
31/03/2026 19:35	67.6	78.3	60.3
31/03/2026 19:40	68.6	82.5	60.8
31/03/2026 19:45	67.2	76.1	60.9
31/03/2026 19:50	67.5	82.0	60.2
31/03/2026 19:55	70.0	89.7	59.9
31/03/2026 20:00	67.8	79.0	59.7
31/03/2026 20:05	67.6	79.3	60.3
31/03/2026 20:10	72.7	94.7	59.9
31/03/2026 20:15	67.9	82.9	59.5
31/03/2026 20:20	69.0	82.4	60.9
31/03/2026 20:25	67.7	81.5	59.4
31/03/2026 20:30	68.5	91.1	59.5
31/03/2026 20:35	68.0	79.6	59.3
31/03/2026 20:40	67.6	82.8	59.8
31/03/2026 20:45	67.8	75.2	59.0
31/03/2026 20:50	66.3	77.0	58.7
31/03/2026 20:55	68.8	81.1	61.1
31/03/2026 21:00	66.6	76.9	58.1
31/03/2026 21:05	68.5	84.1	59.0
31/03/2026 21:10	73.3	95.1	60.5
31/03/2026 21:15	68.0	78.5	58.9
31/03/2026 21:20	67.4	74.8	59.7
31/03/2026 21:25	68.0	79.1	60.5
31/03/2026 21:30	67.7	77.7	58.1
31/03/2026 21:35	67.3	77.4	60.6
31/03/2026 21:40	69.7	87.3	58.5
31/03/2026 21:45	67.3	81.2	59.4
31/03/2026 21:50	67.9	80.0	60.6
31/03/2026 21:55	67.6	76.9	59.5
31/03/2026 22:00	68.9	87.6	57.6
31/03/2026 22:05	70.8	92.8	57.1
31/03/2026 22:10	67.5	78.5	60.2
31/03/2026 22:15	73.9	95.0	59.5
31/03/2026 22:20	69.8	88.2	59.8
31/03/2026 22:25	65.5	78.9	57.8
31/03/2026 22:30	65.2	81.0	56.7
31/03/2026 22:35	71.0	93.2	57.0

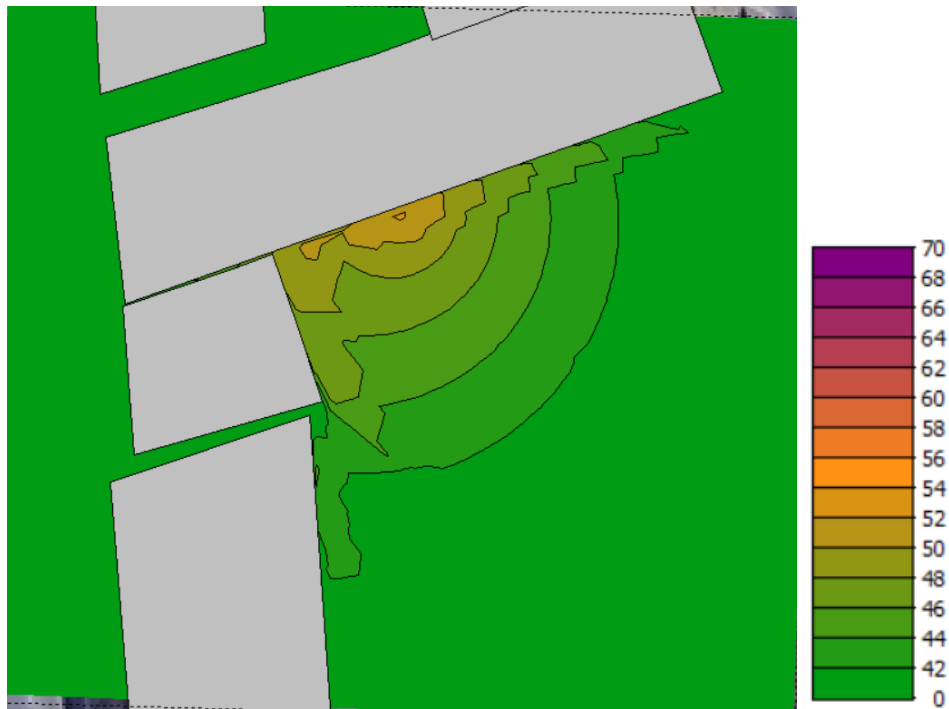
Date and Time	L _{Aeq,5min}	L _{AfMax, 5min}	L _{A90, 5min}
31/03/2026 22:40	68.1	84.3	57.7
31/03/2026 22:45	66.6	82.2	56.8
31/03/2026 22:50	75.6	102.5	58.7
31/03/2026 22:55	66.3	84.9	57.2

10.2 Weather Conditions

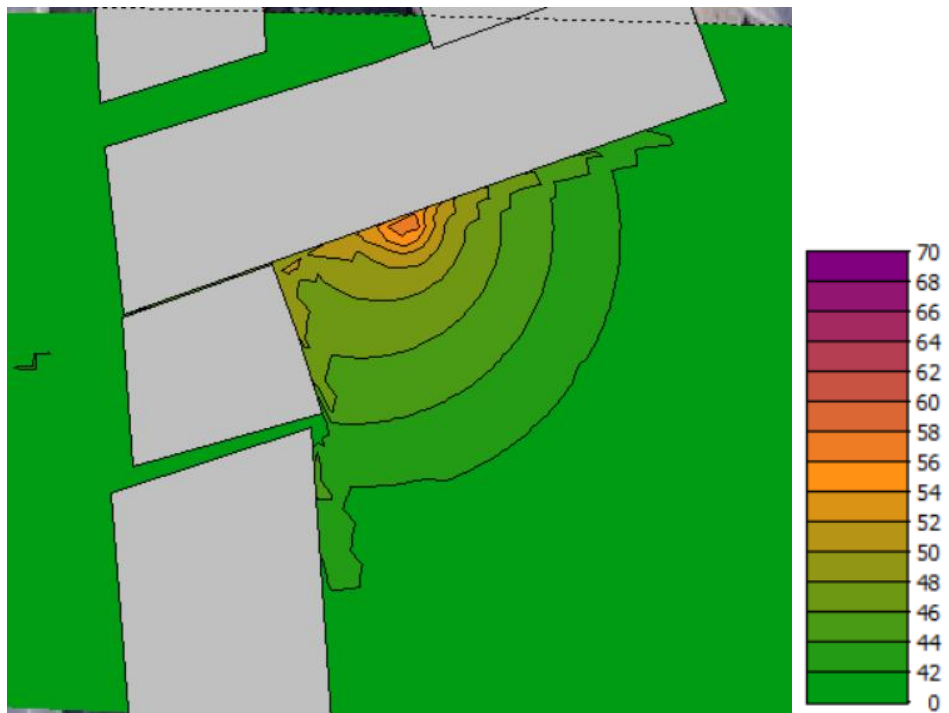
The following Table shows the record weather from www.timeanddate.com

Date	Time	Temp	Weather	Wind
31/03/2026	18:50	11 °C	Scattered clouds.	8 mph
31/03/2026	19:20	10 °C	Broken clouds.	9 mph
31/03/2026	19:50	10 °C	Partly cloudy.	9 mph
31/03/2026	20:20	10 °C	Partly cloudy.	10 mph
31/03/2026	20:50	9 °C	Partly cloudy.	10 mph
31/03/2026	21:20	9 °C	Passing clouds.	10 mph
31/03/2026	21:50	9 °C	Overcast.	9 mph
31/03/2026	22:20	9 °C	Overcast.	10 mph
31/03/2026	22:50	9 °C	Overcast.	12 mph
31/03/2026	18:50	11 °C	Scattered clouds.	8 mph
31/03/2026	19:20	10 °C	Broken clouds.	9 mph
31/03/2026	19:50	10 °C	Partly cloudy.	9 mph
31/03/2026	20:20	10 °C	Partly cloudy.	10 mph
31/03/2026	20:50	9 °C	Partly cloudy.	10 mph
31/03/2026	21:20	9 °C	Passing clouds.	10 mph
31/03/2026	21:50	9 °C	Overcast.	9 mph
31/03/2026	22:20	9 °C	Overcast.	10 mph
31/03/2026	22:50	9 °C	Overcast.	12 mph

10.3 Grid Noise Maps



1.5m



4.5m