HS2

January 2026

Construction Noise and Vibration Monthly Report – November 2025

Lichfield District Council

List of tables

Non-Technical Summary

This Noise and Vibration Monitoring Report fulfils HS2 Limited's commitment detailed in the Environmental Minimum Requirements (EMRs), Annex 1, Code of Construction Practice, to present the results of noise monitoring carried out within the Lichfield District Council (LDC) area during the month of November 2025.

Within this period monitoring was undertaken at the following worksites:

- Fradley Wood Embankment (ref.: FEW) worksite where road realignment works, haul road and site maintenance and vegetation removal were underway.
- A38 Southbound Slip Road Realignment (ref: A38SSRR) worksite where platform maintenance, backfilling, excavation, road construction, deck works, compaction, deliveries, sheet piling and lifting operations were underway.
- Streethay Cutting Retaining Structure (ref: SCRS) worksite where compound construction, general maintenance, deliveries and collections, platform maintenance, backfilling, excavation, road construction, deck works, compaction, sheet piling and lifting operations were underway.
- Staffs Lane (ref: SSL) worksite where no works were undertaken.
- Cappers Lane Compound (ref.: CLC) worksite where no works were undertaken.
- Whittington Common Cutting (ref: WCC) worksite where no works were undertaken.
- Swinfen Cutting South (ref: SCS) worksite where overbridge construction was underway.
- Trunk's Road (ref.: N23) worksite where overbridge construction was underway.
- Sutton Road Overbridge (ref.: SRO) worksite where parapet installation, concrete pours and drainage installation were underway.

The HS2 threshold levels for significant noise impacts, which are defined in Information Paper E23 (https://www.gov.uk/government/publications/hs2-information-papers-environment), were not exceeded due to HS2 works during November 2025.

There were no exceedances of trigger levels as defined in Section 61 consents during the reporting period.

No complaints regarding noise and vibration were received by HS2 during the reporting period.

Abbreviations and Descriptions

The abbreviations, descriptions and project terminology used within this report can be found in Table 1.

Table 1: Table of Abbreviations

Acronym/Term	Definition
$L_{Aeq,T}$	See equivalent continuous sound pressure level
Ambient sound	A description of the all-encompassing sound at a given location and time which will include sound from many sources near and far. Ambient sound can be quantified in terms of the equivalent continuous sound pressure level, $L_{pAeq,T}$
Decibel(s), or dB	Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure (measured in Pascal (Pa)). Because of this wide range, a level scale called the decibel (dB) scale, based on a logarithmic ratio, is used in sound measurement. Audibility of sound covers a range of approximately 0-140dB.
Decibel(s) A-weighted, or dB(A)	The human ear system does not respond uniformly to sound across the detectable frequency range and consequently instrumentation used to measure sound is weighted to represent the performance of the ear. This is known as the 'A weighting' and is written as 'dB(A)'.
Equivalent continuous sound pressure level, or $L_{Aeq,T}$	An index used internationally for the assessment of environmental sound impacts. It is defined as the notional unchanging level that would, over a given period of time (T), deliver the same sound energy as the actual time-varying sound over the same period. Hence fluctuating sound levels can be described in terms of an equivalent single figure value, typically expressed as a decibel level.
Exclusion of data	Measurement of noise levels can be affected by weather conditions such as prolonged periods of rain, wind speeds higher than 5m/s and snow/ice ground cover. Noise levels measured during these periods are considered not representative of normal noise conditions at the site and, for the purposes of this report, are excluded from the assessment of exceedances and calculation of typical noise levels and are also greyed out in charts. Identifiable incongruous noise and vibration events not attributable to HS2 construction noise are also excluded.
Façade	A facade noise level is the noise level 1m in front of a large reflecting surface. The effect of reflection, is to produce a slightly higher (typically +3 dB) sound level than it would be if the reflecting surface was not there.
Free-field	A free-field noise level is the noise level measured at a location where no reflective surfaces, other than the ground, lies within 3.5 metres of the microphone position.
LOAEL	Lowest Observed Adverse Effect Level - the level above which adverse effects on health and quality of life can be detected.
Peak particle velocity, or PPV	Instantaneous maximum velocity reached by a vibrating element as it oscillates about its rest position. The PPV is a simple indicator of perceptibility and risk of damage to structures due to vibration. It is usually measured in mm/s.
SOAEL	Significant Observed Adverse Effect Level - the level above which significant adverse effects on health and quality of life occur.
Sound pressure level	The parameter by which sound levels are measured in air. It is measured in decibels. The threshold of hearing has been set at 0dB, while the threshold of pain is approximately 120dB. Normal speech is approximately 60dB at a distance of 1 metre and a change of 3dB in a time varying sound signal is commonly regarded as being just detectable. A change of 10dB is subjectively twice, or half, as loud.
Vibration dose value, or VDV	An index used to evaluate human exposure to vibration in buildings. While the PPV provides information regarding the magnitude of single vibration events, the VDV provides a measure of the total vibration experienced over a specified period of time (typically 16h daytime and 8h night-time). It takes into account the magnitude, the number and the duration of vibration events and can be used to quantify exposure to continuous, impulsive, occasional and intermittent vibration. The vibration dose value is measured in $m/s^{1.75}$.

1 Introduction

1.1.1 HS2 is required to undertake noise (and vibration) monitoring as necessary to comply with the requirements of the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, including specifically Annex 1: Code of Construction Practice, in addition to any monitoring requirements arising from conditions imposed through consents under Section 61 of the Control of Pollution Act, 1974 or through Undertakings & Assurances given to third parties. Such monitoring may be undertaken for the following purposes:

- monitoring the impact of construction works;
- to investigate complaints, incidents and exceedance of trigger levels; or
- monitoring the effectiveness of noise and vibration control measures.

1.1.2 Monitoring data and interpretive reports are to be provided to each relevant local authority on a monthly basis and shall include a summary of the construction activities occurring, the data recorded over the monitoring period, any complaints received, any periods in exceedance of agreed trigger levels, the results of any investigations and any actions taken or mitigation measures implemented. This report provides noise data, and interpretation thereof, for monitoring carried out by HS2 within the Lichfield District Council (LDC) area for the period 1st to 30th November 2025.

1.1.3 Construction sites in the local authority area where monitoring was undertaken during this period include:

- Fradley Wood Embankment ref: FEW (see Worksite Identification Plan 1 in Appendix A), where work activities included:
    - Road realignment works.
    - Haul road maintenance.
    - Site maintenance.
    - Vegetation removal.
- A38 Southbound Slip Road Realignment ref: A38SSRR (see Worksite Identification Plan 2 in Appendix A), where work activities included:
    - Platform maintenance.
    - Backfilling.
    - Excavation.
    - Road construction including stone deliveries, removals and installations.
    - Compaction.

    - Deck works including asphalt installation.
    - Deliveries.
    - Sheet piling including installation and pre auguring.
    - Lifting operations.
- Streethay Cutting Retaining Structure ref: SCRS (see Worksite Identification Plan 2 in Appendix A), where work activities included:
    - Compound construction including excavation, drainage installation and concrete pours.
    - General maintenance including excavation, road sweeping and strimming.
    - Deliveries and collections.
    - Platform maintenance.
    - Backfilling.
    - Excavation.
    - Road construction including asphalt installation, stone deliveries, removals and installations.
    - Compaction.
    - Deck works.
    - Sheet piling including installation and pre auguring.
    - Lifting operations.
- South Staffs Lane ref: SSL (see Worksite Identification Plan 2 in Appendix A), where no works were undertaken.
- Cappers Lane Compound ref: CLC (see Worksite Identification Plan 3 in Appendix A), where no works were undertaken.
- Whittington Common Cutting ref: WCC (see Worksite Identification Plan 3 in Appendix A), where no works were undertaken.
- Swinfen Cutting South ref: SCS (see Worksite Identification Plan 4 in Appendix A), where activities included:
    - Overbridge construction.
- Trunk's Road ref: N23 (see Worksite Identification Plan 4 in Appendix A), where work activities included:
    - Overbridge construction.
- Sutton Road Overbridge ref: SRO (see Worksite Identification Plan 5 in Appendix A), where work activities included:
    - Parapet installation.

- Concrete pours.
- Drainage installation.

1.1.4 The applicable standards, guidance, and monitoring methodology are outlined in the construction noise and vibration monitoring methodology report which can be found at the following location https://www.gov.uk/government/collectons/monitoring-the-environmental-effects-of-hs2. Noise and vibration monitoring reports for previous months can also be found at this location.

1.2 Measurement Locations

1.2.1 Fifteen (15) noise monitoring and four (4) vibration monitoring installations were active in November 2025 in the LDC area. Table 2 summarises the location of the noise and vibration monitoring installations within the LDC area in November 2025.

1.2.2 The vibration monitor at measurement location CLC-V1, worksite CLC, was removed on the 4th November as works in the vicinity have ceased.

1.2.3 The noise monitor at measurement location CLC-N4, worksite CLC, was removed on the 12th November as works in the vicinity have ceased.

1.2.4 Maps showing the positions of the noise monitoring installations are presented in Appendix B.

Table 2: Monitoring Locations

Worksite Reference	Measurement Reference	Address
FEW	FEW-N1	Wood End Farm, Wood End Lane
	FEW-V3	Wood End Farm, Wood End Lane
A38SSRR	A38SSRR-N1	Thompson Way, Streethay
SCRS	SCRS-N1	Manor House, Burton Road, Streethay
	SCRS-N2	Kings Orchard Marina, Broad Ln, Huddlesford
	SCRS-N4	Streethay Farm, A5127, Streethay
SSL	SSL-N1	Ash Tree Lane, Hill Farm, Fradley and Streethay
CLC	CLC-N1	Ivy Cottage, Park Lane, Fradley and Streethay
	CLC-N4	Huddlesford Lane, Fradley and Streethay
WCC	WCC-N1	Whittington Hill Farm, Darnford Lane, Whittington
	WCC-N2	Ellfield House, Whittington Common Road, Whittington
	WCC-N3	Whittington Hill Farm DLOB Facade, Darnford Lane, Whittington

Worksite Reference	Measurement Reference	Address
SCS	SCS-N1	The Lodge, Rock Hill, Hints
N23	N23-N1	21 Roman Road
SRO	SRO-N1	Sutton Road, Drayton Bassett, Mile Oak
	SRO-N3	White House Farm, Bangley Lane, Tamworth
	SRO-V2	Sutton Road, Drayton Bassett, Mile Oak
	SRO-V3	White House Farm, Bangley Lane, Tamworth

2 Summary of Results

2.1 Summary of Measured Noise and Vibration Levels

2.1.1 Table 3 presents a summary of the measured noise levels at the monitoring locations over the reporting period. The $L_{Aeq,T}$ is presented for each of the relevant time periods averaged over the calendar month, along with the highest single period $L_{Aeq,T}$ that was found to occur within the month.

Table 3: Summary of Measured dB L_{Aeq} Data over the Monitoring Period

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Saturday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Sunday / Public Holiday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)	
				0700 - 0800	0800 - 1800	1800 - 1900	1900 - 2200	2200 - 0700	0700 - 0800	0800 - 1300	1300 - 1400	1400 - 2200	2200 - 0700	0700 - 2200	2200 - 0700
FEW	FEW-N1	Wood End Farm, Wood End Lane	Free-field	60.0 (61.2)	59.6 (60.8)	57.8 (60.8)	55.0 (58.2)	53.2 (58.0)	54.6 (54.6)	57.8 (57.8)	59.3 (62.1)	56.0 (61.1)	50.2 (56.3)	56.5 (62.2)	51.8 (58.2)
A38SSRR	A38SSRR-N1	Thompson Way, Streethay	Free-field	61.5 (64.2)	61.7 (67.5)	60.1 (62.7)	59.4 (64.5)	57.7 (64.0)	58.8 (59.9)	59.6 (61.2)	59.0 (61.4)	58.8 (61.4)	54.5 (58.4)	58.5 (61.9)	56.3 (62.1)
SCRS	SCRS-N1	West of Manor House, Burton Road, Streethay	Free-field	54.7 (59.1)	55.9 (62.9)	53.9 (57.4)	52.9 (57.1)	51.6 (58.5)	52.5 (55.0)	52.2 (56.7)	51.2 (55.0)	51.8 (55.8)	47.8 (52.9)	52.6 (57.1)	50.3 (56.9)
	SCRS-N2	Kings Orchard Marina, Broad Ln, Huddlesford	Free-field	54.7 (57.7)	53.6 (58.1)	53.1 (56.7)	51.8 (55.5)	49.9 (56.9)	49.6 (50.1)	53.3 (56.3)	51.5 (53.0)	51.1 (53.4)	46.9 (52.2)	51.3 (54.2)	48.5 (55.8)
	SCRS-N4	Streethay Farm, A5127, Streethay	Free-field	60.3 (62.3)	62.3 (71.1)	58.8 (60.9)	57.6 (60.1)	56.0 (61.9)	56.5 (58.1)	59.0 (60.6)	58.6 (60.1)	57.5 (61.4)	52.5 (56.7)	57.6 (60.7)	54.8 (60.7)
SSL	SSL-N1	Ash Tree Lane, Hill Farm, Fradley and Streethay	Free-field	58.9 (61.8)	57.8 (60.6)	57.4 (59.0)	56.1 (58.4)	54.6 (61.5)	54.3 (56.5)	56.4 (58.0)	56.1 (58.1)	55.7 (58.7)	50.9 (55.7)	55.9 (59.7)	53.3 (59.3)
CLC	CLC-N1	Ivy Cottage, Park Lane, Fradley and Streethay	Free-field	58.7 (60.7)	57.9 (60.4)	57.3 (59.5)	55.9 (59.1)	52.2 (58.6)	55.8 (56.8)	58.1 (59.7)	58.5 (60.0)	57.7 (61.5)	48.8 (54.9)	56.2 (60.0)	50.6 (57.3)

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Saturday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Sunday / Public Holiday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)	
				0700 - 0800	0800 - 1800	1800 - 1900	1900 - 2200	2200 - 0700	0700 - 0800	0800 - 1300	1300 - 1400	1400 - 2200	2200 - 0700	0700 - 2200	2200 - 0700
	CLC-N4	Huddlesford Lane, Fradley and Streethay	Free-field	65.9 (66.5)	65.8 (65.8)	66.9 (66.9)	63.3 (65.2)	60.5 (64.1)	64.5 (64.5)	66.0 (66.0)	65.1 (65.1)	64.6 (65.6)	49.3 (57.4)	63.1 (65.2)	59.0 (64.3)
WCC	WCC-N1	Whittington Hill Farm, Darnford Lane, Whittington	Free-field	51.5 (54.9)	50.8 (54.7)	50.1 (53.0)	49.2 (60.8)	46.0 (52.5)	46.8 (49.4)	48.6 (51.8)	49.8 (56.7)	48.4 (51.9)	42.8 (48.3)	48.7 (53.4)	45.3 (51.6)
	WCC-N2	Ellfield House, Whittington Common Road, Whittington	Free-field	51.6 (56.0)	51.3 (60.0)	49.7 (53.7)	48.8 (56.2)	46.5 (59.5)	47.6 (50.0)	49.7 (54.0)	48.2 (50.0)	47.6 (51.4)	42.3 (46.8)	48.5 (53.7)	46.4 (53.0)
	WCC-N3	DLOB Facade, Whittington Hill Farm Darnford Lane	Free-field	50.1 (53.8)	49.4 (53.4)	48.6 (52.1)	47.6 (52.2)	45.1 (53.4)	45.6 (47.0)	47.6 (49.6)	47.1 (48.8)	47.4 (52.3)	42.1 (50.9)	47.6 (52.7)	43.9 (51.3)
SCS	SCS-N1	The Lodge, Rock Hill, Hints	Freefield	55.2 (57.4)	53.8 (58.4)	52.6 (54.3)	50.0 (55.7)	48.0 (56.6)	50.7 (52.2)	52.8 (53.8)	52.4 (54.8)	52.2 (61.0)	45.6 (50.9)	51.0 (54.0)	47.4 (55.4)
N23	N23-N1	21 Roman Road	Free-field	59.5 (62.2)	57.9 (59.9)	56.9 (59.5)	53.9 (58.5)	51.6 (60.6)	53.9 (54.1)	56.9 (58.4)	57.2 (58.7)	56.1 (60.6)	48.6 (53.5)	55.5 (59.3)	50.6 (58.5)

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Saturday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Sunday / Public Holiday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)	
				0700 - 0800	0800 - 1800	1800 - 1900	1900 - 2200	2200 - 0700	0700 - 0800	0800 - 1300	1300 - 1400	1400 - 2200	2200 - 0700	0700 - 2200	2200 - 0700
SRO	SRO-N1	Sutton Road, Drayton Bassett, Mile Oak	Free-field	52.7 (54.8)	52.7 (56.8)	50.4 (53.6)	48.9 (54.9)	46.3 (54.3)	49.1 (50.0)	50.8 (54.4)	49.8 (52.8)	49.3 (52.5)	44.9 (49.9)	49.6 (52.8)	45.9 (53.0)
	SRO-N3	White House Farm, Bangley Lane, Tamworth	Free-field	47.3 (51.7)	47.0 (53.8)	45.2 (48.3)	44.3 (53.8)	41.7 (53.9)	43.3 (44.7)	47.4 (48.7)	46.6 (49.5)	46.1 (61.1)	39.1 (46.8)	45.1 (51.7)	41.6 (47.0)

2.1.2 Table 4 presents a summary of the measured vibration levels at each monitoring location over the reporting period. The highest PPV measured during the monitoring along any axis is presented in the table.

Table 4: Summary of Measured PPV Data over the Monitoring Period

Worksite Reference	Measurement Reference	Monitor Address	Highest PPV measured in any axis, mm/s
FEW	FEW-V3	Wood End Farm, Wood End Lane	1.29 (X-axis)
SRO	SRO-V2	Sutton Road, Drayton Bassett, Mile Oak	0.90 (Z-axis)
	SRO-V3	White House Farm, Bangley Lane, Tamworth	0.15 (X-axis)

2.1.3 Appendix C presents graphs of the noise and vibration monitoring data over the month for each of the measurement locations. Noise data presented consists of the hourly L_{Aeq} values and, where relevant, the $L_{Aeq,T}$ values (where the time period T has been taken to be the averaging period as specified in Table 1 of HS2 Information Paper E23). Vibration data presented consist of hourly PPV values. The full data set for the monitoring equipment can be found at the following location: https://data.gov.uk/dataset/24542ae7-dd44-444f-b259-871c4cc43b5e/environmental-monitoring-data.

2.2 Exceedances of the LOAEL and SOAEL

2.2.1 The lowest observed adverse effect level (LOAEL) is defined in the Planning Practice Guidance – Noise (PPG) as the level above which "noise starts to cause small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life".

2.2.2 The significant observed adverse effect level (SOAEL) is defined in the 'Planning Practice Guidance – Noise' as the level above which "noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area."

2.2.3 HS2 Phase One Information Paper E23: Control of Construction Noise and Vibration sets out the LOAELs and SOAELs for construction noise.

2.2.4 Where reported construction noise levels exceed the LOAEL and SOAEL, relevant periods will be identified. Summary statistics to evaluate ongoing qualification for noise insulation and temporary rehousing are also presented where relevant.

2.2.5 Table 5 presents a summary of recorded exceedances of the LOAEL and SOAEL at each measurement location over the reporting period, including the number of exceedances during each time period.

Table 5: Summary of Exceedances of LOAEL and SOAEL

Worksite Reference	Measurement Reference	Site Address	Day (Weekday, Saturday, Sunday, Night)	Time Period	Number of Exceedances of LOAEL	Number of Exceedances of SOAEL
FEW	FEW-N1	Wood End Farm, Wood End Lane	All days	All periods	No exceedance	No exceedance
A38SSRR	A38SSRR-N1	Thompson Way, Streethay	Weekday	0800-1800	2	No exceedance
SCRS	SCRS-N1	West of Manor House, Burton Road	All days	All periods	No exceedance	No exceedance
	SCRS-N2	Kings Orchard Marina, Broad Lane	All days	All periods	No exceedance	No exceedance
	SCRS-N4	Streethay Farm, A5127, Streethay	Weekday	0800-1800	1	No exceedance
SSL	SSL-N1	Ash Tree Lane, Hill Farm	All days	All periods	No exceedance	No exceedance
CLC	CLC-N1	Ivy Cottage, Park Lane	All days	All periods	No exceedance	No exceedance
	CLC-N4	Huddlesford Lane	All days	All periods	No exceedance	No exceedance

Worksite Reference	Measurement Reference	Site Address	Day (Weekday, Saturday, Sunday, Night)	Time Period	Number of Exceedances of LOAEL	Number of Exceedances of SOAEL
WCC	WCC-N1	Whittington Hill Farm	All days	All periods	No exceedance	No exceedance
	WCC-N2	Ellfield House	All days	All periods	No exceedance	No exceedance
	WCC-N3	DLOB Facade, Whittington Hill Farm	All days	All periods	No exceedance	No exceedance
SCS	SCS-N1	The Lodge, Rock Hill, Hints	All days	All periods	No exceedance	No exceedance
N23	N23-N1	21 Roman Road	All days	All periods	No exceedance	No exceedance
SRO	SRO-N1	Sutton Road, Drayton Bassett	All days	All periods	No exceedance	No exceedance
	SRO-N3	White House Farm, Bangley Lane	All days	All periods	No exceedance	No exceedance

2.2.6 There were exceedances of the LOAEL due to HS2 construction works at two (2) monitoring location during weekday daytime periods.

2.2.7 No exceedances of the SOAEL were recorded due to HS2 construction works during November 2025.

2.3 Exceedances of Trigger Level

2.3.1 Table 6 provides a summary of exceedances of the Section 61 trigger noise levels determined to be due to HS2 related construction noise measured during the reporting period, along with the findings of any investigation.

Table 6: Summary of Exceedances of Trigger Levels

Complaint Reference Number (if applicable)	Worksite Reference	Date and Time Period	Identified Source	Results of Investigation (including noise monitoring results)	Actions Taken
-	-	-	-	-	-

2.4 Complaints

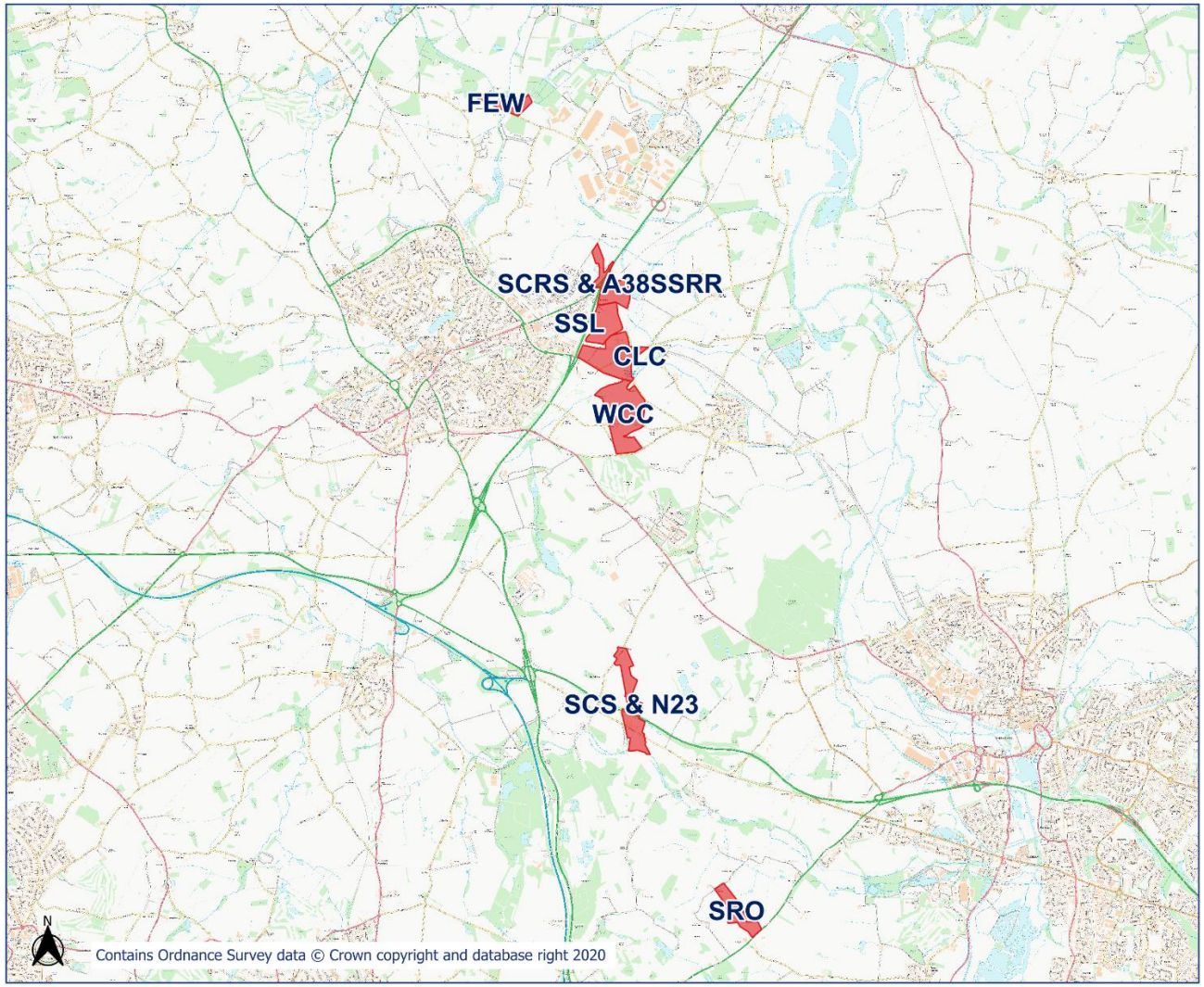
2.4.1 Table 7 provides a summary of complaint information related to noise received during the reporting period, along with the findings of any investigation.

Table 7: Summary of Complaints

Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
-	-	-	-	-

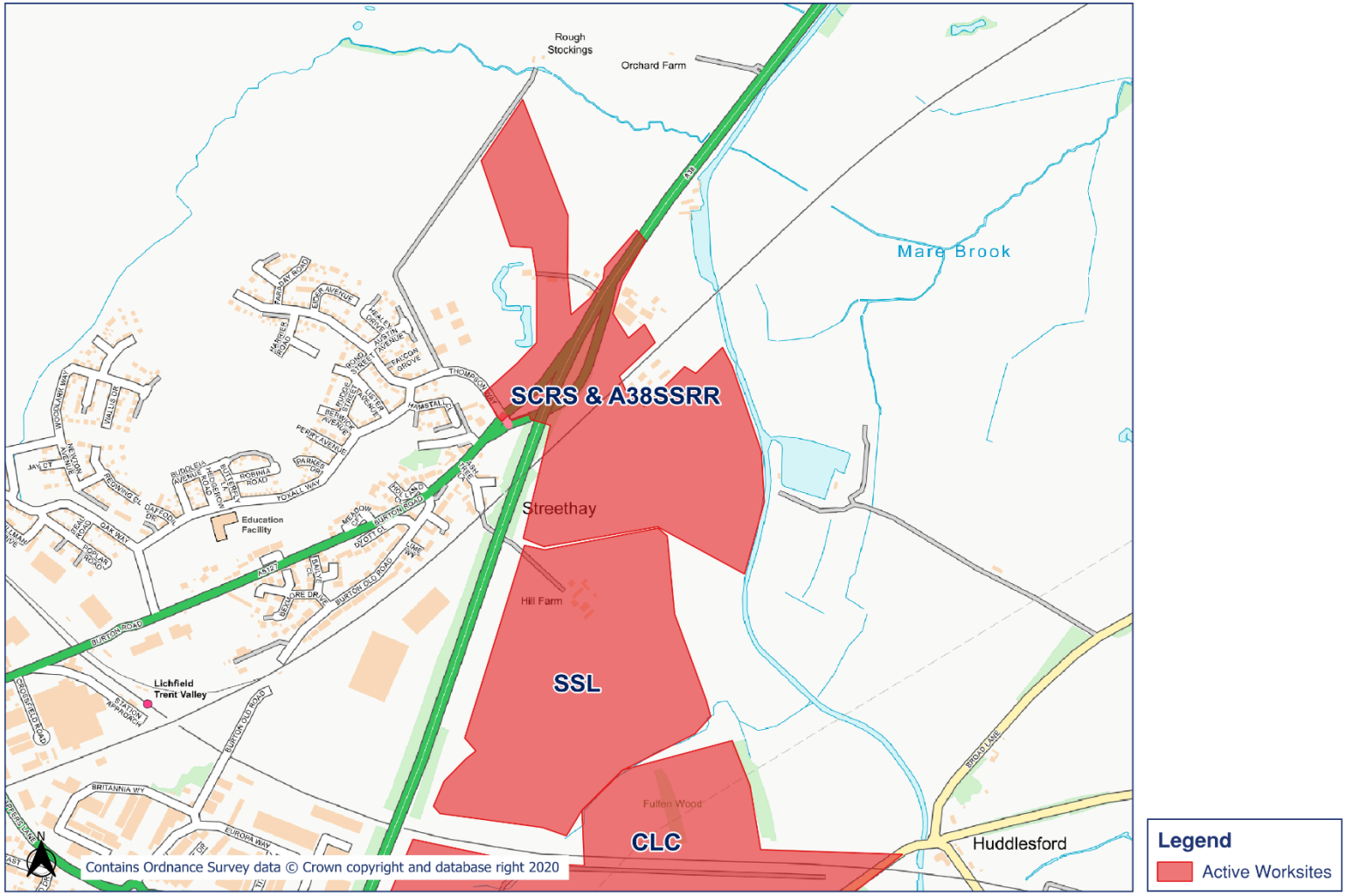
Appendix A Site Locations

HS2 Worksite Identification Plan - Overview



HS2 Worksite Identification Plan - 1

HS2 Worksite Identification Plan - 2



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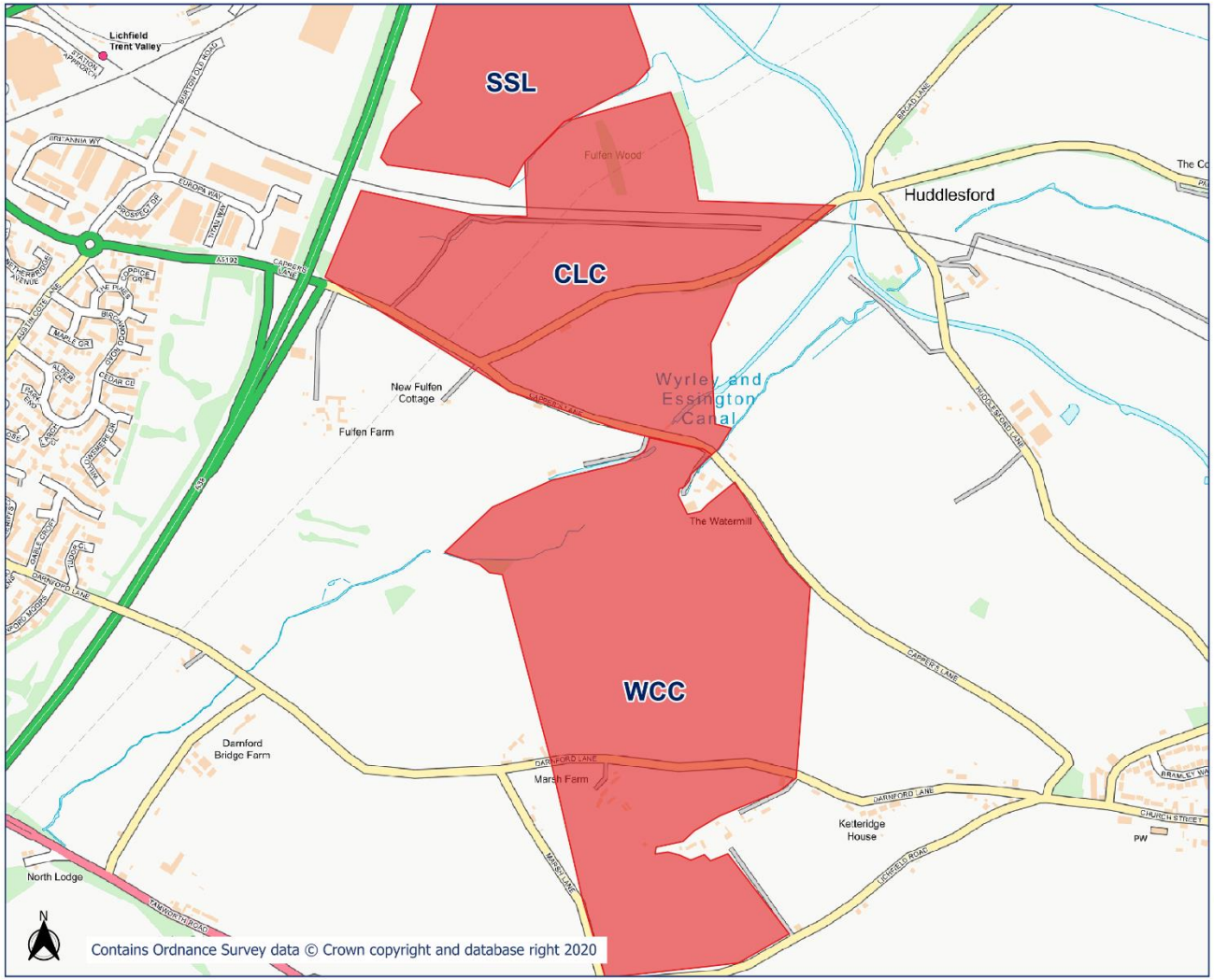
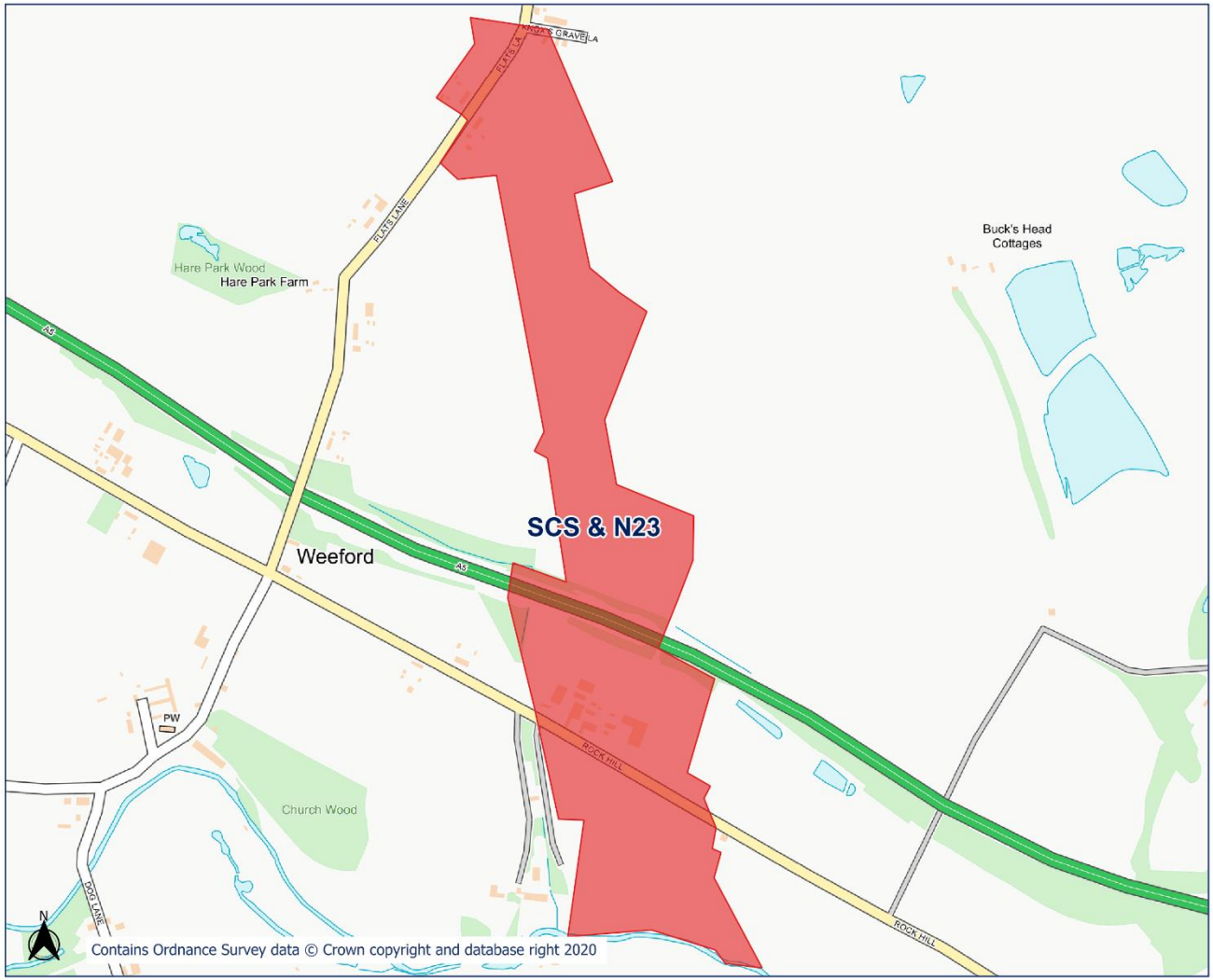


Legend

Active Worksites

Worksite Identification Plan - 4



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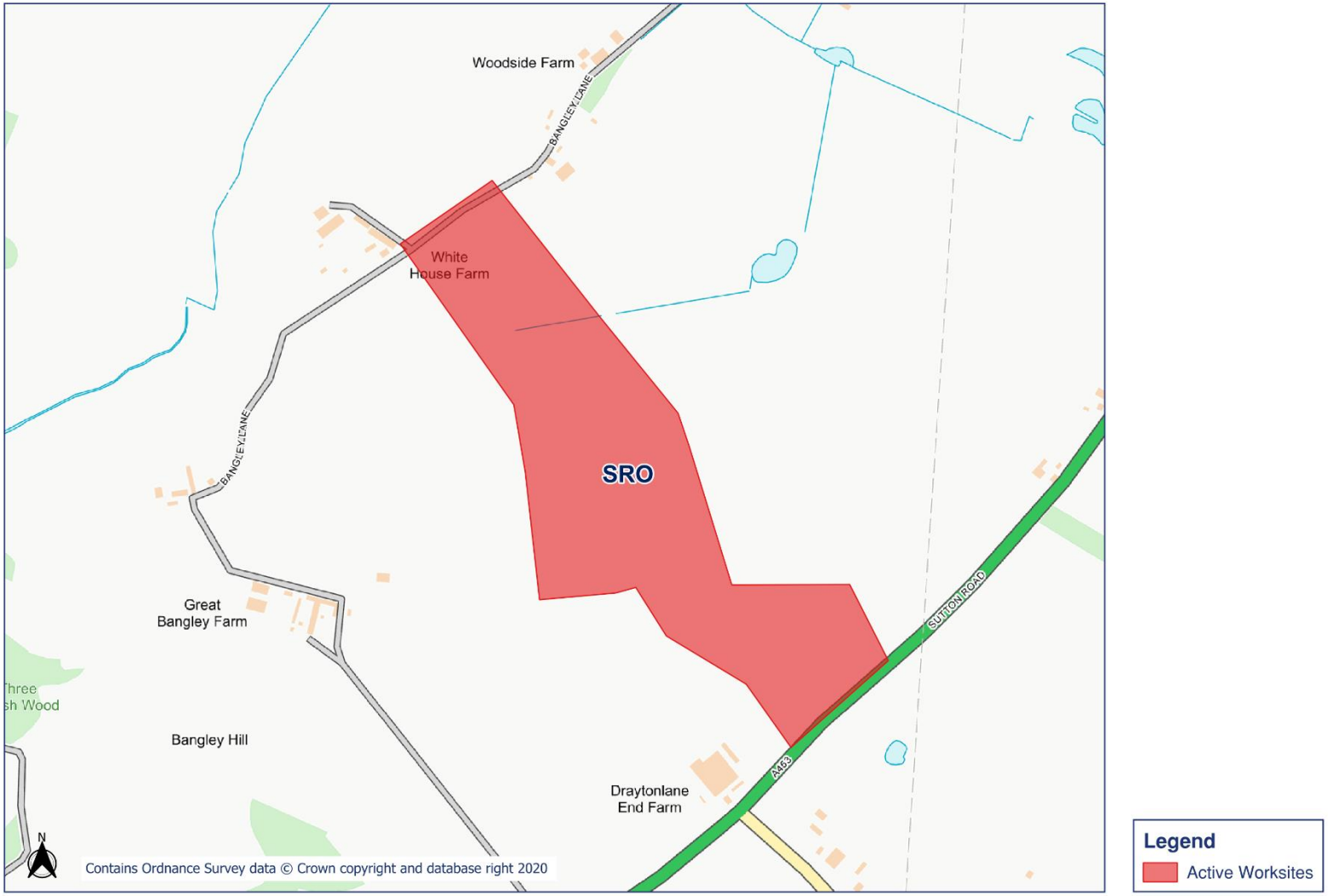
Active Worksites

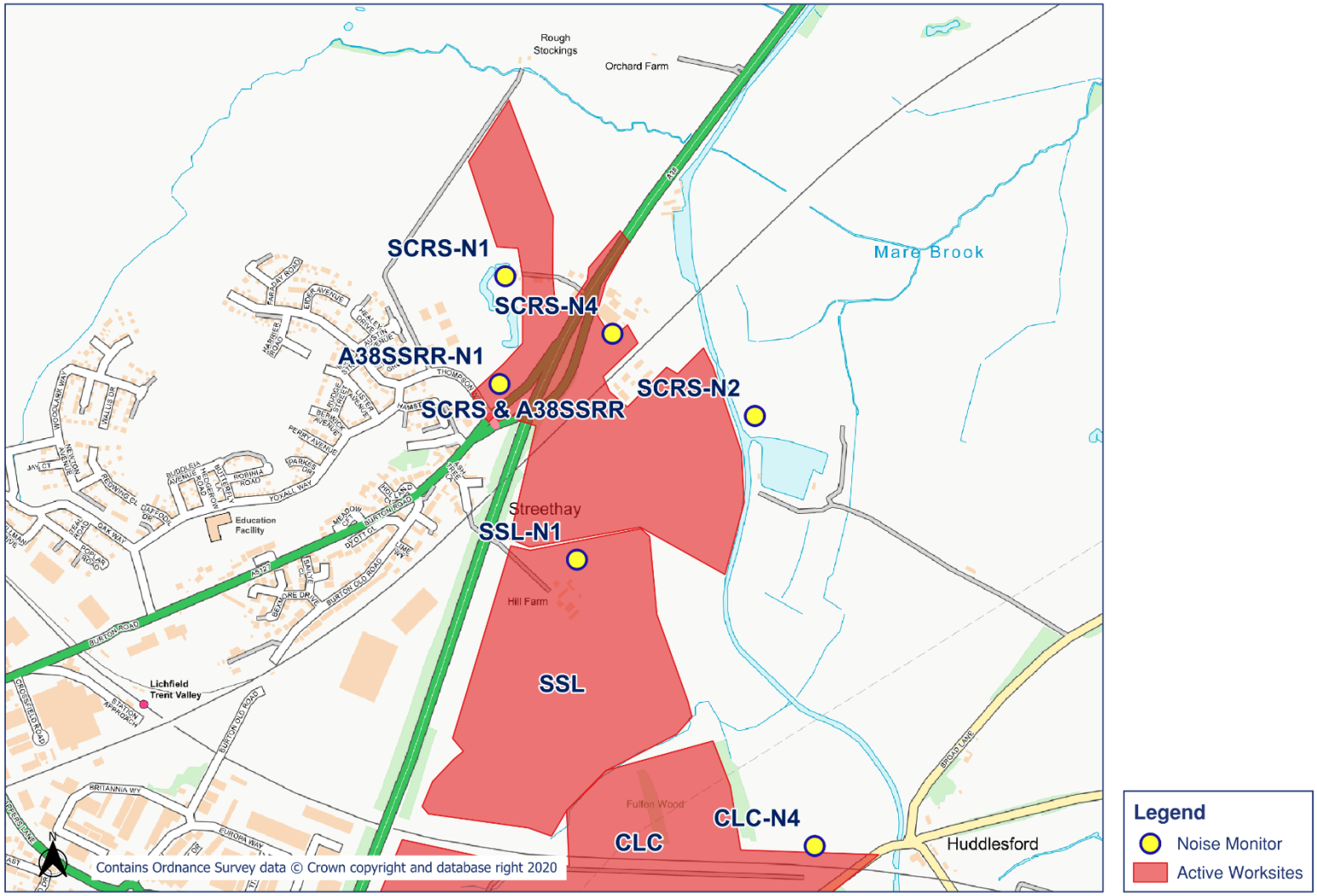
HS2 Worksite Identification Plan - 5



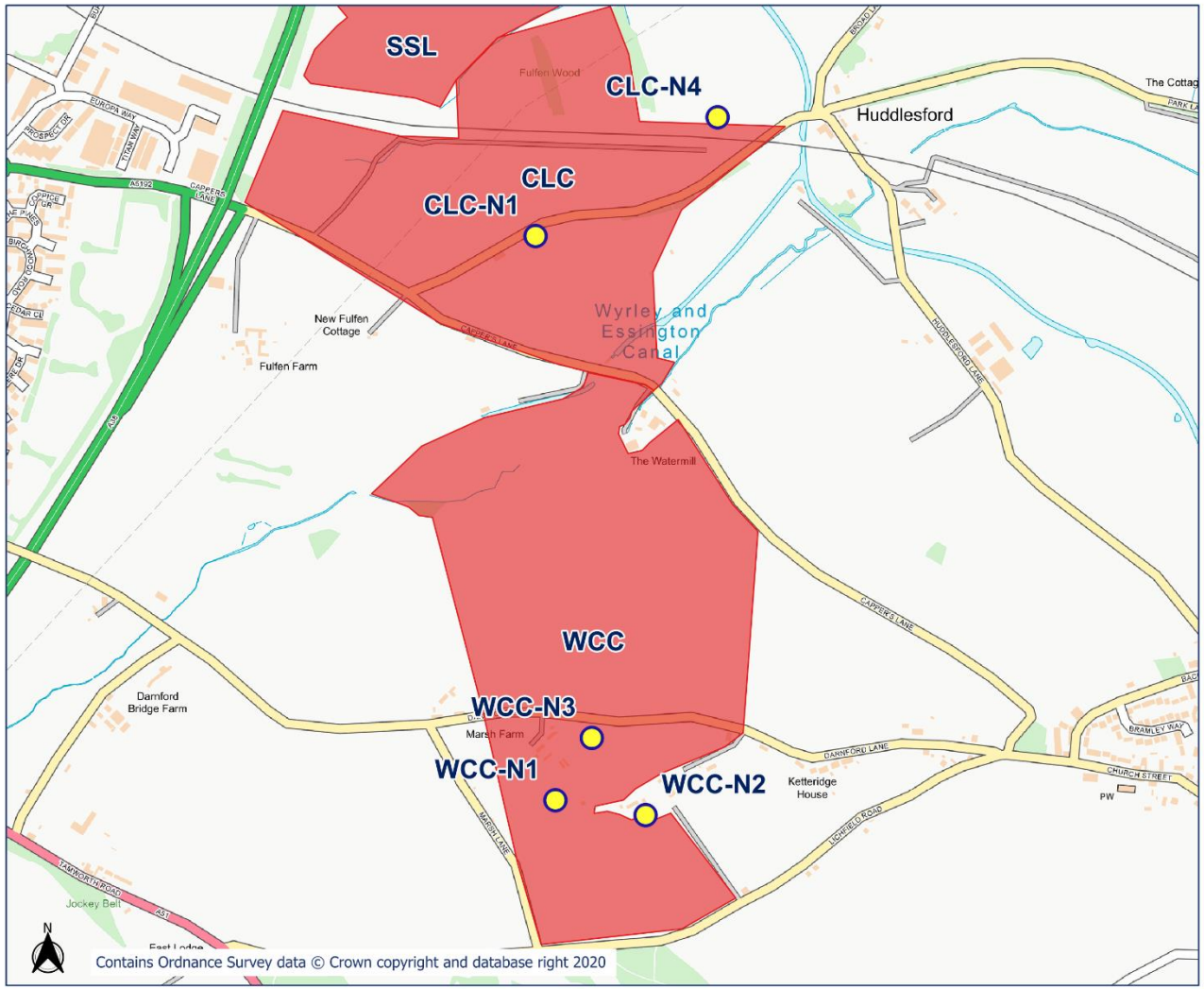
Appendix B Monitoring Locations

HS2 Noise and Vibration Monitoring Plan - 1

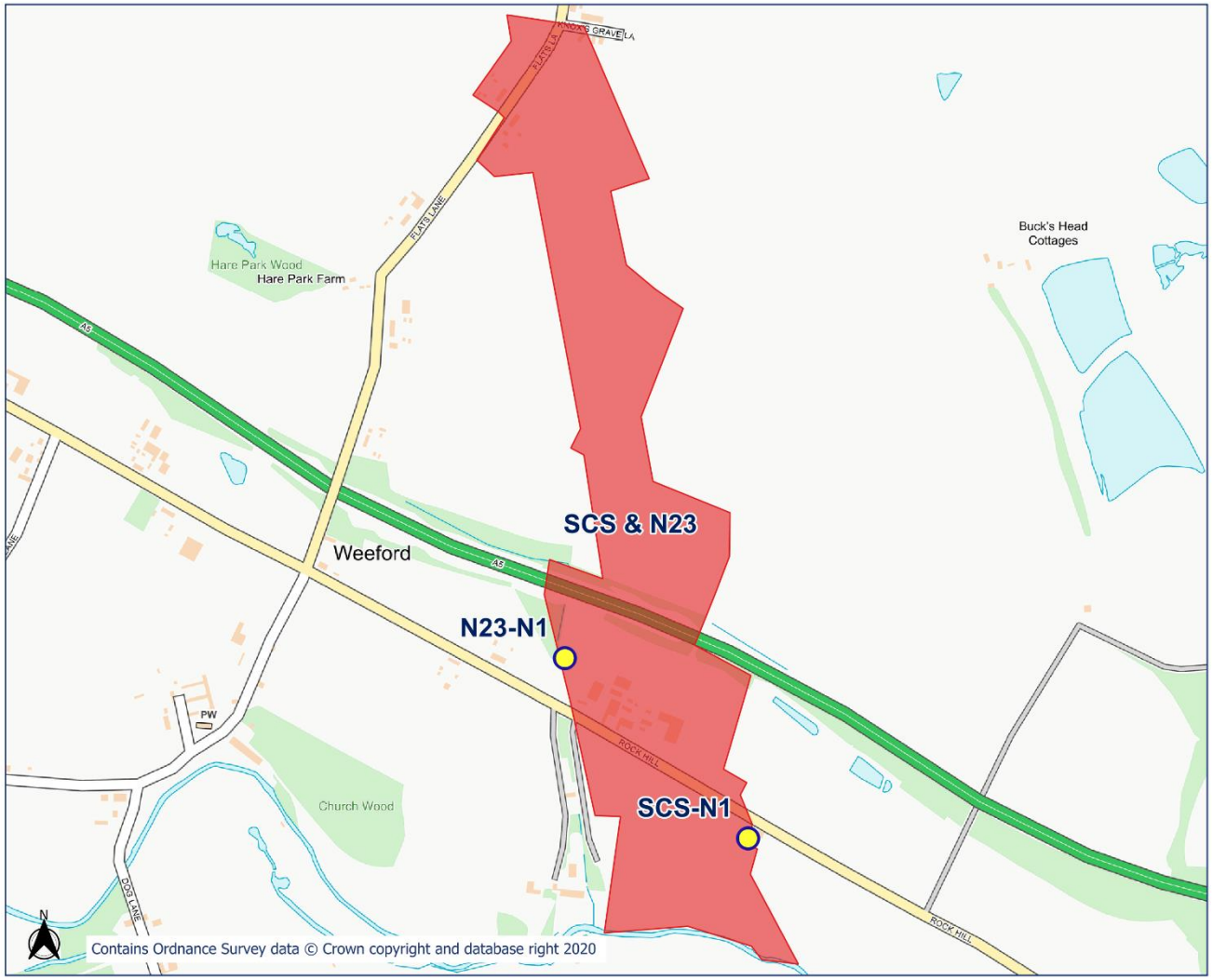
HS2 Noise and Vibration Monitoring Plan - 2



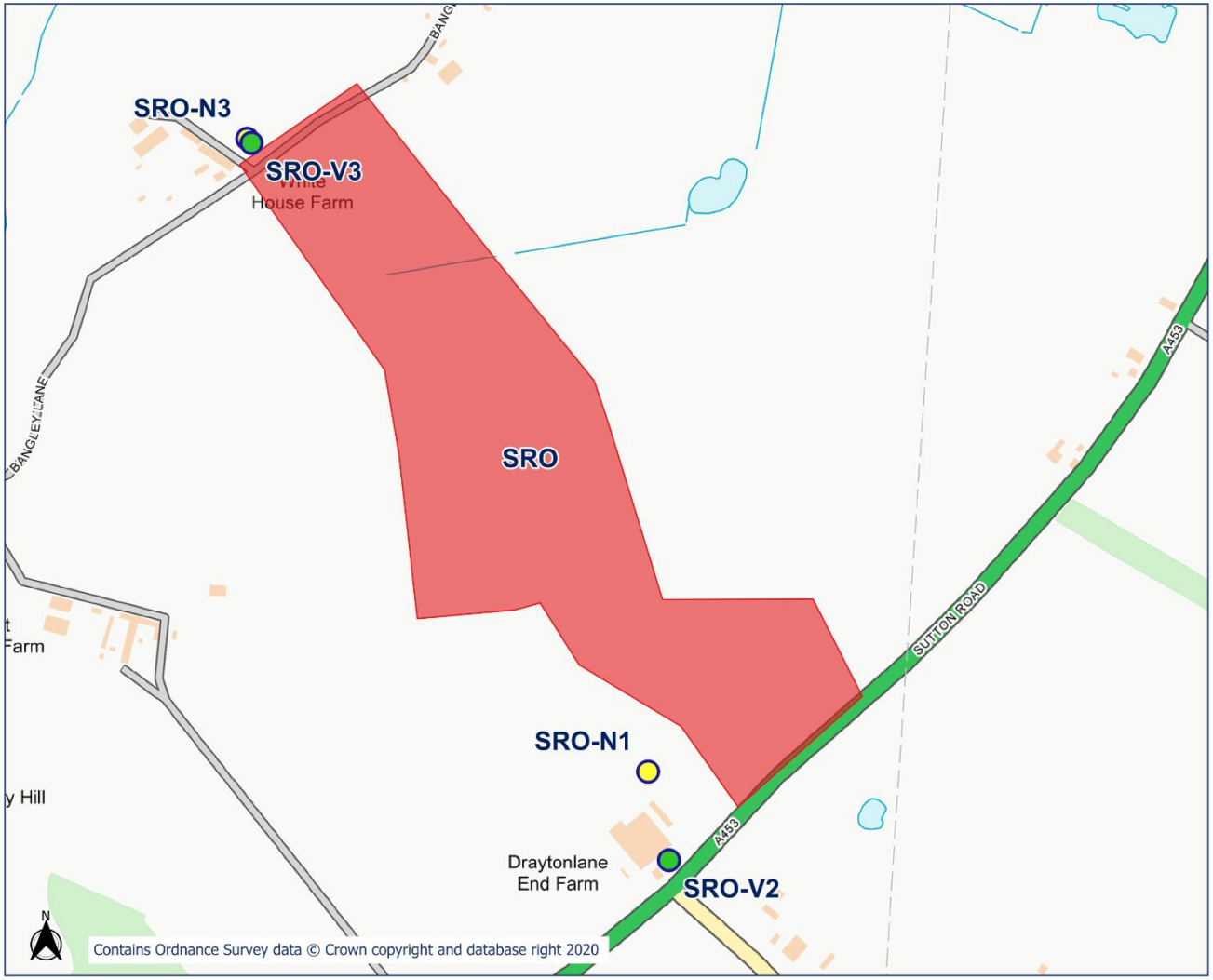
HS2 Noise and Vibration Monitoring Plan - 3



HS2 Noise and Vibration Monitoring Plan - 4



HS2 Noise and Vibration Monitoring Plan - 5

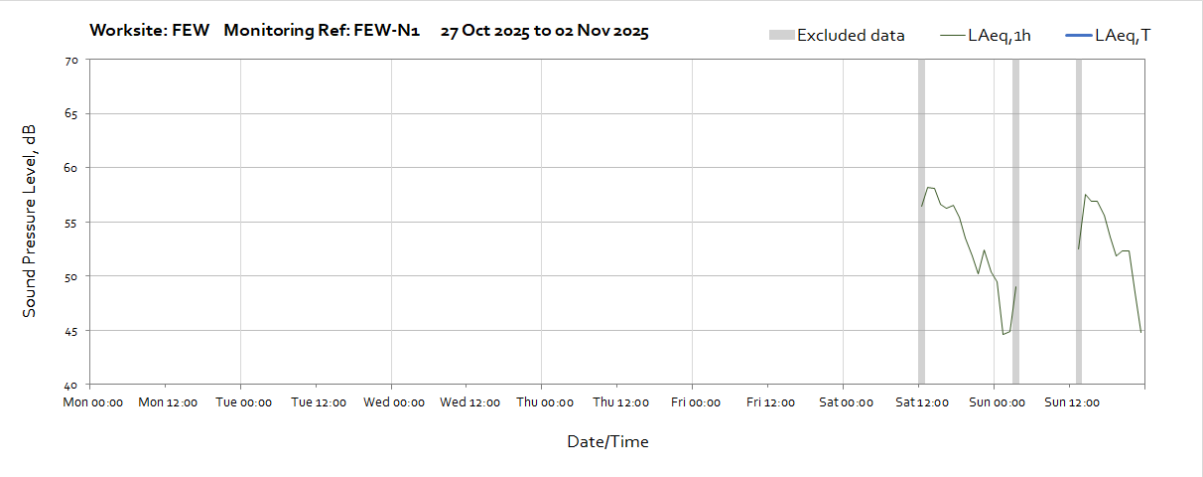


Appendix C Data

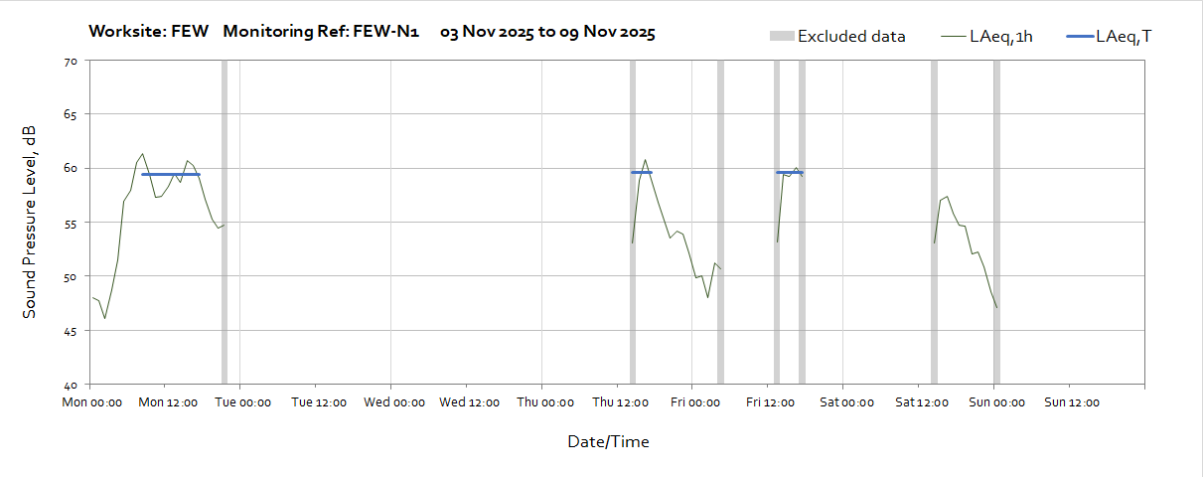
Noise

The following graphs show the hourly measured ambient noise level $L_{Aeq,1h}$ and, where relevant, the averaged noise level $L_{Aeq,T}$ values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods where noise levels are adversely affected by weather or only measured for part of the period, which are not representative of HS2 construction works, have been greyed out and excluded from the calculation of the $L_{Aeq,T}$ values in Table 3 of the main report.

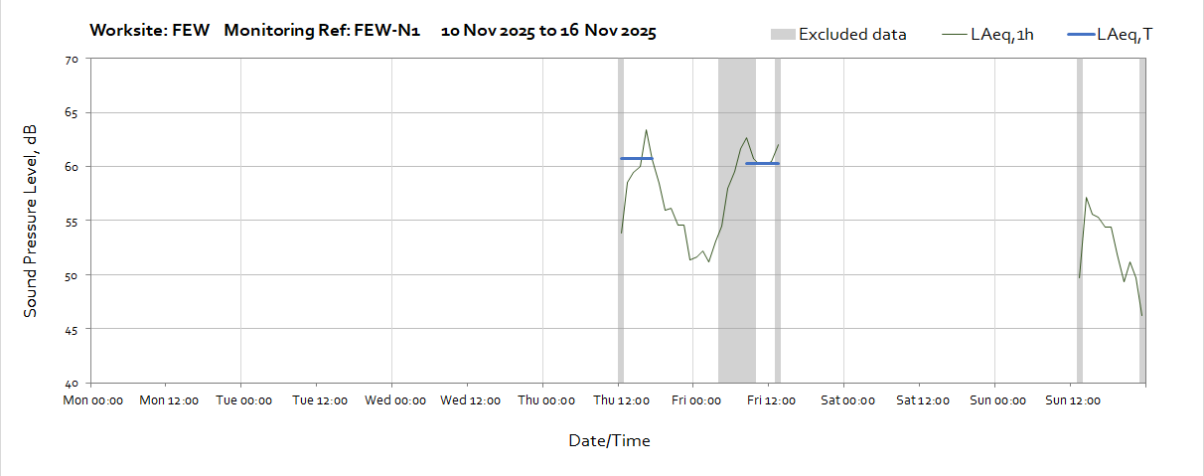
Worksite: FEW – Monitoring Ref: FEW-N1



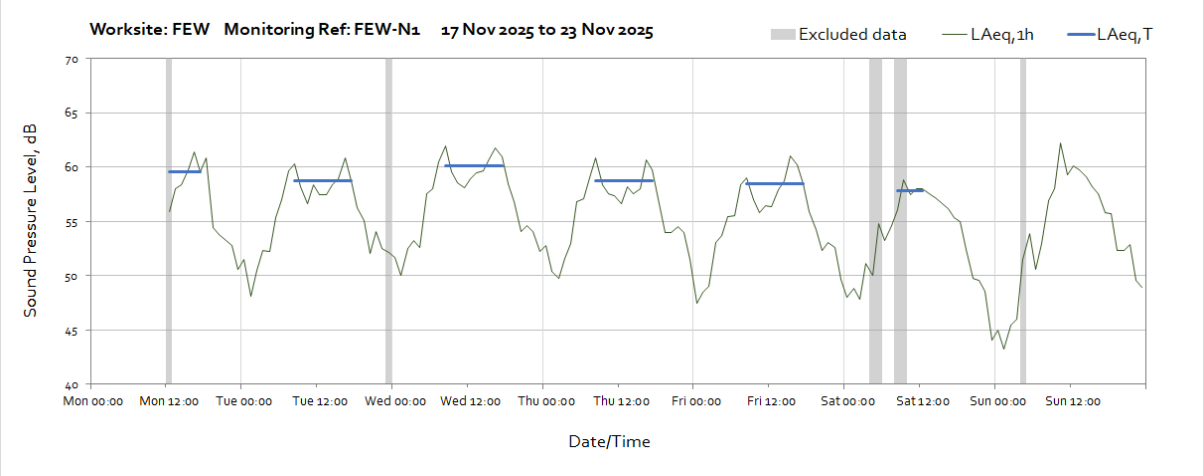
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.



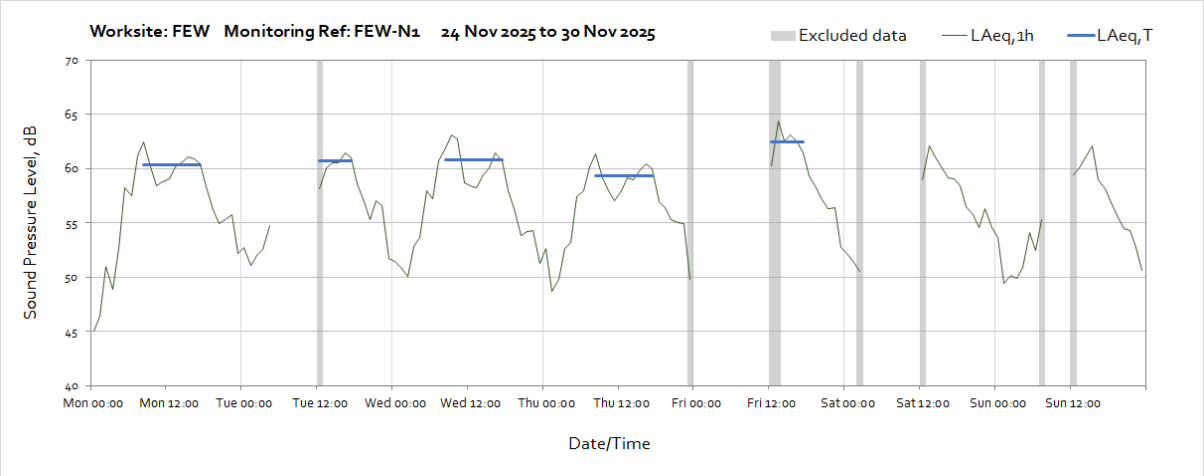
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.



Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

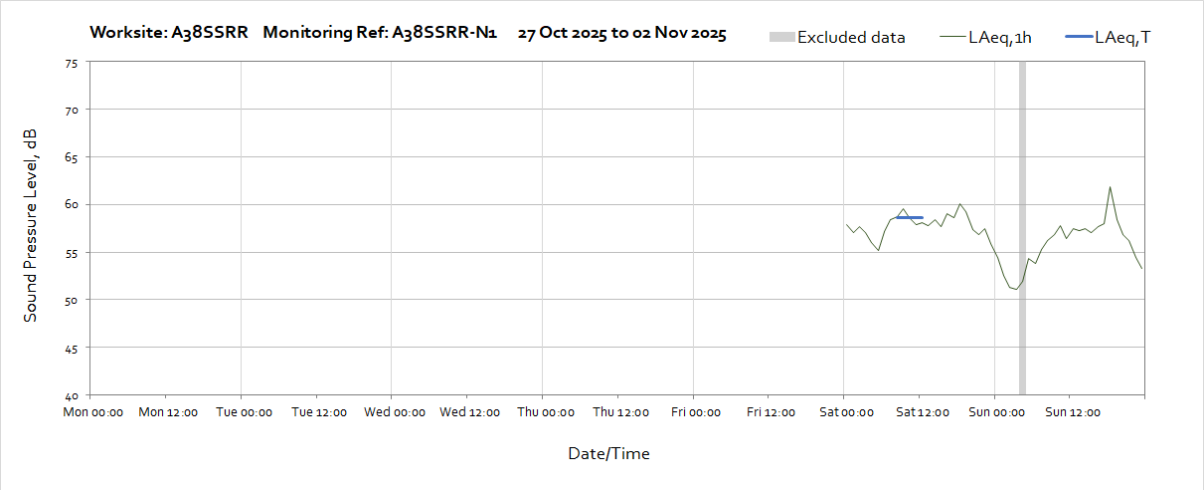


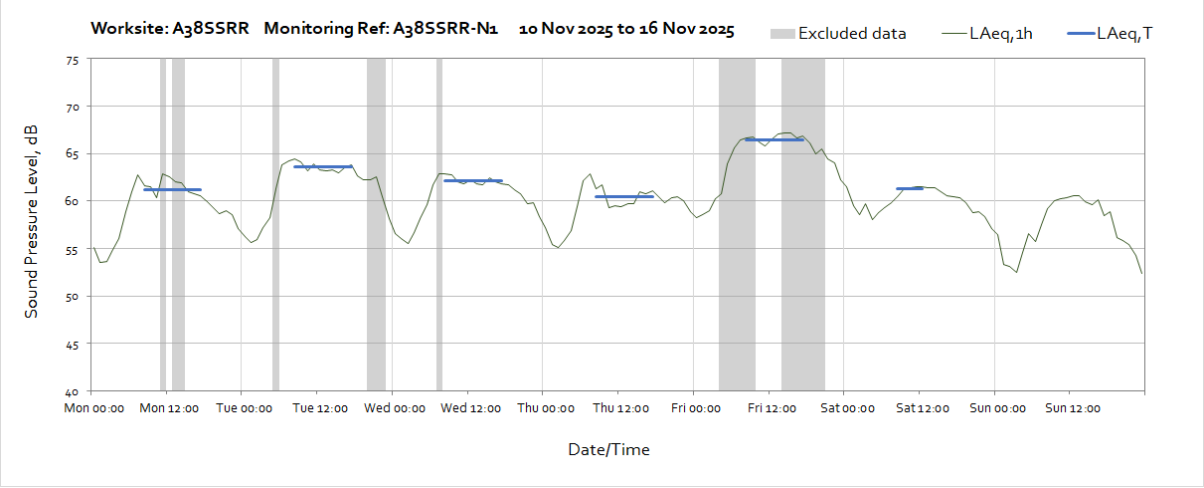
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

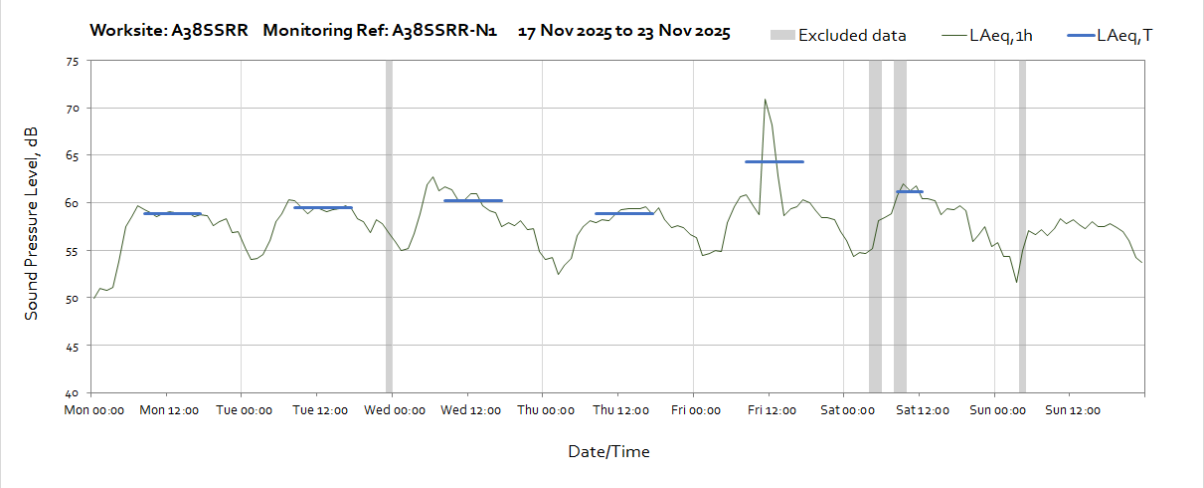


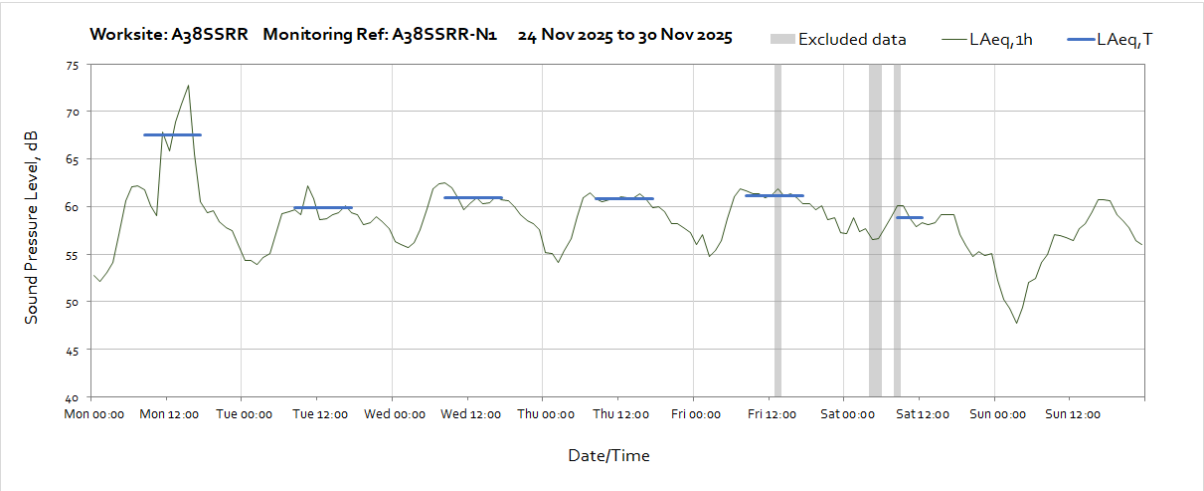
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

Worksite: A38SSRR – Monitoring Ref: A38SSRR-N1

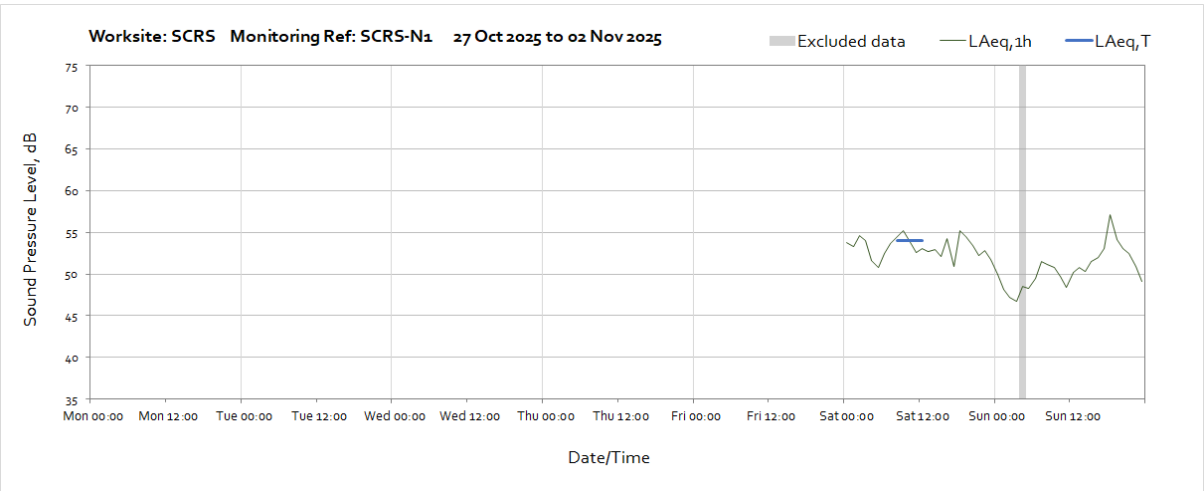


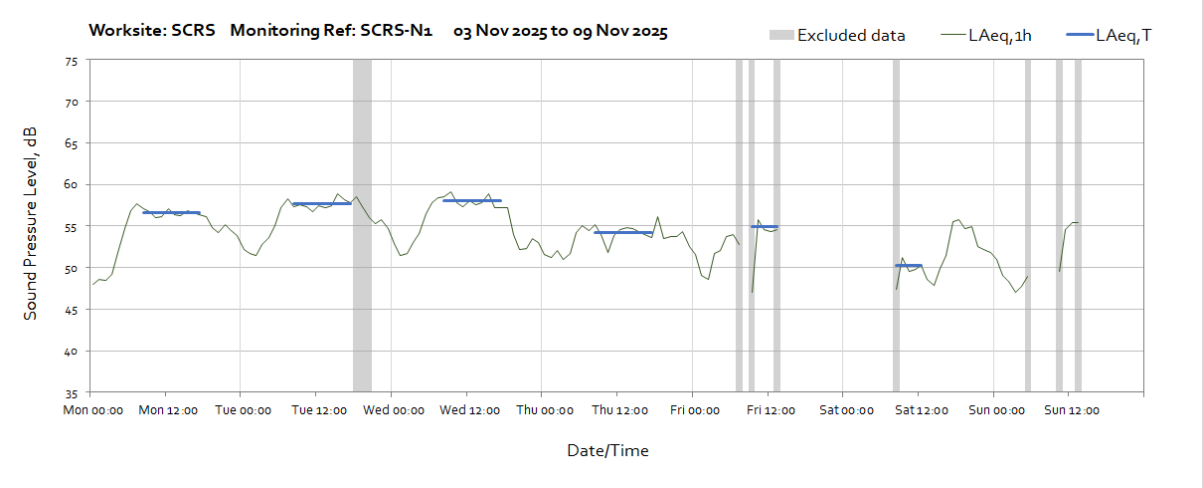




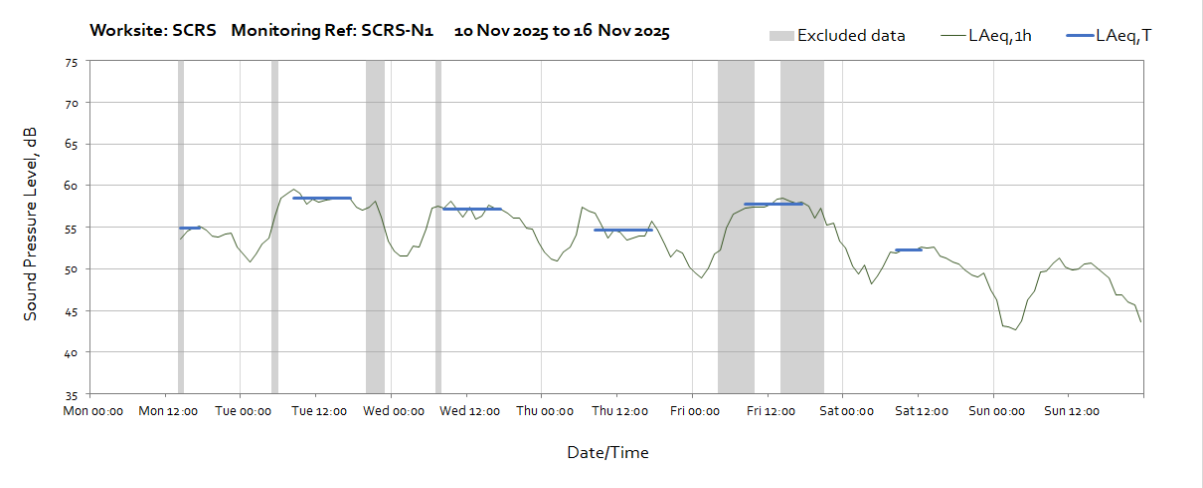


Worksite: SCRS – Monitoring Ref: SCRS-N1

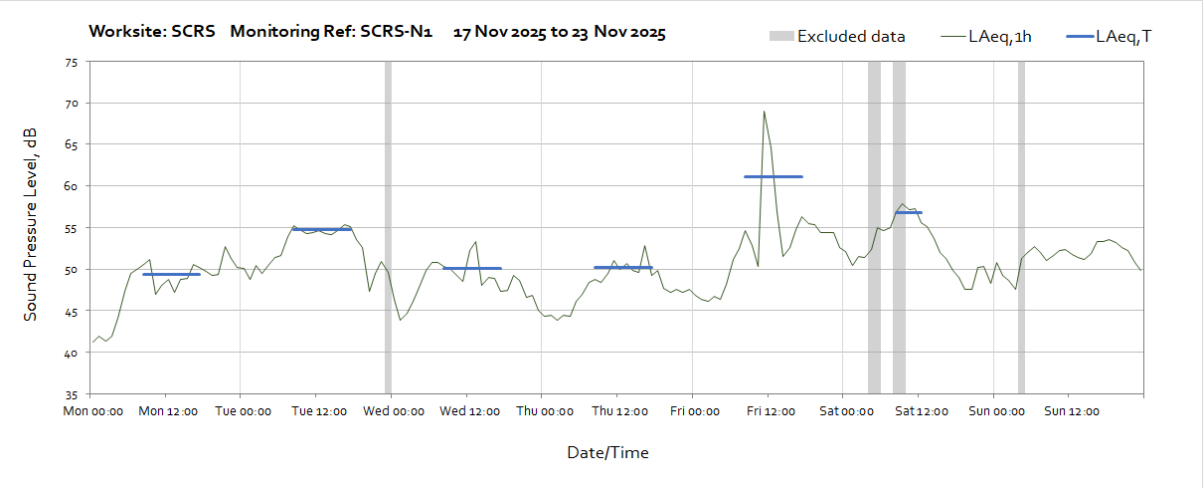


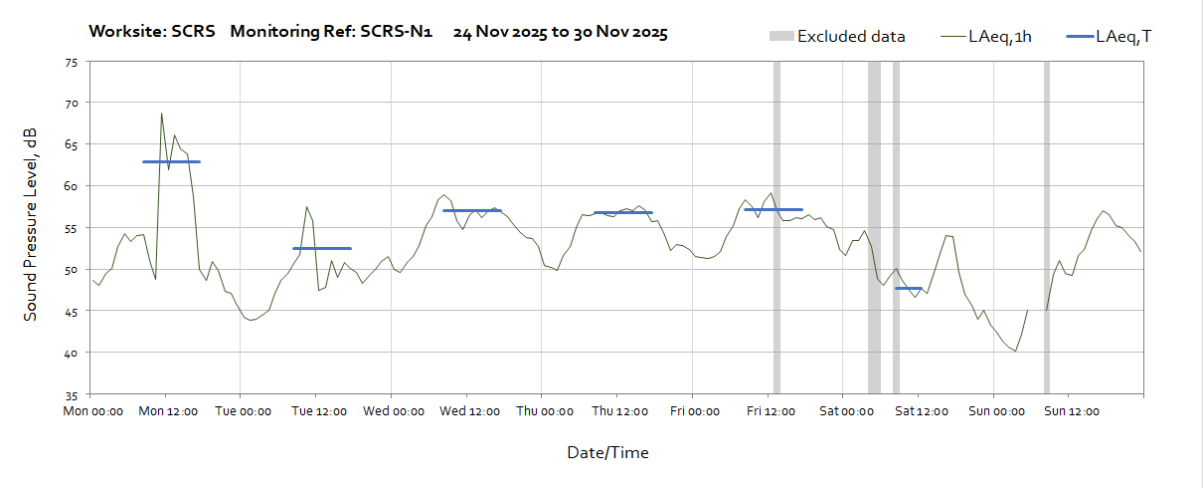


Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.



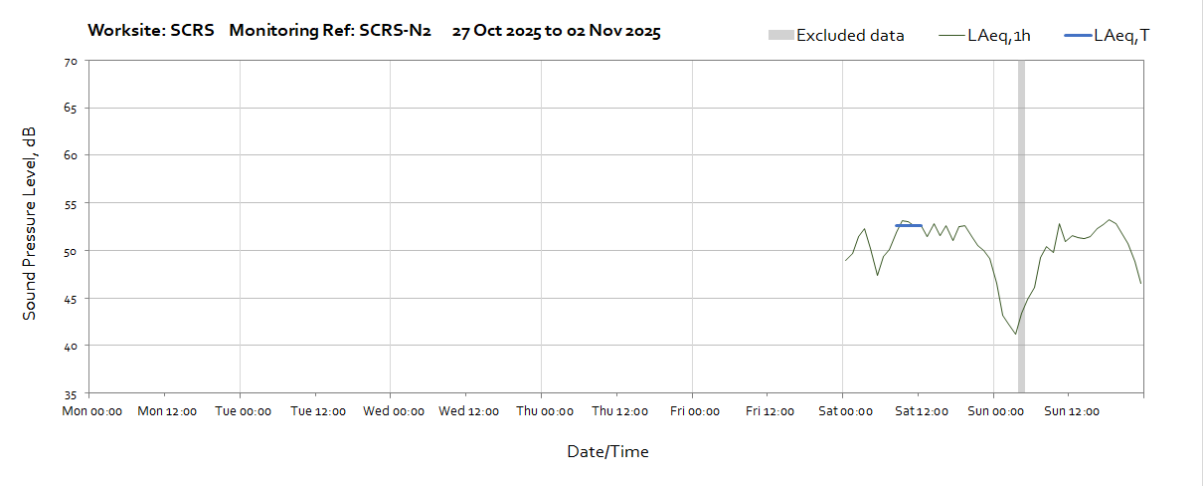
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

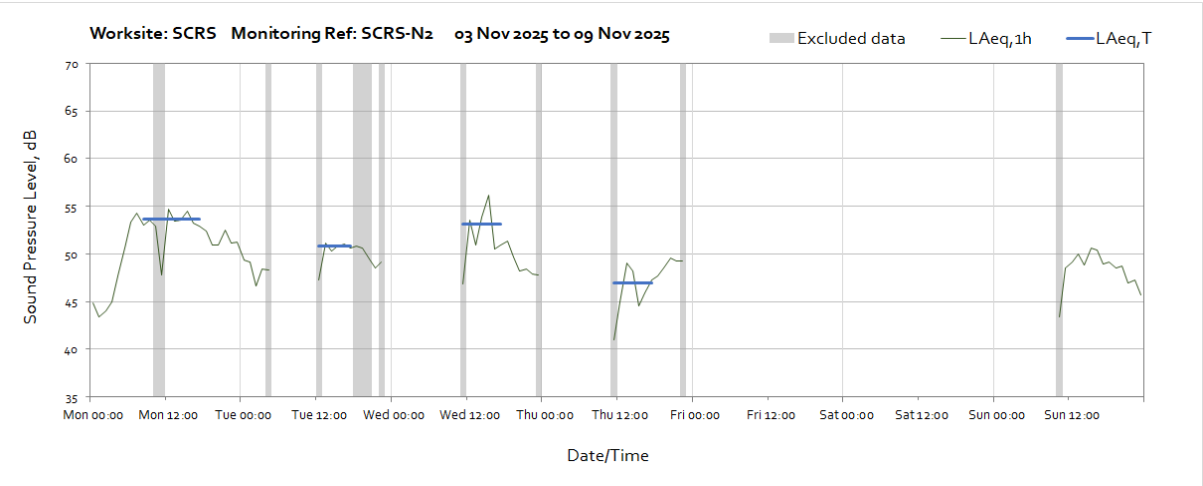




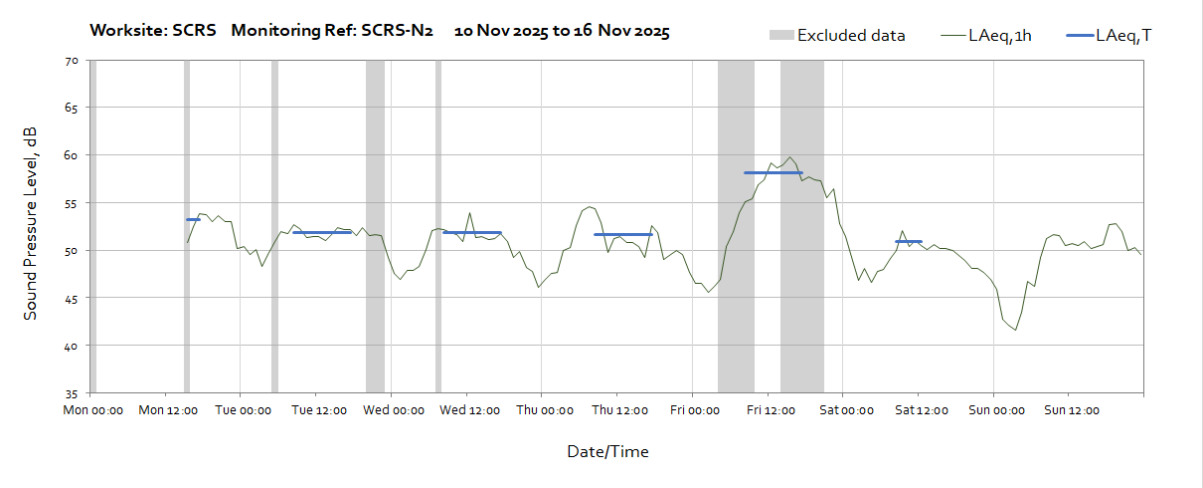
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

Worksite: SCRS – Monitoring Ref: SCRS-N2

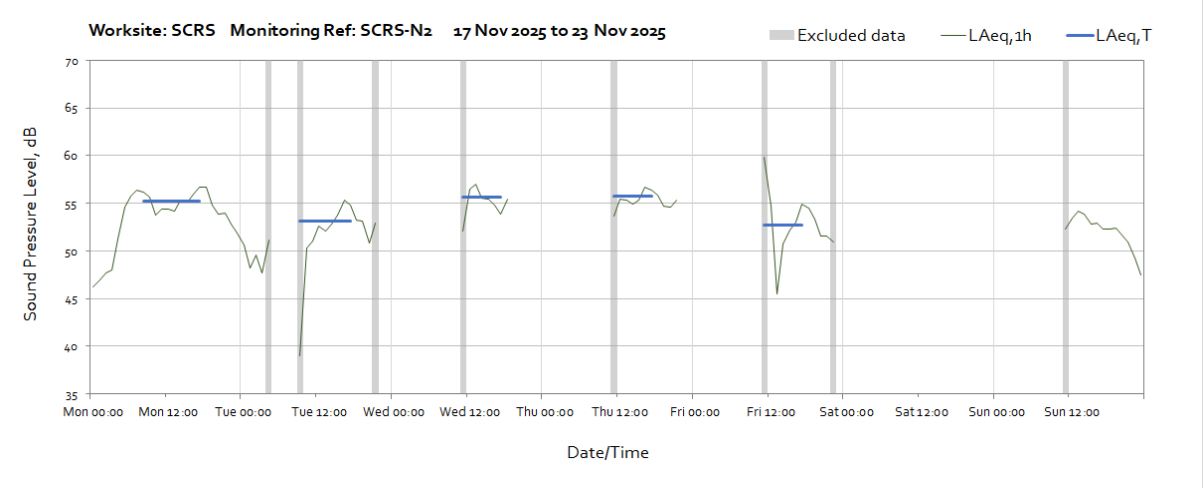




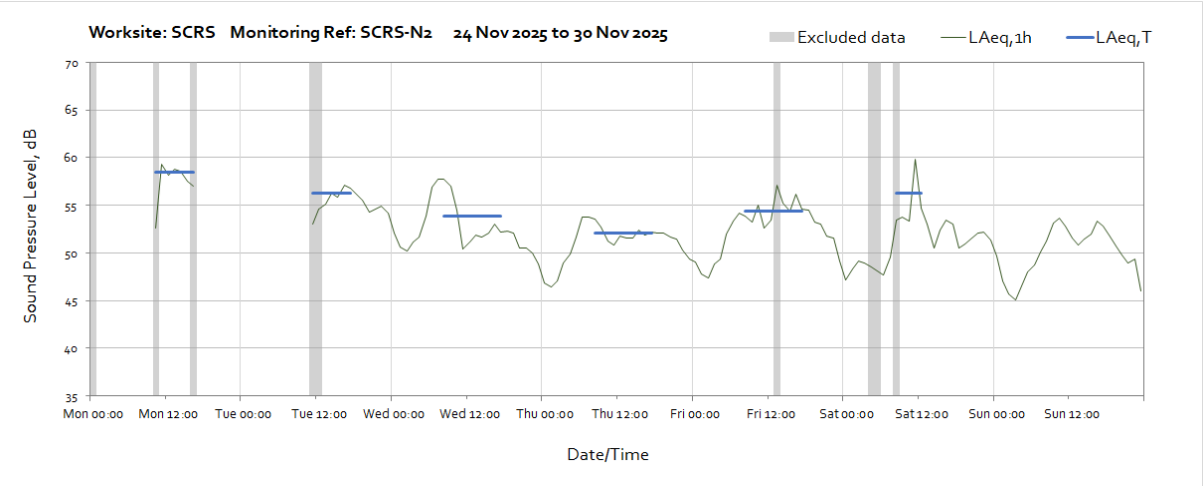
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.



Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

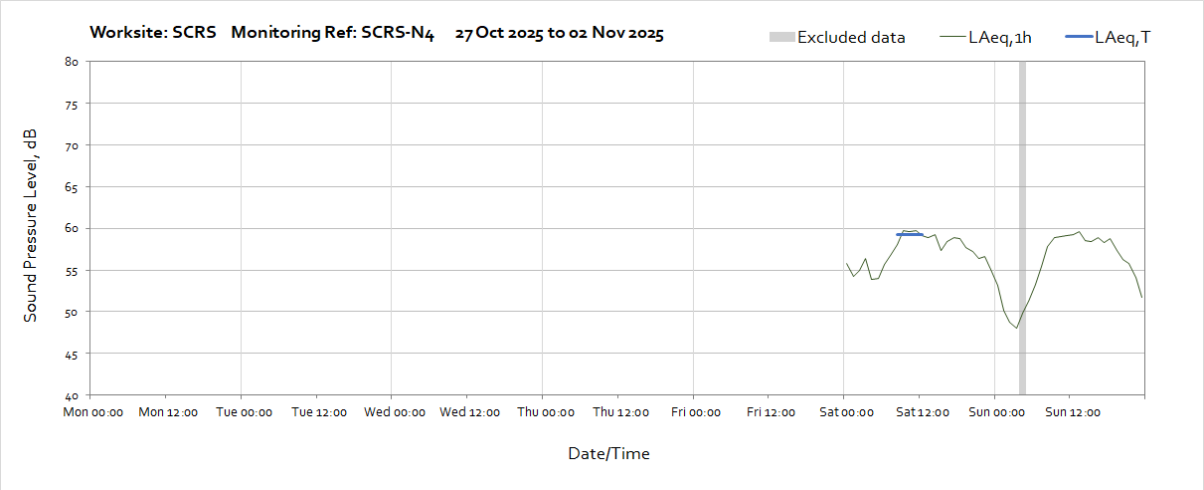


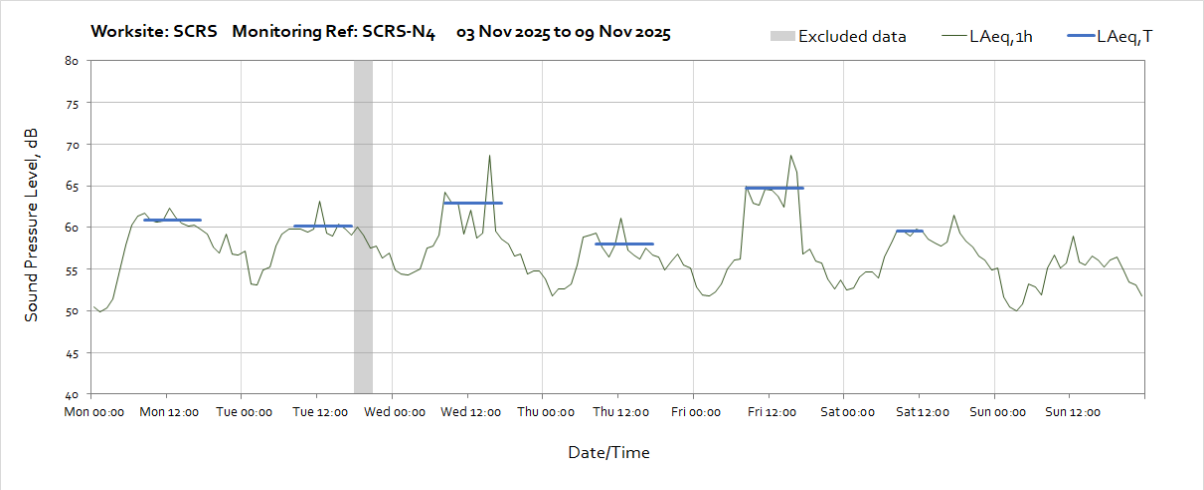
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

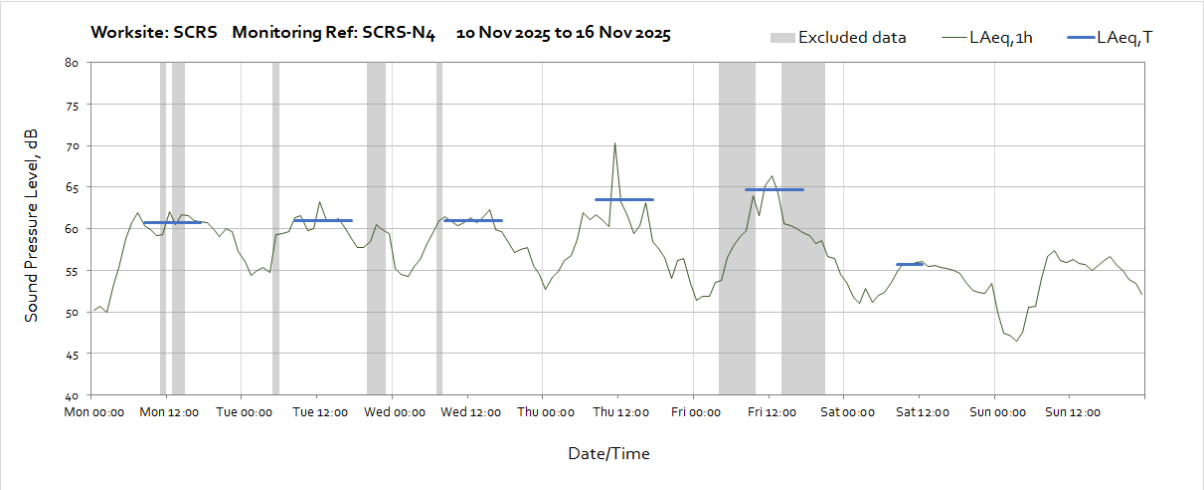


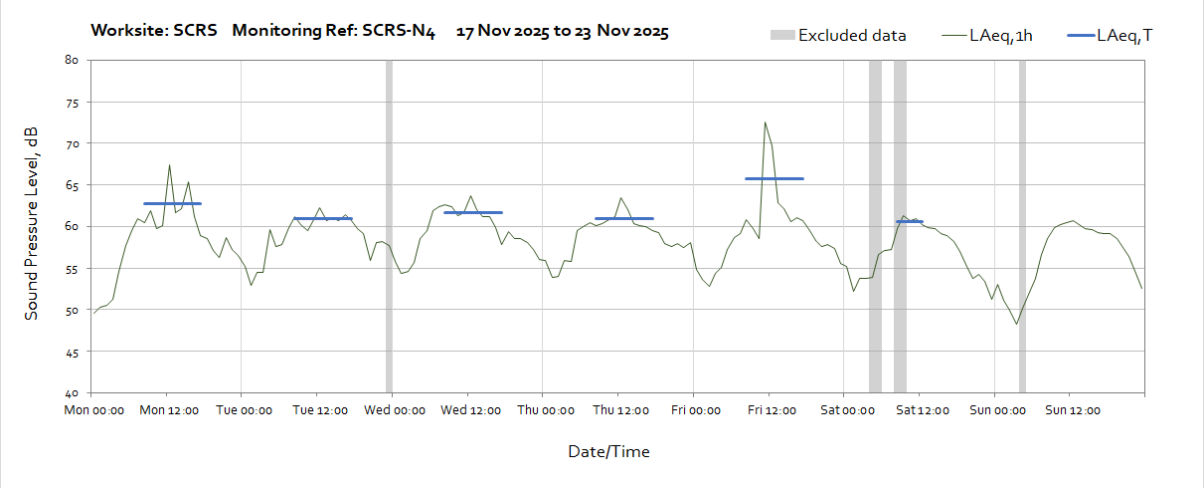
Note: Missing data throughout the month was due to a loss of power to the monitoring station caused by poor weather conditions preventing sufficient light reaching the solar panel.

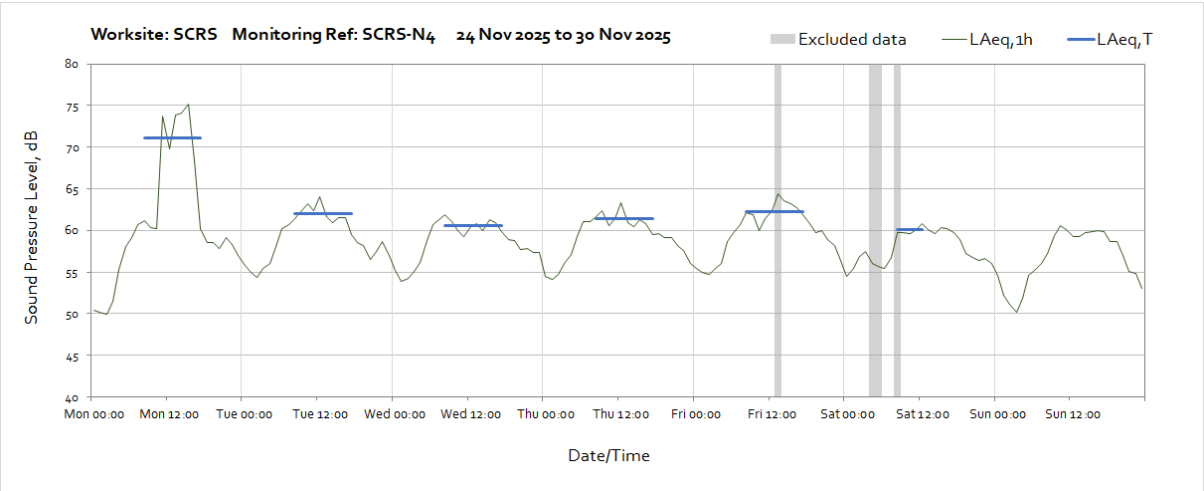
Worksite: SCRS – Monitoring Ref: SCRS-N4



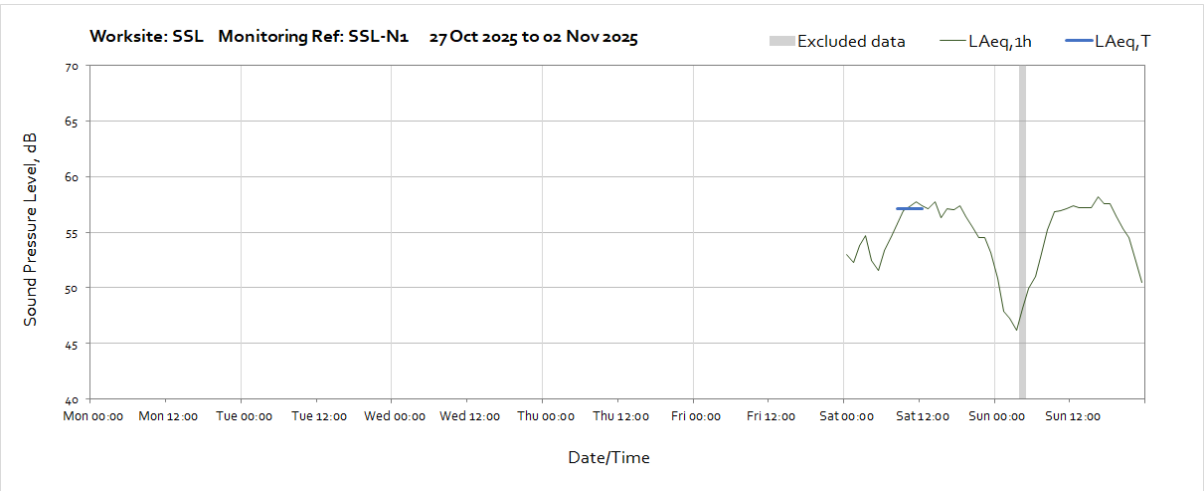


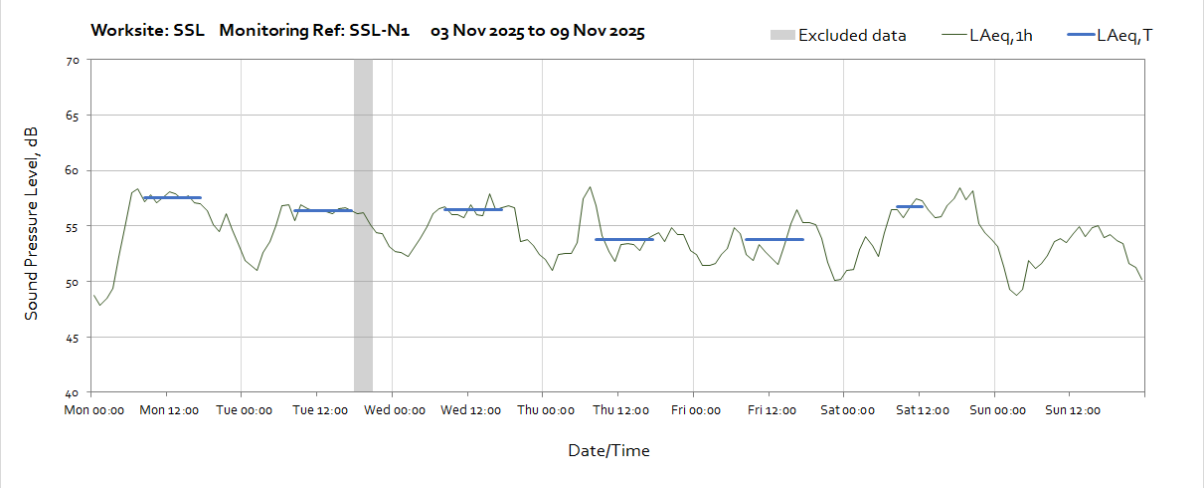






Worksite: SSL – Monitoring Ref: SSL-N1

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LAeq,T
Sound Pressure Level, dB
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45
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Mon 12:00
Tue 00:00
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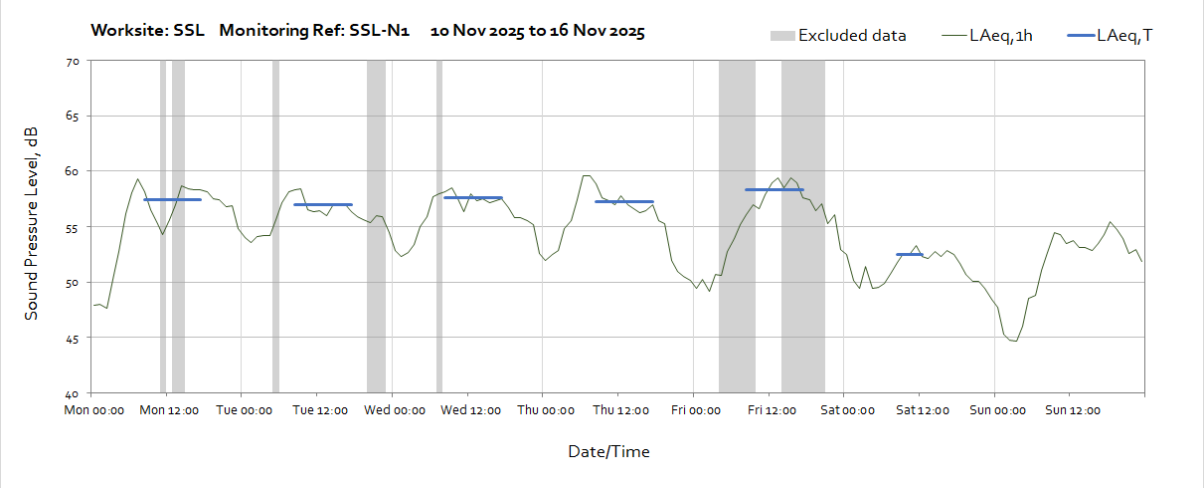
Date/Time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Sound Pressure Level, dB
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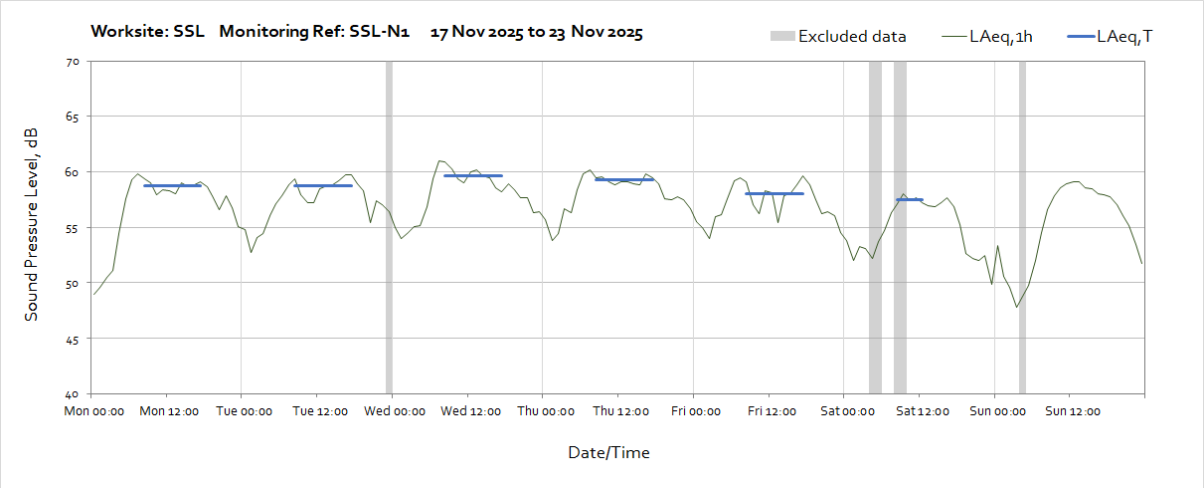
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LAeq,T
Sound Pressure Level, dB
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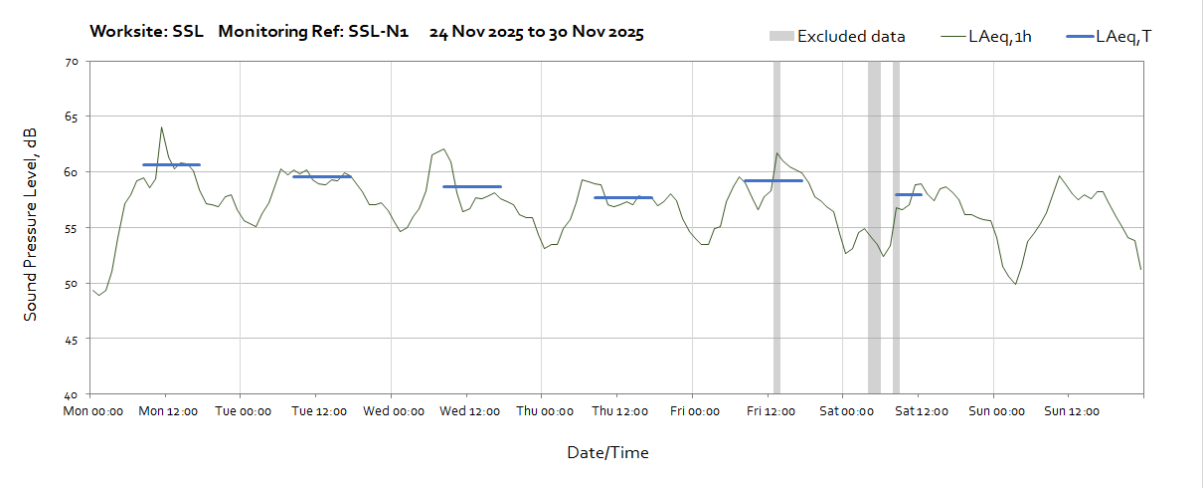
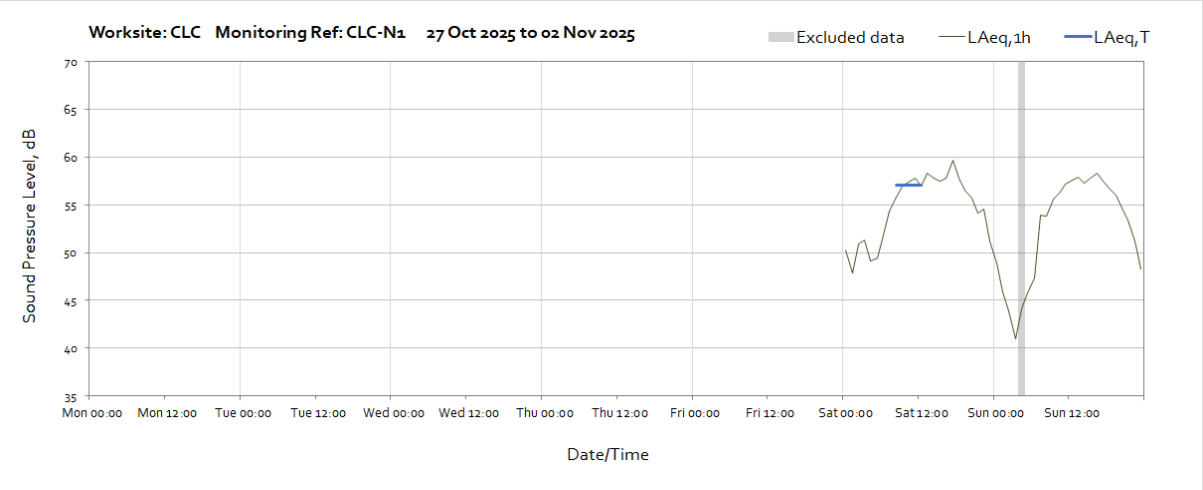
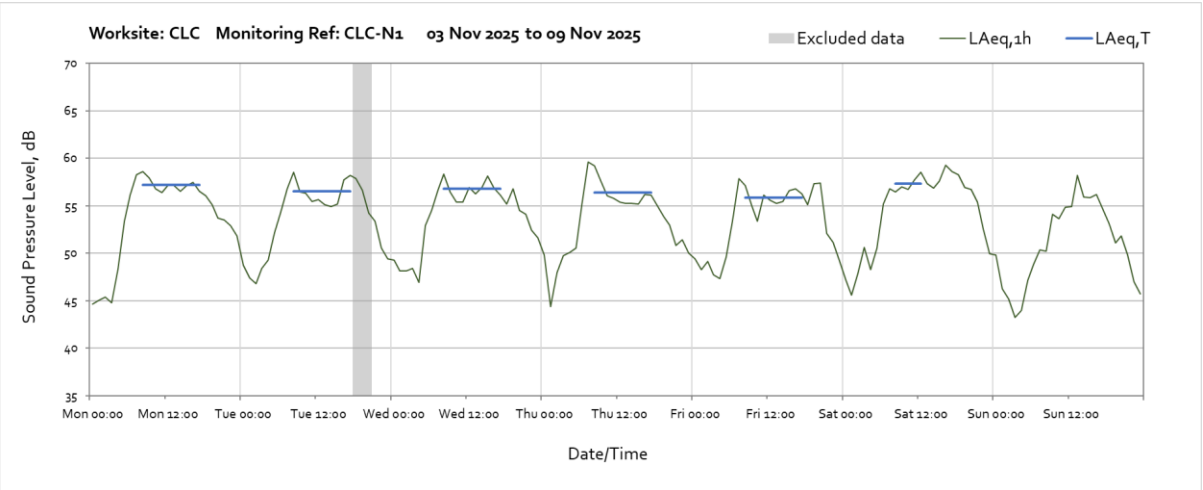
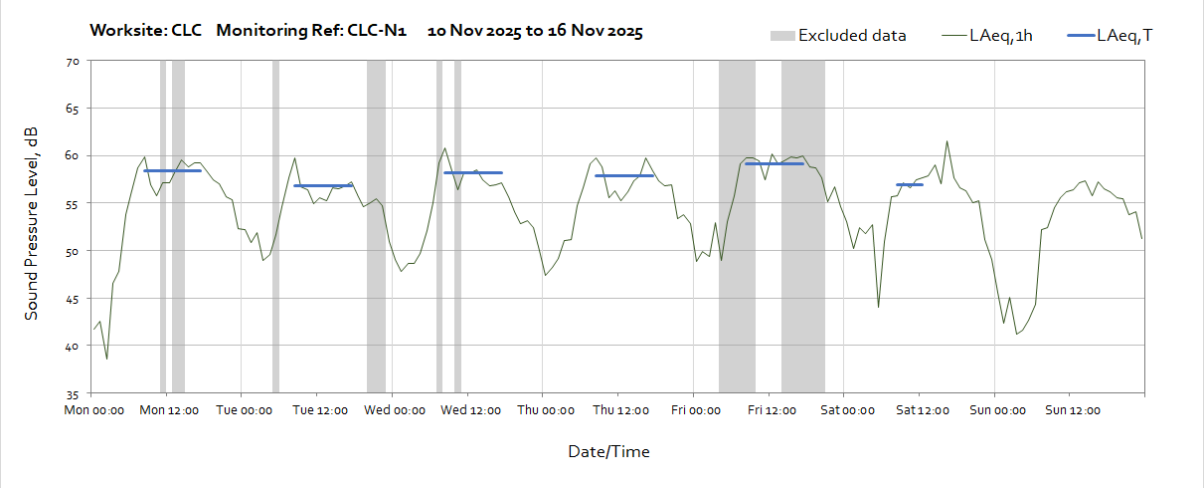
Date/Time



Worksite: CLC – Monitoring Ref: CLC-N1



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Excluded data
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LAeq,T
Sound Pressure Level, dB
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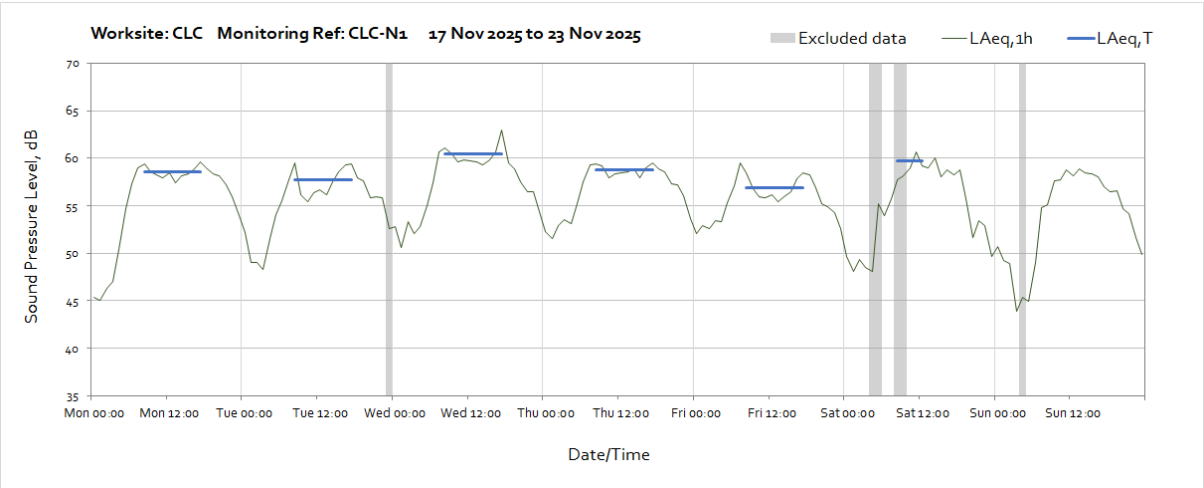
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: CLC Monitoring Ref: CLC-N1 17 Nov 2025 to 23 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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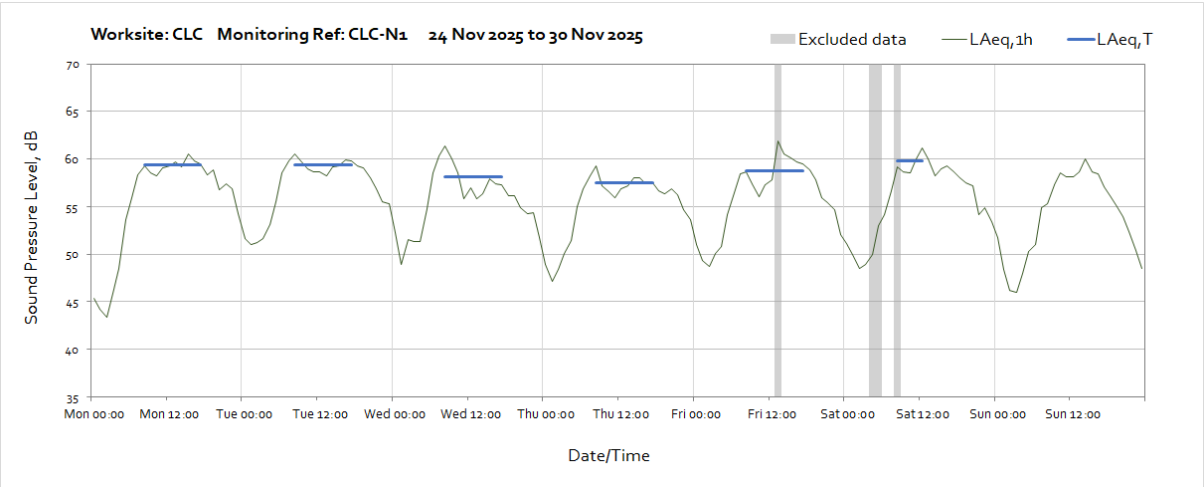
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time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Excluded data
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LAeq,T
Sound Pressure Level, dB
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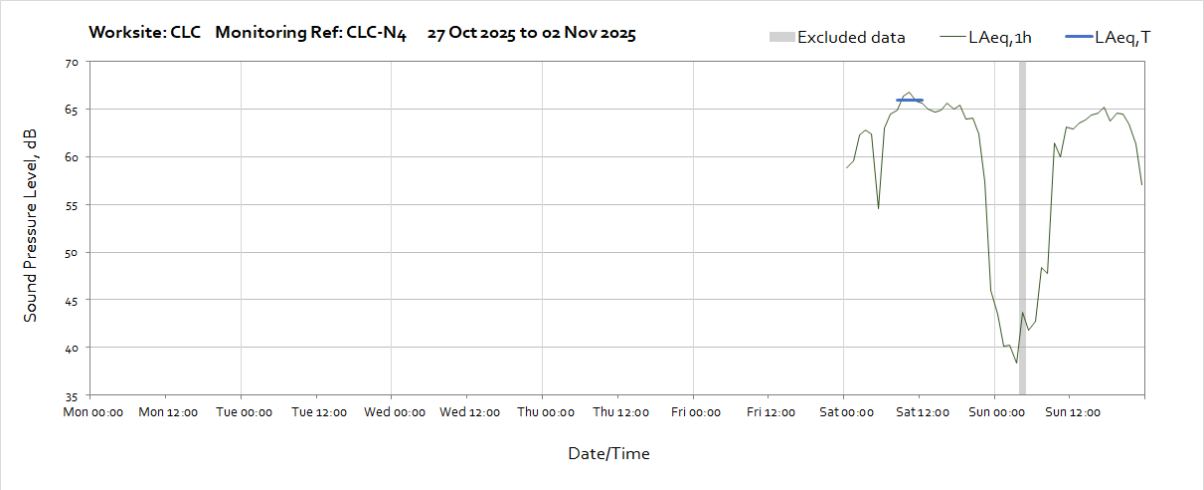
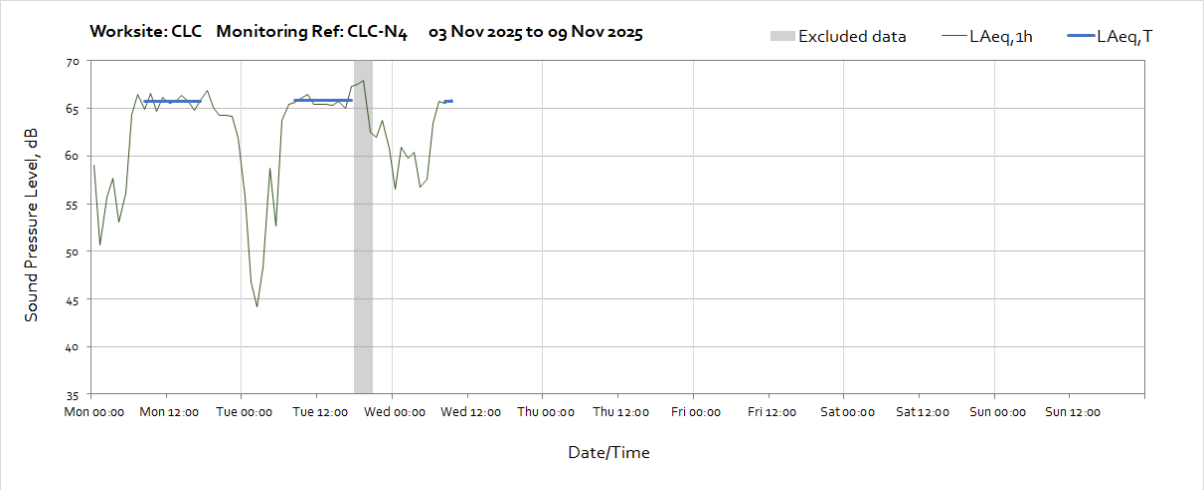
Sun 00:00
Sun 12:00
Date/Time

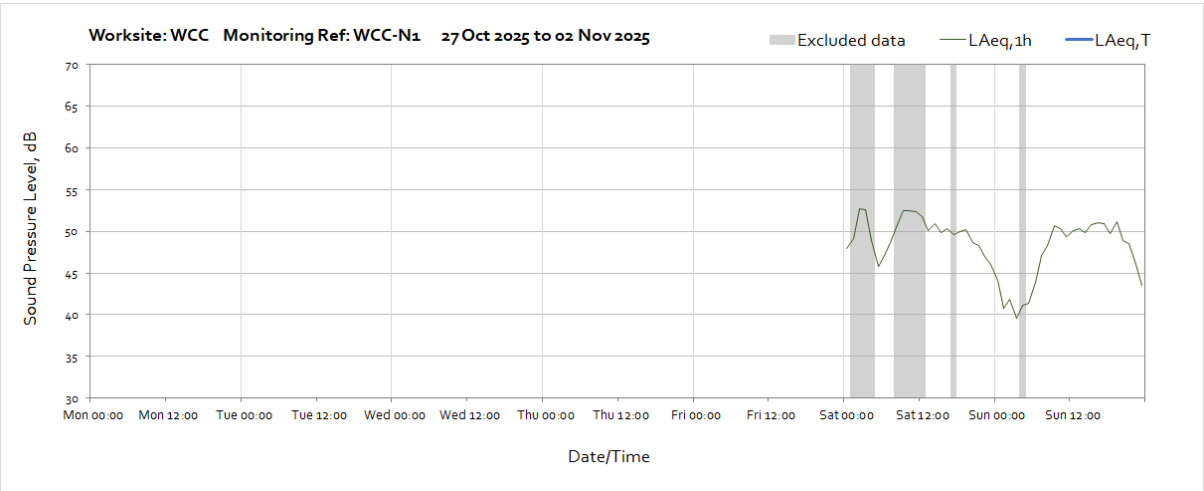
Worksite: CLC – Monitoring Ref: CLC-N4

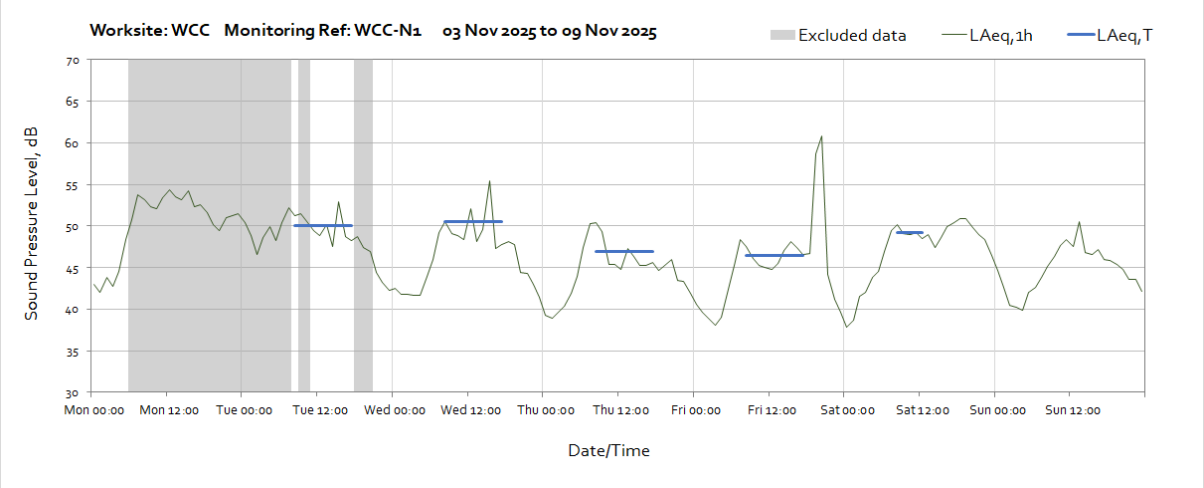




Note: Missing data between 10:00 on Wednesday 5th November and 10:00 on Wednesday 12th November was due to a monitoring station system error. Monitor decommissioned on 12th November

Worksite: WCC – Monitoring Ref: WCC-N1




Worksite: WCC Monitoring Ref: WCC-N1 03 Nov 2025 to 09 Nov 2025
Excluded data
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LAeq,T
Sound Pressure Level, dB
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60
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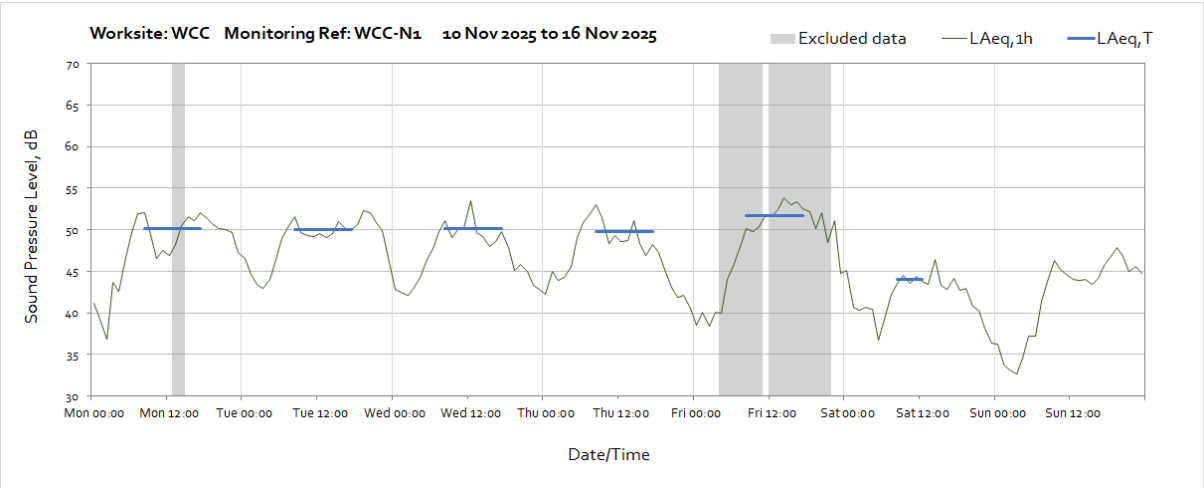
Date/Time


Worksite: WCC Monitoring Ref: WCC-N1 10 Nov 2025 to 16 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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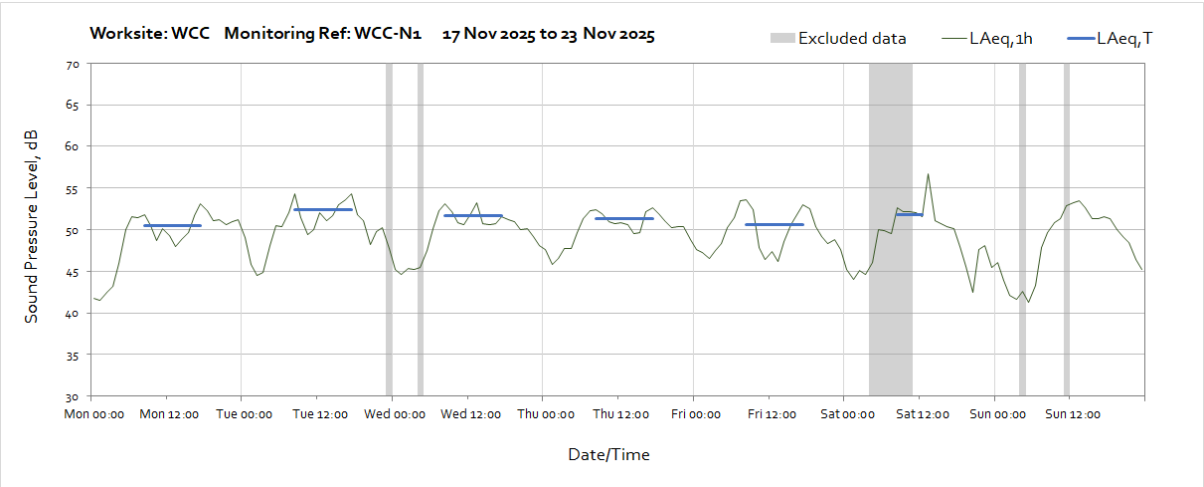
Worksite: WCC Monitoring Ref: WCC-N1 17 Nov 2025 to 23 Nov 2025
Excluded data
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LAeq,T
Sound Pressure Level, dB
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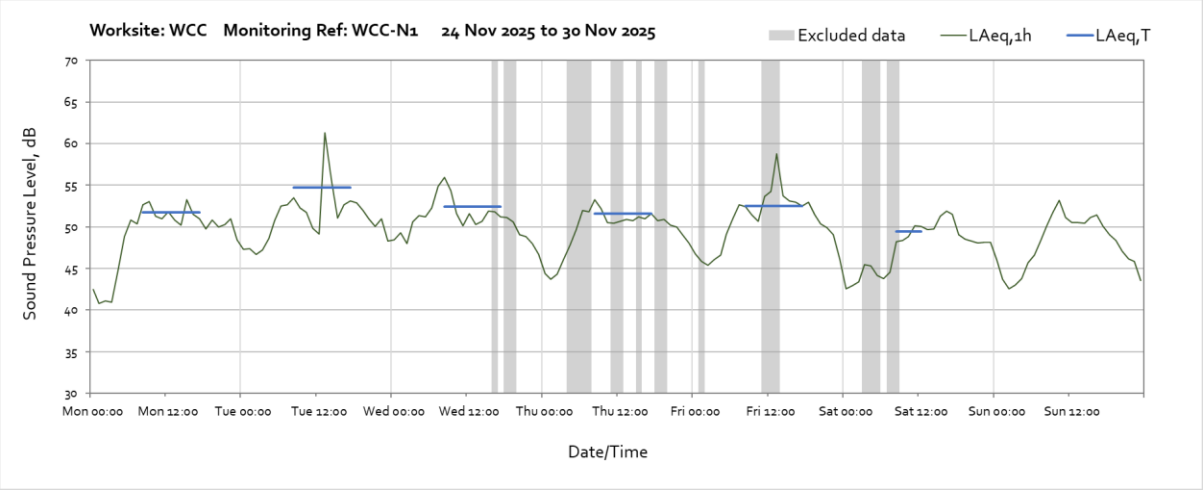
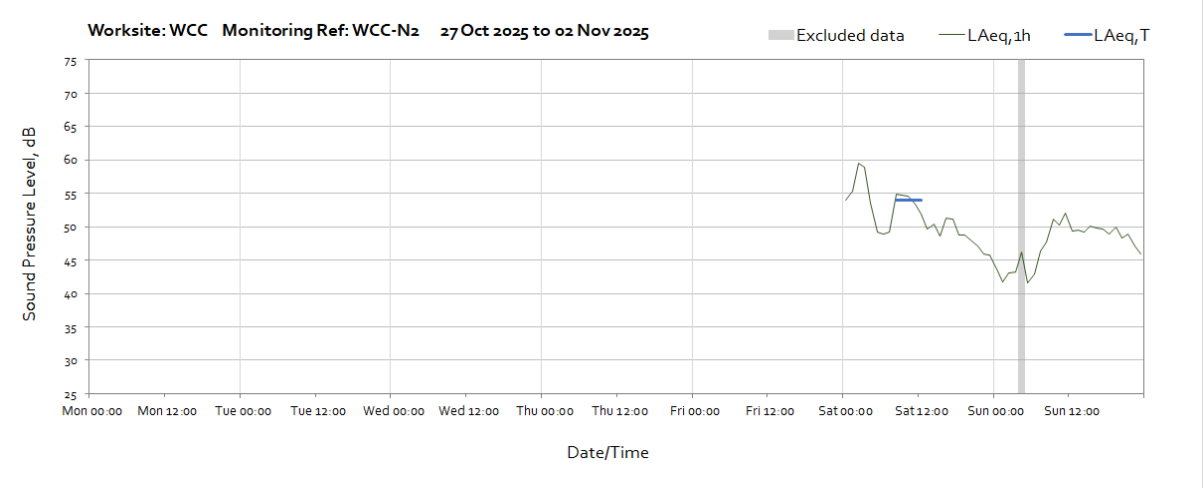
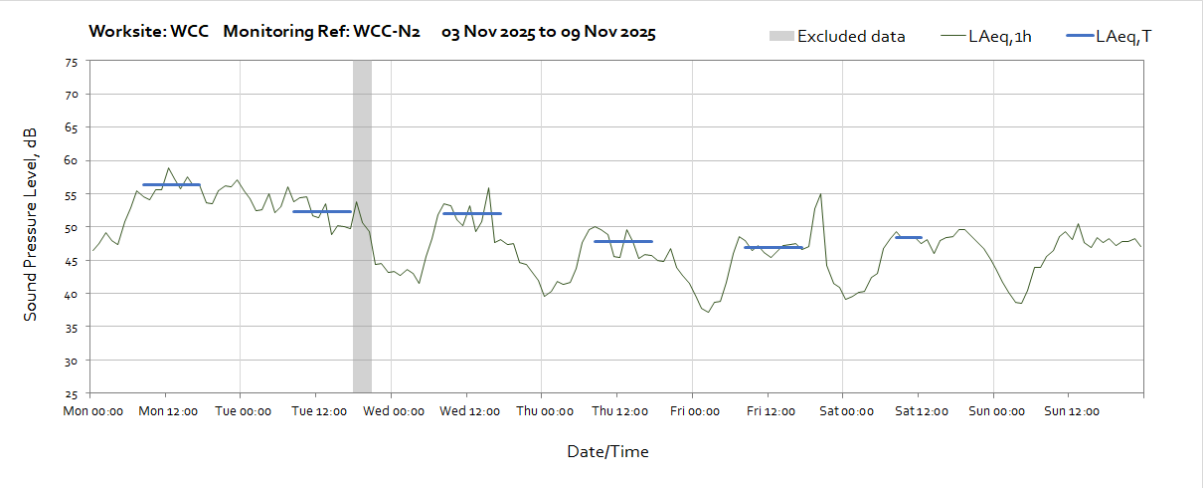
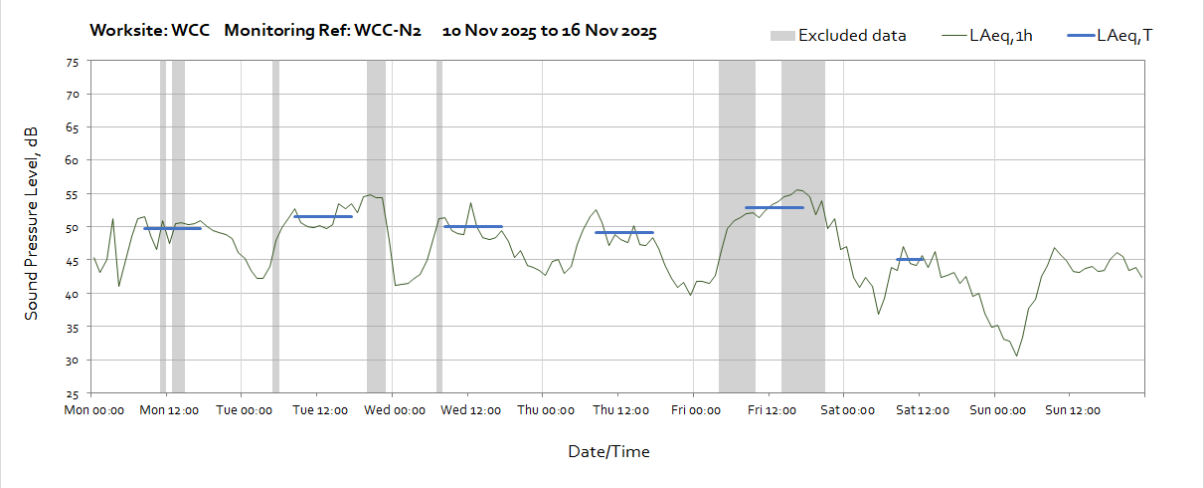
Sun 12:00
Date/Time

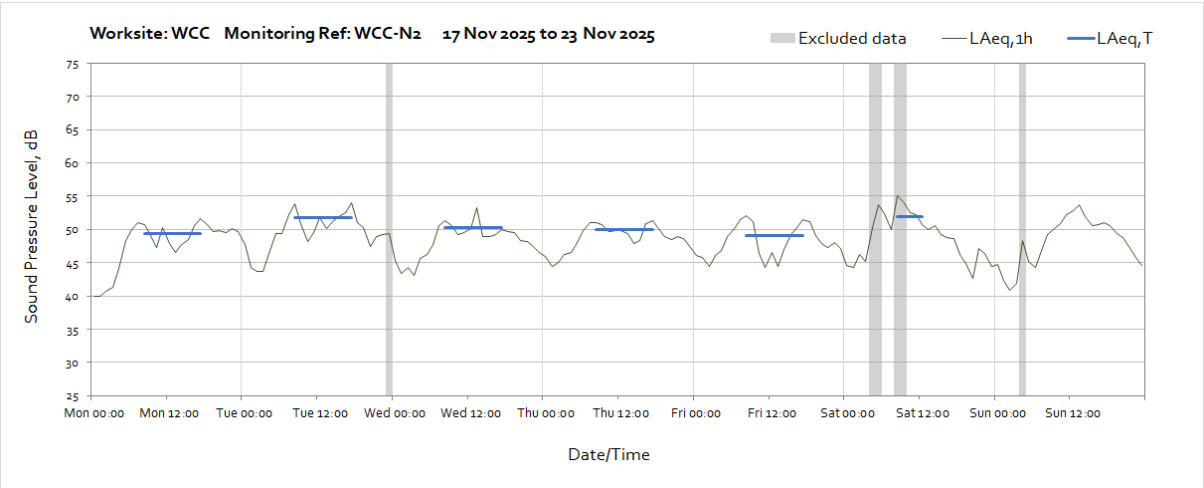


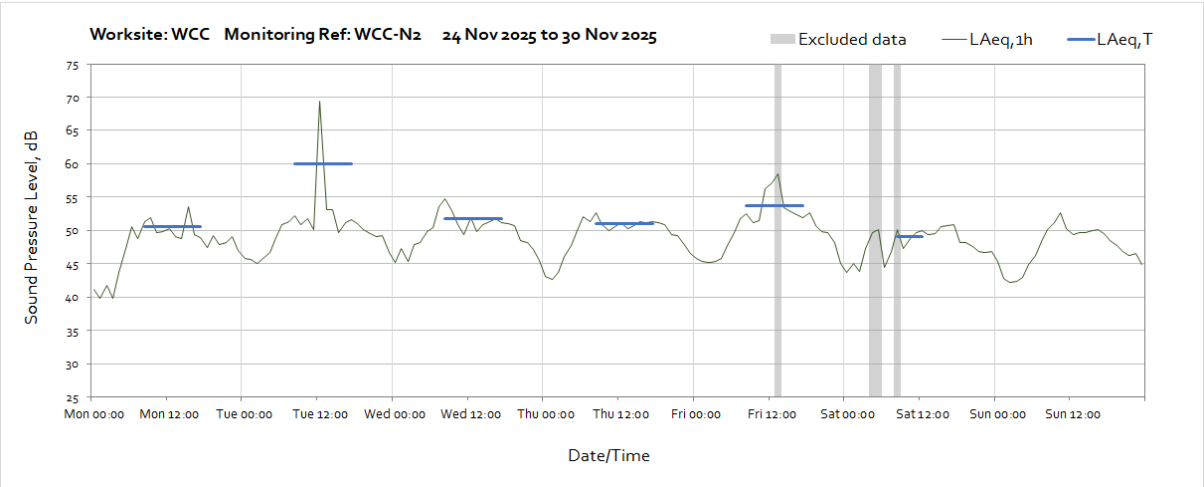
Worksite: WCC – Monitoring Ref: WCC-N2



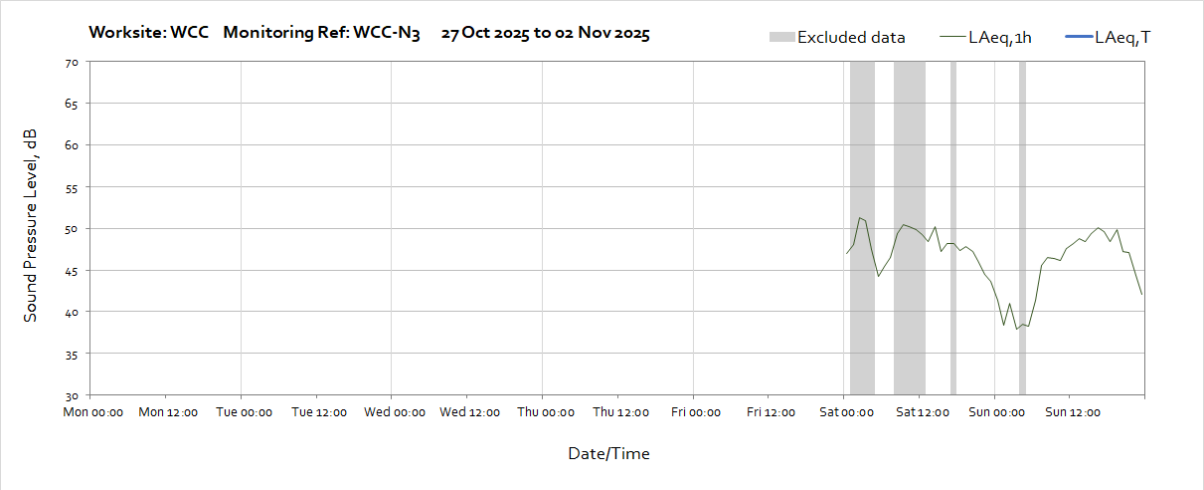


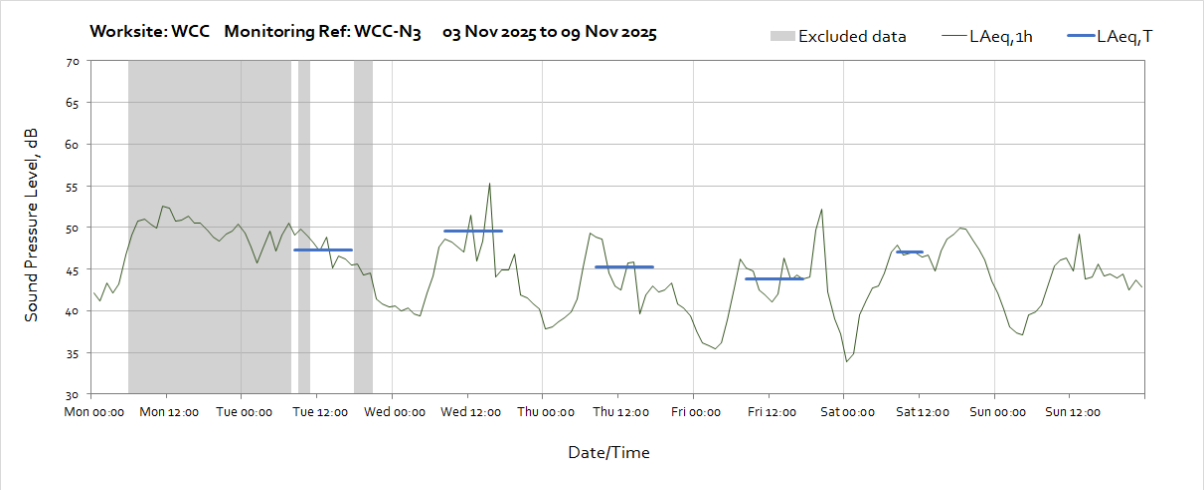

Worksite: WCC Monitoring Ref: WCC-N2 10 Nov 2025 to 16 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
35
30
25
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

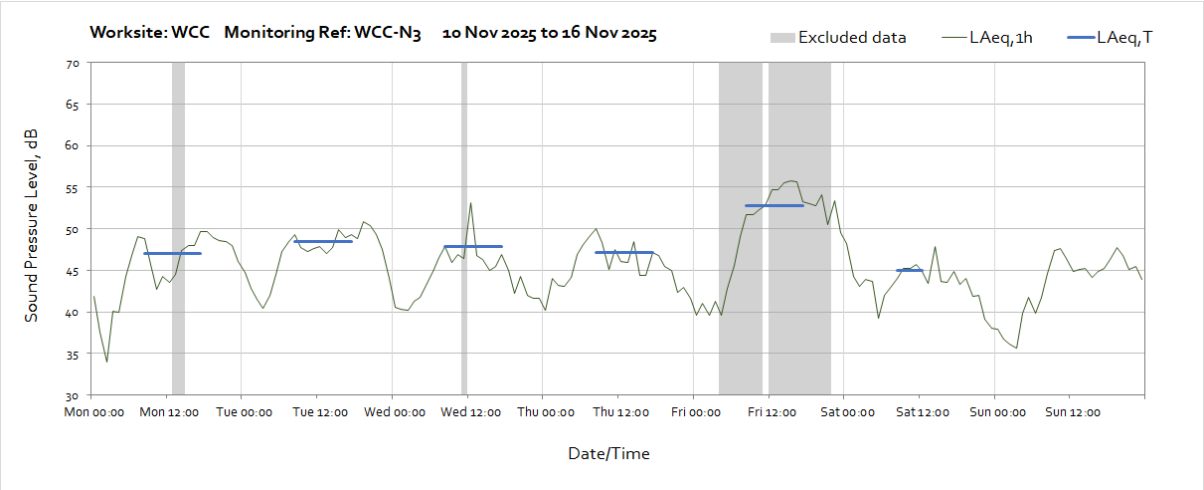

Worksite: WCC Monitoring Ref: WCC-N2 17 Nov 2025 to 23 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
35
30
25
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

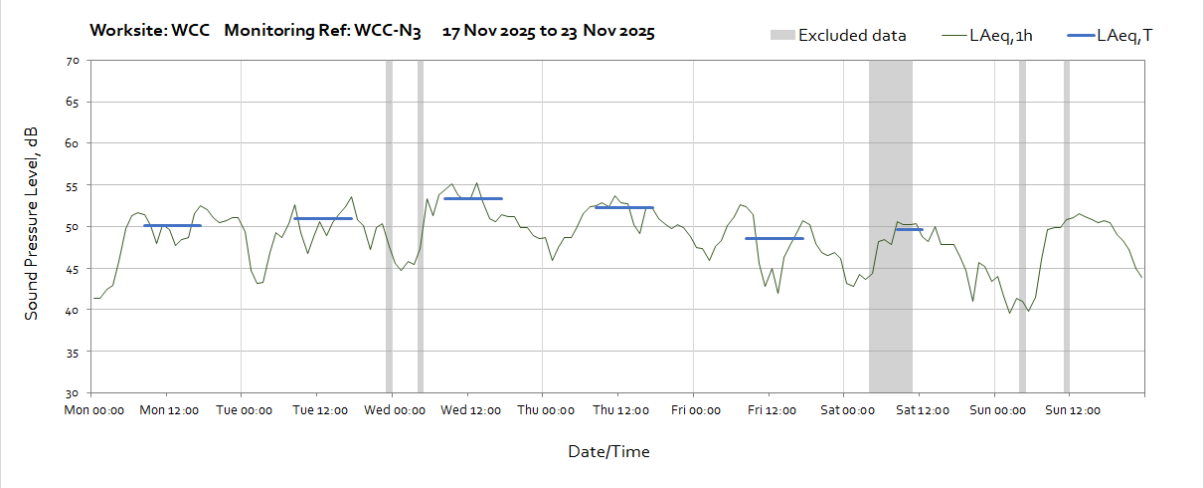

Worksite: WCC Monitoring Ref: WCC-N2 24 Nov 2025 to 30 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
35
30
25
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

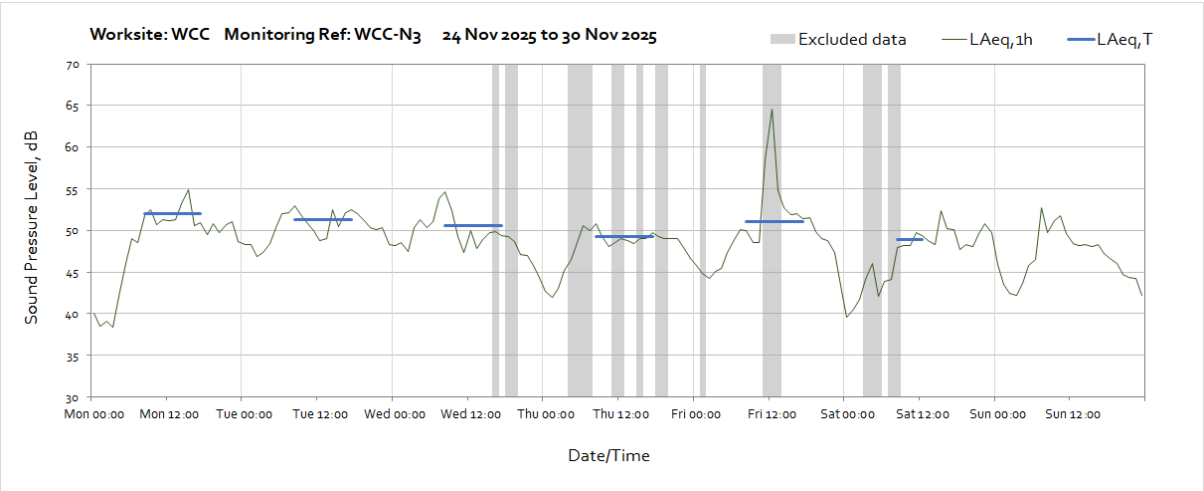
Worksite: WCC – Monitoring Ref: WCC-N3



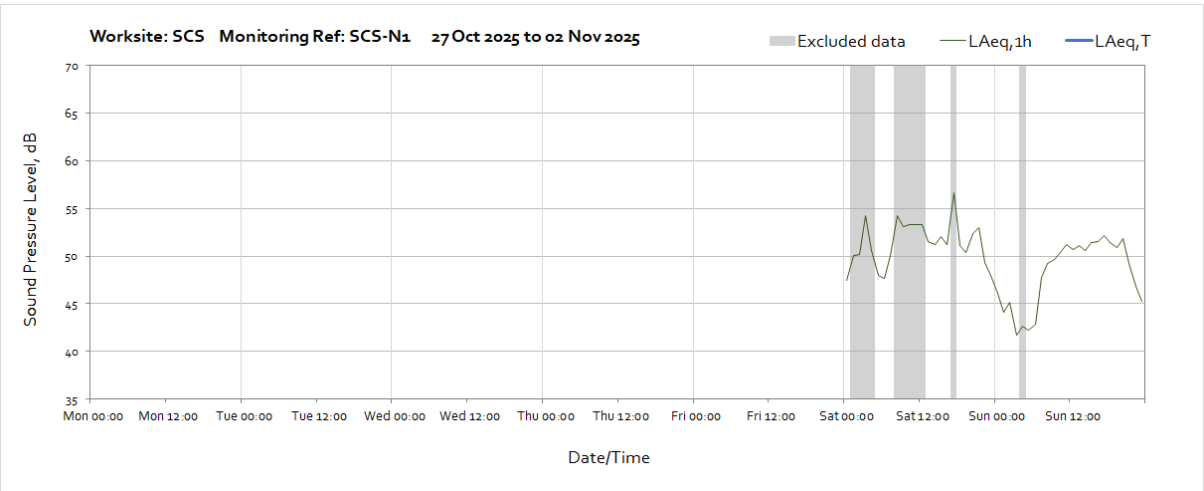


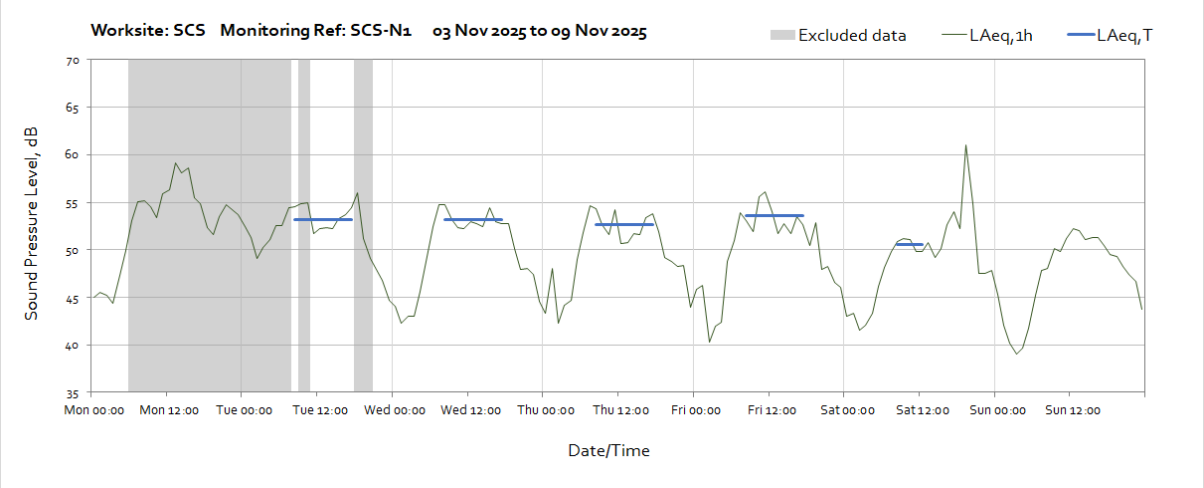


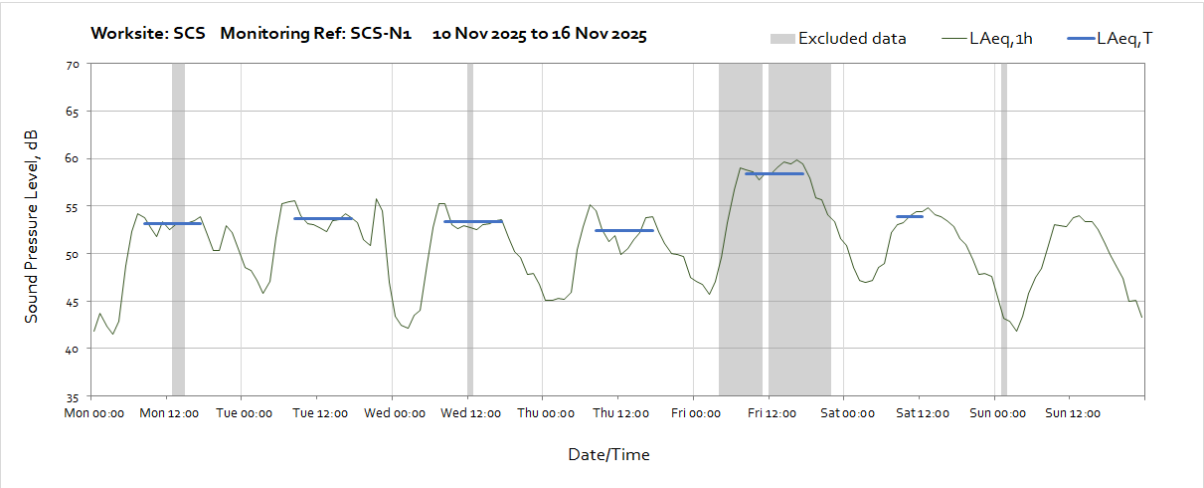


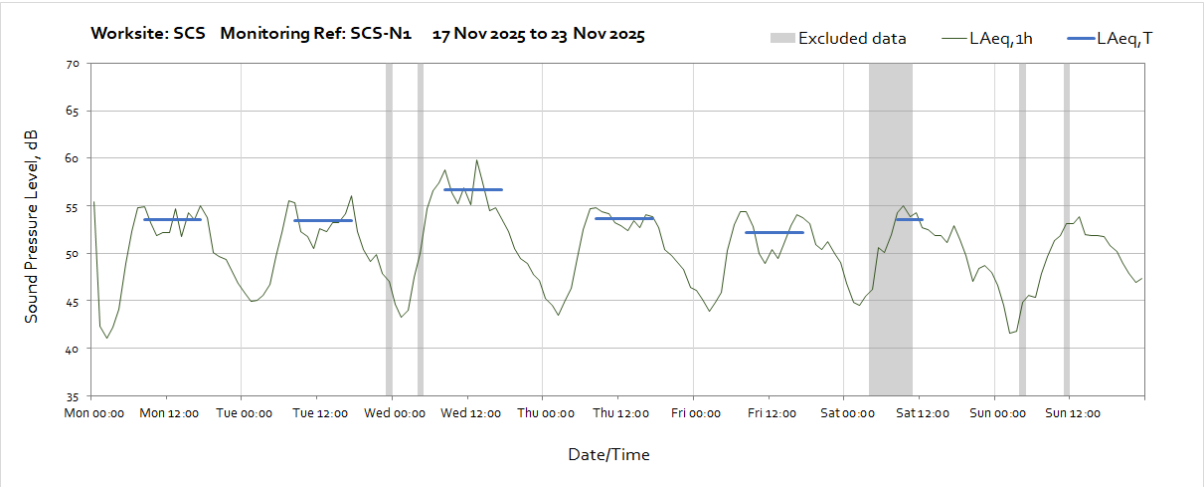


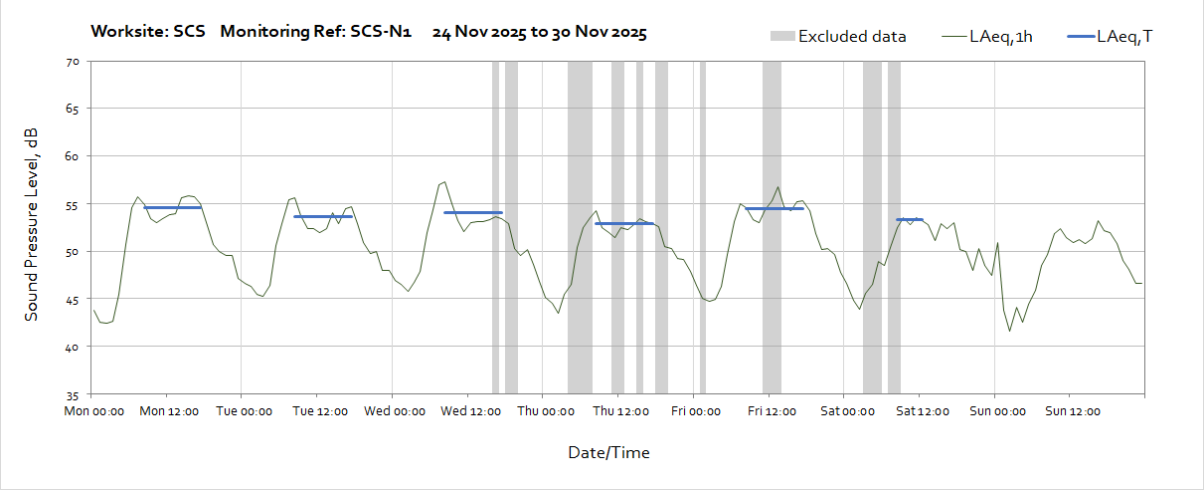
Worksite: SCS – Monitoring Ref: SCS-N1



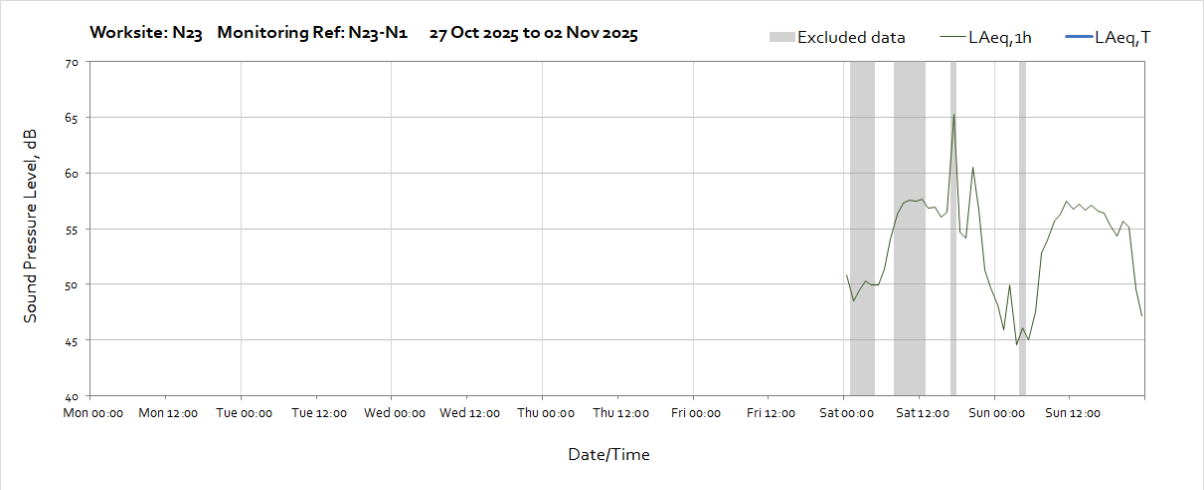

Worksite: SCS Monitoring Ref: SCS-N1 03 Nov 2025 to 09 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

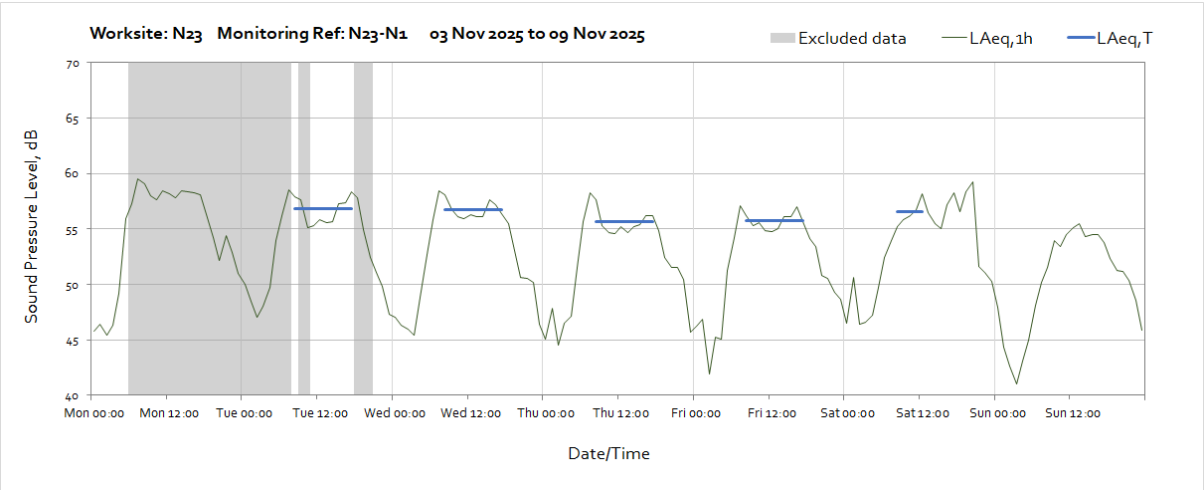

Worksite: SCS Monitoring Ref: SCS-N1 10 Nov 2025 to 16 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

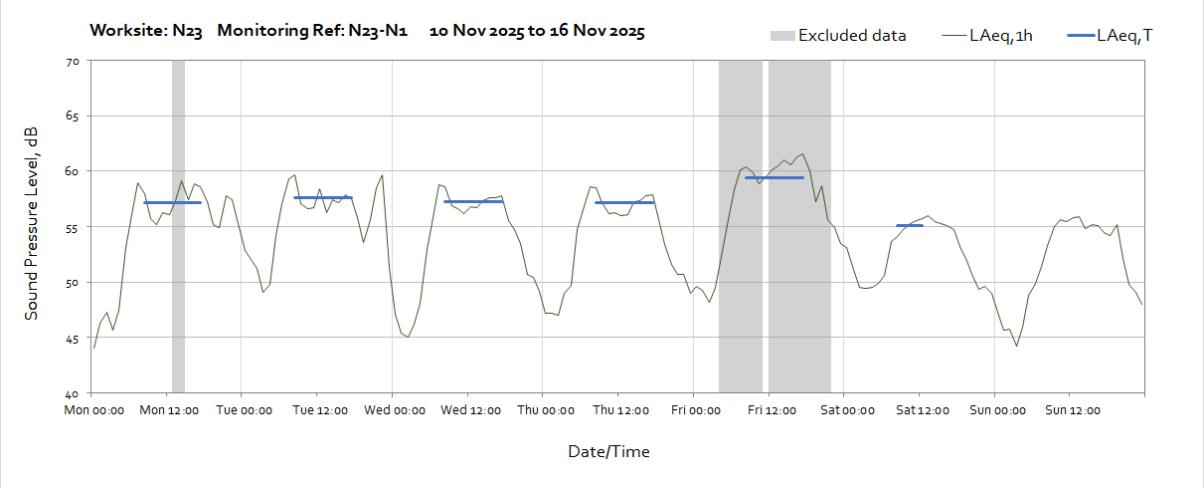

Worksite: SCS Monitoring Ref: SCS-N1 17 Nov 2025 to 23 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

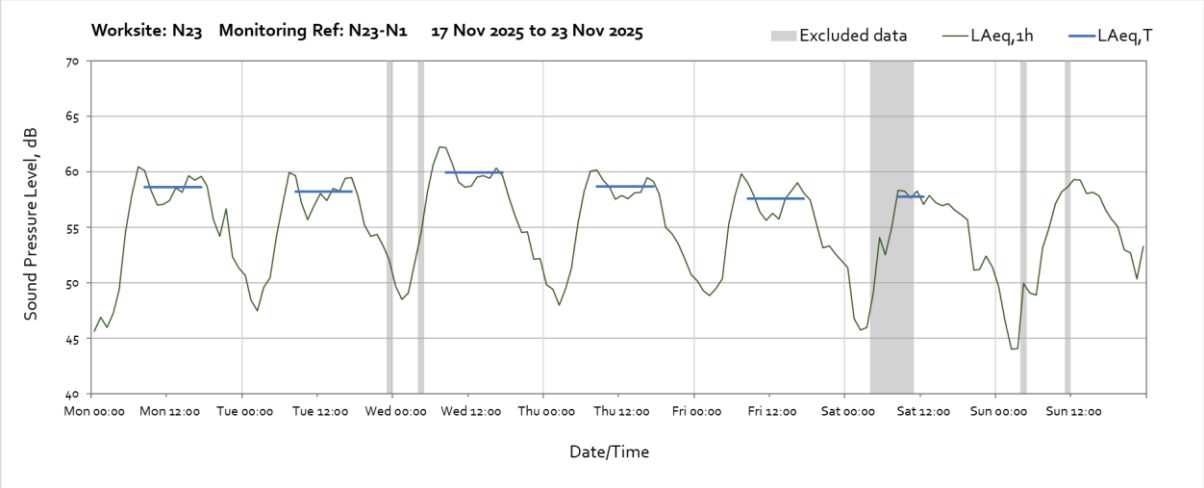


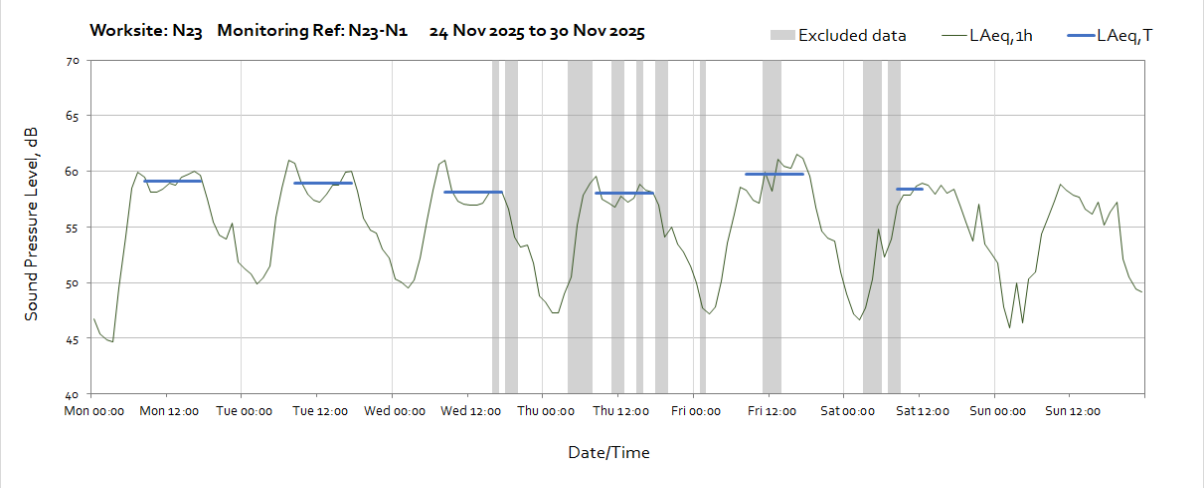
Worksite: N23 – Monitoring Ref: N23-N1



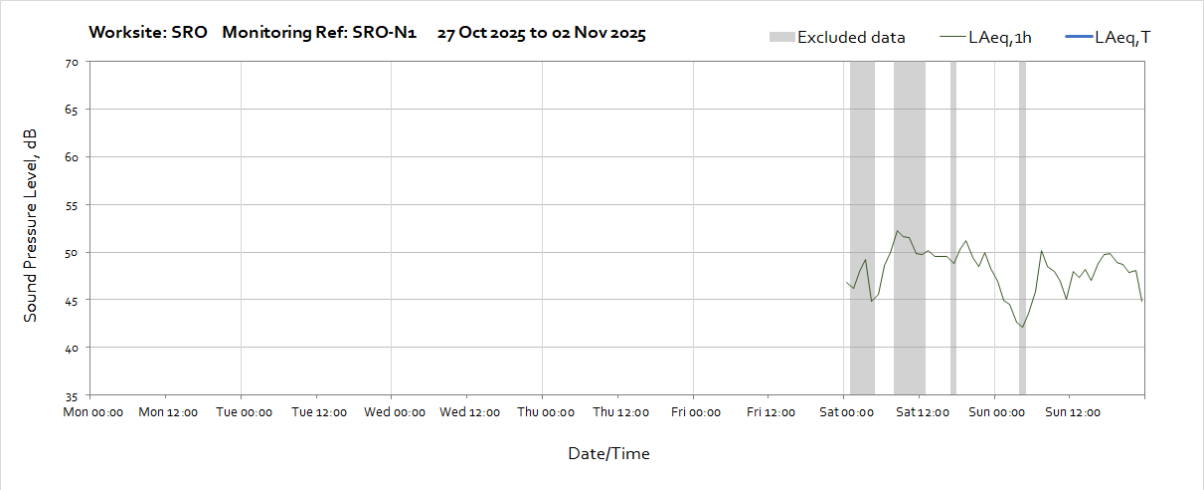


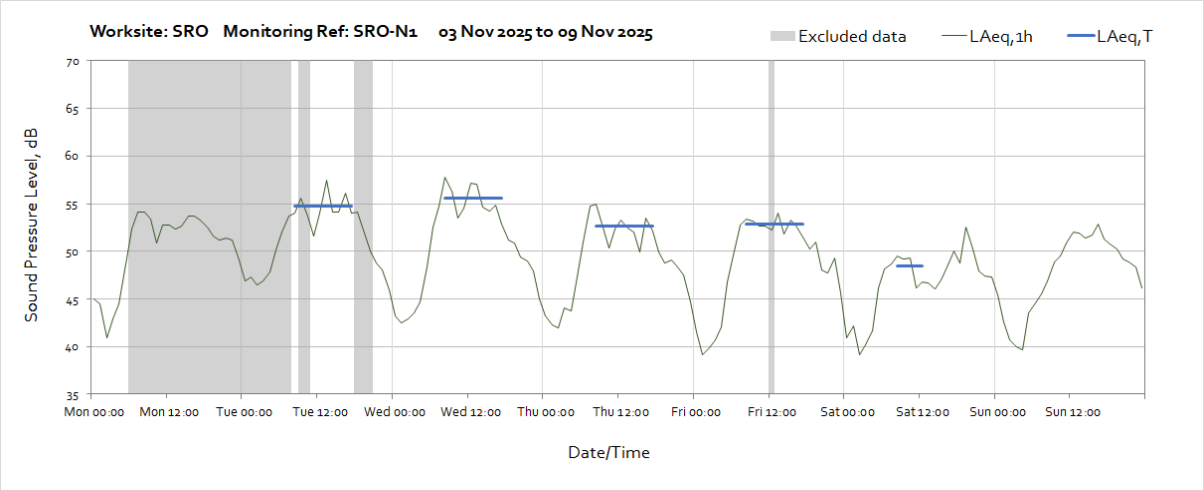

Worksite: N23 Monitoring Ref: N23-N1 10 Nov 2025 to 16 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

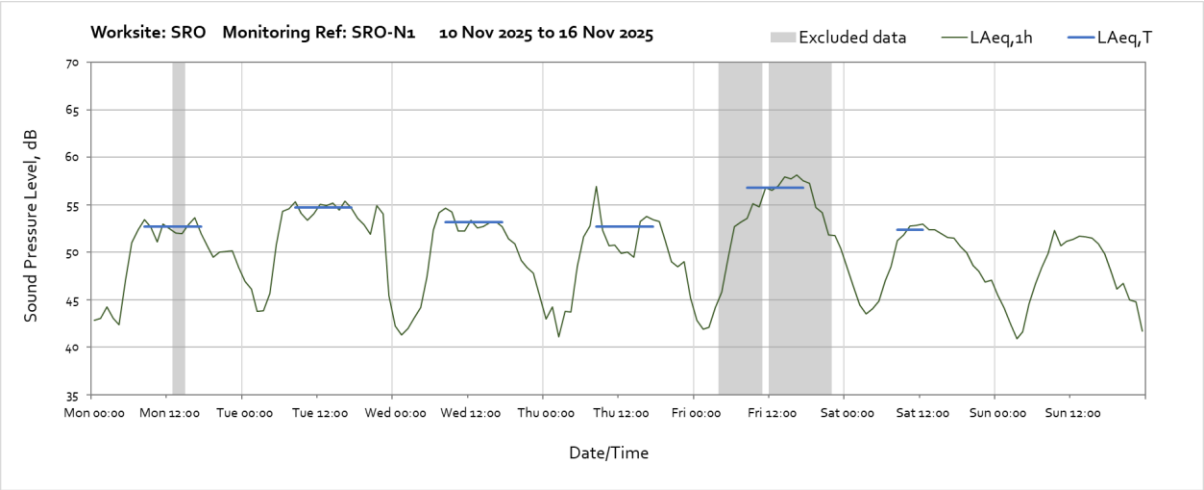

Worksite: N23 Monitoring Ref: N23-N1 17 Nov 2025 to 23 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

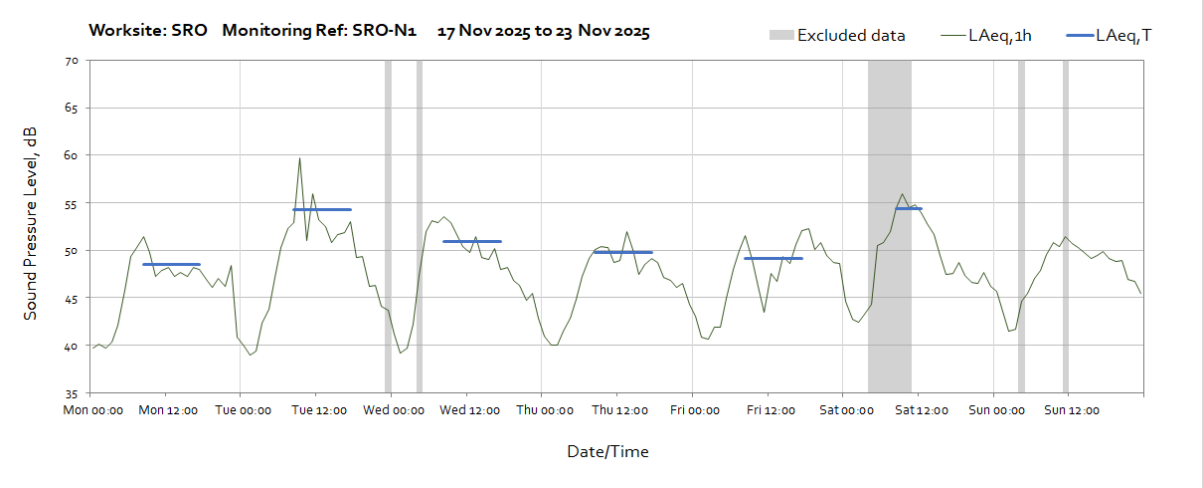

Worksite: N23 Monitoring Ref: N23-N1 24 Nov 2025 to 30 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

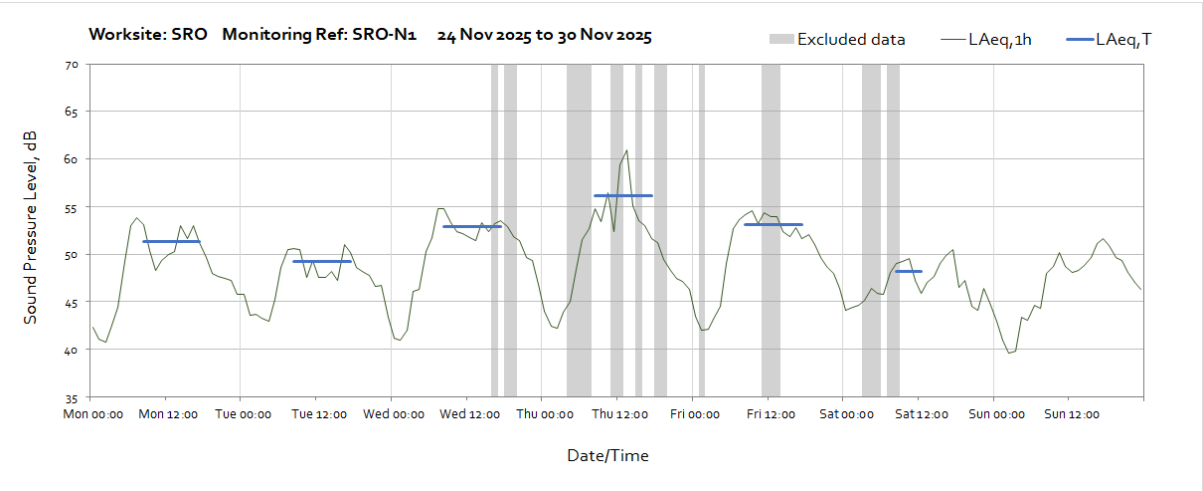
Worksite: SRO – Monitoring Ref: SRO-N1



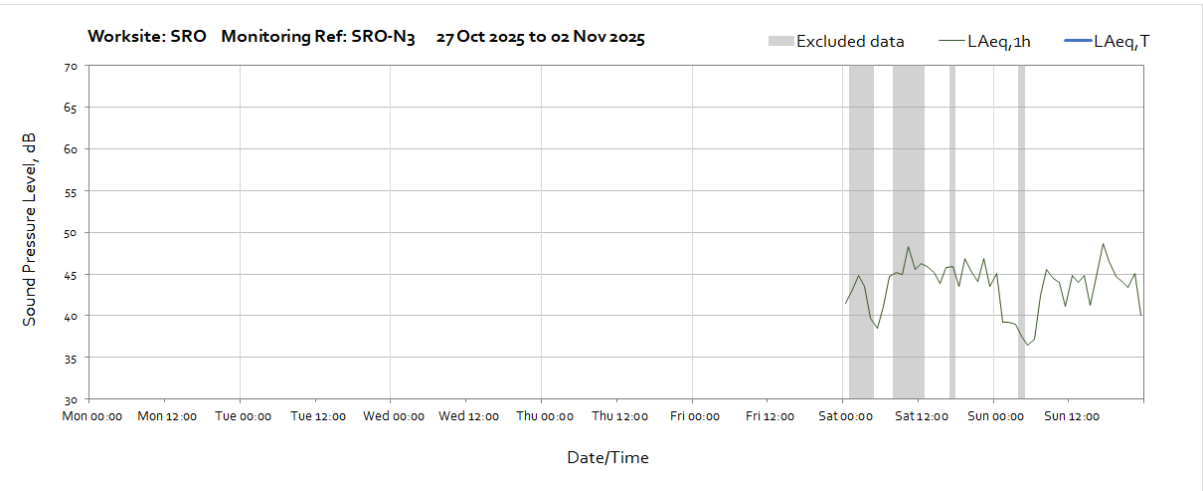


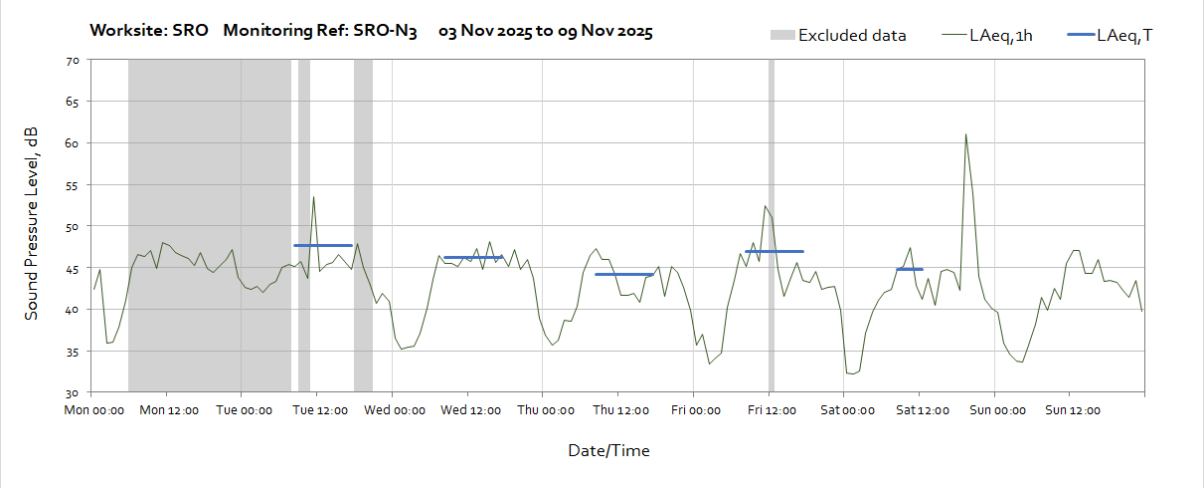


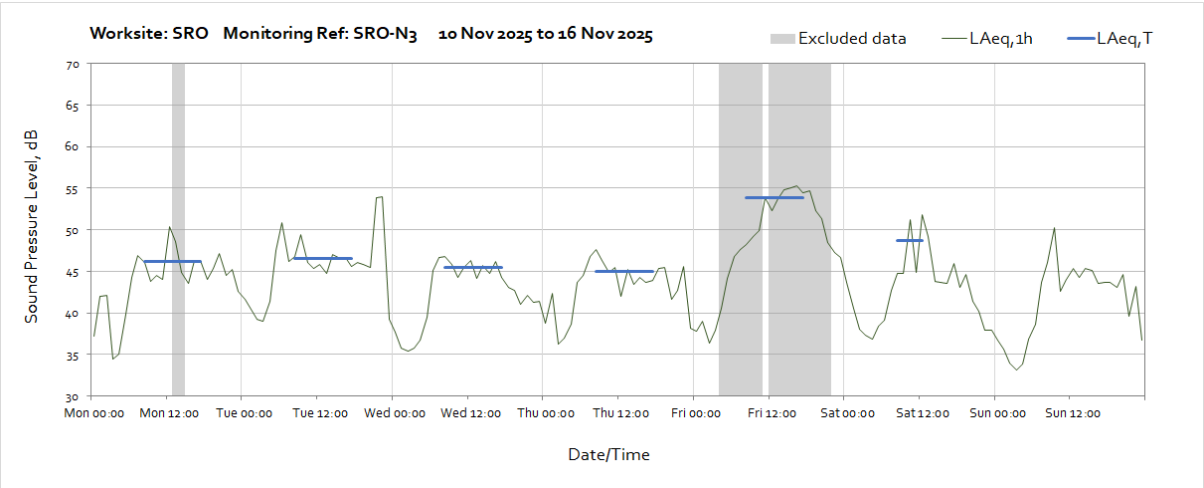


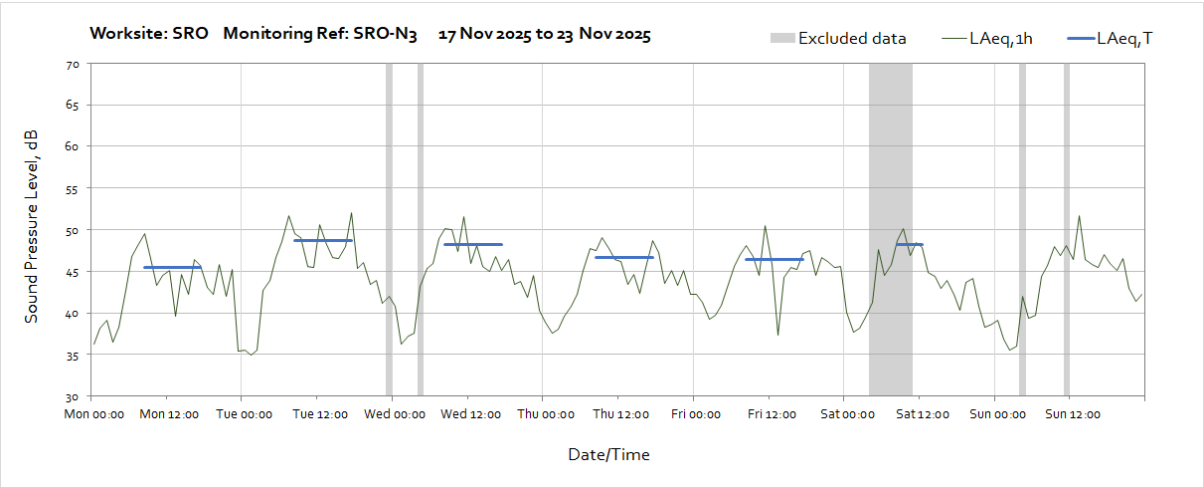


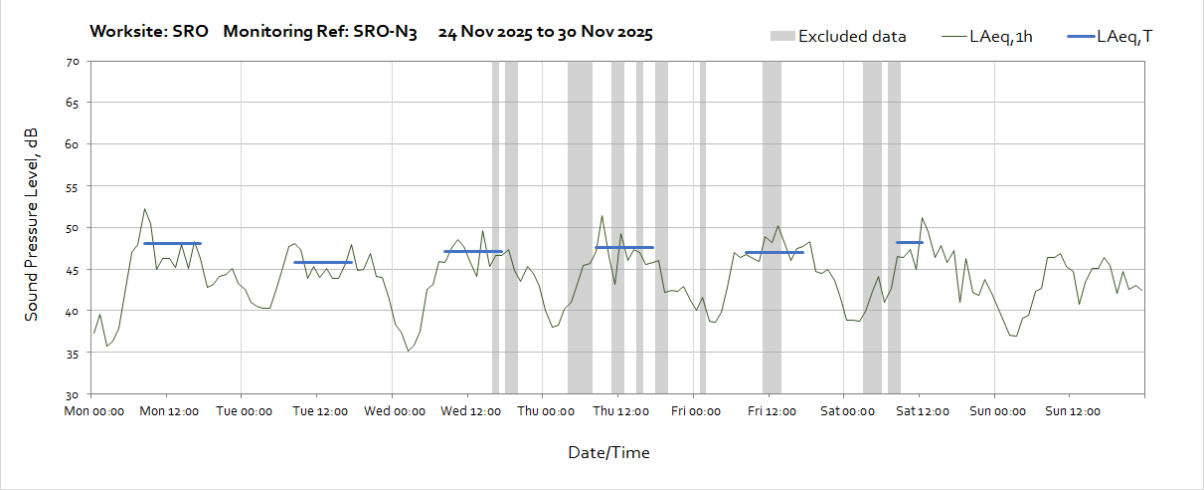
Worksite: SRO – Monitoring Ref: SRO-N3




Worksite: SRO Monitoring Ref: SRO-N3 03 Nov 2025 to 09 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: SRO Monitoring Ref: SRO-N3 10 Nov 2025 to 16 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

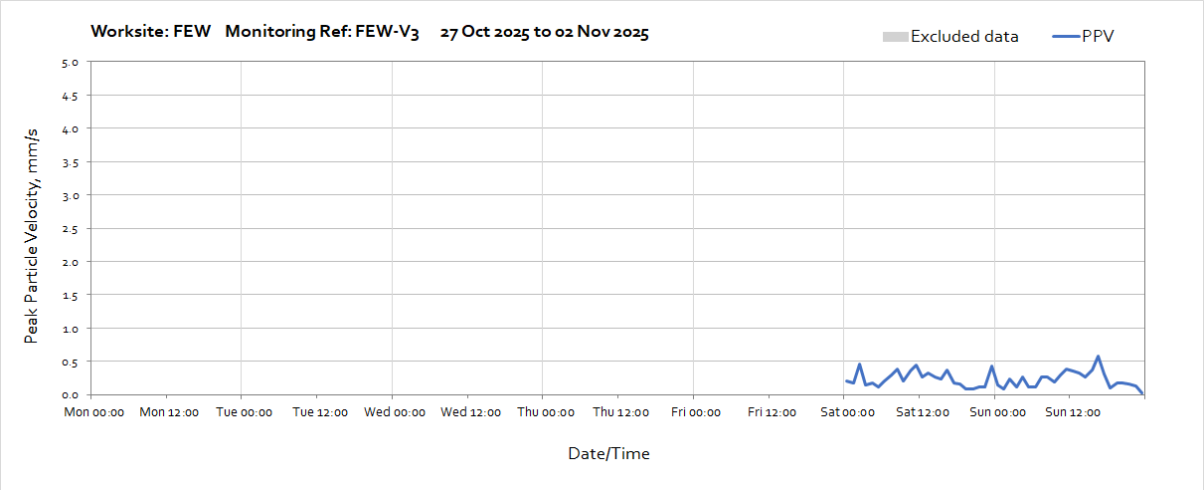

Worksite: SRO Monitoring Ref: SRO-N3 17 Nov 2025 to 23 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

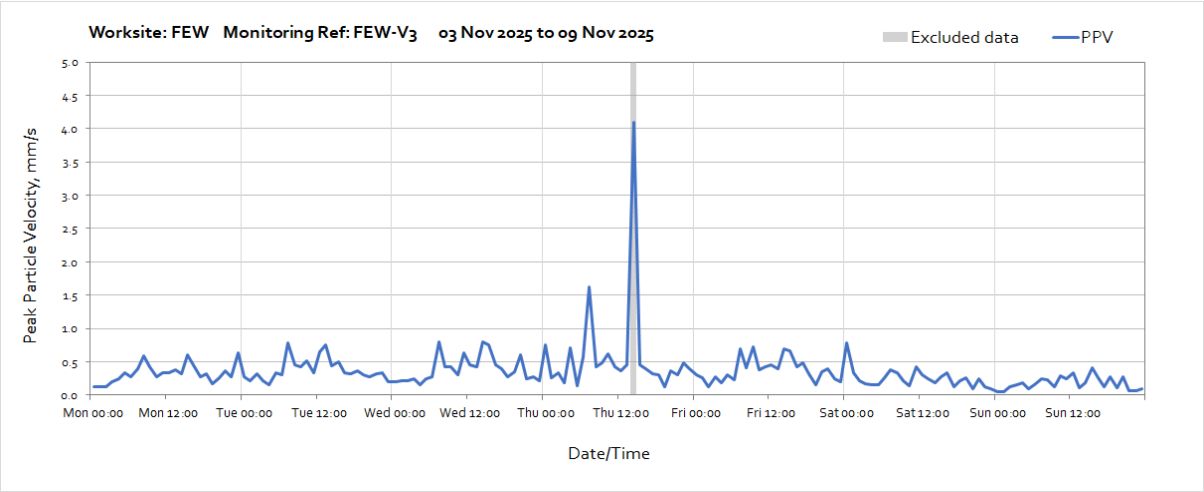

Worksite: SRO Monitoring Ref: SRO-N3 24 Nov 2025 to 30 Nov 2025
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
35
30
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

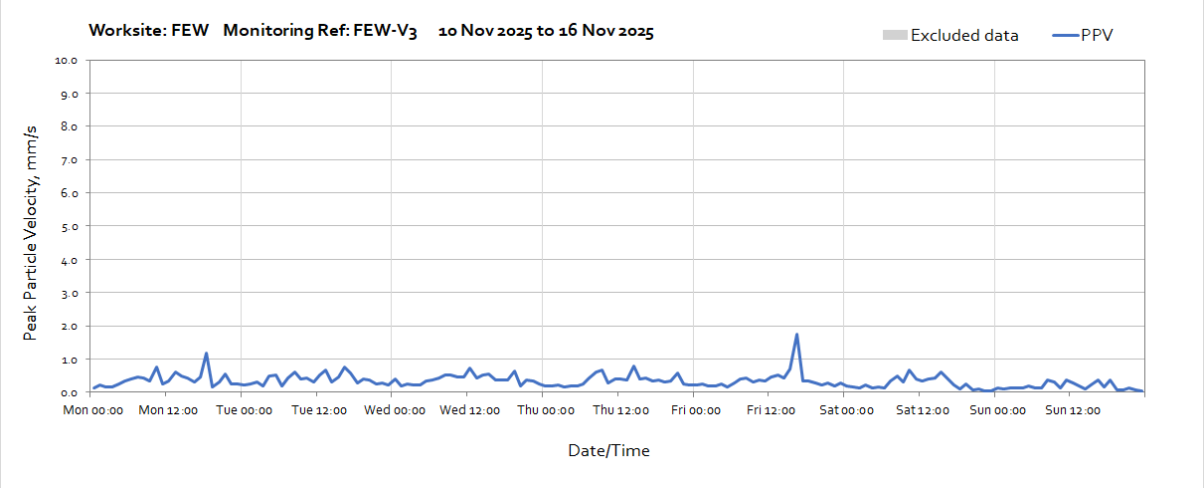
Vibration

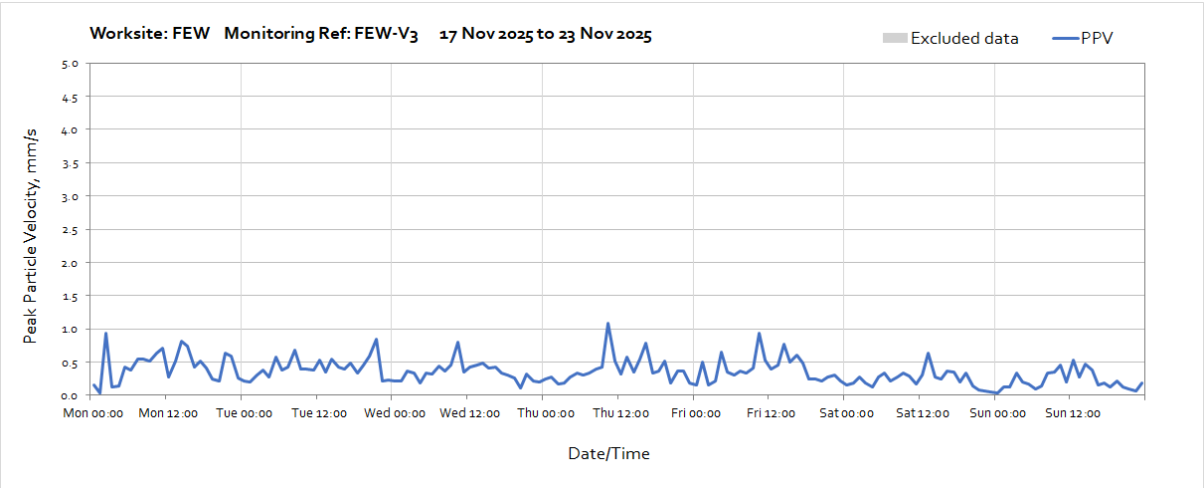
The following graphs show the hourly measured peak particle velocity PPV recorded during the monitoring period. The graphs show the highest PPV of the three orthogonal axes x, y and z. Periods where PPV values have been affected by local interference with the vibration monitor or only measured for part of the period, which are not representative of HS2 construction works, have been greyed out and excluded when calculating values in Table 4 of the main report.

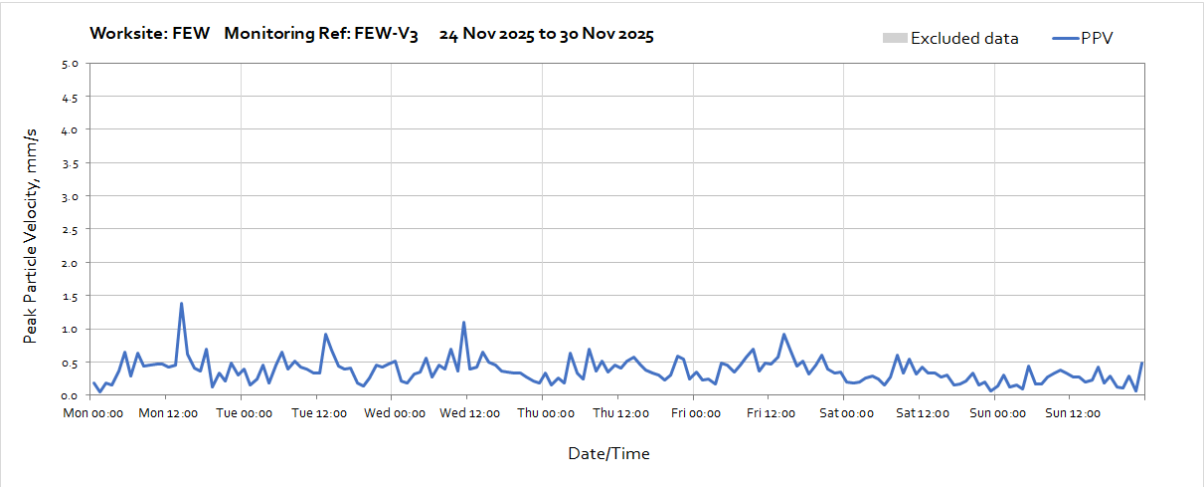
Worksite: FEW – Monitoring Ref: FEW-V3



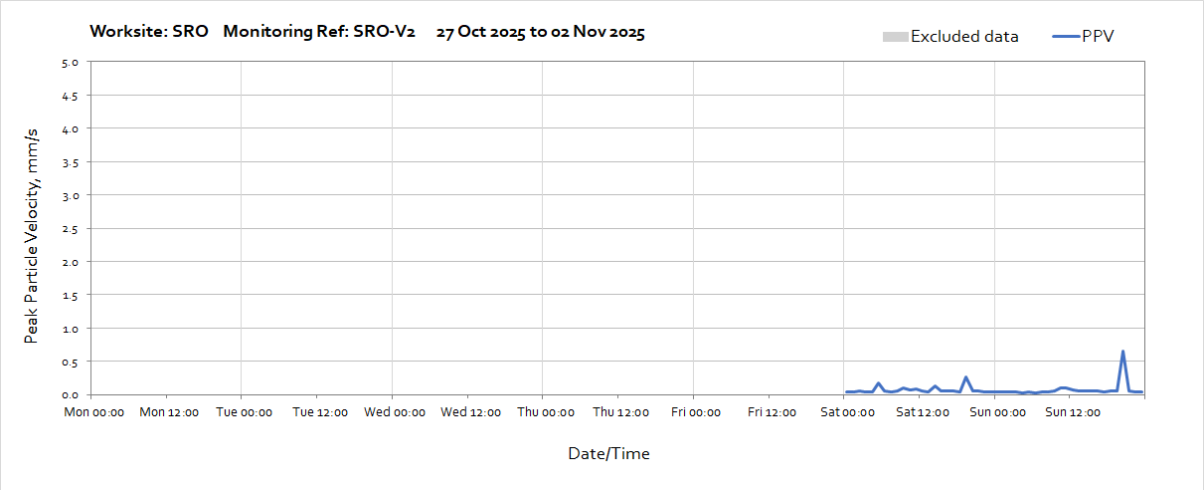


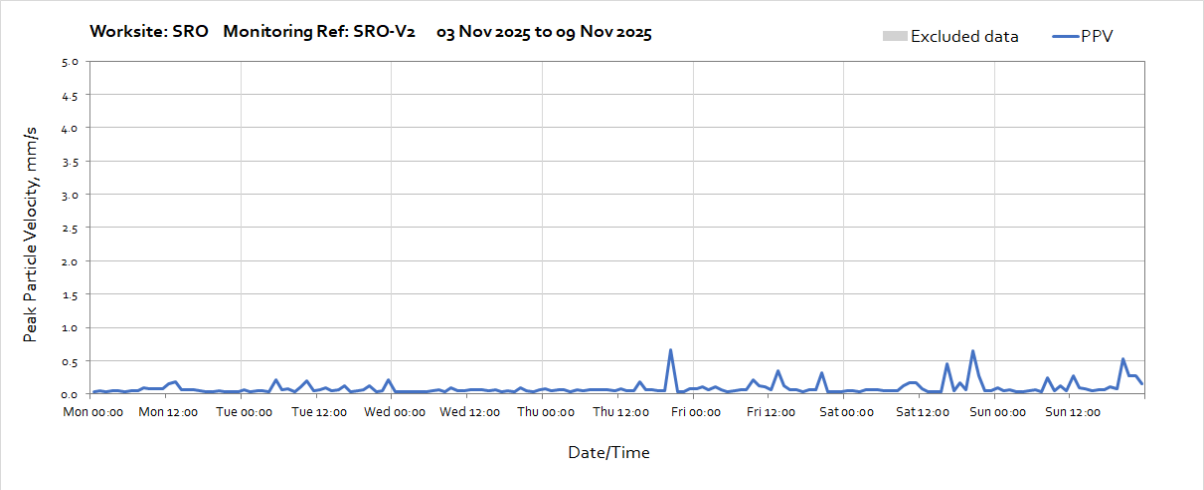

Worksite: FEW Monitoring Ref: FEW-V3 10 Nov 2025 to 16 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

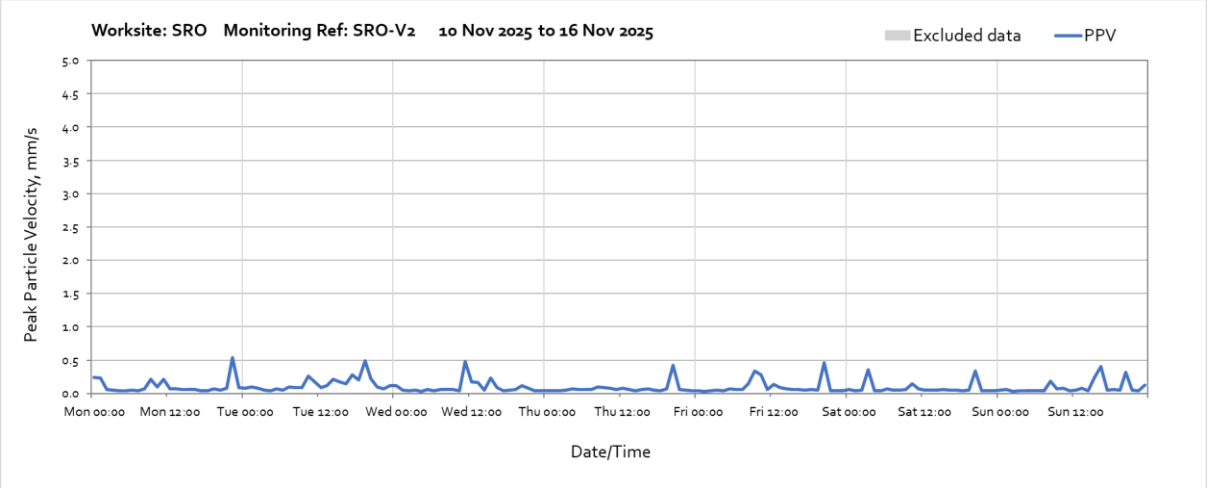

Worksite: FEW Monitoring Ref: FEW-V3 17 Nov 2025 to 23 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

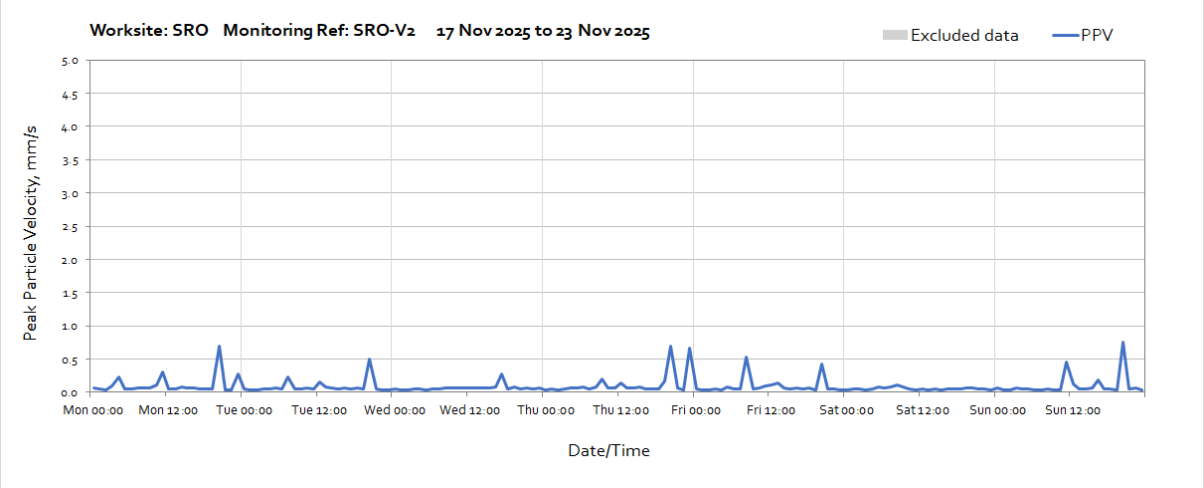

Worksite: FEW Monitoring Ref: FEW-V3 24 Nov 2025 to 30 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

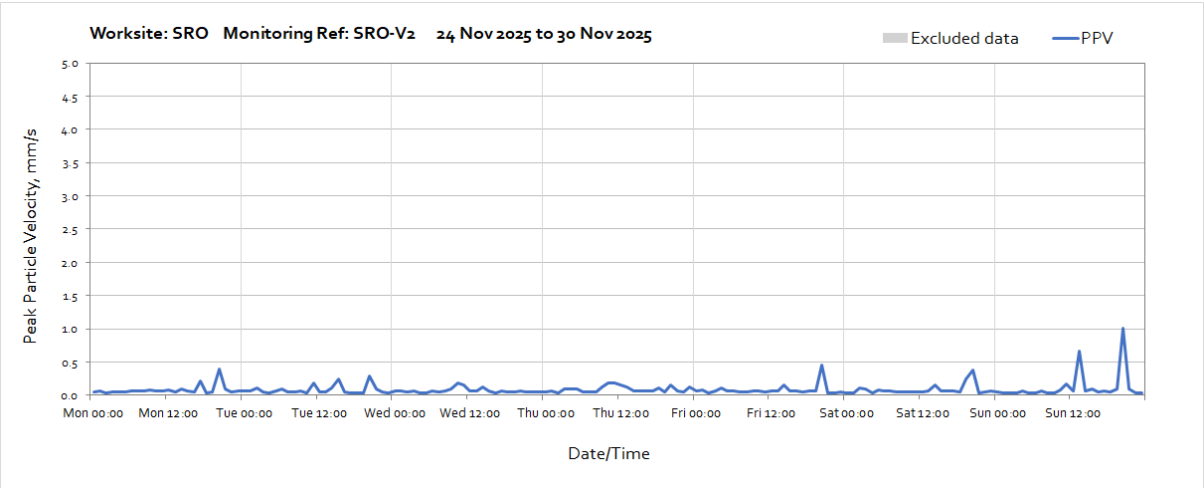
Worksite: SRO – Monitoring Ref: SRO-V2



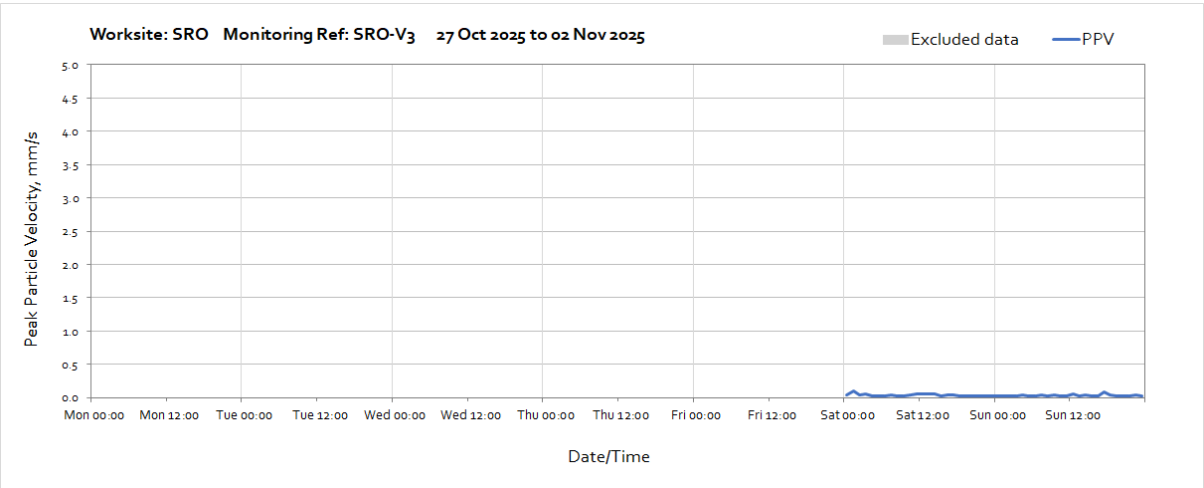


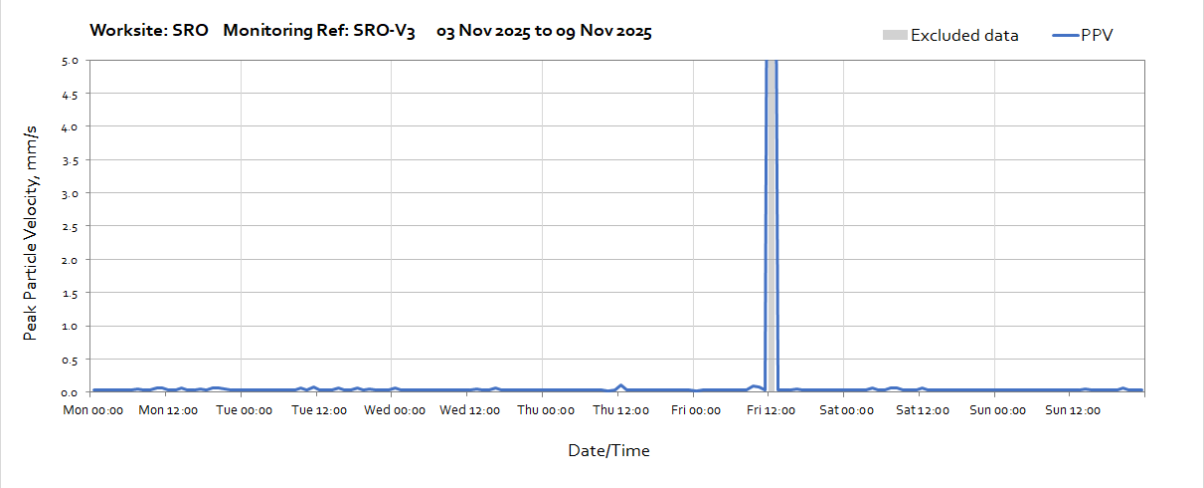


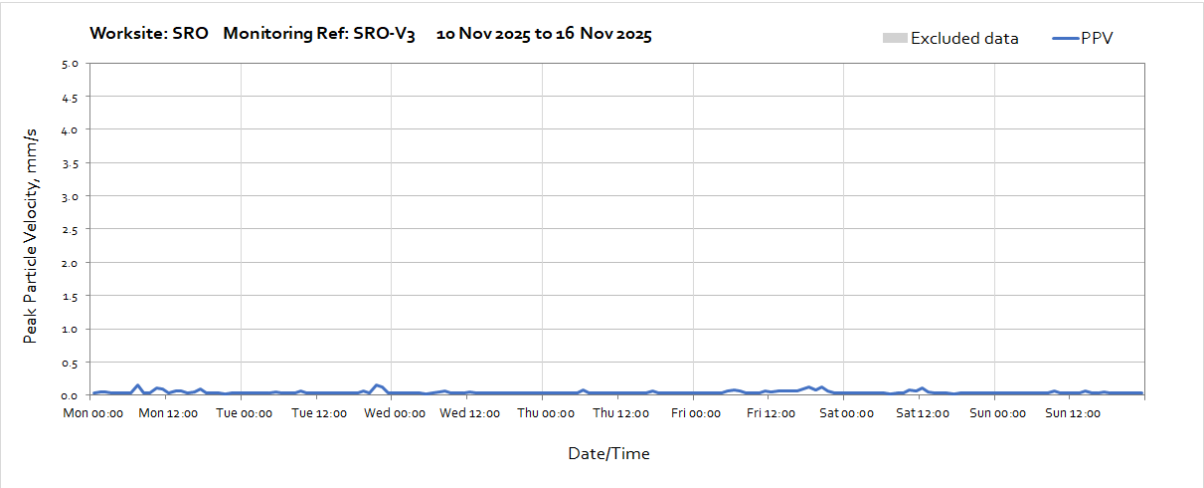


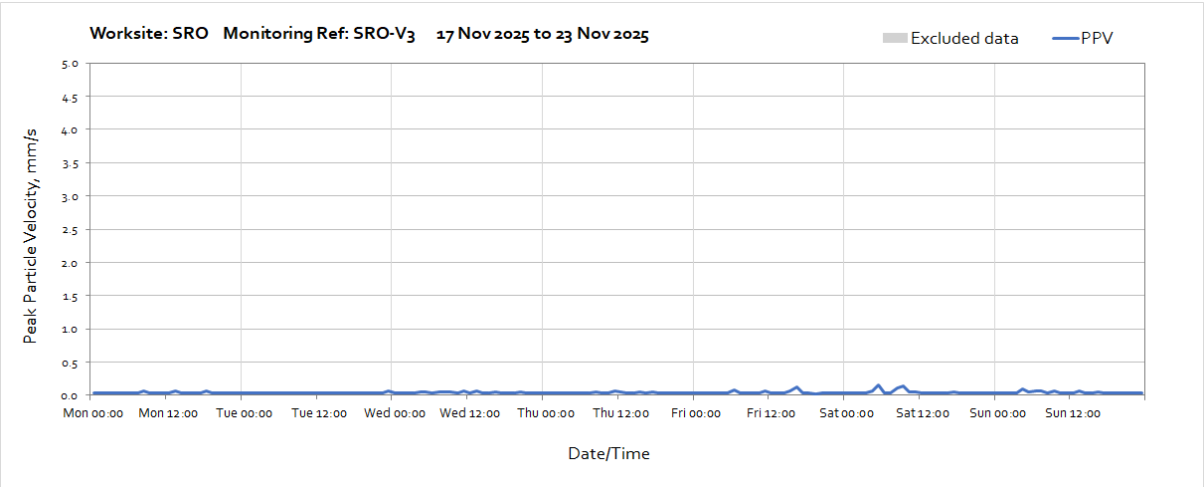


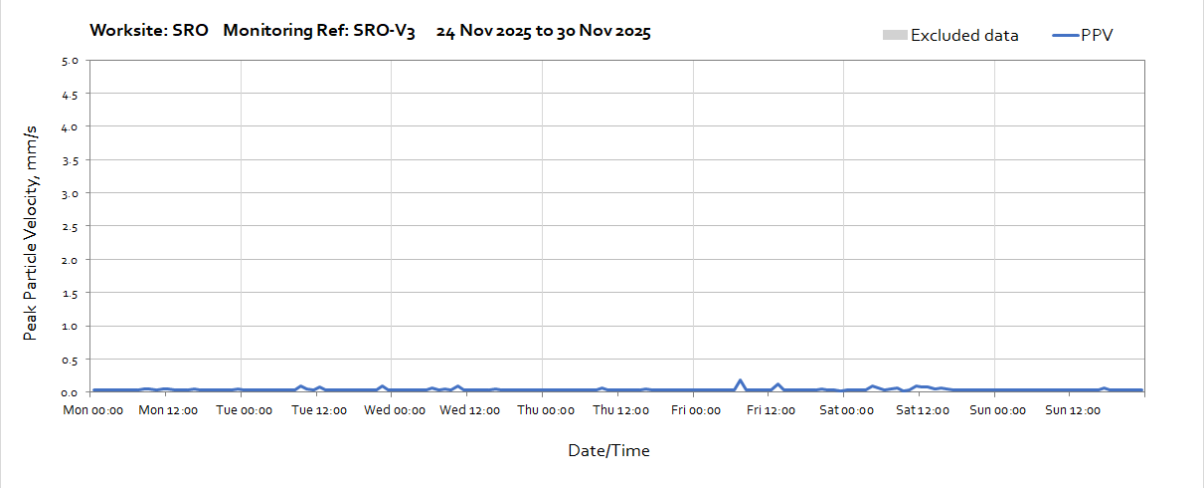
Worksite: SRO – Monitoring Ref: SRO-V3




Worksite: SRO Monitoring Ref: SRO-V3 03 Nov 2025 to 09 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: SRO Monitoring Ref: SRO-V3 10 Nov 2025 to 16 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: SRO Monitoring Ref: SRO-V3 17 Nov 2025 to 23 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: SRO Monitoring Ref: SRO-V3 24 Nov 2025 to 30 Nov 2025
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time