HS2

October 2022

Construction Noise and Vibration Monthly Report – August 2022

London Borough of Camden

gov.uk/hs2

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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 and vibration monitoring carried out within the London Borough of Camden during the month of August 2022.

Within this period monitoring was undertaken at the following worksites:

- Noise monitoring was undertaken in the vicinity of The Adelaide Road Ventilation Shaft (ref.: ARVS) where piling, installation of monitoring equipment, preparation for utility works, preparation for railway track removal, vegetation clearance, excavation for trial holes and working platform works were underway.
- Noise monitoring was undertaken in the vicinity of the Vehicle Holding Area worksite (ref.: VHA), where compound operations were underway.
- Noise monitoring was undertaken in the vicinity of Euston Throat Retained Cut and Granby Terrace Bridge worksite (ref.: ETRC & GTB) where piling, excavation works and installation of supports, concrete works, removal of site generator, mains electricity connection, cabling works, welfare and site services maintenance and utility diversion works were underway.
- Noise monitoring was undertaken in the vicinity of Euston Scissor Cut worksite (ref.: ESC) where site maintenance, site mobilisation and deliveries, surveys, earthworks, haul road and site drainage, installation and maintenance of site temporary services, scaffolding works, piling, retaining wall works and sewer lining were underway.
- Noise and vibration monitoring were undertaken in the vicinity of the Hampstead Road Bridge worksite (ref.: HRB) where sewer diversion works, traffic management works, hoarding installation, road junction improvements and utility works were underway.
- Noise and vibration monitoring were undertaken in the vicinity of the Euston Cavern worksite (ref.: ECAV) where piling, wall strengthening works, surveys, tunnel possession works, utility diversion works, ground water works and gas monitoring, sewer lining works and tower crane preparation works were underway.
- Noise monitoring was undertaken in the vicinity of On-Network worksites (ref.: B, C, D, E, F, G and H), where work activities included:
    - non-intrusive survey works and deliveries (worksite E);
    - inspections and maintenance works (worksite G); and
    - enabling preparation works and surveys (worksite H).

    - no HS2 works were undertaken at worksites B, C, D, and F.
- Noise monitoring was undertaken in the vicinity of the Former National Temperance Hospital - North worksite (ref.: NTH-N) where pile mat installation, removal of obstruction and drilling of bore holes were underway.
- Noise monitoring was undertaken in the vicinity of the Former National Temperance Hospital - Euston North worksite (ref.: NTH-EN) where polymer slab installation, construction of plant, pile mat installation, piling and excavation of trial holes were underway.
- Noise monitoring was undertaken in the vicinity of the Euston Towers Demolition worksite (ref.: ETD), where set up of scaffold safety fans, demolition, installation of supports, reinforced concrete works and realignment of site entrance were underway.
- Noise monitoring was undertaken in the vicinity of the Traction Substation worksite (ref.: TSS) where removal of supports, installation of lift liner walls, tunnel waterproofing, concrete works, tunnel installation and demobilisation were underway.
- Noise monitoring was undertaken in the vicinity of the Interim Taxi Rank worksite (ref.: ITR), where installation of drainage, water utility works, installation of ducting and chambers, pile mat installation, removal of waste, deliveries and realignment of site entrance 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 exceeded fourteen (14) times during the reporting period.

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

Five (5) complaints were received during the monitoring period. A description of complaints, the results of investigations and any actions taken are detailed in Table 8 of this report.

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, winds 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.

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 London Borough of Camden (LBC) for the period 1st to 31st August 2022.

1.1.2 Active construction sites in the local authority area where monitoring was undertaken during this period include:

- The Adelaide Road ventilation shaft ref.: ARVS, (see plan 2 in Appendix A), where work activities included:
    - Sheet piling works.
    - Monitoring prisms installation.
    - Preparation for utility works.
    - Preparation for removing disused railway track (including de-vegetation).
    - Excavation of trial holes.
    - Installation of monitoring equipment.
    - Ongoing working platform works (including concreting slab installation, installation of ducts and breaking out / excavation of duct trenches).
- Vehicle Holding Area worksite ref.: VHA (see plan 1 in Appendix A), where work activities included:
    - General compound operation (vehicle movements).

- Euston Throat Retained Cut and Granby Terrace Bridge worksite ref.: ETRC & GTB (see plan 2 in Appendix A), where work activities included:
    - Piling (including pile mat preparation).
    - Excavating and propping.
    - Reinforced concrete works.
    - Generator removal.
    - Mains electricity connection.
    - Cabling works.
    - Welfare and site services maintenance.
    - Utility diversion works.
- Euston Scissor Cut worksite ref.: ESC (see plan 2 in Appendix A), where work activities included:
    - Site maintenance.
    - Site mobilisation and deliveries.
    - Sitewide surveys and ground investigation (including unexploded ordinance survey probing).
    - Earthworks.
    - Haul road and site drainage.
    - Installation and maintenance of site temporary services.
    - Scaffolding.
    - Sheet and bored piling.
    - Retaining wall works (including hanging bar trials and mitigation slabs).
    - Sewer lining.
- Hampstead Road Bridge worksite ref.: HRB (see plan 3 in Appendix A), where work activities included:
    - Sewer diversion works.
    - Traffic management.
    - Hoarding installation.
    - Road junction improvement works.
    - Utility works.

- Euston Cavern worksite ref.: ECAV (see plan 3 in Appendix A), where work activities included:
    - Shaft piling and enabling works.
    - Wall strengthening works.
    - Intrusive surveys at road level and possession works at track level.
    - Tunnels possession works.
    - Utilities diversions.
    - Groundwater and gas monitoring.
    - Sewer lining works.
    - Tower crane preparation.
- On-Network worksites ref.: B, C, D, E, F, G and H (see plan 3 in Appendix A), where work activities included:
    - Non-intrusive survey works and deliveries (worksite E).
    - Inspections and maintenance works (worksite G).
    - Enabling preparation works and surveys (worksite H).
    - No HS2 works were undertaken at worksites B, C, D, and F.
- Former National Temperance Hospital - North worksite ref.: NTH-N (see plan 3 in Appendix A), where work activities included:
    - Pile mat installation.
    - Removal of obstructions.
    - Drilling of bore holes.
- Former National Temperance Hospital - Euston North worksite ref.: NTH-EN (see plan 3 in Appendix A), where work activities included:
    - Installation of polymer slab.
    - Construction of batching plant.
    - Installation of piling mat.
    - Piling.
    - Excavation of trial holes.
- Euston Towers Demolition worksite ref.: ETD (see plan 3 in Appendix A), where work activities included:
    - Set up of scaffold safety fans.
    - Ground floor slab demolition.

- Installation of supporting structures (props).
- Drilling of concrete reinforcement bars.
- Demolition of vertical elements.
- Realignment of site entrance.

- Traction Substation worksite ref.: TSS (see plan 3 in Appendix A), where work activities included:
  - Removal of supporting structures (props).
  - Installation of lift liner walls.
  - Waterproofing of tunnel eye.
  - Concrete pouring.
  - Concrete slab works.
  - Tunnel installation.
  - Demobilisation.
- Interim Taxi Rank worksite ref.: ITR (see plan 3 in Appendix A), where work activities included:
  - Installation of drainage.
  - Water utility works (including trench box installation for pipe and rocker connection to deep chamber).
  - Installation of ducting and chambers.
  - Pile mat installation.
  - Removal of waste.
  - Deliveries.
  - Realignment of site entrance.

1.1.3 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/collections/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 Thirty-three (33) noise and eleven (11) vibration monitoring installations were active across eighteen worksites in August in the LBC area. Table 2 summarises the position of noise and vibration monitoring installations within the LBC area in August 2022.

1.2.2 Noise monitor ref.: N008 was reinstalled at worksite ref.: TSS on Tuesday 16th August following completion of works (unrelated to HS2) near the monitor.

1.2.3 Maps showing the position of noise and vibration monitoring installations are presented in Appendix B.

Table 2: Monitoring Locations

Worksite Reference	Measurement Reference	Address
ARVS	N051	Outside 70 Adelaide Road
	N052	Adelaide Road-Beaumont Walk
	V059	Outside 68 Adelaide Road
	ARBW-V1	Adelaide Road-Beaumont Walk
B	JC	Juniper Crescent
ESC	N024	External to Park Village Studios, Park Village East
	N047	Park Village East/Mornington Street bridge, lamppost #13
	PVS-V1	Park Village Studios
ESC, C	N022	External to 34 Mornington Terrace
	N046	Mornington Terrace near The Edinboro Castle pub, lamppost #18
ETRC & GTB	N001	Park Village East, lamppost #1 (external to Cubitt Court, 100 Park Village East)
	N002	Park Village East, lamppost #2 (external to Richmond Court)
	N003	Park Village East, lamppost #9 (external to Silsoe House)
	SH-V1	Silsoe House
ETRC & GTB, D	N004	Mornington Terrace, lamppost #7 (junction of Mornington Terrace, Mornington Place and Clarkson Row)
ETRC & GTB, E	N005	5A Granby Terrace
E	CR	Lamppost #2 on Clarkson Row
ETRC & GTB, F	N023	Lamppost #21 on Hampstead Road
HRB	N019	Outside Cartmel, Hampstead Road
	N020	Mackworth Street, lamppost #1

Worksite Reference	Measurement Reference	Address
	N021	Stanhope Street, lamppost #2
	N044	Regents Park Estate west, near Langdale
	N045	Regents Park Estate south, external to Coniston
	V039	Coniston, Regents Park Estate
	V043	Cubitt Court, Park Village East
HRB, NTH-N	N026a	Euston Site, Cartmel
G, H	HH	Euston Station Parcel Deck, Barnby Street
G	BS	Roof of Stockbeck House, Barnby Street
ETD, TSS	N006	Royal College of General Practitioners roof level
TSS	N008	Stephenson's Way lamppost (external to RCGP)
	N010	Wesley Hotel
	N011	Euston Street, lamppost #4 (external to 82 Euston Street)
	V002	Royal College of General Practitioners basement boiler room by Stephenson Way
	V037	Magic Circle, basement
	V038	Wesley Hotel, basement lightwell, Euston Street
ETD	N007	Royal College of General Practitioners, Melton Street
	V003	Royal College of General Practitioners basement vaults under Melton St
VHA	N025	External to 3 Prince Albert Road
NTH-EN, TSS	N012	Drummond Street, lamppost #14 (opposite to 92-94 Drummond Street)
NTH-EN	N014	Starcross Street lamppost (external to Exmouth Arms)
	N016	Margaret Centre roof
	N017	Hampstead Road, lamppost #48
	V021	42-44 Cobourg Street
NTH-EN, NTH-N	N018	Outside replacement housing, Hampstead Road

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 each monitoring location 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
ARVS	N051	Outside 70 Adelaide Road	Free-field	56.7 (67.0)	70.7 (77.1)	59.7 (75.0)	59.0 (74.6)	54.6 (66.4)	58.2 (63.7)	70.7 (78.9)	66.3 (73.9)	61.7 (68.1)	54.9 (66.2)	60.5 (72.8)	55.2 (72.3)
	N052	Adelaide Road-Beaumont Walk	Free-field	58.7 (68.5)	65.2 (69.7)	59.8 (71.0)	60.3 (76.3)	56.4 (66.4)	61.1 (71.9)	65.3 (69.3)	64.8 (69.0)	62.3 (69.4)	59.1 (69.6)	59.5 (66.3)	57.7 (74.2)
B	JC	Juniper Crescent	Free-field	56.9 (58.8)	57.7 (59.6)	57.9 (62.1)	58.2 (61.6)	55.1 (61.8)	55.7 (57.1)	55.0 (57.5)	54.4 (56.7)	54.7 (63.9)	51.5 (61.7)	55.4 (59.1)	53.1 (58.9)
ESC	N024	External to Park Village Studios, Park Village East	Free-field	58.5 (61.0)	61.7 (70.0)	59.4 (63.3)	58.1 (61.8)	54.3 (68.9)	55.6 (56.6)	57.3 (57.4)	58.3 (61.8)	56.8 (61.0)	53.9 (62.2)	57.6 (64.6)	53.9 (64.4)
	N047	Park Village East/Mornington Street bridge, lamppost #13	Free-field	57.8 (59.8)	60.5 (65.0)	59.6 (66.0)	57.8 (61.3)	52.9 (61.1)	61.2 (78.6)	58.7 (60.6)	58.4 (60.0)	57.5 (60.5)	52.2 (56.6)	57.7 (71.0)	52.2 (56.2)
ESC, C	N022	External to 34 Mornington Terrace	Free-field	56.9 (58.7)	60.7 (62.1)	57.5 (59.8)	57.0 (59.4)	52.0 (57.1)	55.0 (59.4)	56.3 (57.5)	54.9 (56.9)	55.6 (61.1)	49.7 (55.0)	55.4 (59.4)	51.3 (57.0)
	N046	Mornington Terrace near The Edinboro Castle pub, lamppost #18	Free-field	60.4 (62.0)	65.0 (67.1)	60.9 (64.0)	60.7 (64.5)	56.1 (62.8)	57.2 (61.3)	60.2 (62.8)	59.1 (61.8)	59.3 (64.2)	53.6 (59.2)	59.2 (62.0)	55.5 (60.3)

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
ETRC & GTB	N001	External to Cubitt Court, 100 Park Village East	Free-field	57.4 (61.0)	62.6 (65.0)	59.3 (61.9)	57.9 (62.5)	53.1 (59.8)	55.9 (56.8)	59.3 (61.6)	57.0 (58.0)	57.4 (59.9)	53.0 (57.0)	56.2 (61.0)	52.5 (57.3)
	N002	Richmond Court, Park Village East	Free-field	58.5 (60.1)	62.4 (64.4)	60.3 (64.7)	58.9 (62.8)	55.3 (59.5)	57.2 (58.2)	61.5 (61.9)	59.1 (59.6)	58.6 (60.8)	55.5 (57.8)	58.2 (64.7)	54.7 (59.1)
	N003	Silsoe House, Park Village East	Façade	57.5 (59.4)	60.9 (62.7)	60.0 (64.7)	58.3 (61.8)	53.7 (70.3)	55.9 (56.7)	59.5 (60.1)	58.6 (59.8)	58.3 (62.0)	53.2 (57.2)	57.0 (62.9)	52.8 (58.2)
ETRC & GTB, D	N004	Mornington Terrace, lamppost #7	Free-field	62.5 (64.3)	65.6 (66.9)	63.2 (66.6)	63.3 (67.1)	58.9 (70.4)	60.1 (63.6)	62.9 (69.2)	60.6 (69.2)	60.5 (69.7)	54.1 (64.9)	63.4 (70.7)	60.2 (70.2)
ETRC & GTB, E	N005	5A Granby Terrace	Free-field	63.3 (67.1)	66.5 (68.1)	64.4 (67.8)	64.4 (69.5)	59.9 (69.3)	61.2 (66.4)	63.9 (66.9)	59.9 (61.6)	60.6 (64.5)	58.0 (62.8)	62.0 (67.9)	59.9 (67.3)
E	CR	Clarkson Row, lamppost #2	Free-field	63.5 (66.4)	69.0 (71.7)	67.9 (72.7)	66.3 (71.8)	58.8 (66.6)	61.1 (66.2)	64.6 (69.8)	60.6 (64.7)	60.9 (67.2)	54.2 (65.6)	64.7 (73.1)	58.9 (65.1)
ETRC & GTB, F	N023	Lamppost #21 on Hampstead Road	Free-field	69.6 (71.4)	68.8 (69.9)	68.1 (70.7)	68.1 (72.7)	66.1 (73.1)	67.8 (69.0)	68.0 (69.6)	67.1 (67.8)	67.8 (71.1)	66.0 (69.8)	67.2 (73.3)	65.0 (68.1)
HRB	N019	Outside Cartmel, Hampstead Road	Free-field	55.8 (60.2)	68.7 (77.2)	56.8 (69.7)	56.2 (67.8)	52.1 (58.2)	52.9 (54.1)	59.2 (62.8)	52.4 (53.5)	54.5 (61.4)	52.0 (63.0)	53.9 (65.2)	50.8 (56.6)

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
HRB	N020	Mackworth Street, lamppost #1	Free-field	54.1 (57.9)	61.0 (65.2)	52.8 (59.5)	51.0 (55.6)	47.5 (54.8)	54.6 (58.4)	57.0 (60.9)	51.4 (52.7)	51.0 (54.8)	46.2 (49.7)	50.1 (55.2)	47.4 (54.3)
	N021	Stanhope Street, lamppost #2	Free-field	56.9 (61.7)	60.1 (62.3)	58.7 (63.0)	56.9 (62.0)	52.0 (57.6)	54.9 (55.4)	57.4 (58.9)	56.8 (57.9)	57.2 (62.2)	52.5 (61.1)	55.4 (59.0)	51.5 (57.7)
	N044	Regents Park Estate west, near Langdale	Free-field	56.2 (60.5)	63.3 (68.3)	54.7 (63.9)	53.1 (56.9)	49.7 (56.3)	52.7 (54.9)	63.0 (70.5)	55.9 (73.0)	54.9 (74.5)	48.1 (51.7)	55.0 (70.0)	48.4 (52.8)
	N045	Regents Park Estate south, external to Coniston	Free-field	57.9 (72.7)	71.7 (80.0)	58.0 (76.2)	57.1 (76.2)	51.9 (61.3)	52.8 (55.1)	61.5 (70.8)	52.9 (54.7)	54.5 (58.8)	50.4 (55.8)	54.0 (63.0)	49.9 (55.1)
HRB, NTH-N	N026a	Euston Site, Cartmel	Free-field	64.8 (68.7)	68.4 (73.4)	64.5 (73.3)	64.3 (71.4)	62.0 (71.1)	63.6 (65.7)	64.7 (68.0)	63.8 (66.6)	64.9 (68.1)	63.7 (70.1)	64.7 (69.6)	62.6 (66.4)
G, H	HH	Euston Station Parcel Deck, Barnby Street	Free-field	62.8 (67.0)	62.2 (64.9)	61.5 (66.0)	61.8 (68.2)	58.2 (67.2)	58.7 (62.8)	61.8 (62.4)	58.0 (58.6)	60.5 (66.5)	57.6 (63.2)	60.1 (65.8)	58.9 (66.2)
G	BS	Roof of Stockbeck House, Barnby Street	Free-field	60.3 (63.2)	62.3 (63.2)	61.0 (62.6)	61.5 (65.3)	58.4 (68.4)	60.2 (63.8)	60.9 (62.5)	58.4 (59.1)	58.7 (62.4)	54.1 (60.1)	59.9 (65.1)	58.4 (66.6)
ETD, TSS	N006	Royal College of General Practitioners roof level	Free-field	63.3 (67.1)	66.5 (68.1)	64.4 (67.8)	64.4 (69.5)	59.9 (69.3)	61.2 (66.4)	63.9 (66.9)	59.9 (61.6)	60.6 (64.5)	58.0 (62.8)	62.0 (67.9)	59.9 (67.3)

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
TSS	N008	Stephenson's Way lamppost (external to RCGP)	Façade	58.8	64.1	58.9	57.6	56.9	59.4	60.5	55.7	55.7	54.6	57.0	55.2
				(65.5)	(67.8)	(66.9)	(69.9)	(65.8)	(63.2)	(65.1)	(55.7)	(56.5)	(55.2)	(65.3)	(59.0)
	N010	Wesley Hotel	Façade	65.7	67.2	65.7	64.0	56.6	65.6	66.2	65.3	64.8	55.4	62.3	57.1
				(67.5)	(69.7)	(67.2)	(69.0)	(65.9)	(66.0)	(67.5)	(65.7)	(65.9)	(63.1)	(66.0)	(65.7)
	N011	Outside 82 Euston Street	Free-field	54.8	56.9	54.1	53.3	50.8	49.6	53.8	53.8	54.3	49.6	53.1	50.3
				(62.0)	(60.1)	(59.7)	(62.2)	(64.1)	(51.3)	(55.1)	(57.8)	(61.5)	(55.2)	(61.9)	(57.5)
ETD	N007	Royal College of General Practitioners, Melton Street	Free-field	64.1	65.7	63.9	62.9	61.1	63.0	62.6	62.7	62.6	62.1	62.3	60.8
				(68.3)	(67.2)	(70.5)	(66.3)	(67.0)	(67.9)	(63.2)	(64.0)	(66.2)	(66.3)	(65.3)	(65.0)
VHA	N025	External to 3 Prince Albert Road	Free-field	66.3	67.0	65.2	65.4	63.2	64.7	64.7	65.5	65.0	63.1	64.2	63.0
				(71.9)	(69.2)	(67.9)	(72.8)	(69.9)	(67.3)	(66.1)	(66.5)	(70.1)	(67.3)	(71.0)	(68.7)
NTH-EN, TSS	N012	Opposite 92-94 Drummond Street	Free-field	54.1	57.7	56.8	56.5	52.7	53.0	55.6	56.4	55.0	49.7	55.0	50.9
				(60.1)	(60.0)	(65.3)	(60.5)	(66.9)	(55.1)	(60.0)	(60.0)	(57.4)	(53.0)	(60.6)	(56.6)
NTH-EN	N014	Starcross Street lamppost (external to Exmouth Arms)	Free-field	54.9	64.1	59.9	59.8	52.5	50.5	56.7	55.8	54.3	51.2	54.5	51.3
				(65.3)	(71.1)	(66.2)	(66.6)	(63.9)	(51.2)	(60.5)	(57.4)	(60.6)	(59.3)	(62.6)	(57.9)

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
	N016	Margaret Centre roof	Free-field	53.4 (55.9)	60.4 (63.4)	54.6 (58.7)	53.6 (58.5)	50.7 (58.7)	51.3 (51.5)	59.2 (62.8)	56.5 (59.1)	53.5 (61.6)	50.4 (54.6)	52.5 (58.3)	49.6 (53.0)
NTH-EN	N017	Hampstead Road, lamppost #48	Free-field	70.1 (74.3)	69.9 (71.7)	69.5 (73.0)	69.5 (75.7)	66.9 (74.0)	66.6 (66.9)	67.7 (68.8)	66.9 (68.2)	68.8 (73.1)	66.9 (72.5)	68.2 (74.6)	65.7 (68.5)
NTH-EN, NTH-N	N018	Outside replacement housing, Hampstead Road	Free-field	68.3 (74.2)	70.1 (71.6)	69.3 (75.4)	69.3 (76.0)	66.3 (74.3)	65.9 (66.1)	67.8 (71.0)	66.7 (67.2)	67.9 (71.7)	66.6 (71.8)	67.8 (73.4)	65.4 (68.6)

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
ARVS	V059	Outside 68 Adelaide Road	10.10* (Z-axis)
	ARBW-V1	Adelaide Road – Beaumont Walk	7.91 (Y-axis)
HRB	V039	Coniston, Regents Park Estate	5.44 (Y-axis)
	V043	Cubitt Court, Park Village East	4.92 (Y-axis)
ETD, TSS	V003	RCGP basement vaults, 305 Euston Road	2.85 (Y-axis)
TSS	V002	RCGP basement boiler room, 305 Euston Road	0.61 (Y-axis)
	V037	Magic Circle, basement	0.57 (Z-axis)
	V038	Wesley Hotel, basement lightwell, Euston Street	0.72 (X-axis)
NTH-EN	V021	42-44 Cobourg Street (floor)	2.65 (Z-axis)
ESC	PVS-V1	Park Village Studios	0.97 (Y-axis)
ETRC & GTB	SH-V1	Silsoe House	0.92 (Y-axis)

* High levels of vibration were due to utilities work being undertaken in close proximity (1m) to the monitor. Vibration levels at the nearest receptor (7m from the works) will be lower.

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 SOAEL

2.2.1 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."

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

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

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

Table 5: Summary of Exceedances of SOAEL

Worksite Reference	Measurement Reference	Site Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of SOAEL
ARVS	N051	Outside 70 Adelaide Road	All days	All periods	No exceedance
	N052	Adelaide Road, Beaumont Walk	All days	All periods	No exceedance
B	JC	Juniper Crescent	All days	All periods	No exceedance
ESC	N024	External to Park Village Studios, Park Village East	All days	All periods	No exceedance
	N047	Park Village East/Mornington Street bridge, lamppost #13	All days	All periods	No exceedance
ESC, C	N022	External to 34 Mornington Terrace	All days	All periods	No exceedance
	N046	Mornington Terrace near The Edinboro Castle pub, lamppost #18	All days	All periods	No exceedance
ETRC & GTB	N001	External to Cubitt Court, 100 Park Village East	All days	All periods	No exceedance
	N002	Richmond Court, Park Village East	All days	All periods	No exceedance
	N003	Silsoe House, Park Village East	All days	All periods	No exceedance

Worksite Reference	Measurement Reference	Site Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of SOAEL
ETRC & GTB, D	N004	Mornington Terrace, lamppost #7	All days	All periods	No exceedance
ETRC & GTB, E	N005	5A Granby Terrace	All days	All periods	No exceedance
E	CR	Clarkson Row, lamppost #2	All days	All periods	No exceedance
ETRC & GTB, F	N023	Lamppost #21 on Hampstead Road	All days	All periods	No exceedance
HRB	N019	Outside Cartmel, Hampstead Road	All days	All periods	No exceedance
	N020	Mackworth Street, lamppost #1	All days	All periods	No exceedance
	N021	Stanhope Street, lamppost #2	All days	All periods	No exceedance
	N044	Regents Park Estate west, near Langdale	Saturday	08:00-13:00	1
				14:00-22:00	1
			Sunday	07:00-22:00	2
	N045	Regents Park Estate south, external to Coniston	Weekday	07:00-08:00	2
				08:00-18:00	10
				18:00-19:00	1
HRB, NTH-N	N026a	Euston Site, Cartmel	Weekday	08:00-18:00	2
G, H	HH	Euston Station Parcel Deck, Barnby Street	All days	All periods	No exceedance
G	BS	Roof of Stockbeck House, Barnby Street	All days	All periods	No exceedance
ETD, TSS	N006	RCGP Roof level	All days	All periods	Not applicable*
TSS	N008	Stephenson's Way lamppost (external to RCGP)	All days	All periods	Not applicable*
	N010	Wesley Hotel	All days	All periods	Not applicable*
	N011	Outside 82 Euston Street	All days	All periods	No exceedance

Worksite Reference	Measurement Reference	Site Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of SOAEL
ETD	N007	RCGP, Melton Street	All days	All periods	No exceedance
VHA	N025	External to 3 Prince Albert Road	All days	All periods	No exceedance
NTH-EN	N012	Opposite 92-94 Drummond Street	All days	All periods	No exceedance
	N014	Starcross Street lamppost (external to Exmouth Arms)	All days	All periods	No exceedance
NTH-EN	N016	Margarete Centre roof	All days	All periods	No exceedance
	N017	Hampstead Road, lamppost #48	All days	All periods	No exceedance
NTH-N	N018	Outside replacement housing, Hampstead Road	All days	All periods	No exceedance

* The defined SOAEL criteria are not applicable to non-residential properties.

2.2.5 For the purpose of assessing eligibility for noise insulation or temporary rehousing, multiple exceedances of the SOAEL in a 24-hour period would be counted as a single exceedance during that day. Over the reporting period, the overall number of SOAEL exceedances at each measurement location is shown in Table 6 and may be lower than the total sum of individual exceedances reported in Table 5 for each location.

Table 6: Summary of Total Exceedances of SOAEL

Worksite Reference	Measurement Reference	Monitor Address	Total of SOAEL exceedances in the month
HRB, NTH-N	N026a	Euston Site, Cartmel	2
HRB	N044	Regents Park Estate west, near Langdale	2
HRB	N045	Regents Park Estate south, external to Coniston	10

2.2.6 Two (2) exceedances of the SOAEL were measured at locations N026a and N044 respectively, with a further ten (10) exceedances measured at location N045, during weekday daytime periods in the month of August 2022.

2.3 Exceedances of Trigger Level

2.3.1 Table 7 provides a summary of exceedances of the S61 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 7: 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 8 provides a summary of complaint information related to noise and vibration received during the reporting period, along with the findings of any investigation.

Table 8: Summary of Complaints

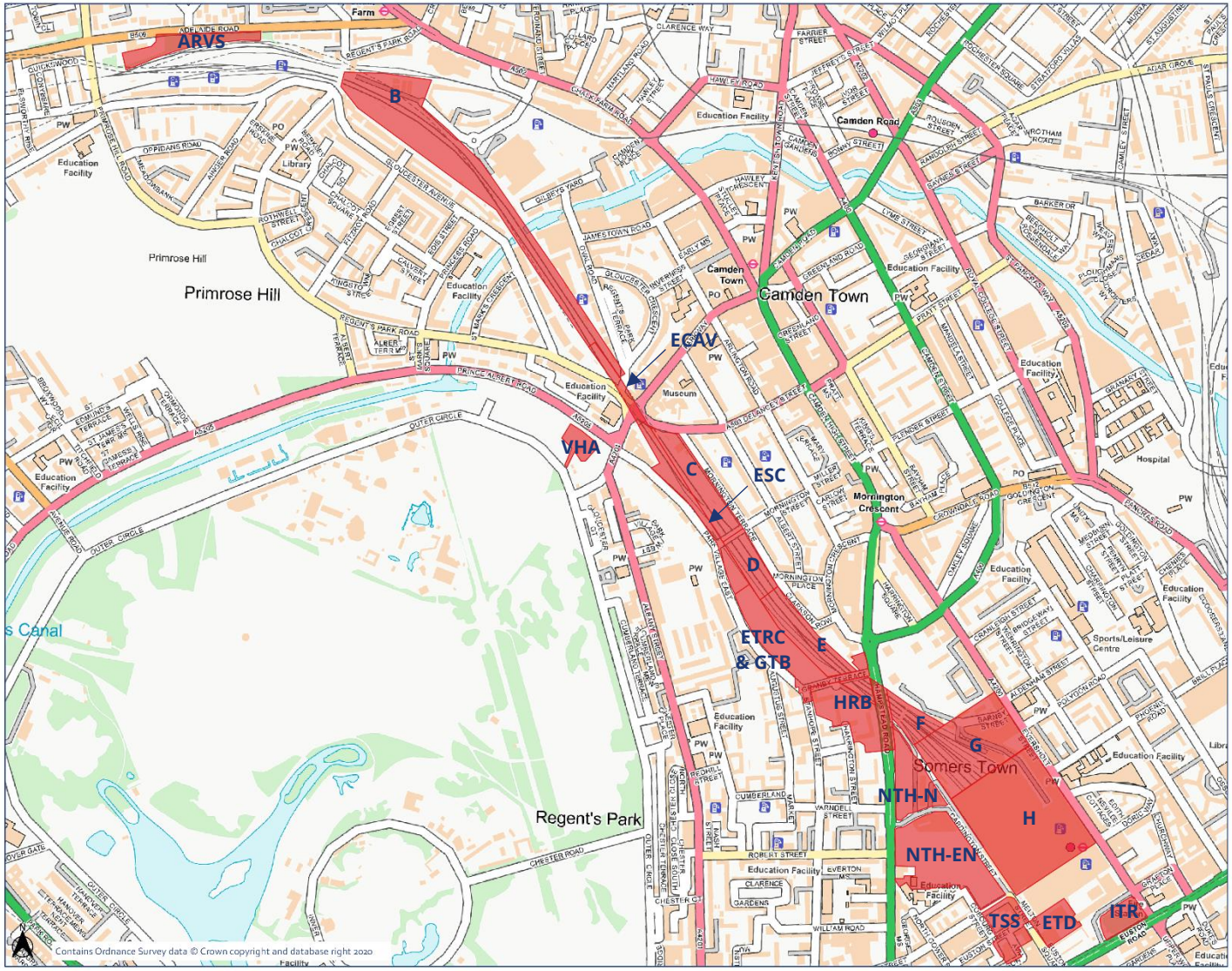
Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
HS2-22-43856-C	ARVS	General complaint about construction noise.	Noise monitoring levels were within Section 61 requirements and best practicable means were used during all phases of works. Alternative quiet work facilities were provided to residents during closure of Adelaide Road.	A response was provided to the complainant detailing the measures adopted to mitigate noise.

Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
HS2-22-43884-C	ARVS	General complaint about high level of noise from works affecting health and wellbeing of local residents.	Noise monitoring levels were within Section 61 requirements and best practicable means were used during all phases of works. Alternative quiet work facilities were provided to residents during closure of Adelaide Road.	A response was provided to the complainant including information on HS2 schemes available for receptors whose special circumstances may require individual consideration.
HS2-22-43912-C	ECAV	Complaint from resident regarding noise and vibration during both daytime and night-time periods.	No SCS works were ongoing during the night-time period referred in the complaint. Noise monitoring levels were within trigger levels and best practicable means were used during all phases of works.	A response was provided to the complainant detailing the measures adopted to mitigate noise and vibration.
HS2-22-43922-C	ARVS	Complaint regarding disturbance due to utility works associated with HS2.	Noise monitoring levels were within Section 61 requirements and best practicable means were used during all phases of works. Alternative quiet work facilities were provided to residents during closure of Adelaide Road.	A response was provided to the complainant.
HS2-22-43924-C	ARVS	Complaint regarding noise from pneumatic drilling.	Noise monitoring levels were within Section 61 requirements and best practicable means were used during all phases of works.	A response was provided to the complainant detailing the measures adopted to mitigate noise.

Appendix A Site Locations

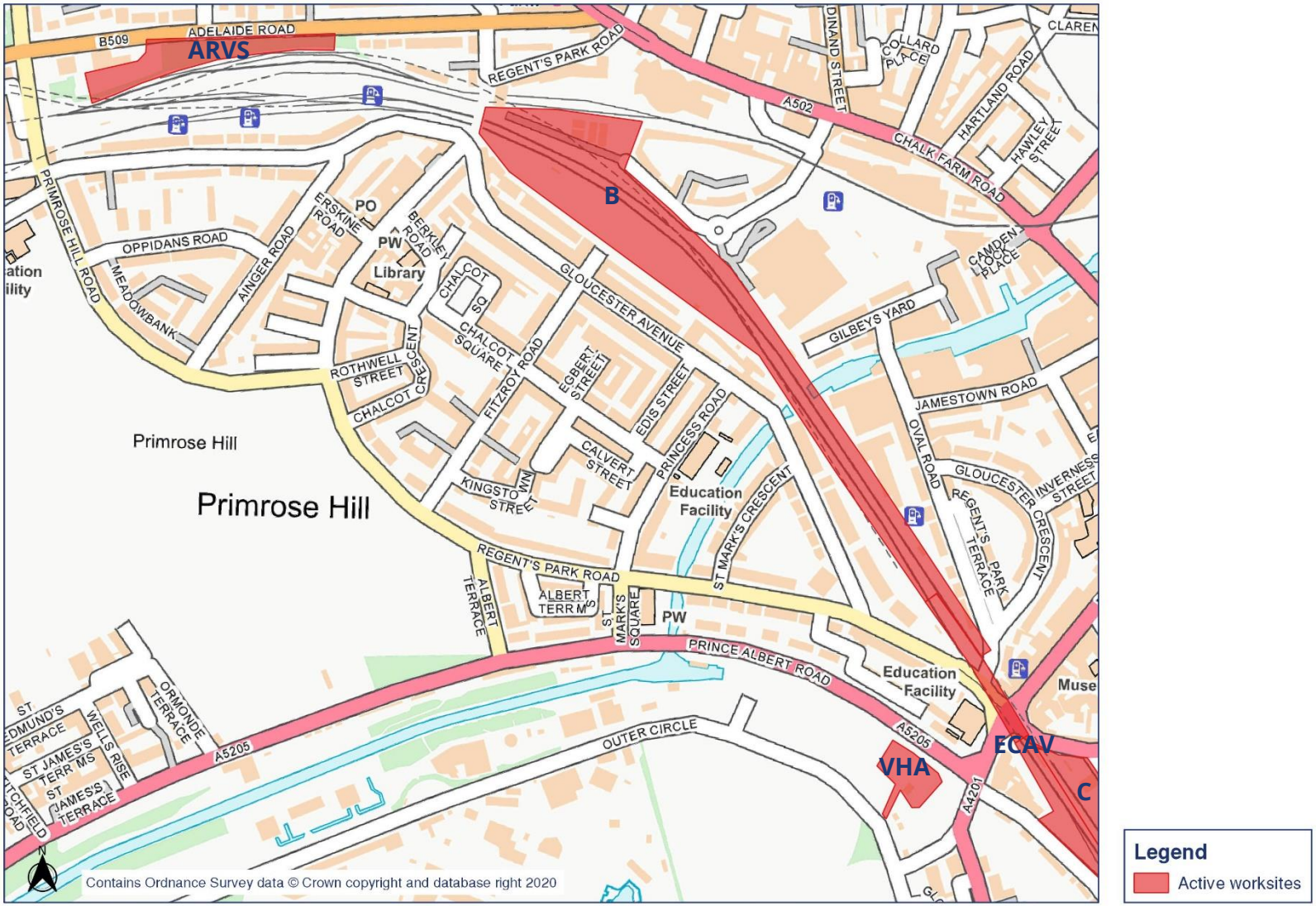
HS2

Worksite identification plan - Overview



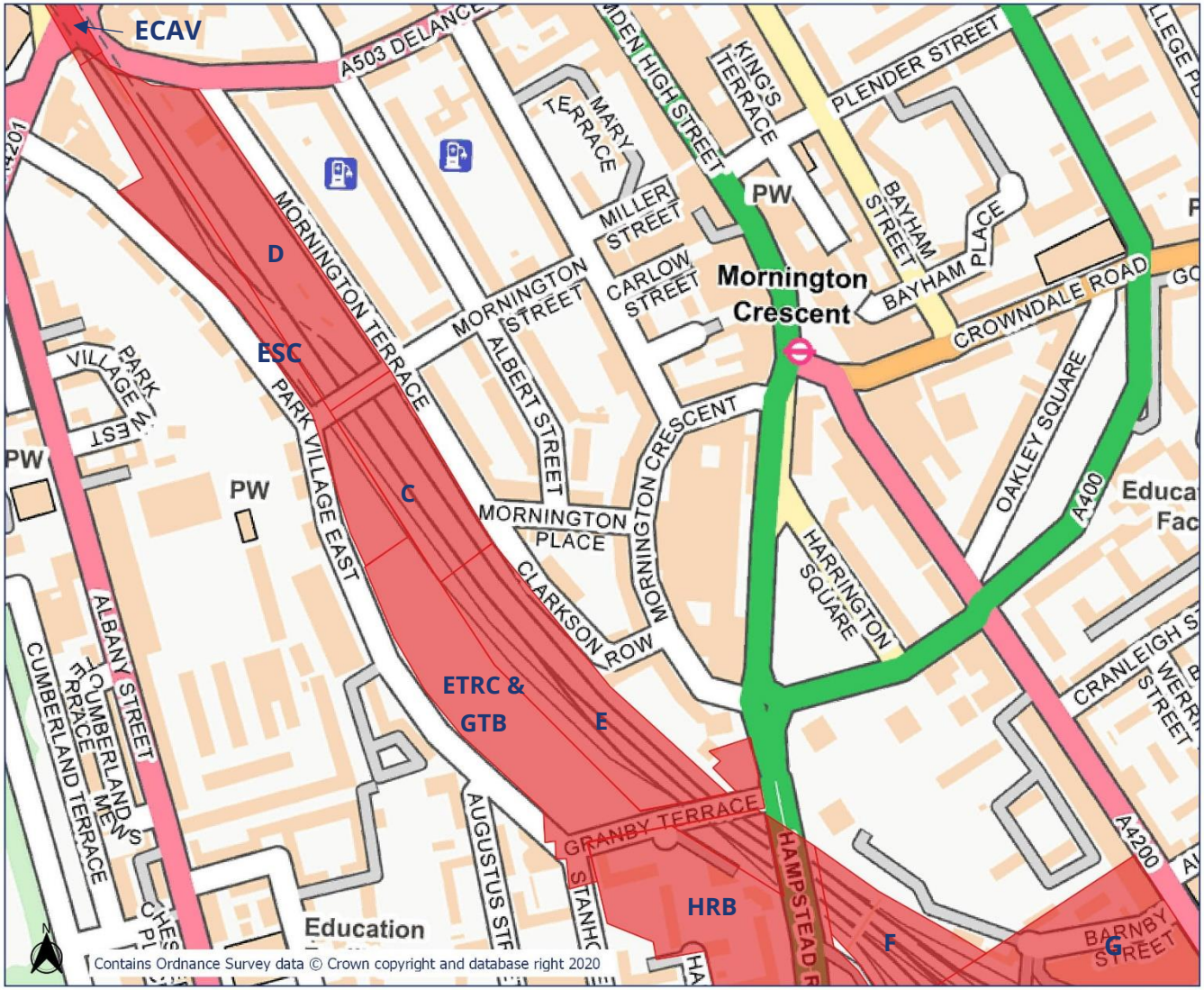
HS2

Worksite identification plan - 1



HS2

Worksite identification plan - 2

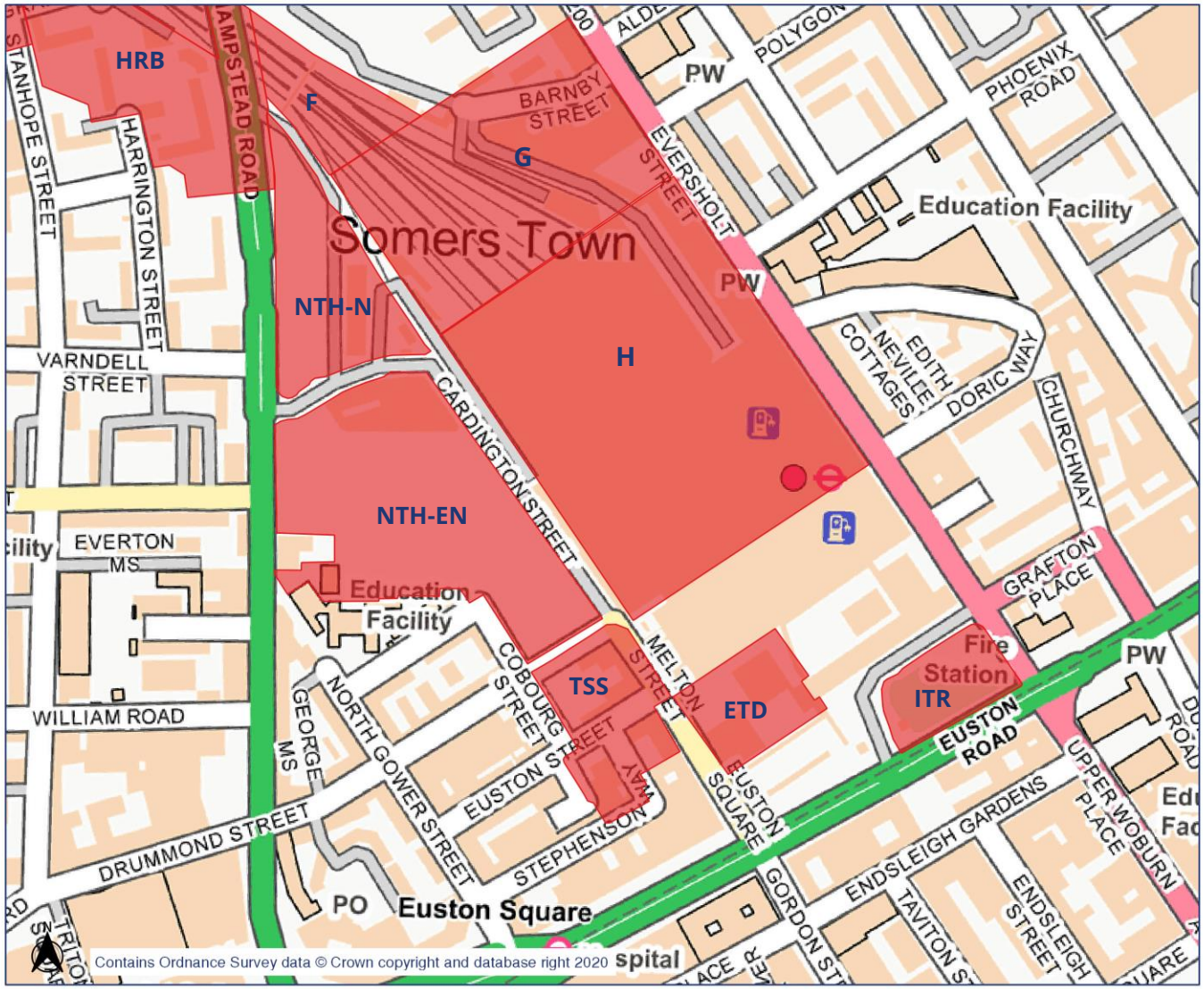


Legend

Active worksites

HS2

Worksite identification plan - 3



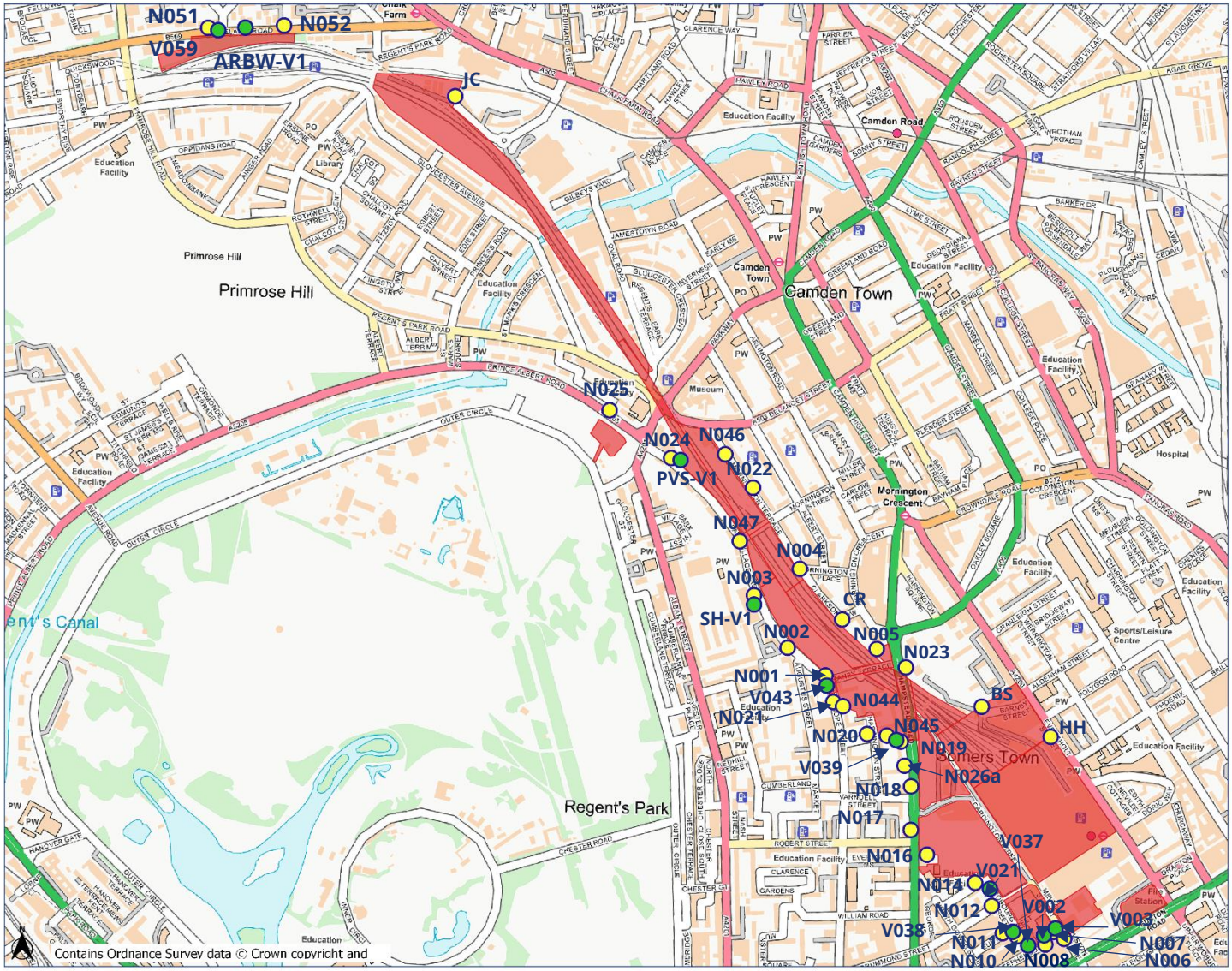
Legend

Active Worksites

Appendix B Monitoring Locations

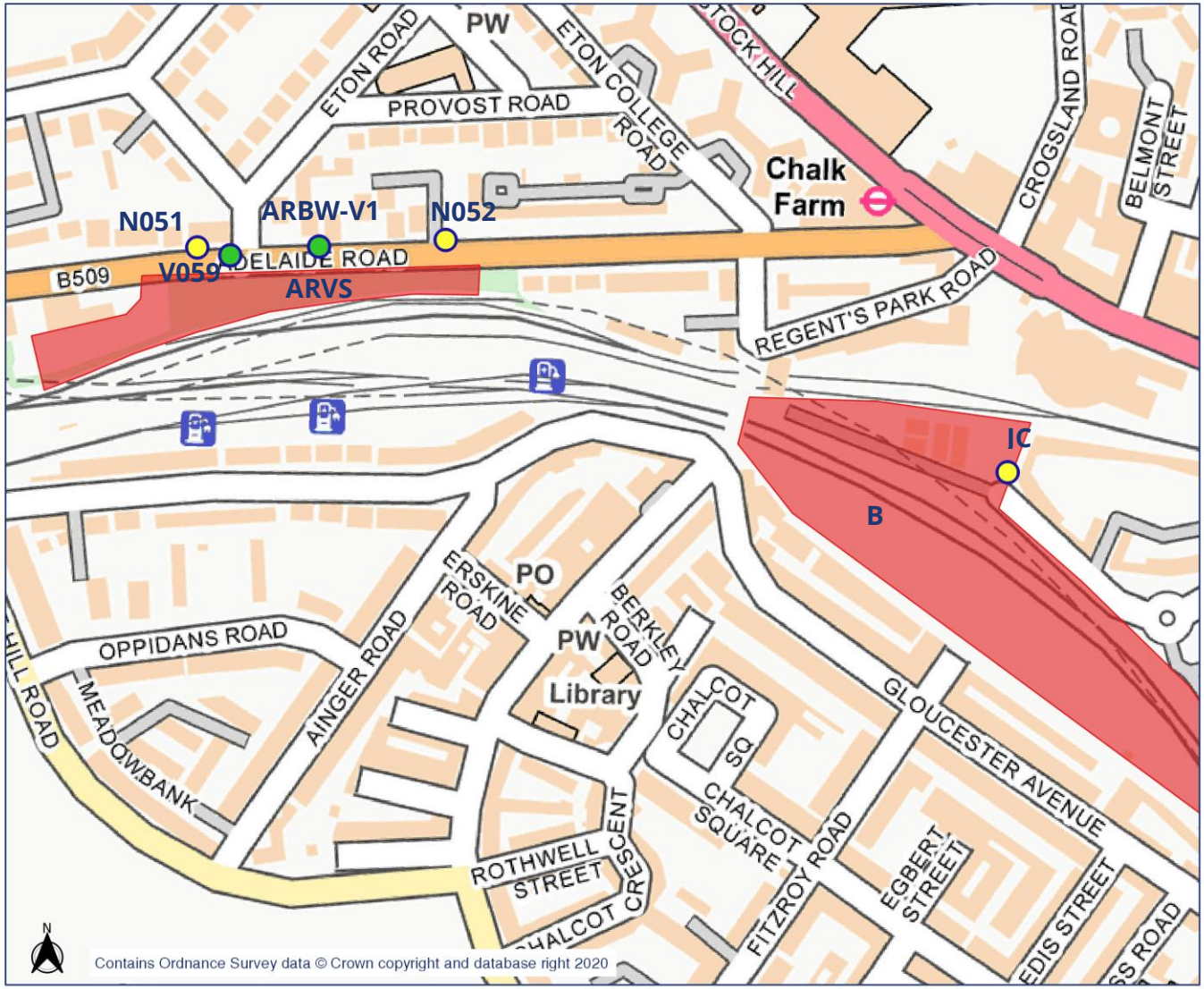
HS2

Noise and vibration monitoring plan - Overview



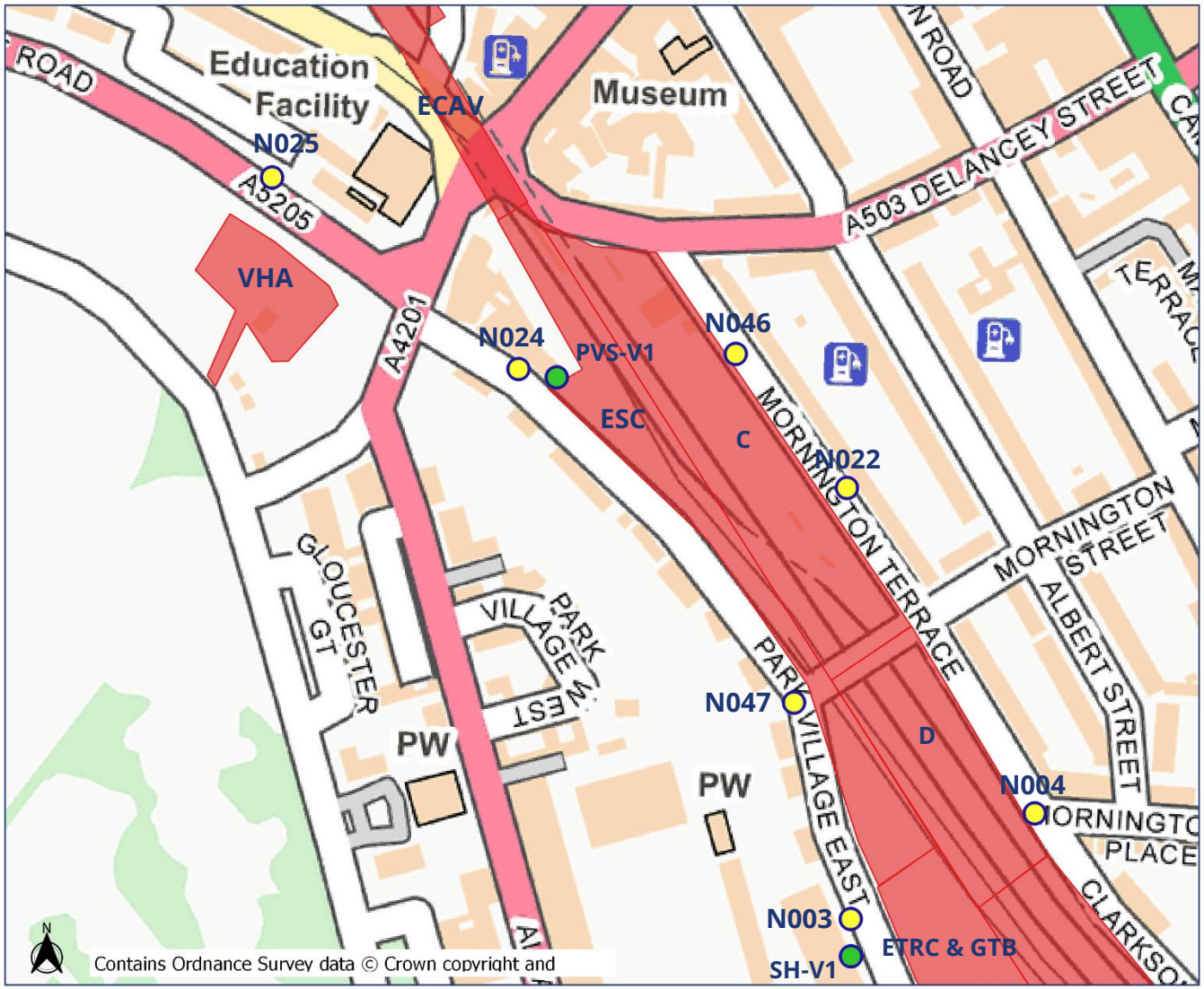
HS2

Noise and vibration monitoring plan - 1



HS2

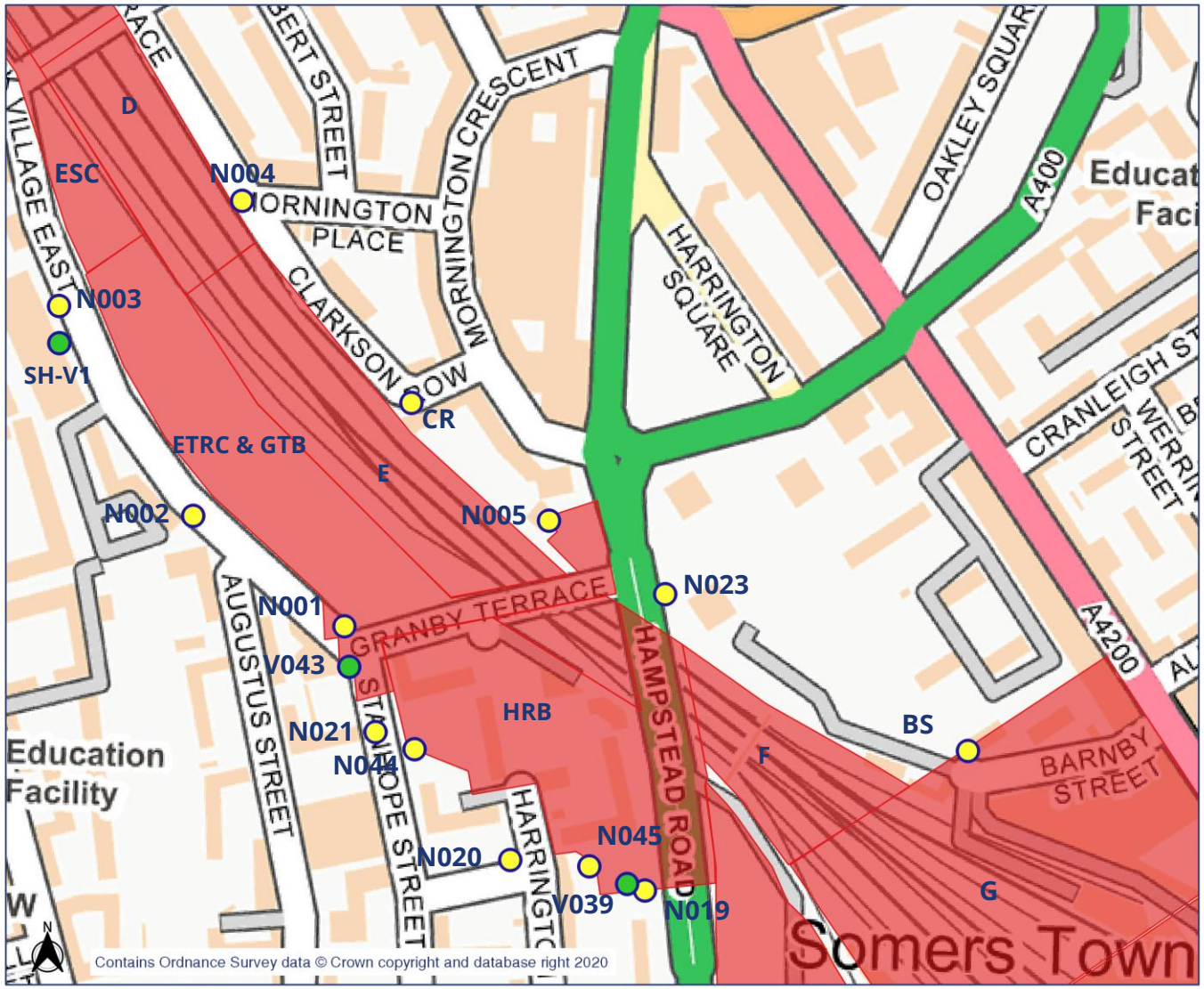
Noise and vibration monitoring plan - 2



Legend

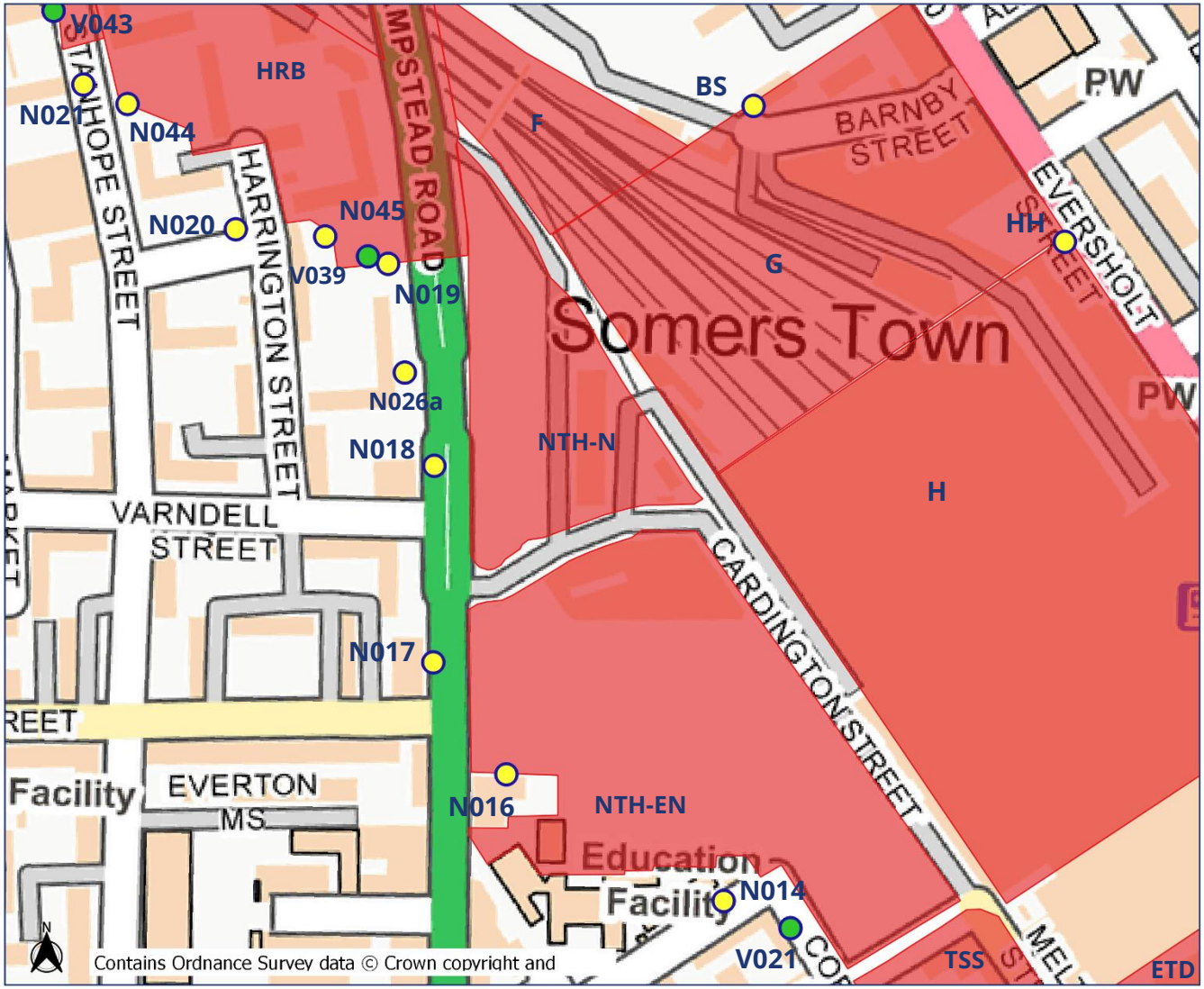
- Noise Monitor
- Vibration Monitor
- Active Worksites

HS2 Noise and vibration monitoring plan - 3



HS2

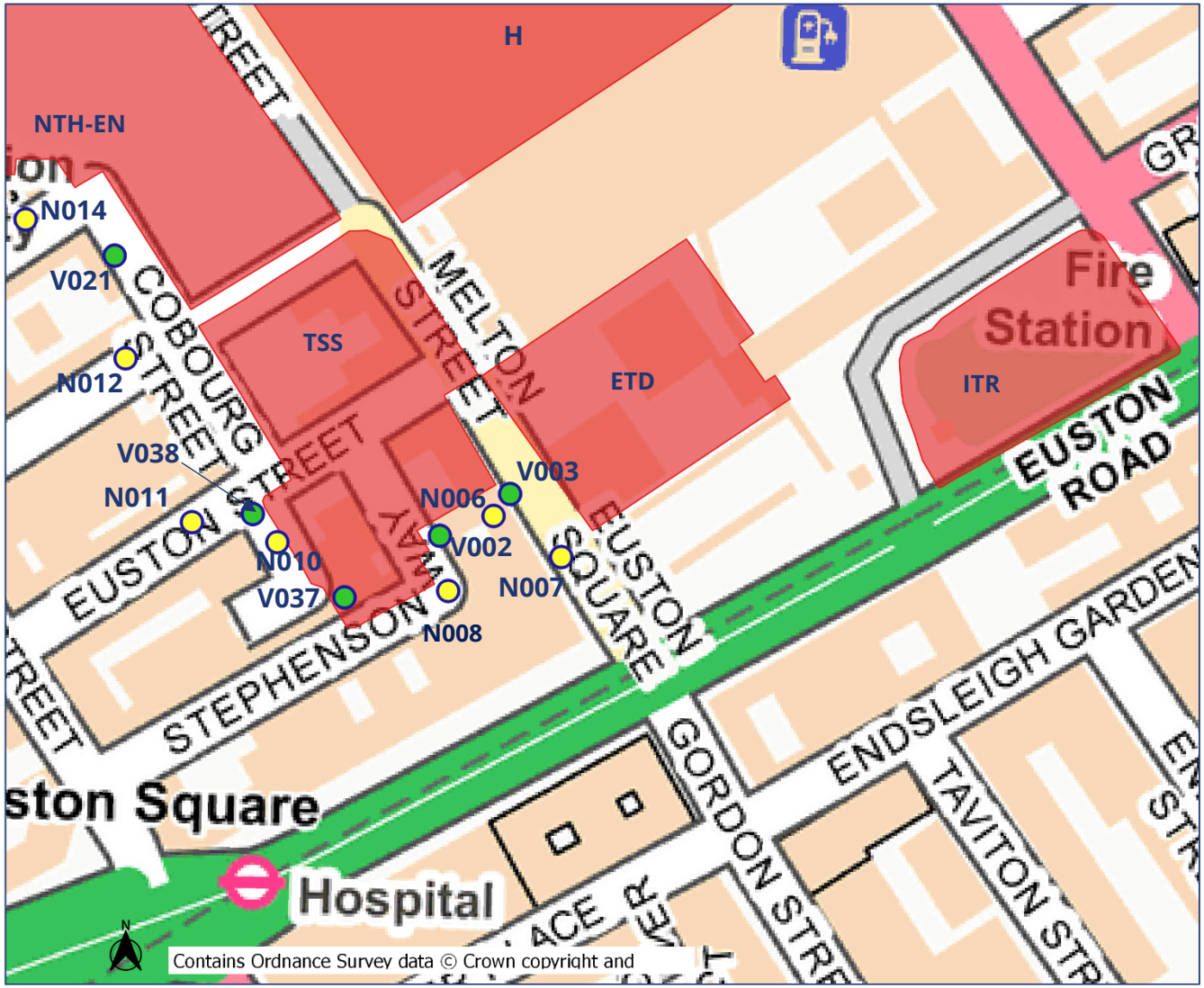
Noise monitoring plan - 4



Legend

- Noise Monitor
- Vibration Monitor
- Active Worksites

HS2 Noise and vibration monitoring plan - 5



Legend

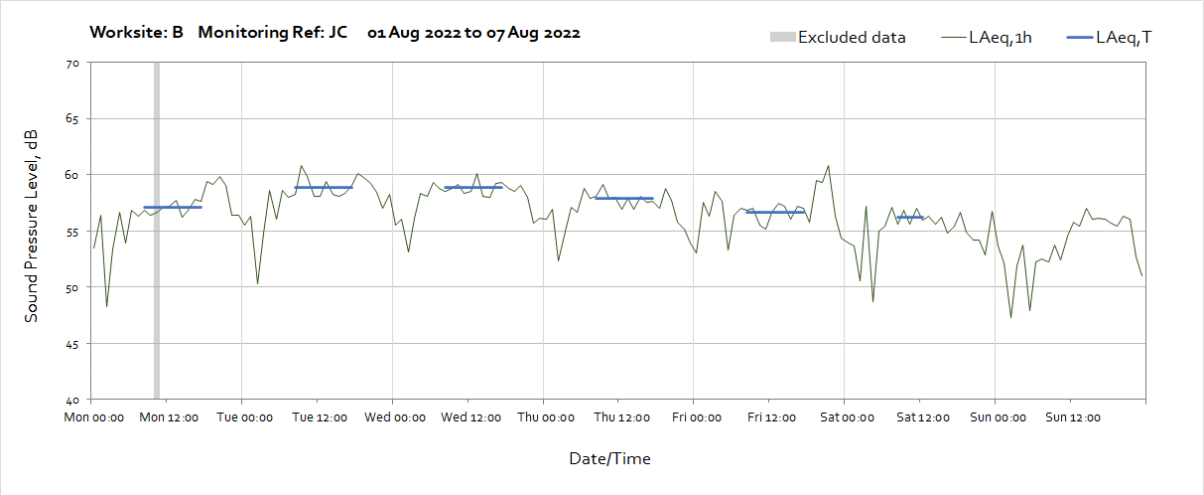
- Noise Monitor
- Vibration Monitor
- Active Worksites

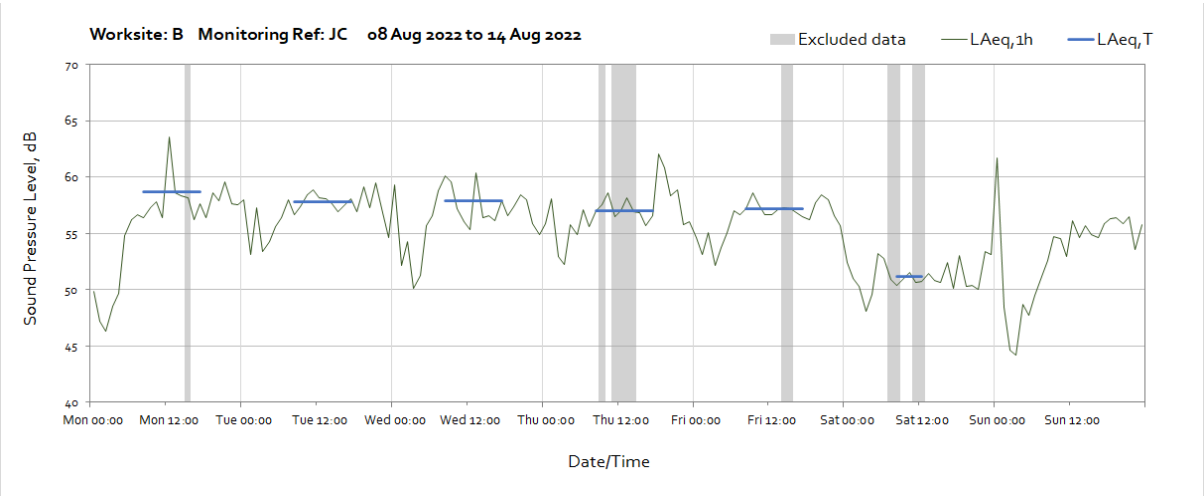
Appendix C Data

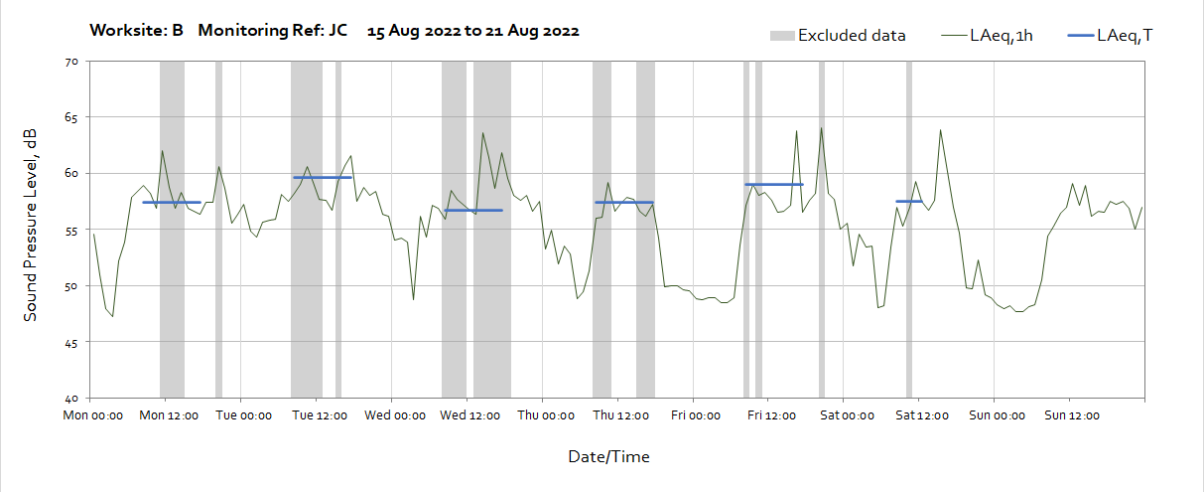
The following graphs show the hourly measured ambient noise level $L_{Aeq,1h}$ and, where relevant, the averaged noise level $L_{Aeq,T}$ values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods with adversely weather affected noise levels are greyed out and have been excluded from the calculation of the $L_{Aeq,T}$ values in Table 3 of the main report.

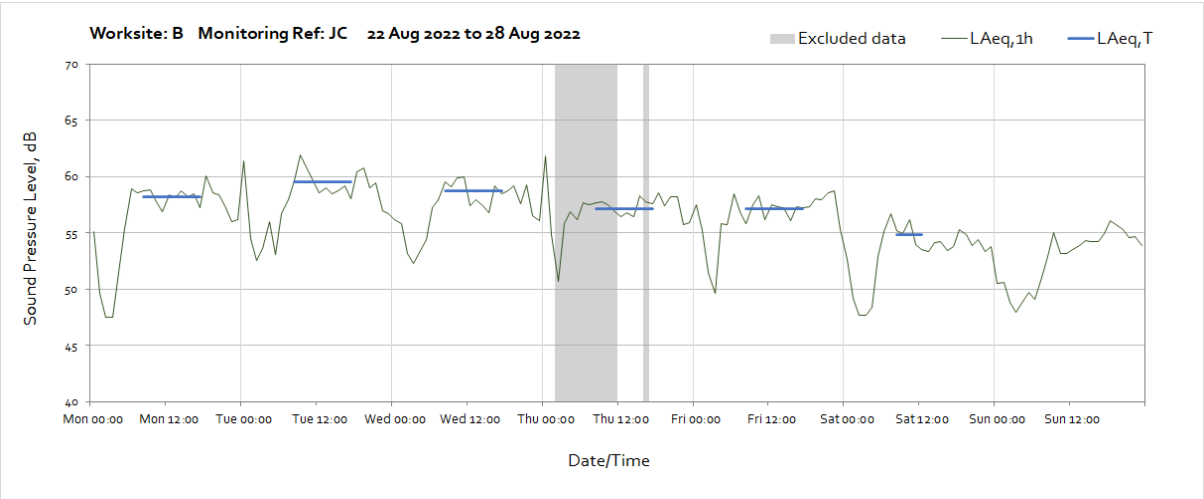
Noise

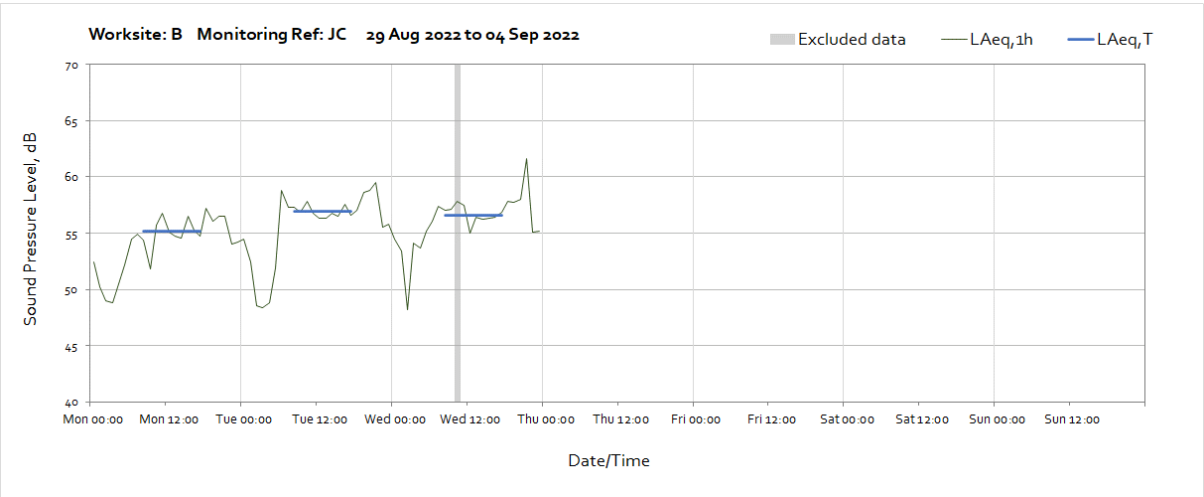
Worksite: B – Monitoring Ref: JC



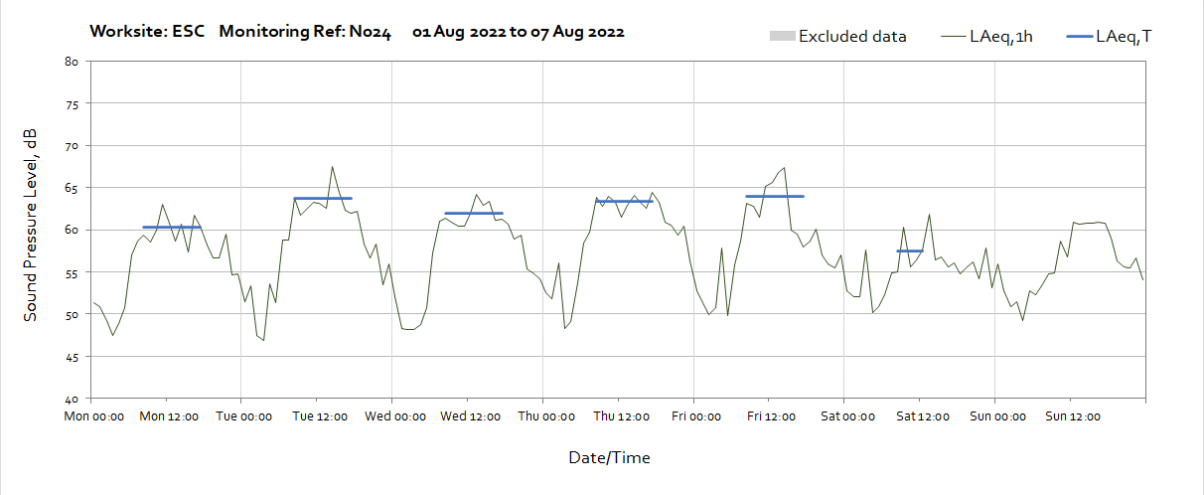


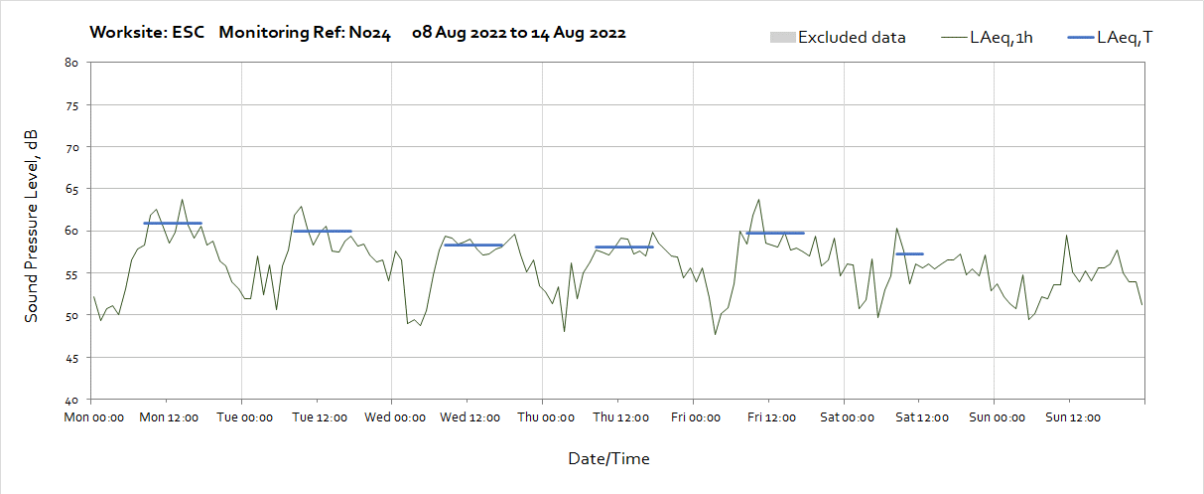

Worksite: B Monitoring Ref: JC 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

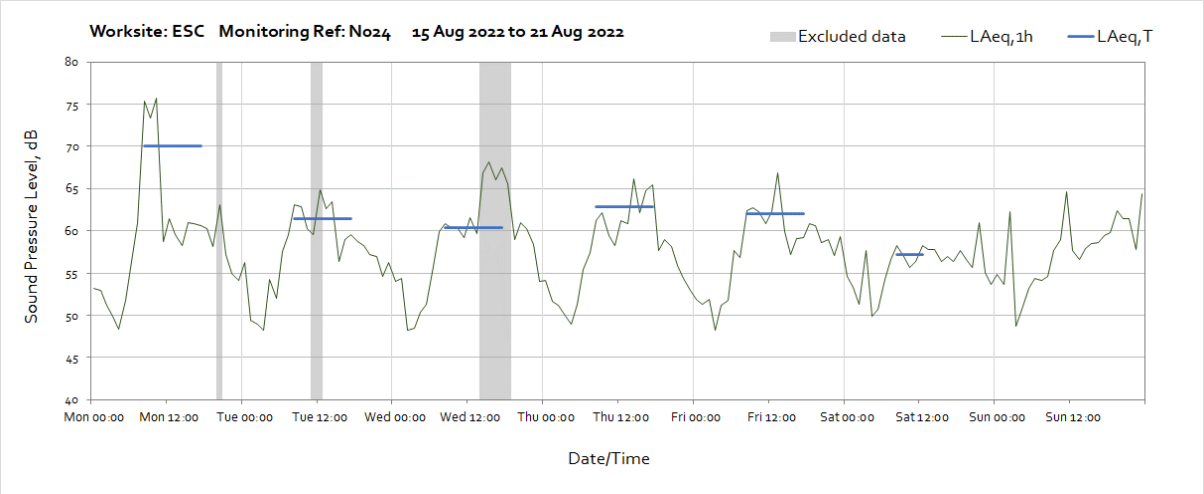

Worksite: B Monitoring Ref: JC 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

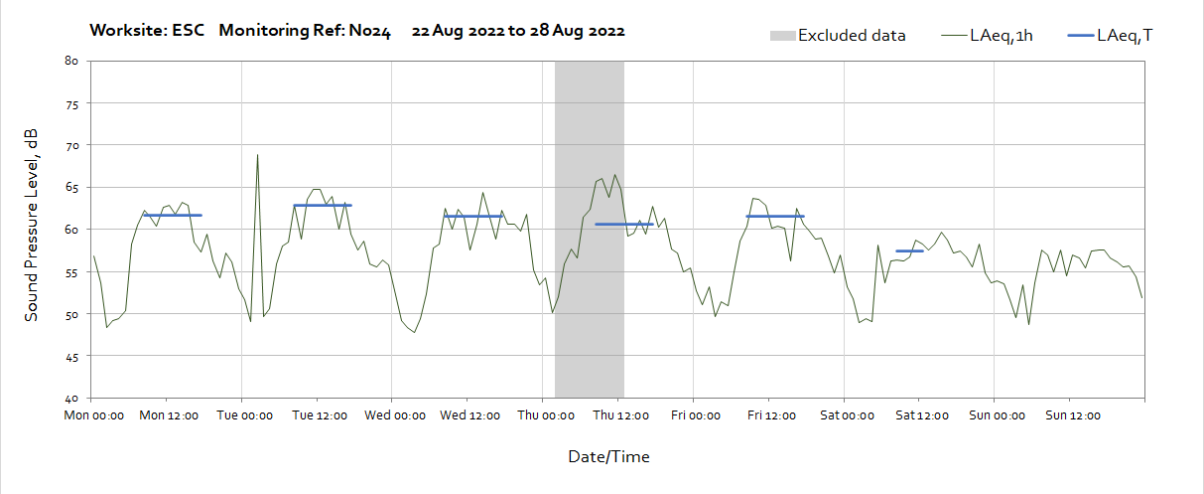

Worksite: B Monitoring Ref: JC 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

Worksite: ESC – Monitoring Ref: N024

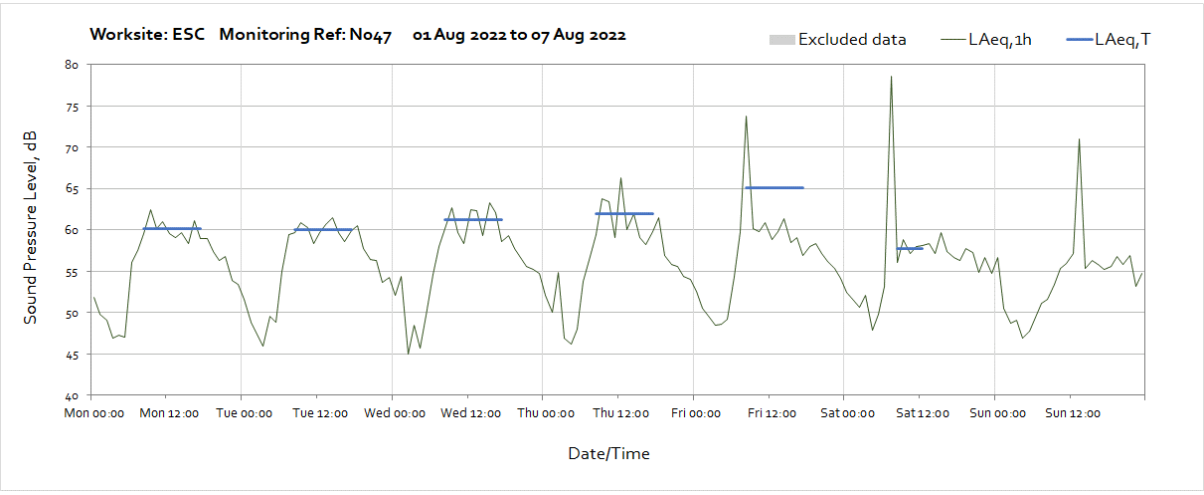


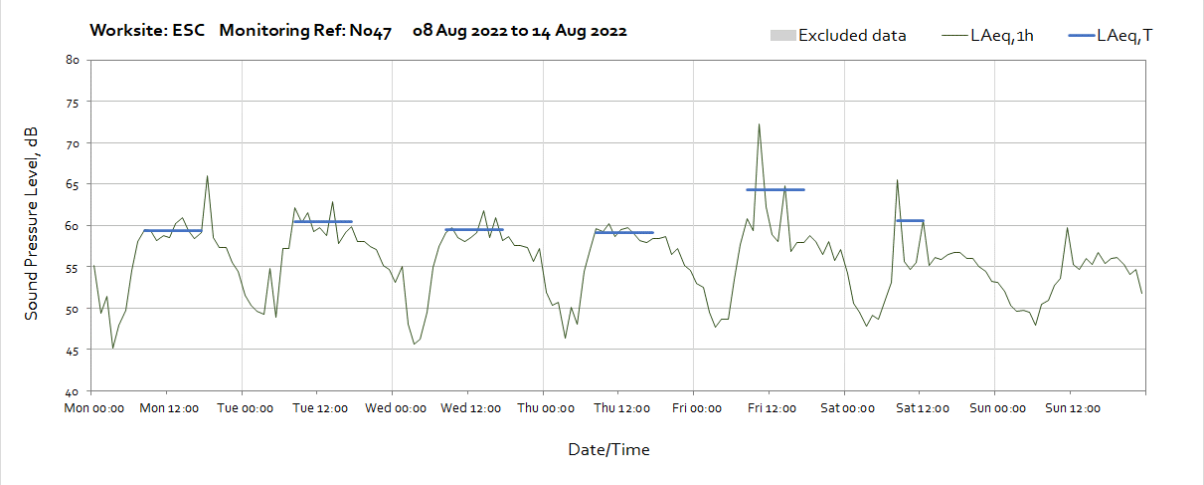


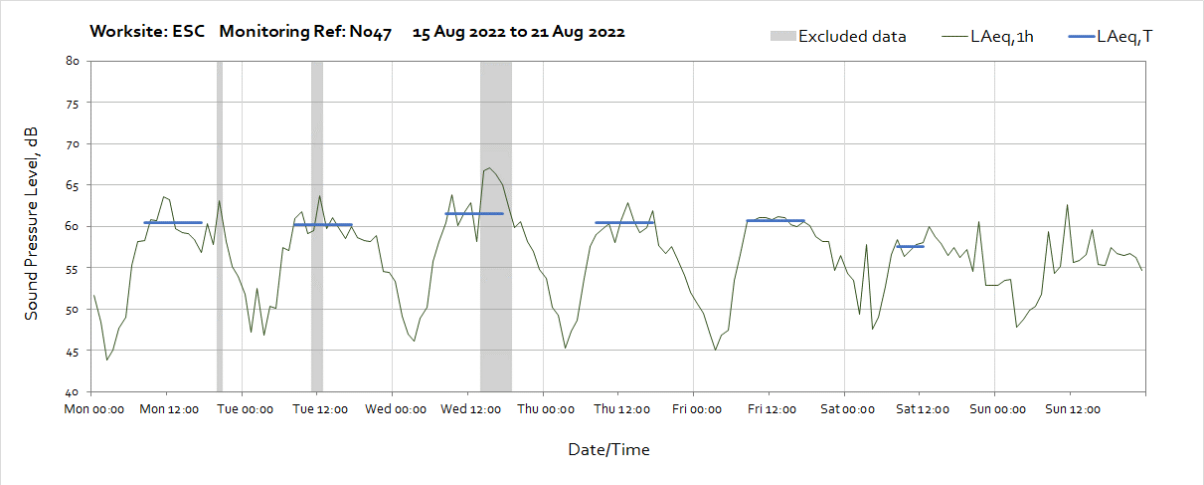




Worksite: ESC – Monitoring Ref: N047




Worksite: ESC Monitoring Ref: No47 08 Aug 2022 to 14 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
80
75
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: ESC Monitoring Ref: No47 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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70
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Mon 00:00
Mon 12:00
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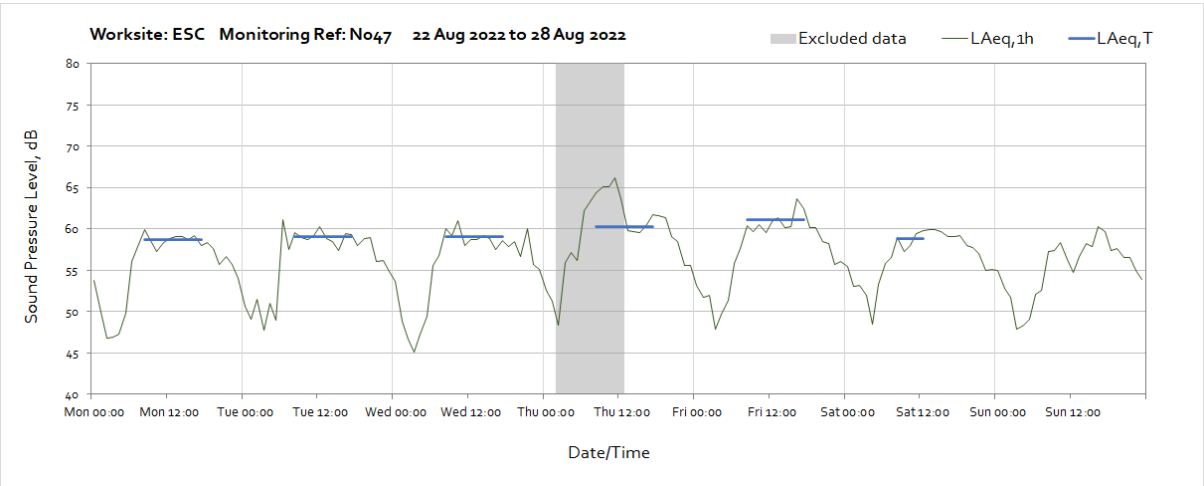
Sun 12:00
Date/Time


Worksite: ESC Monitoring Ref: No47 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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75
70
65
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Mon 12:00
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Tue 12:00
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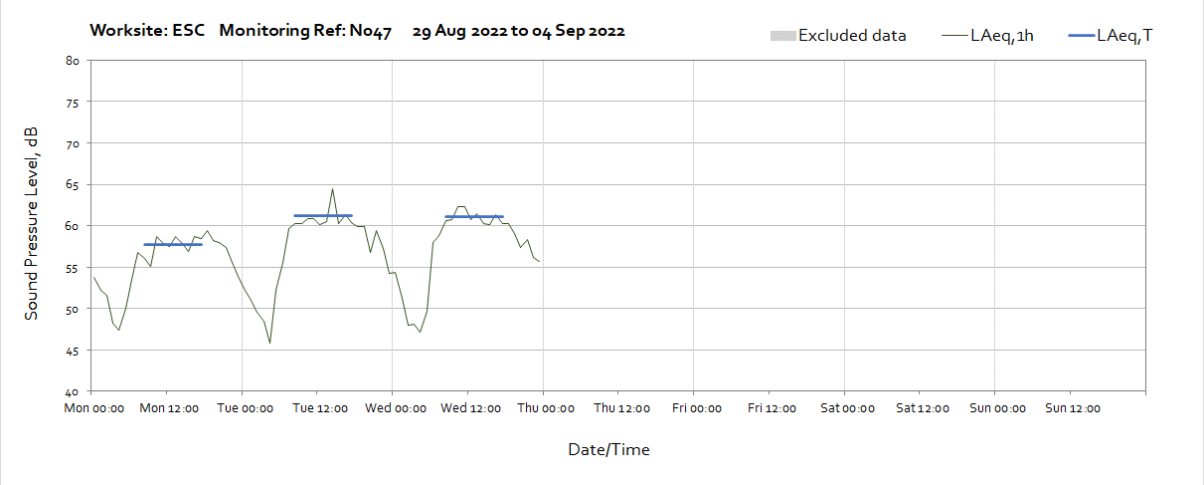
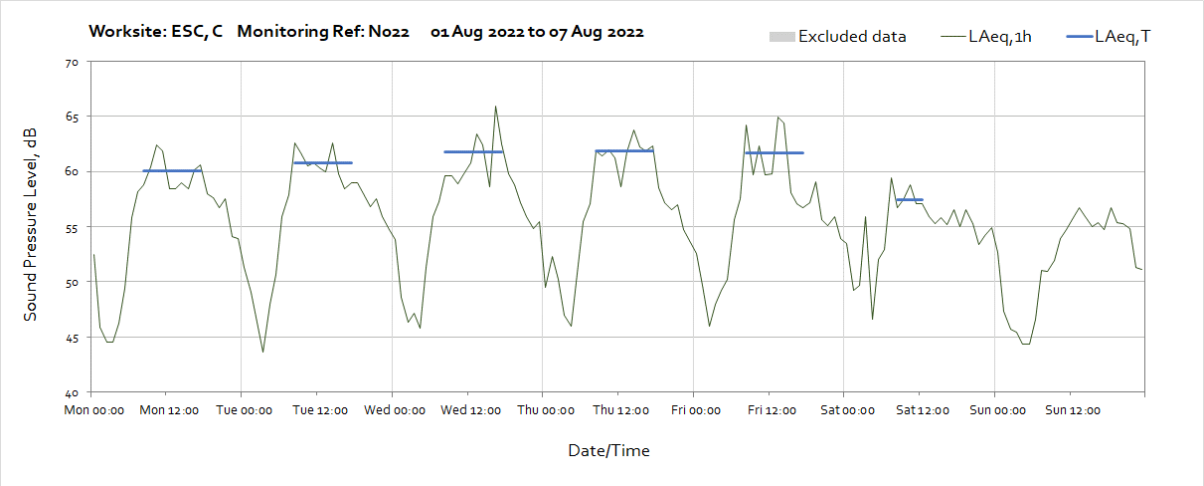
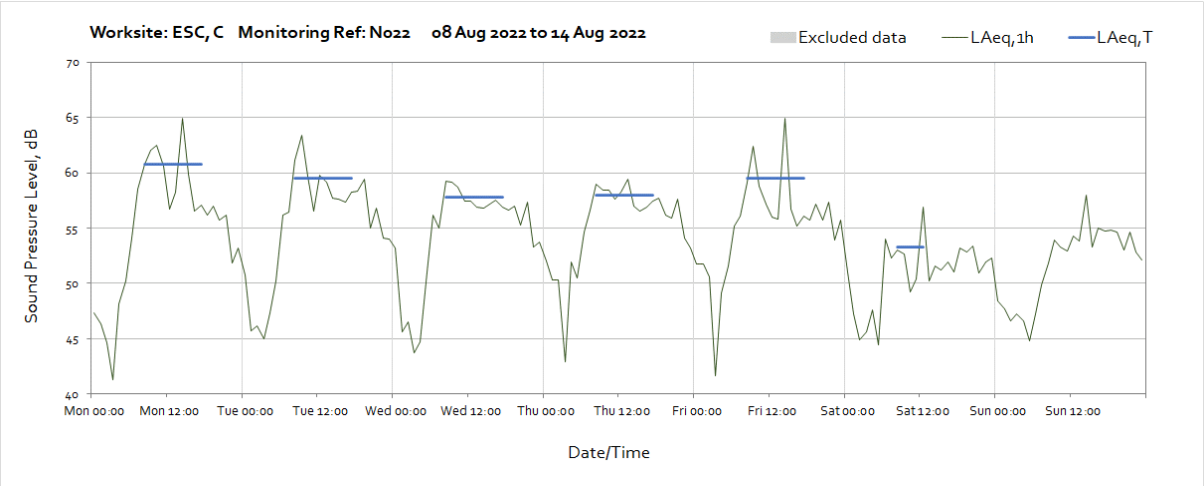
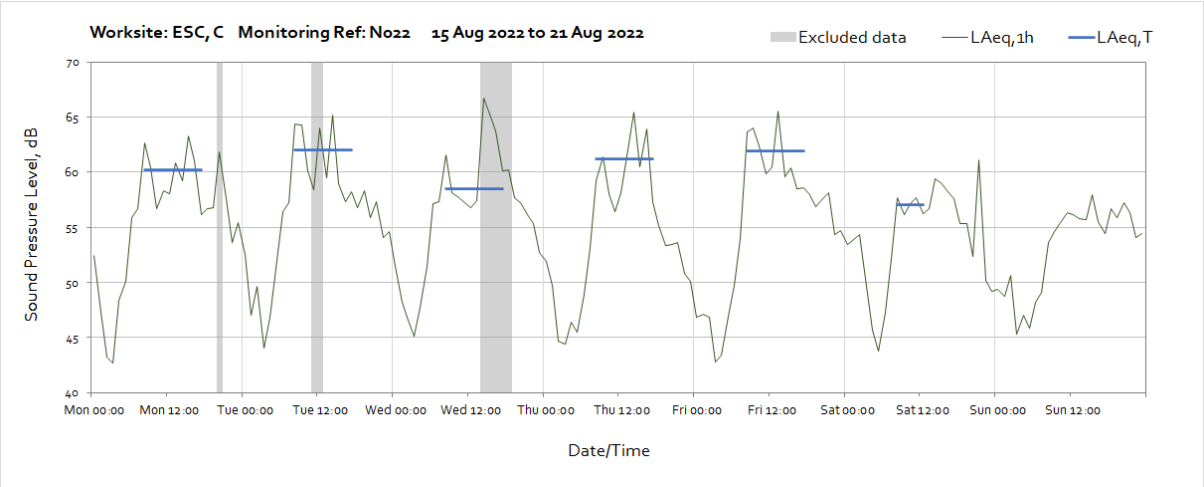
Date/Time



Worksite: ESC, C – Monitoring Ref: N022






Worksite: ESC, C Monitoring Ref: No22 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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60
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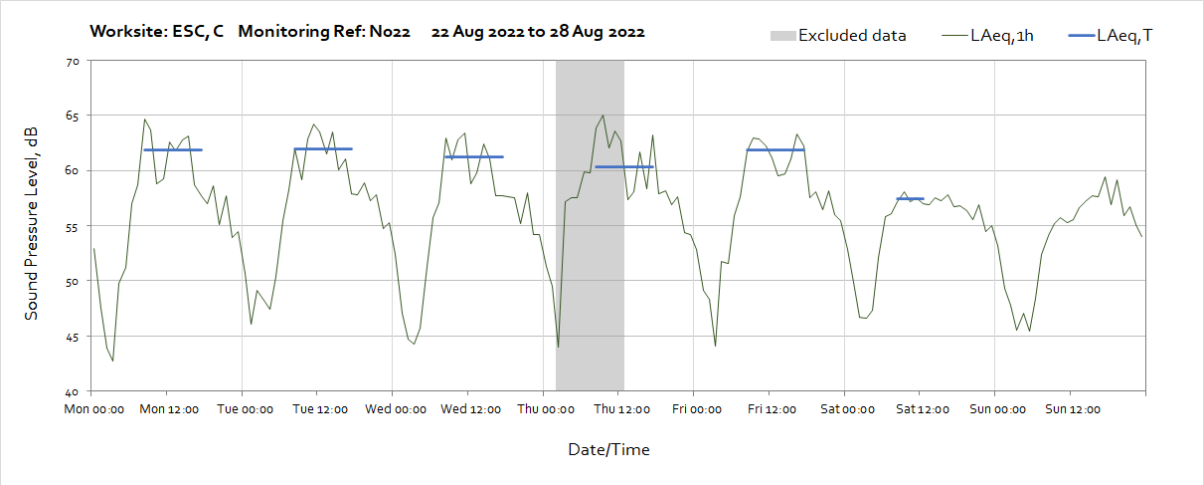
Date/Time


Worksite: ESC, C Monitoring Ref: No22 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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65
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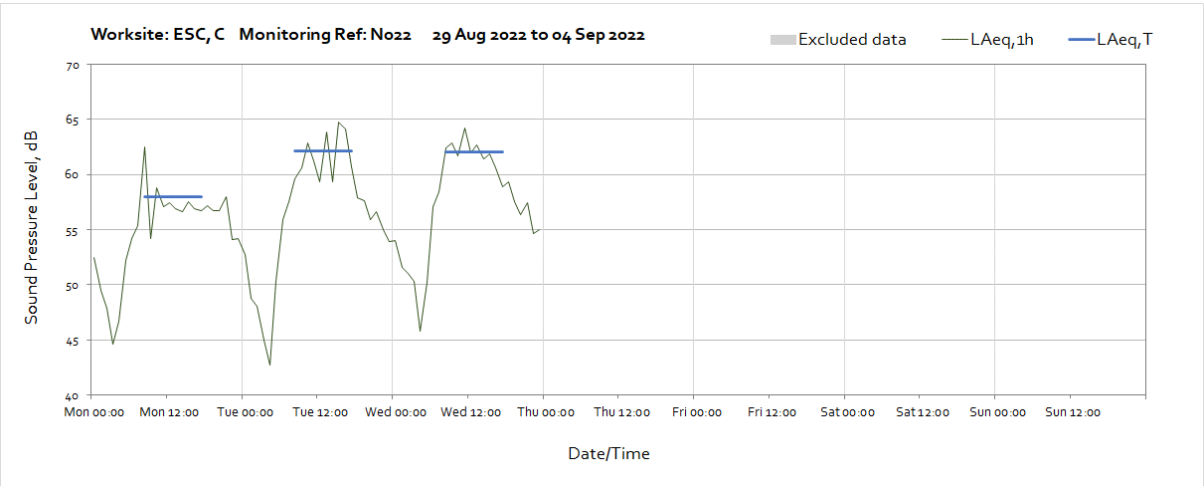
Date/Time


Worksite: ESC, C Monitoring Ref: No22 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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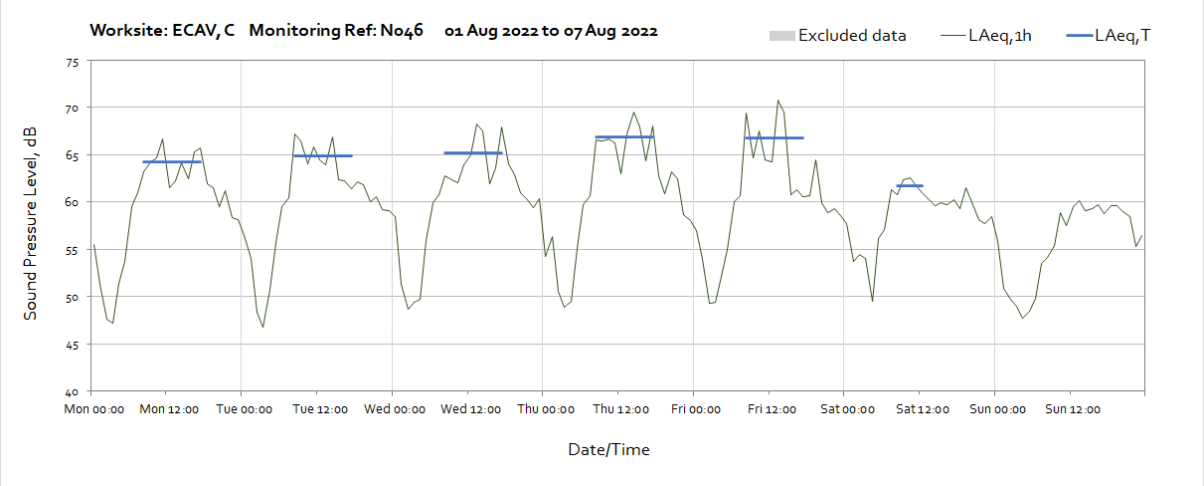
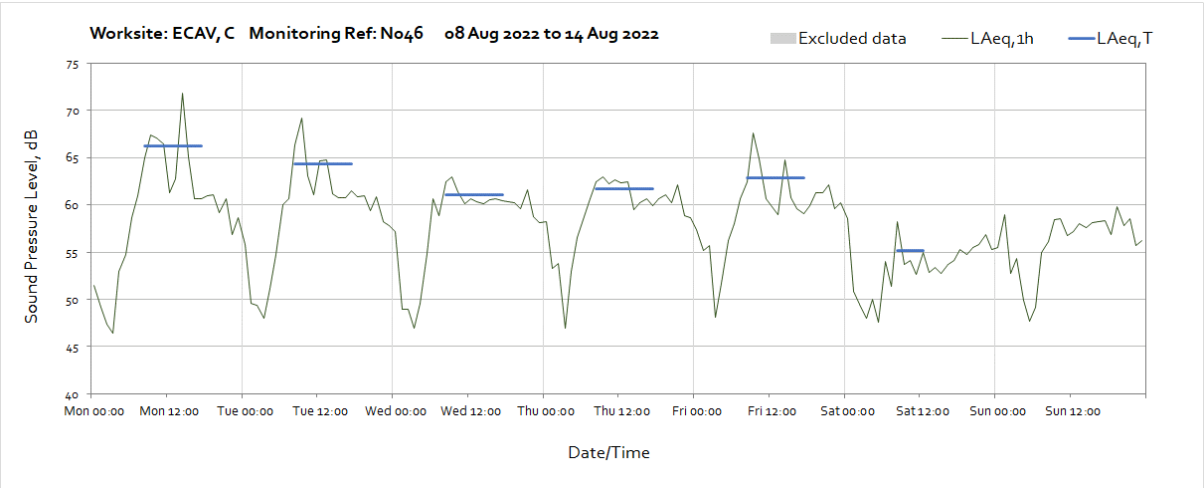
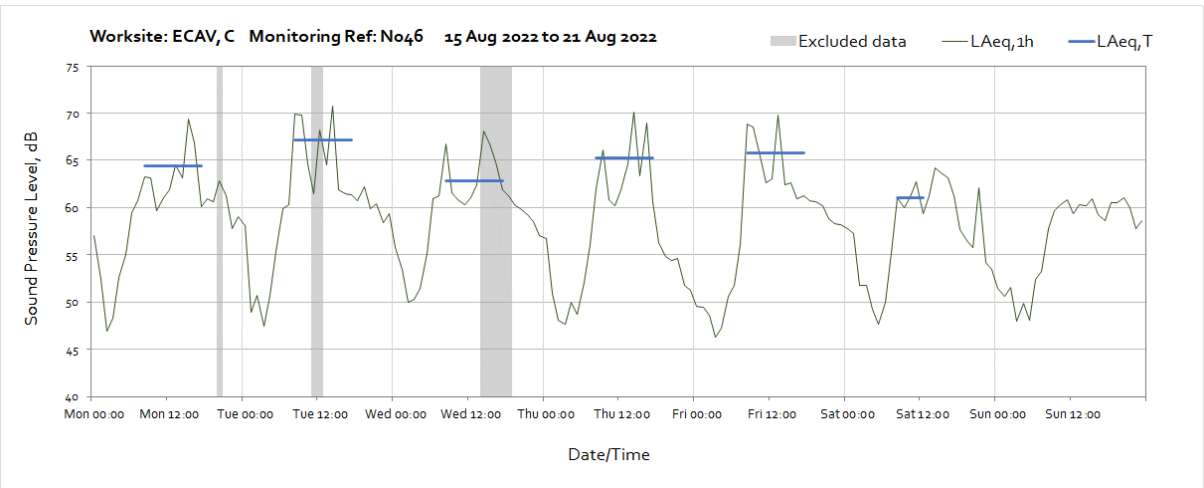
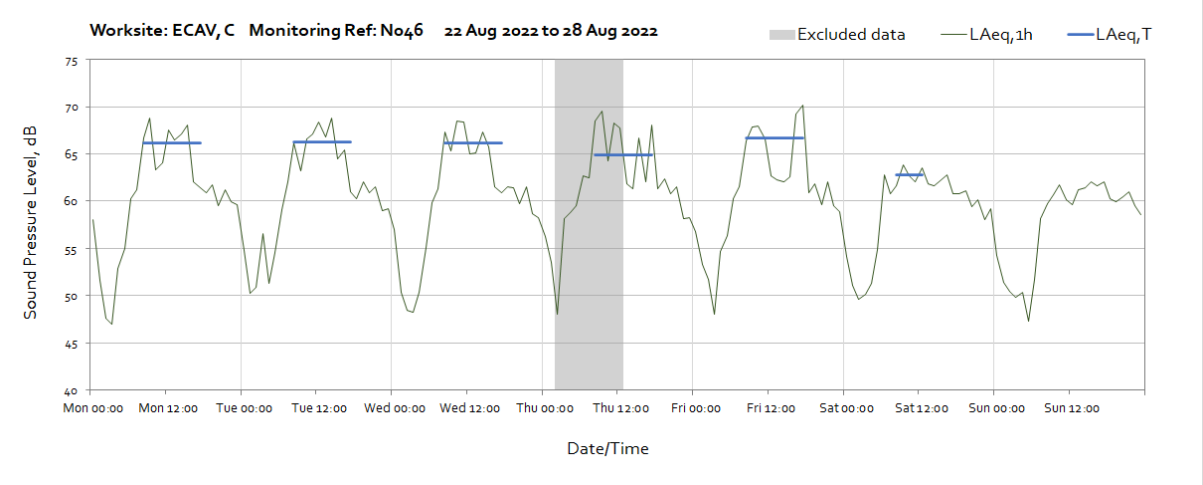
Date/Time

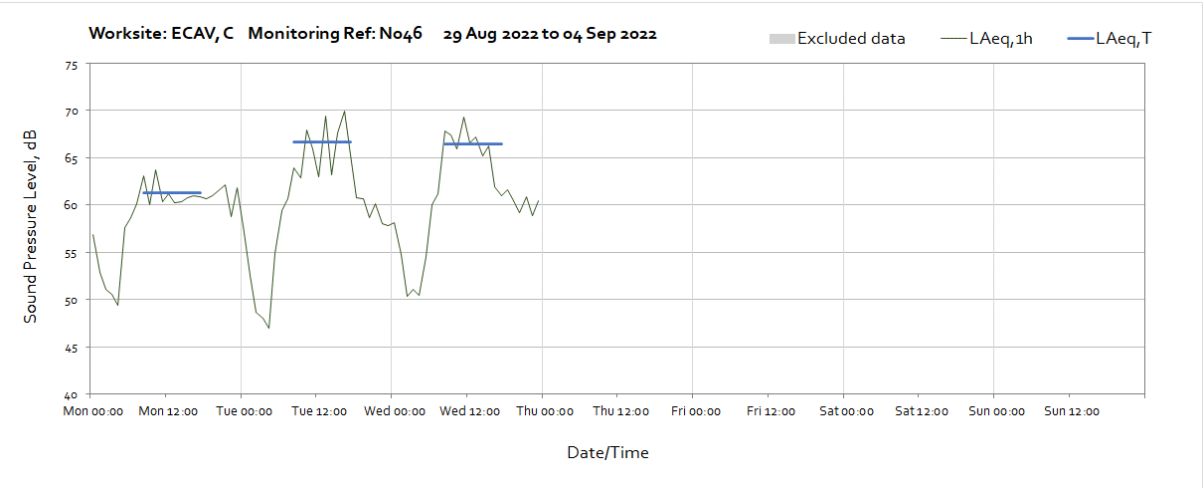
Worksite: ESC, C – Monitoring Ref: N046



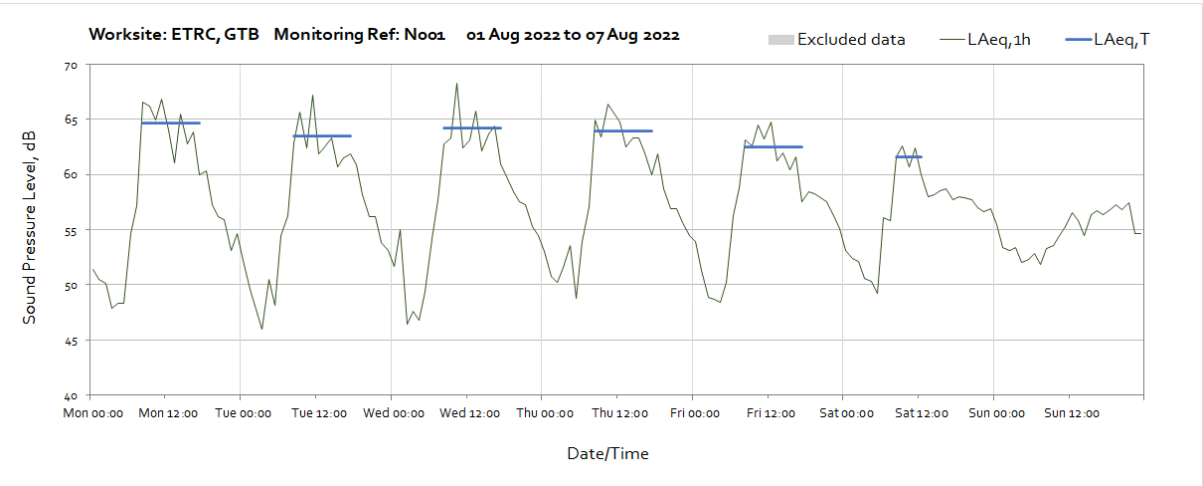


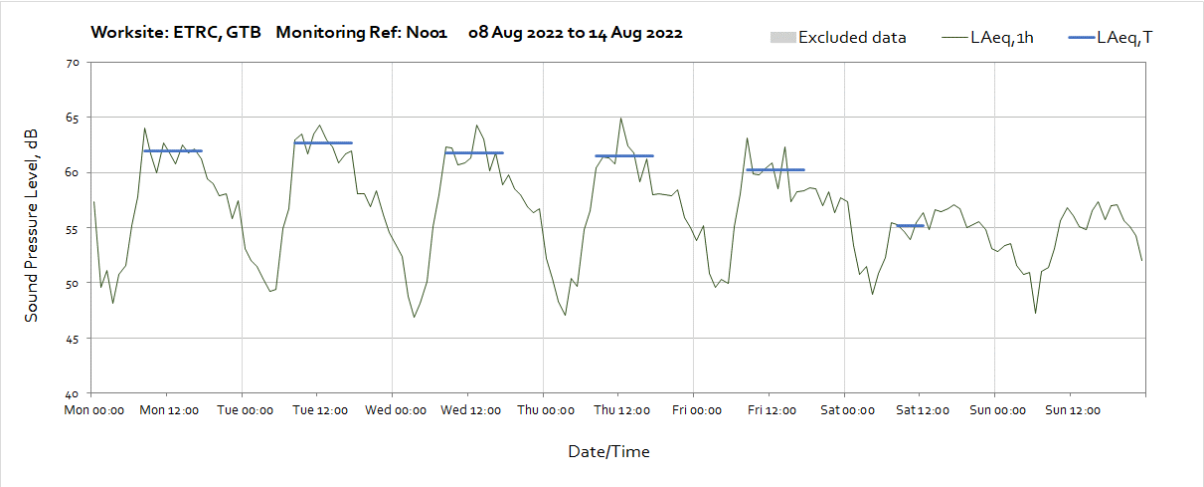






Worksite: ETRC & GTB – Monitoring Ref: N001




Worksite: ETRC, GTB Monitoring Ref: No01 08 Aug 2022 to 14 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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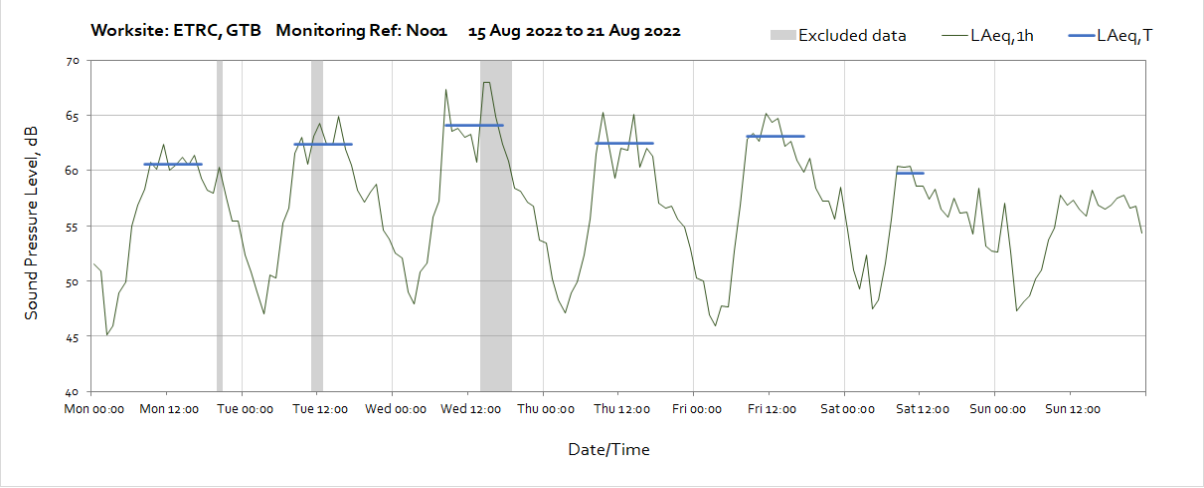
Date/Time


Worksite: ETRC, GTB Monitoring Ref: No01 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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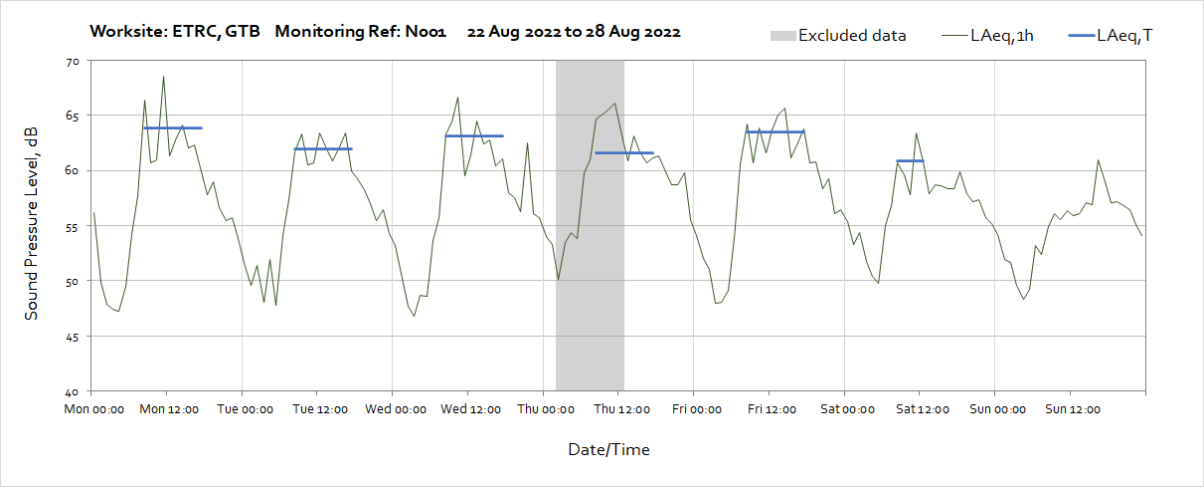
Date/Time


Worksite: ETRC, GTB Monitoring Ref: No01 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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Mon 00:00
Mon 12:00
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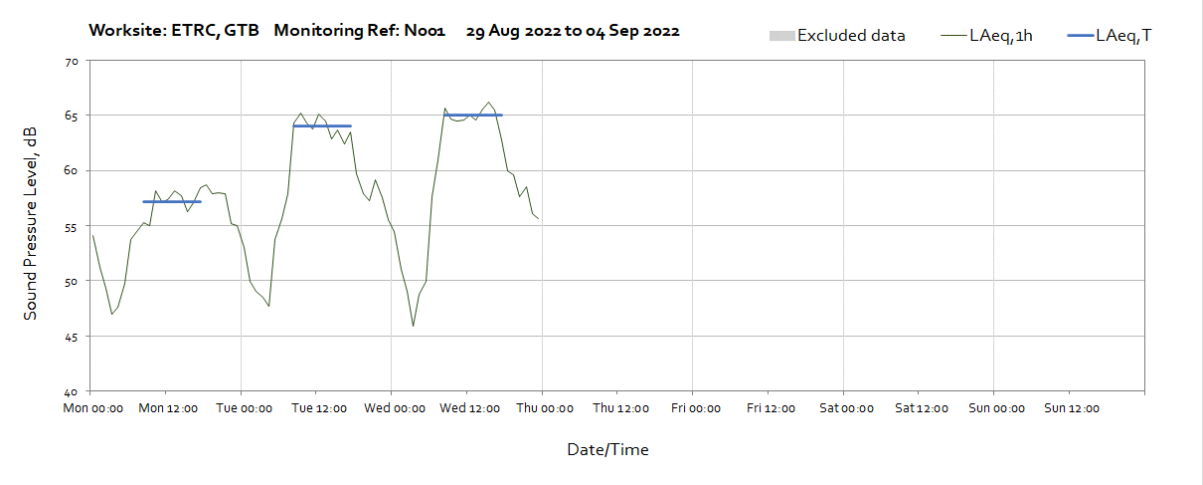
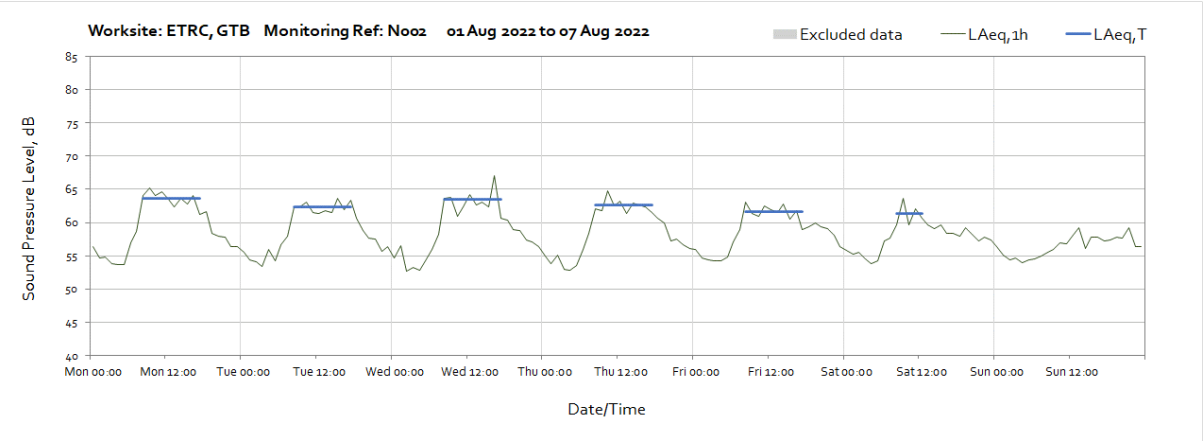
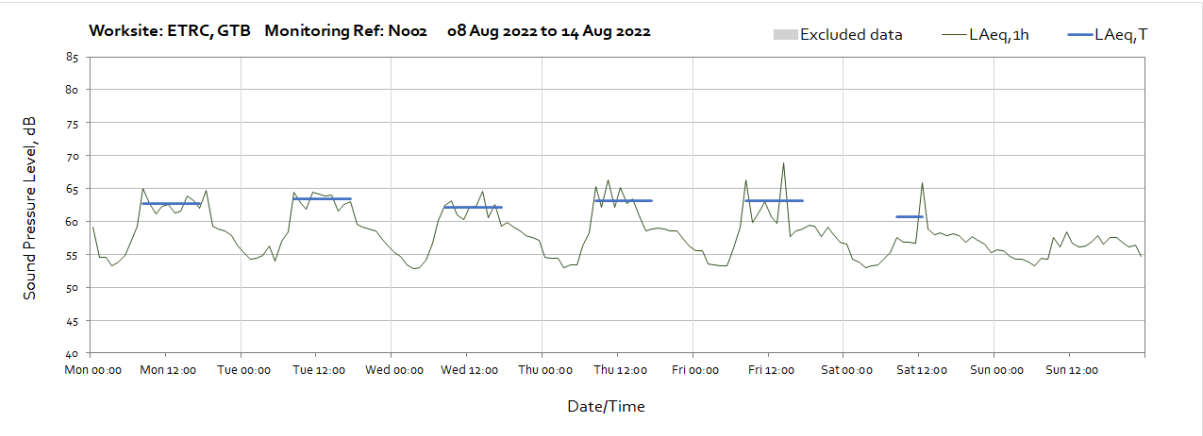
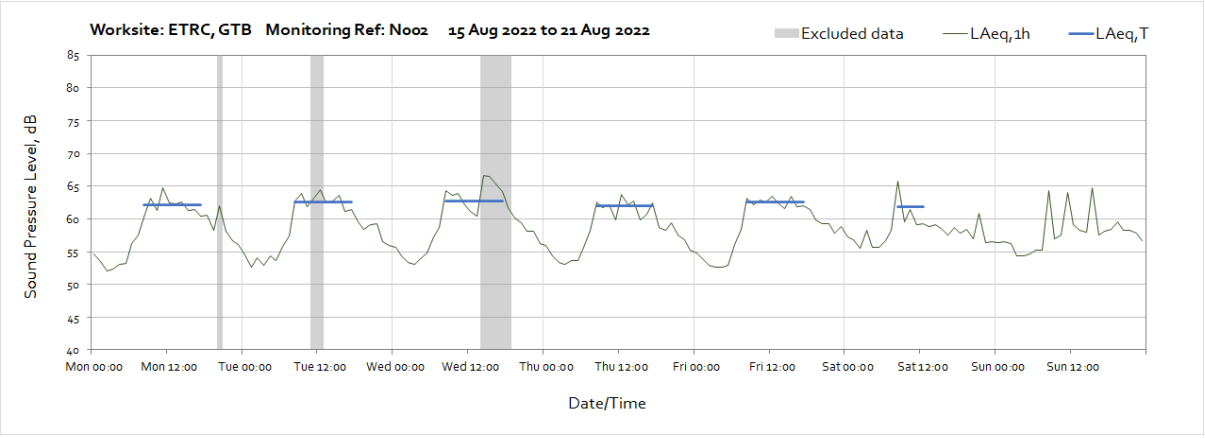
Date/Time



Worksite: ETRC & GTB – Monitoring Ref: N002






Worksite: ETRC, GTB Monitoring Ref: No02 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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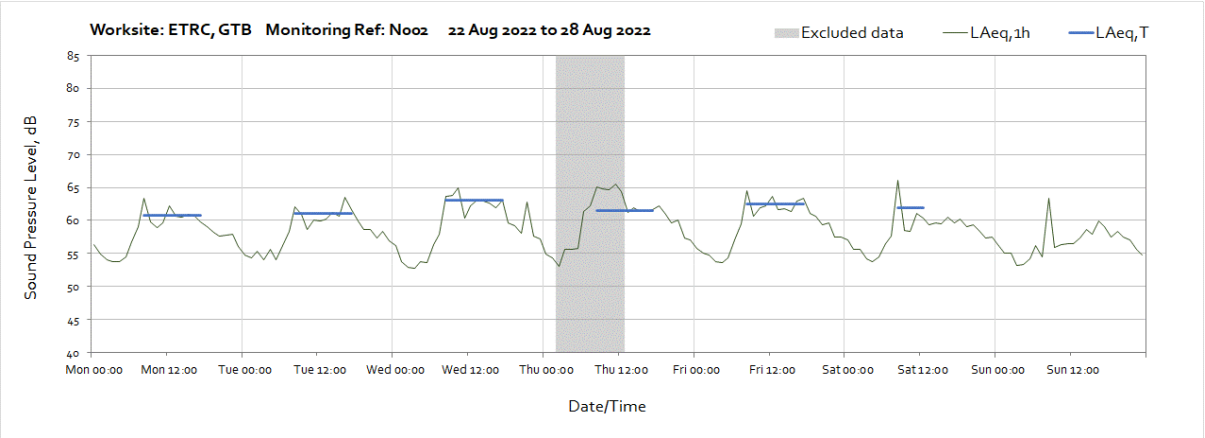
Date/Time


Worksite: ETRC, GTB Monitoring Ref: No02 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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80
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Date/Time


Worksite: ETRC, GTB Monitoring Ref: No02 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
85
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Mon 00:00
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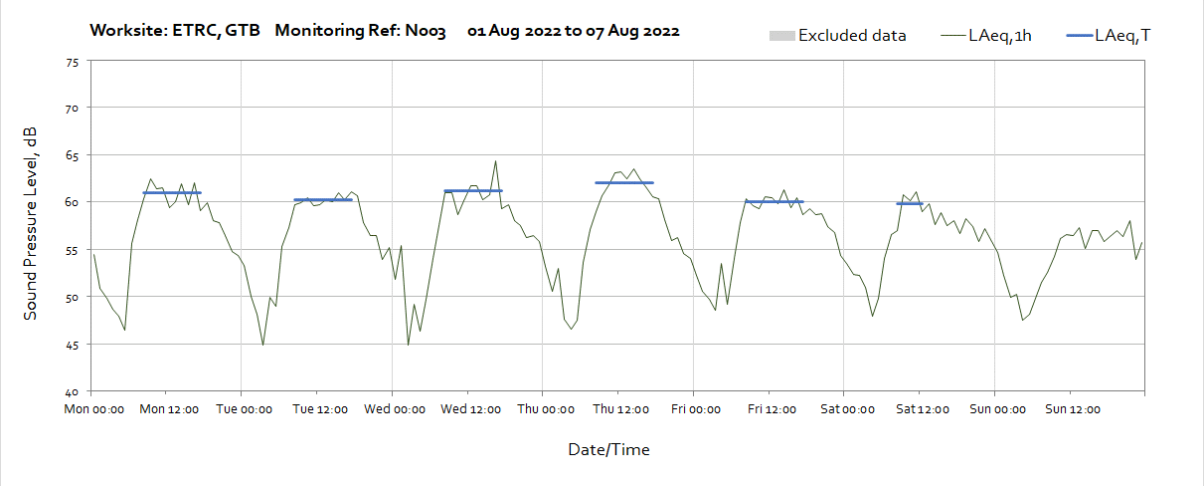
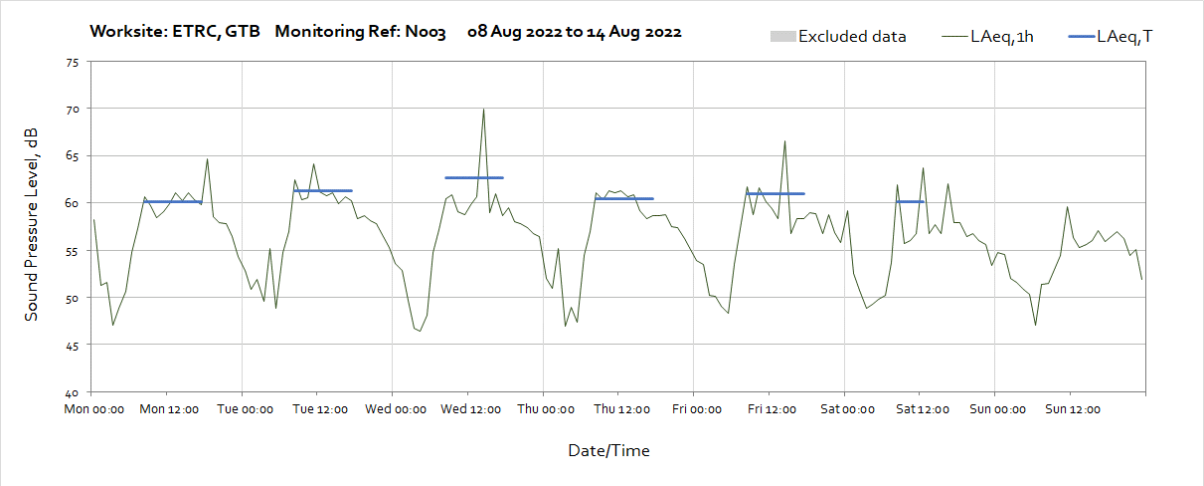
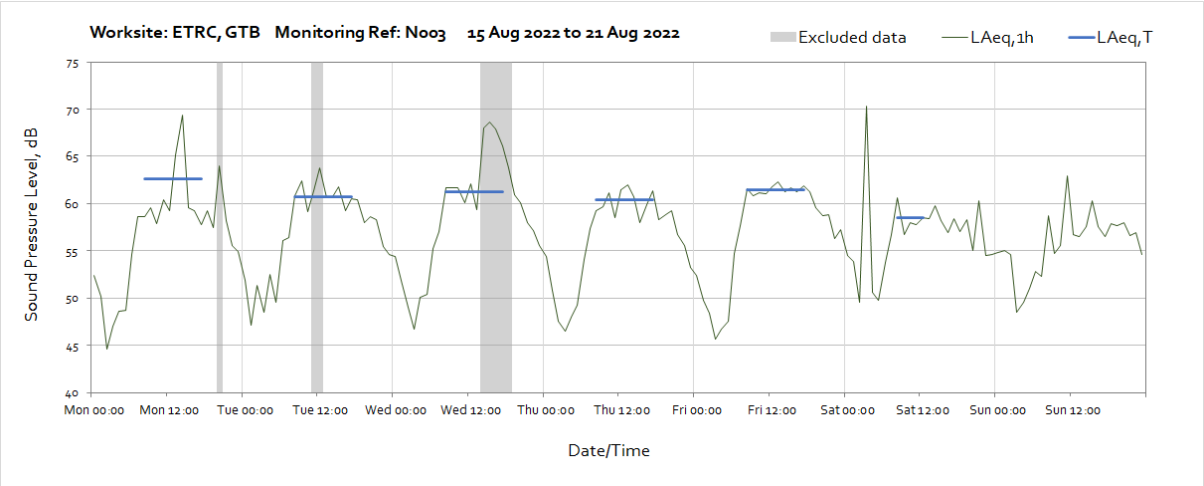
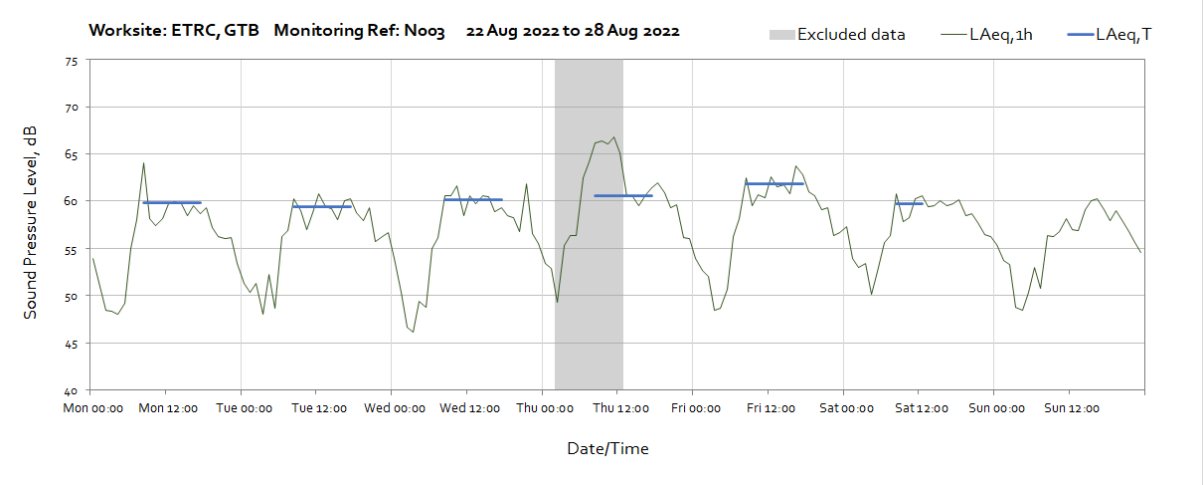
Date/Time

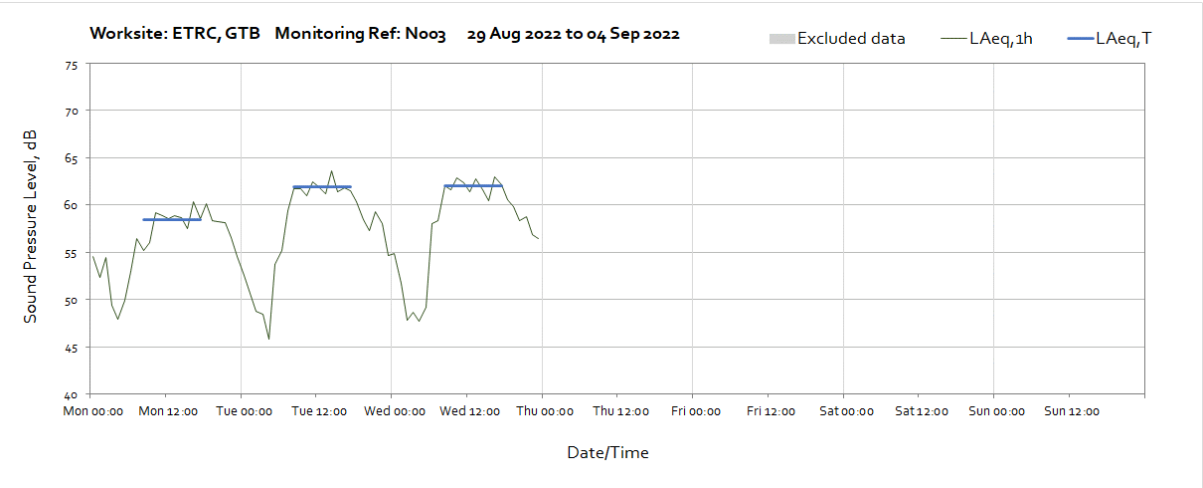
Worksite: ETRC & GTB – Monitoring Ref: N003



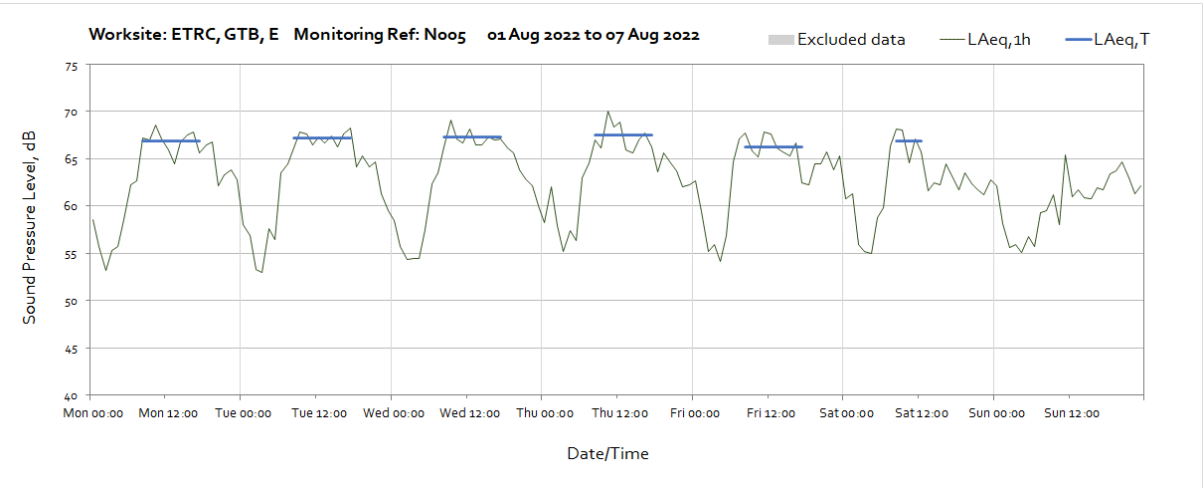


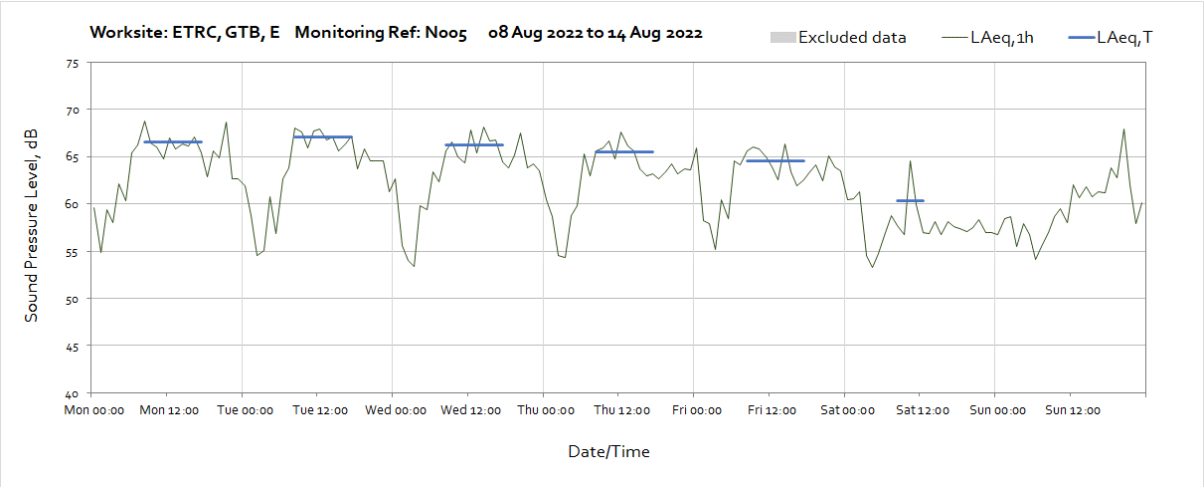






Worksite: ETRC & GTB, E – Monitoring Ref: N005




Worksite: ETRC, GTB, E Monitoring Ref: No05 08 Aug 2022 to 14 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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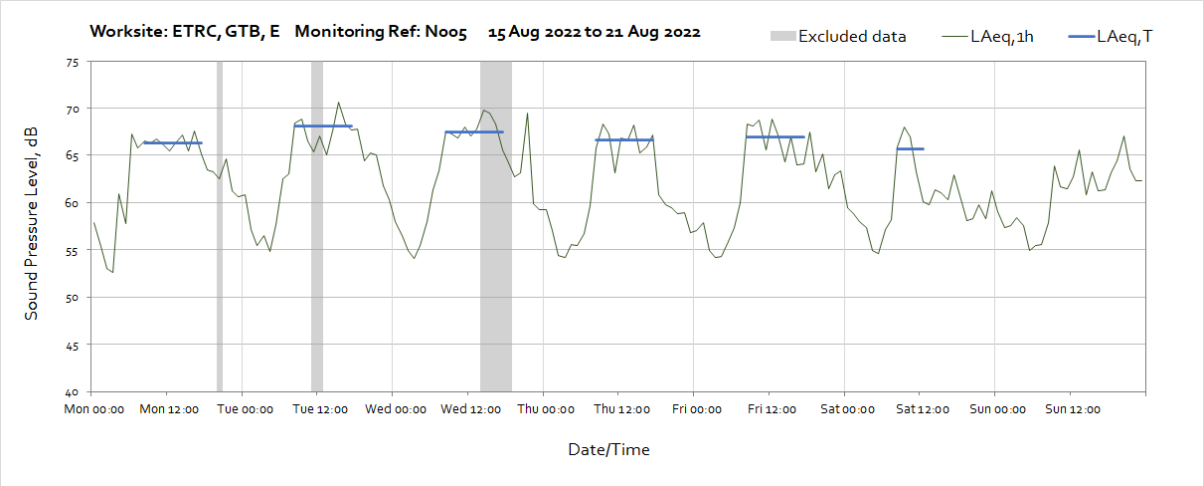
Date/Time


Worksite: ETRC, GTB, E Monitoring Ref: No05 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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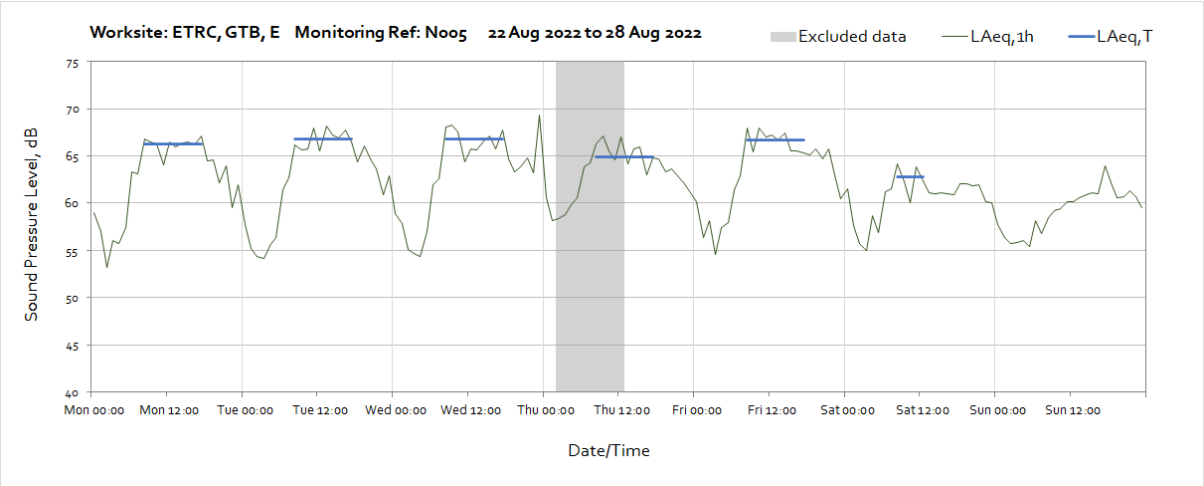
Date/Time


Worksite: ETRC, GTB, E Monitoring Ref: No05 22 Aug 2022 to 28 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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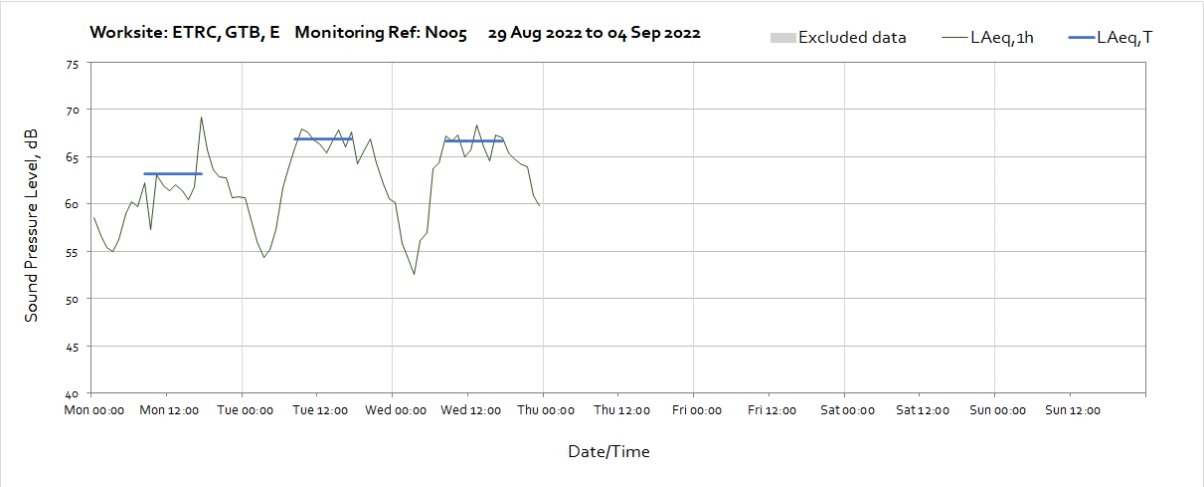
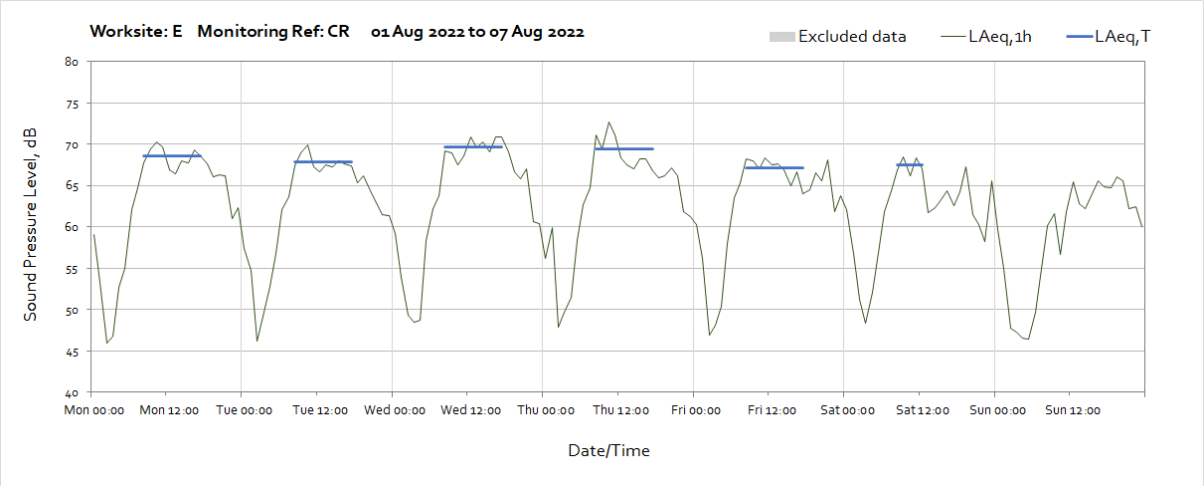
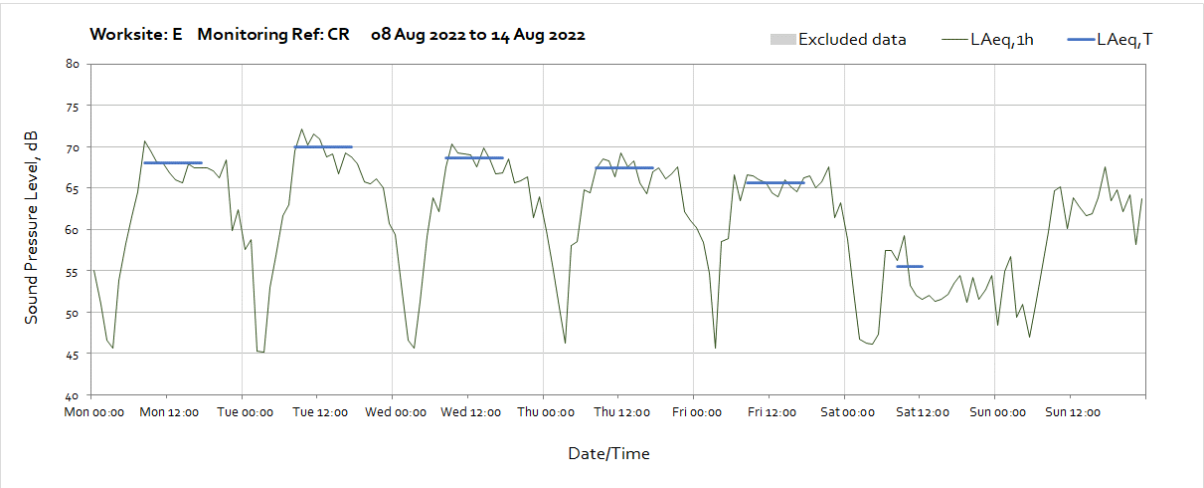
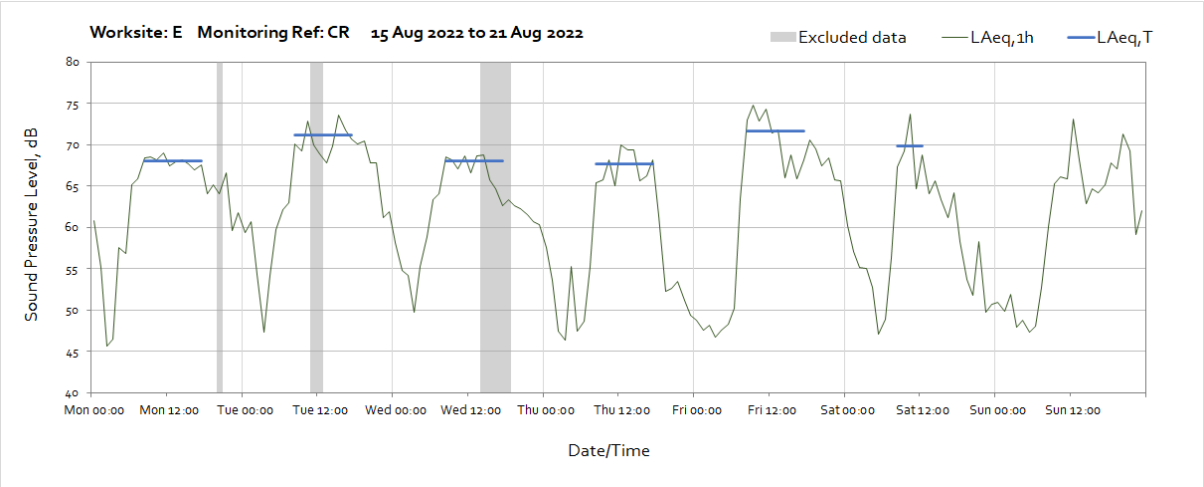
Date/Time



Worksite: E – Monitoring Ref: CR






Worksite: E Monitoring Ref: CR 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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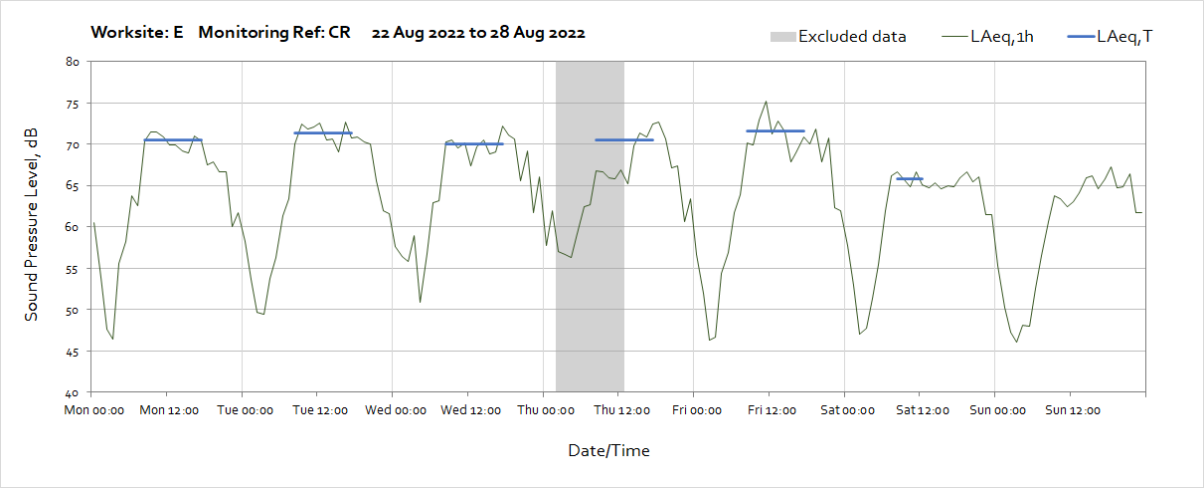
Date/Time


Worksite: E Monitoring Ref: CR 22 Aug 2022 to 28 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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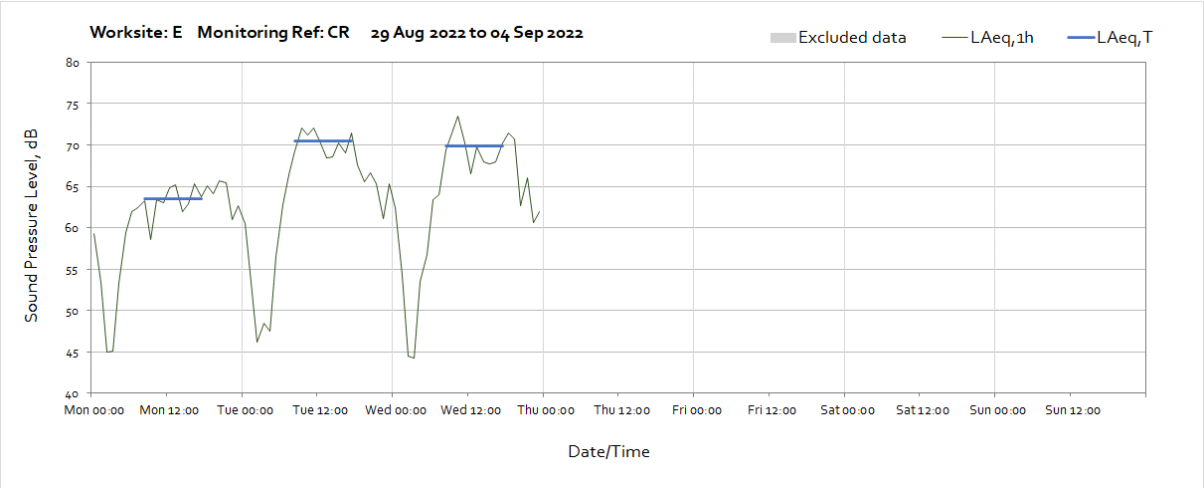
Date/Time


Worksite: E Monitoring Ref: CR 29 Aug 2022 to 04 Sep 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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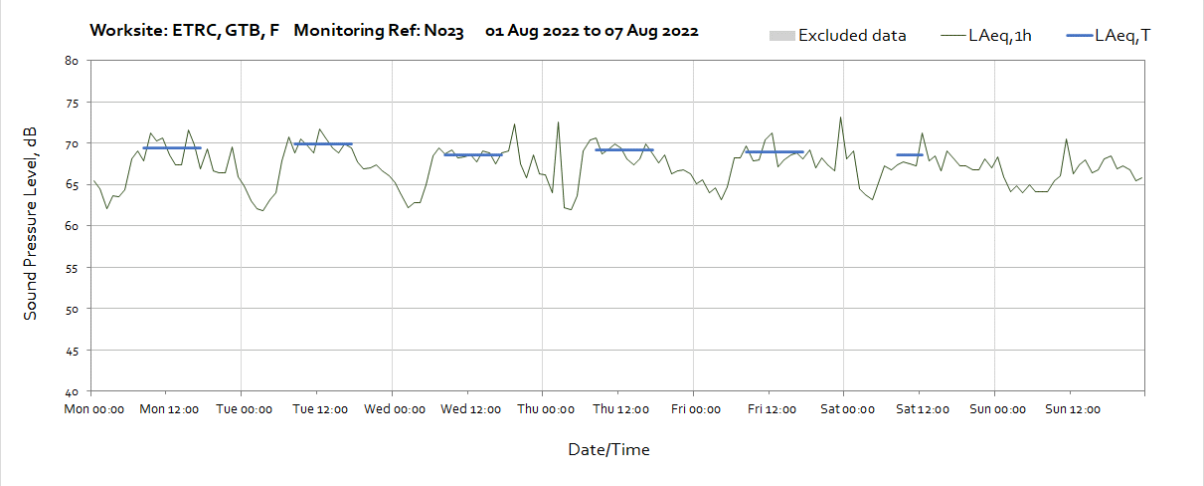
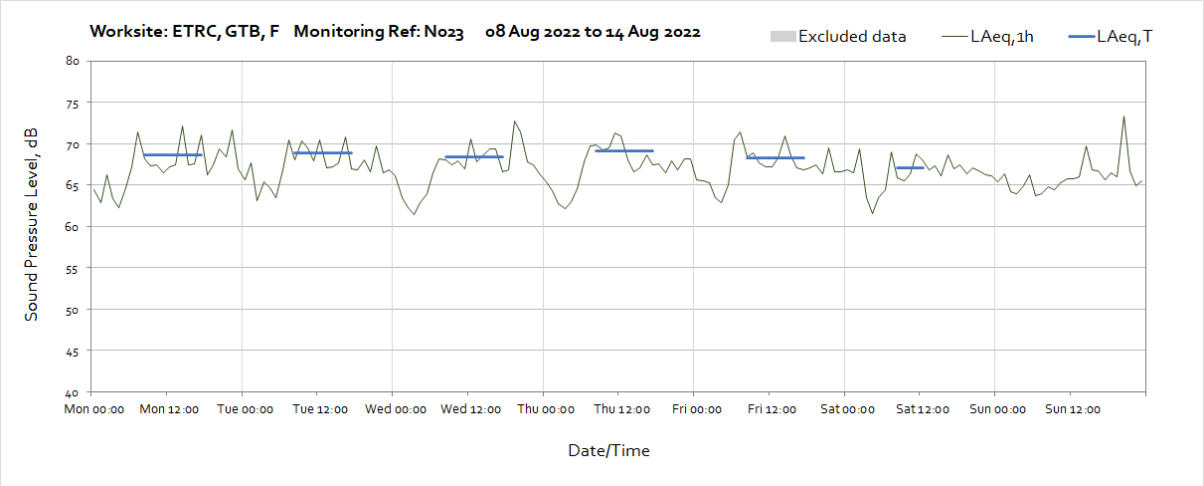
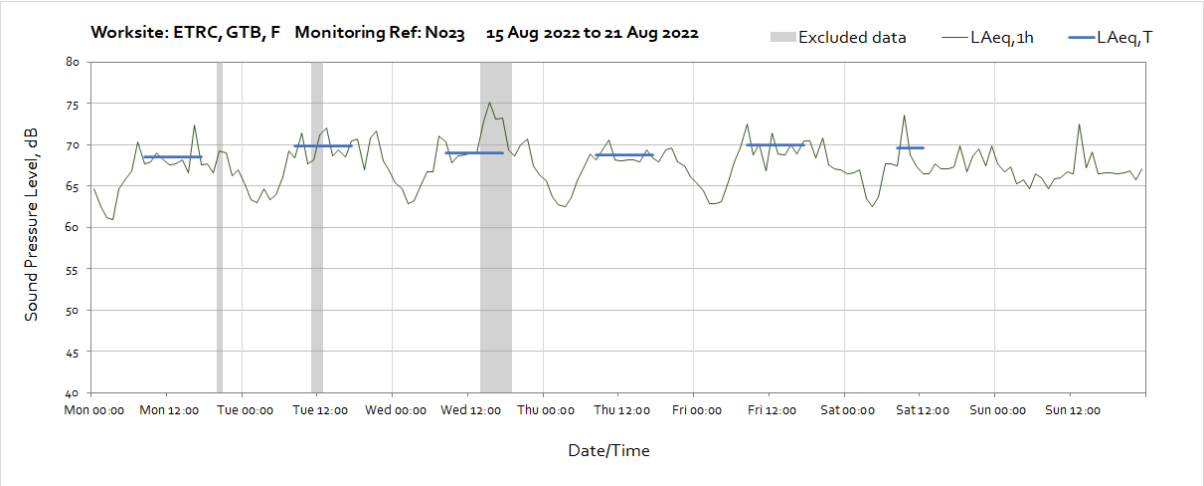
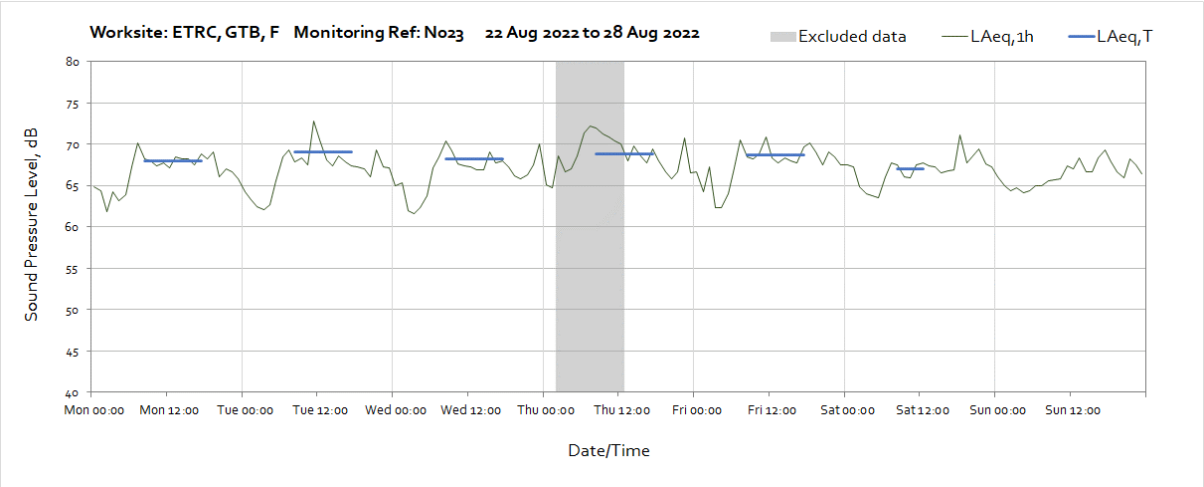
Date/Time

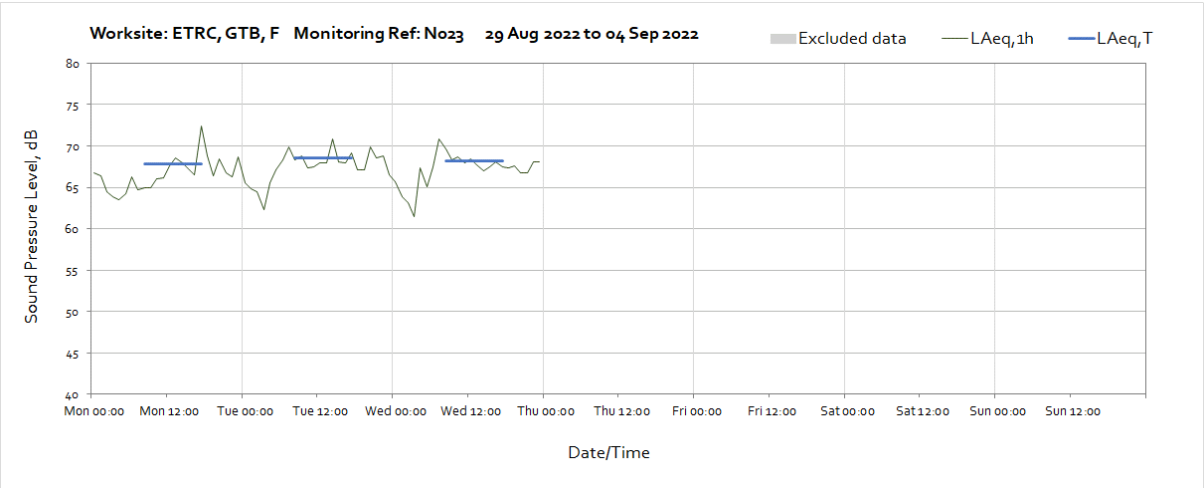
Worksite: ETRC & GTB, F – Monitoring Ref: N023



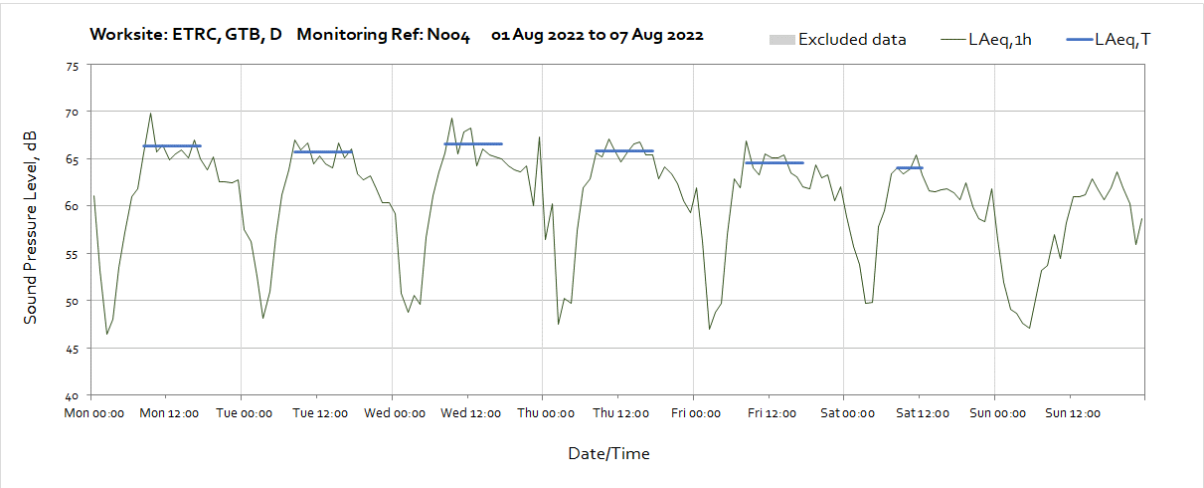


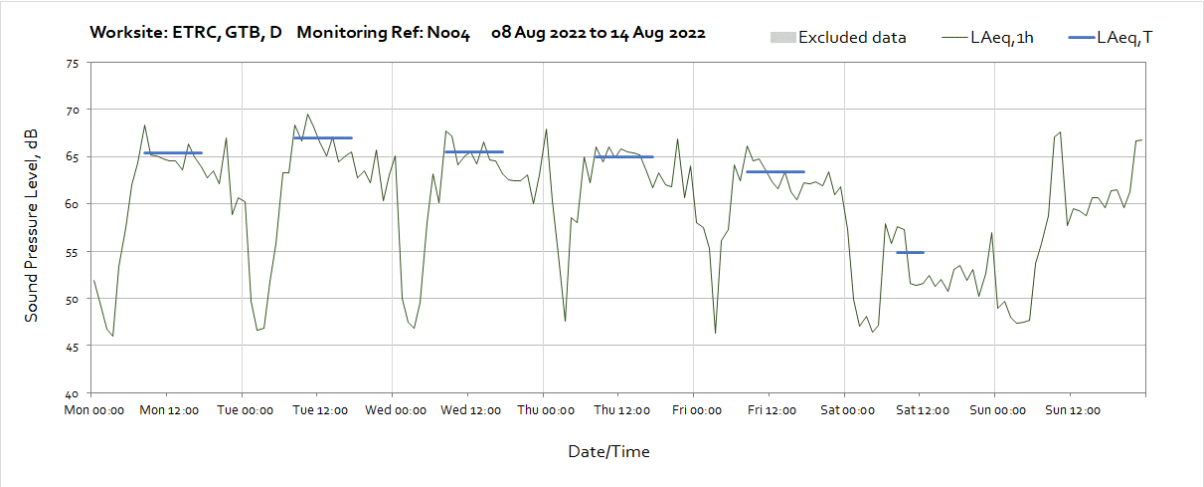






Worksite: ETRC & GTB, D – Monitoring Ref: N004




Worksite: ETRC, GTB, D Monitoring Ref: No04 08 Aug 2022 to 14 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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Mon 00:00
Mon 12:00
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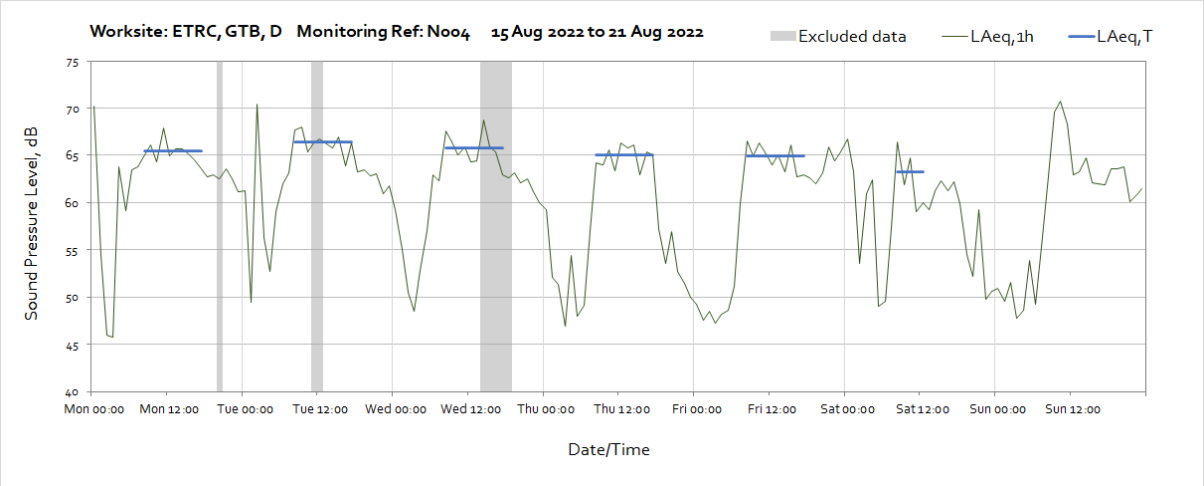
Date/Time


Worksite: ETRC, GTB, D Monitoring Ref: No04 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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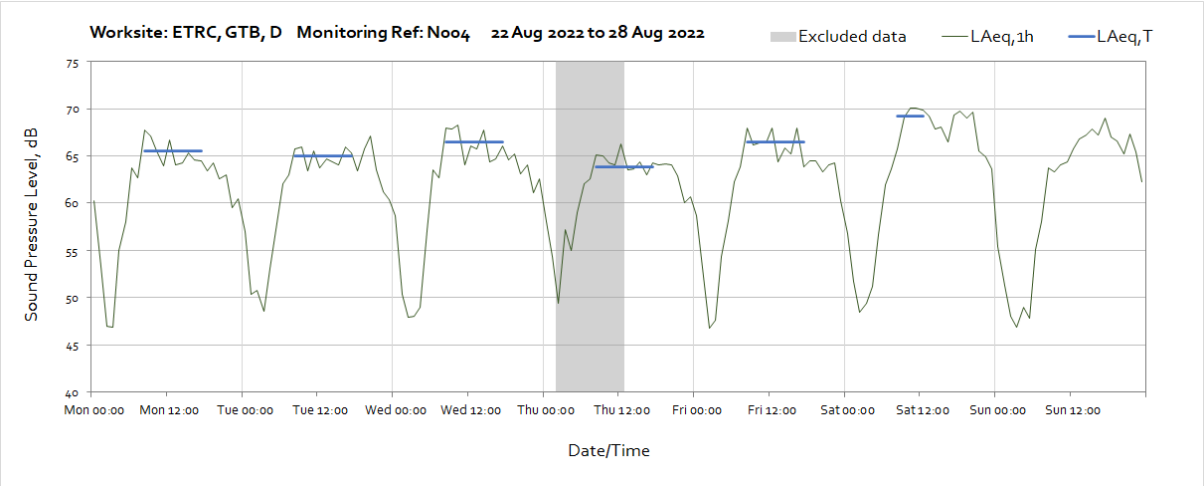
Date/Time


Worksite: ETRC, GTB, D Monitoring Ref: No04 22 Aug 2022 to 28 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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70
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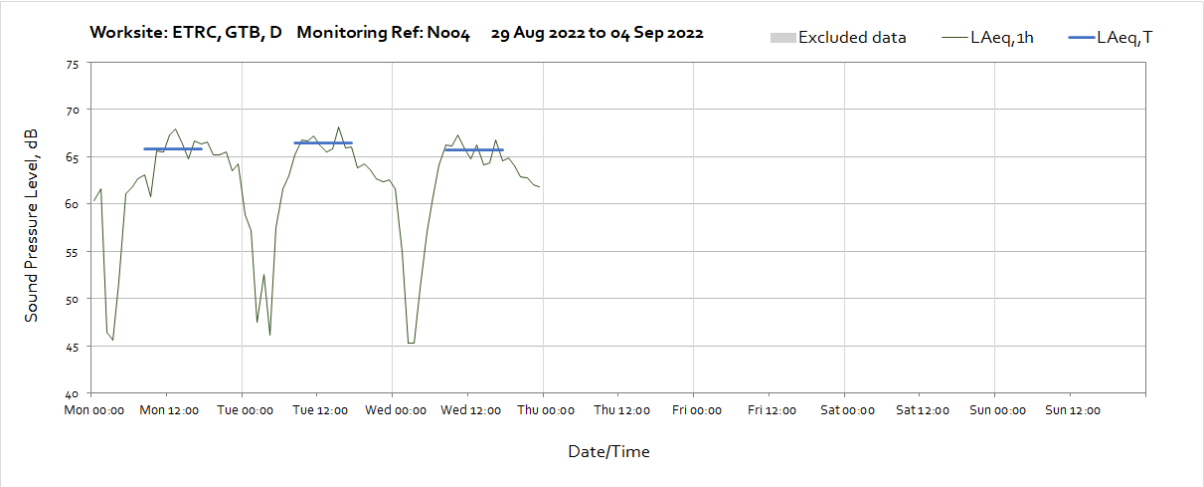
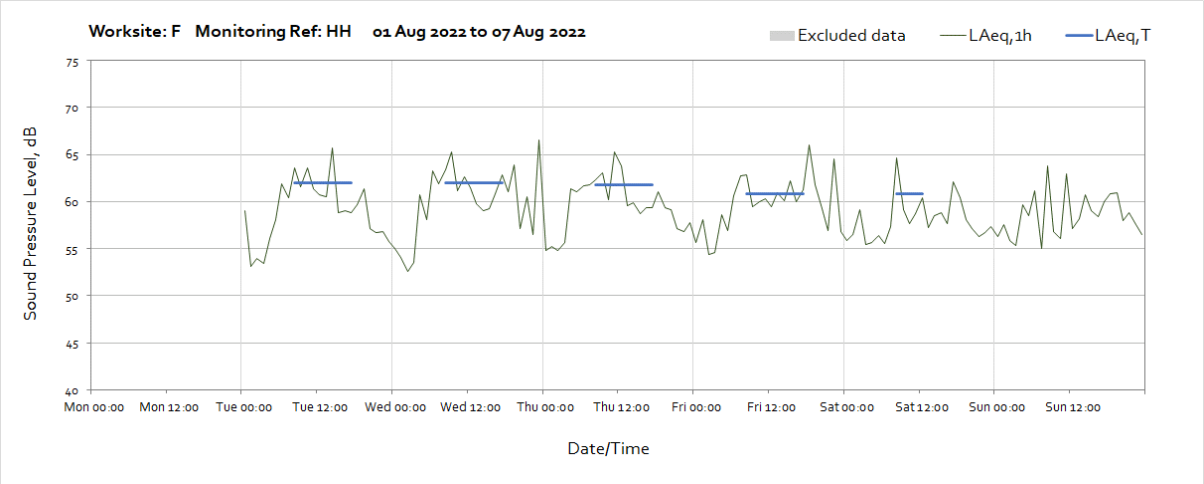
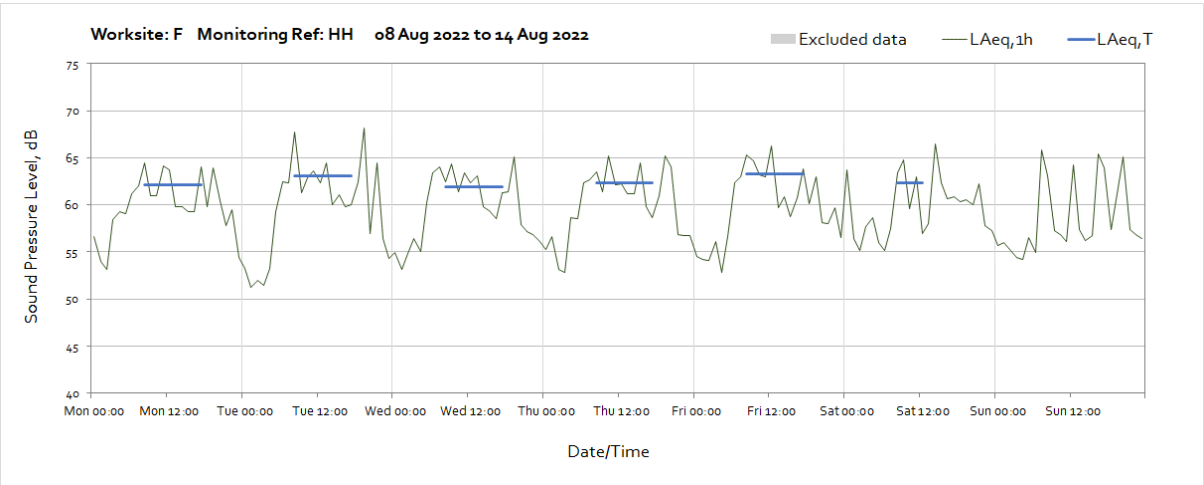
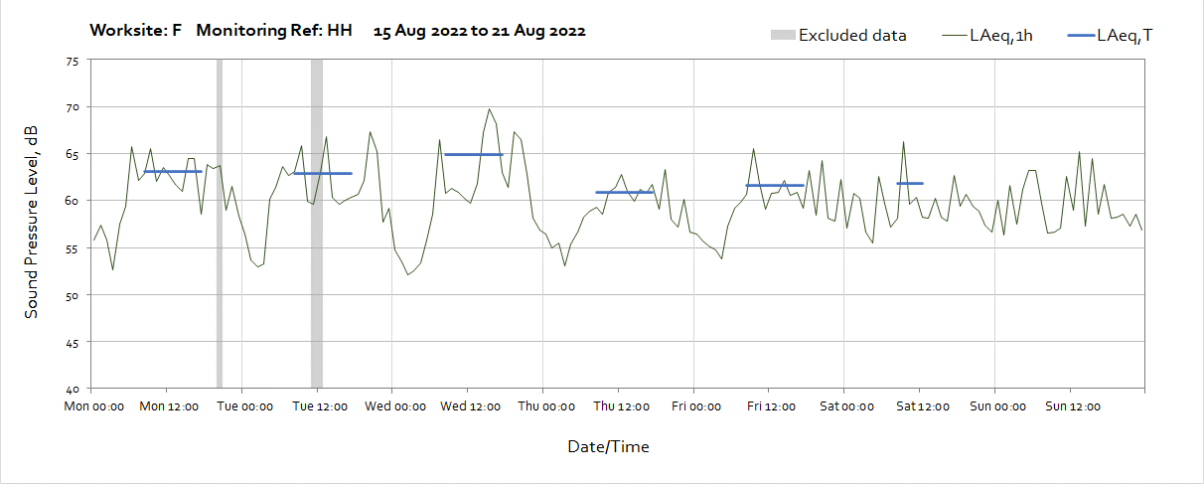
Date/Time



Worksite: G, H – Monitoring Ref: HH






Worksite: F Monitoring Ref: HH 15 Aug 2022 to 21 Aug 2022
Excluded data
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Sound Pressure Level, dB
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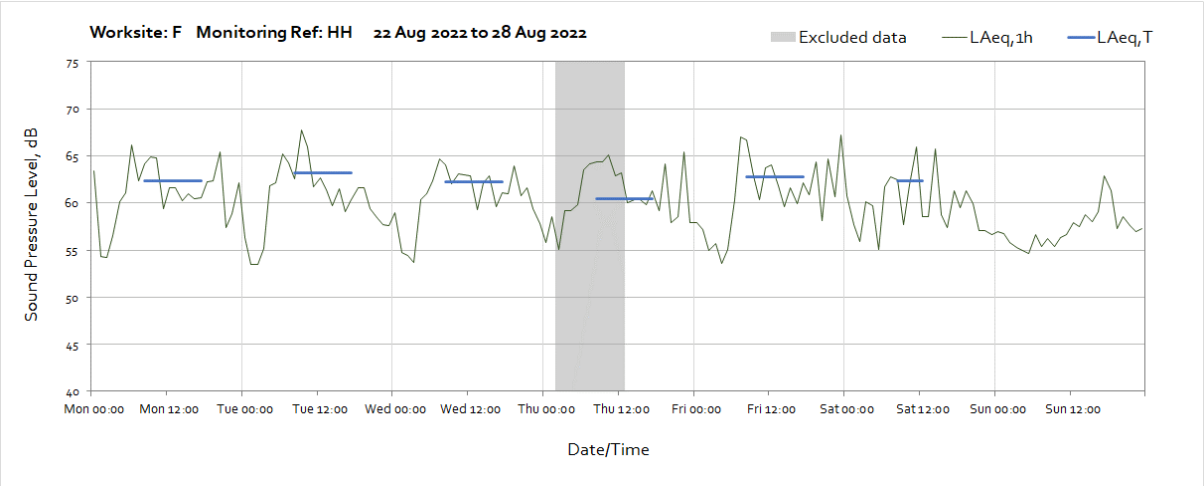
Date/Time


Worksite: F Monitoring Ref: HH 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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70
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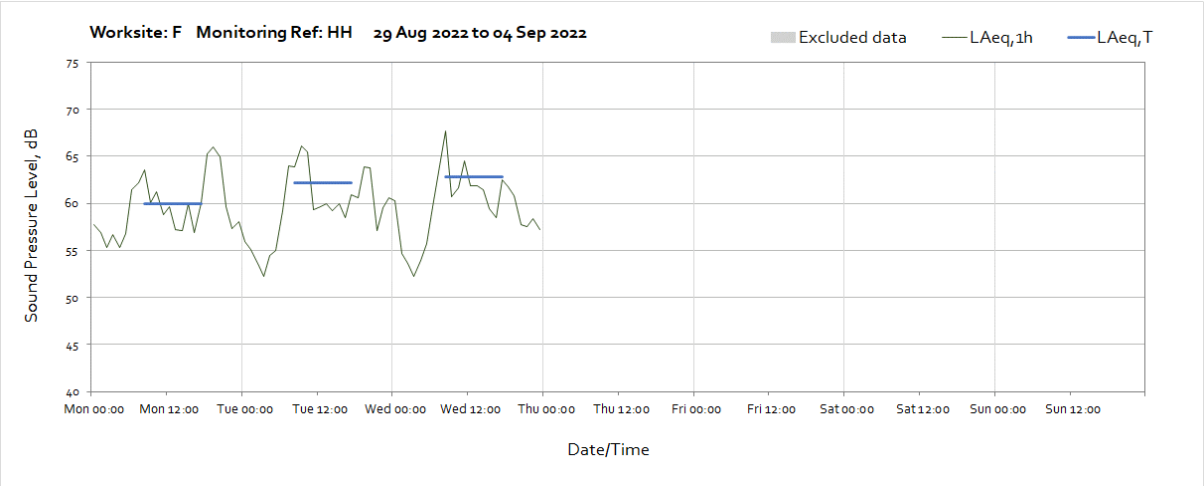
Date/Time


Worksite: F Monitoring Ref: HH 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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70
65
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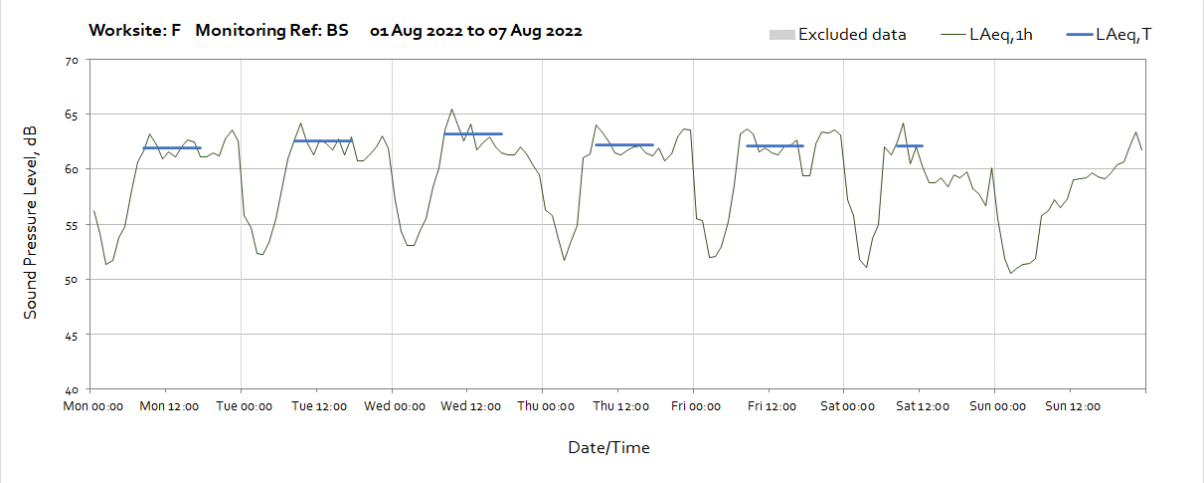
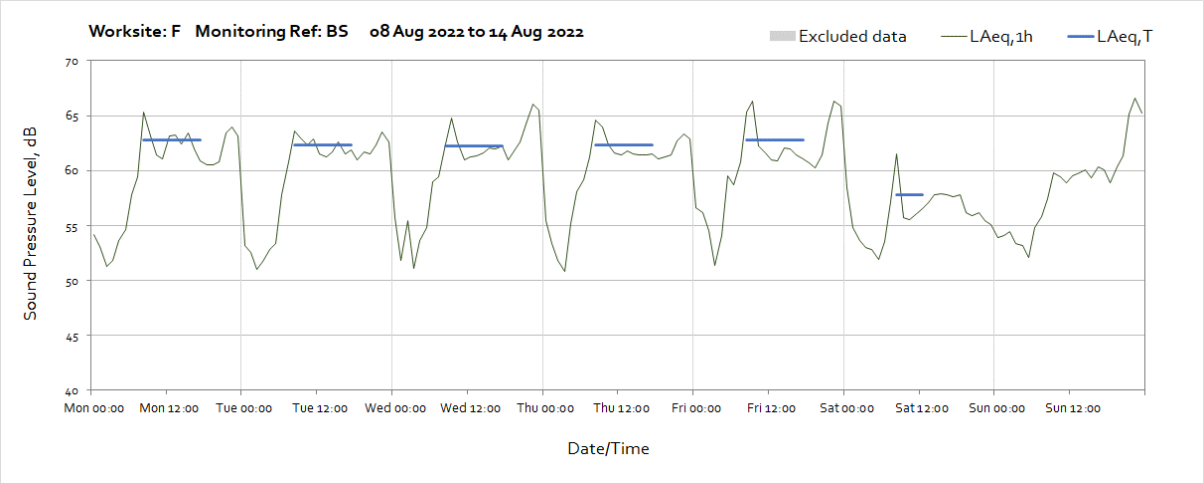
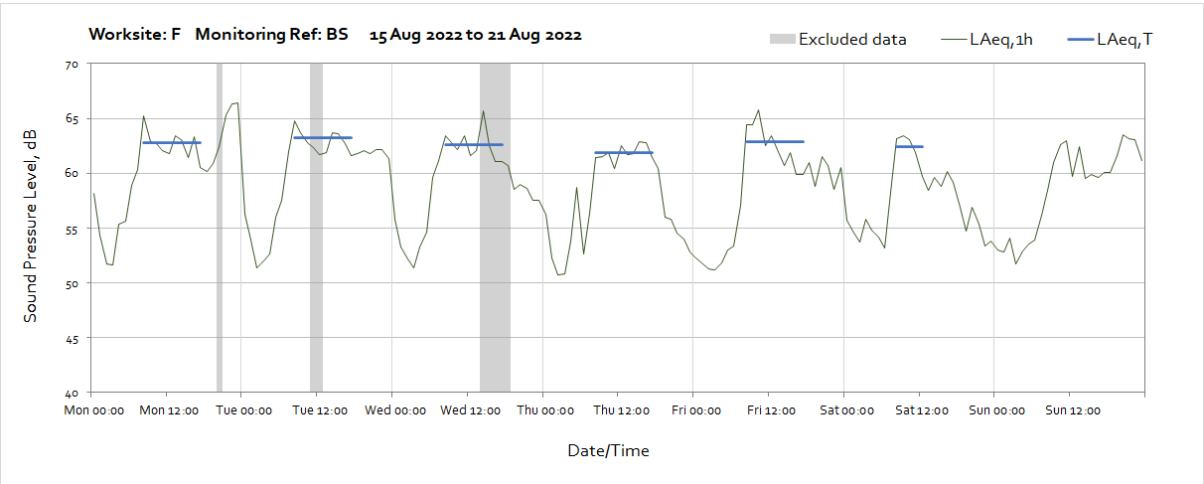
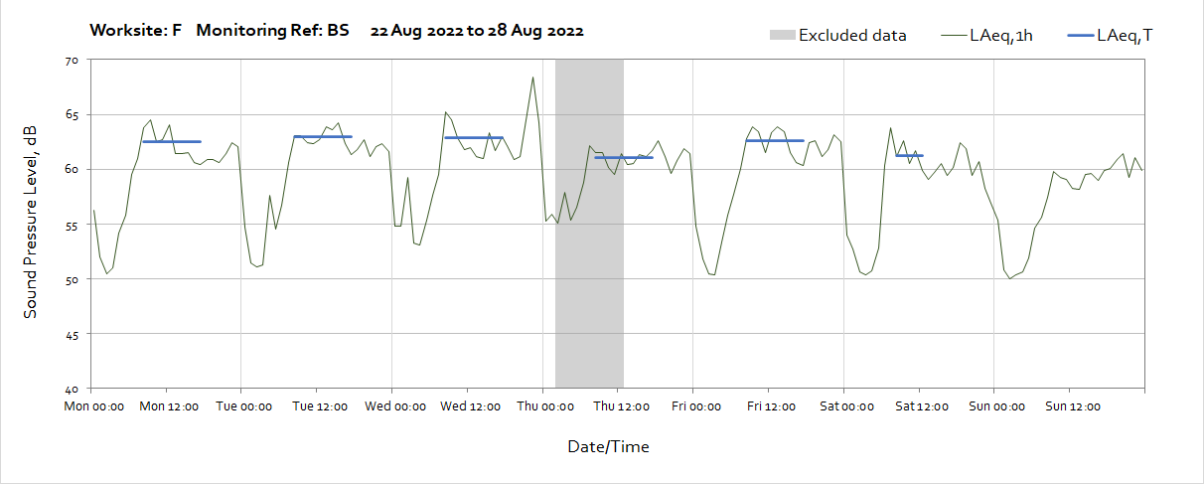
Date/Time

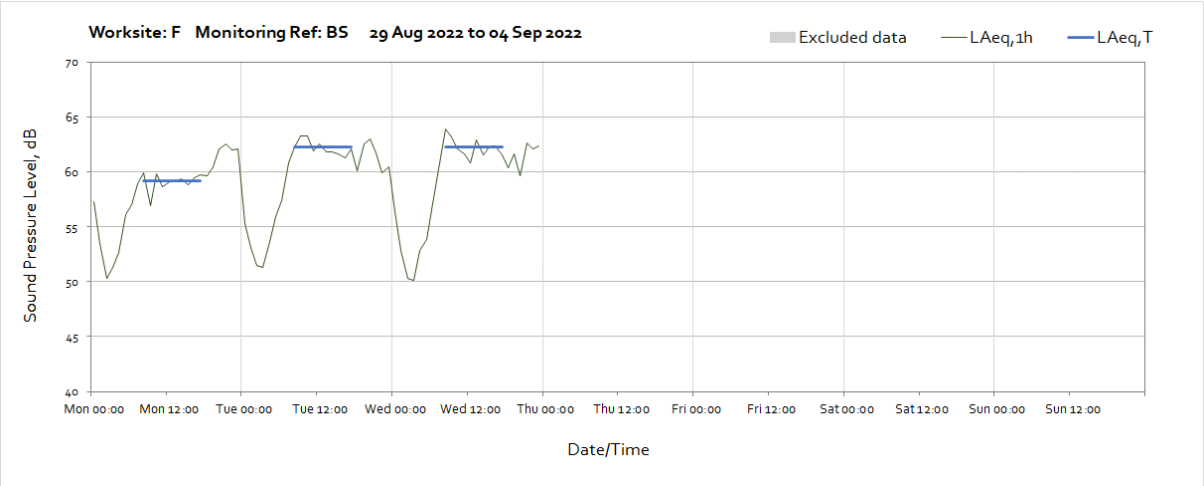
Worksite: G – Monitoring Ref: BS



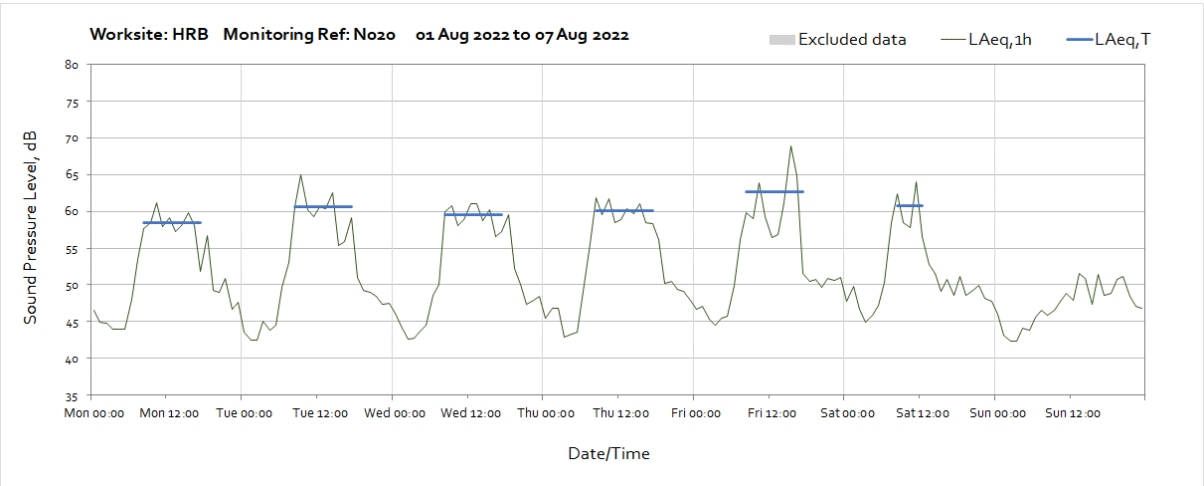


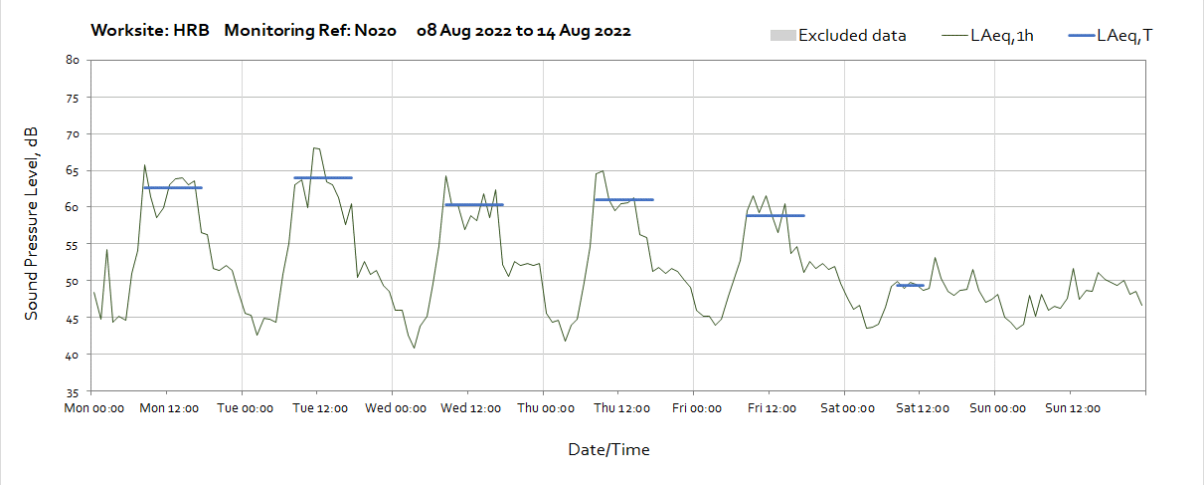






Worksite: HRB – Monitoring Ref: N020




Worksite: HRB Monitoring Ref: No20 08 Aug 2022 to 14 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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75
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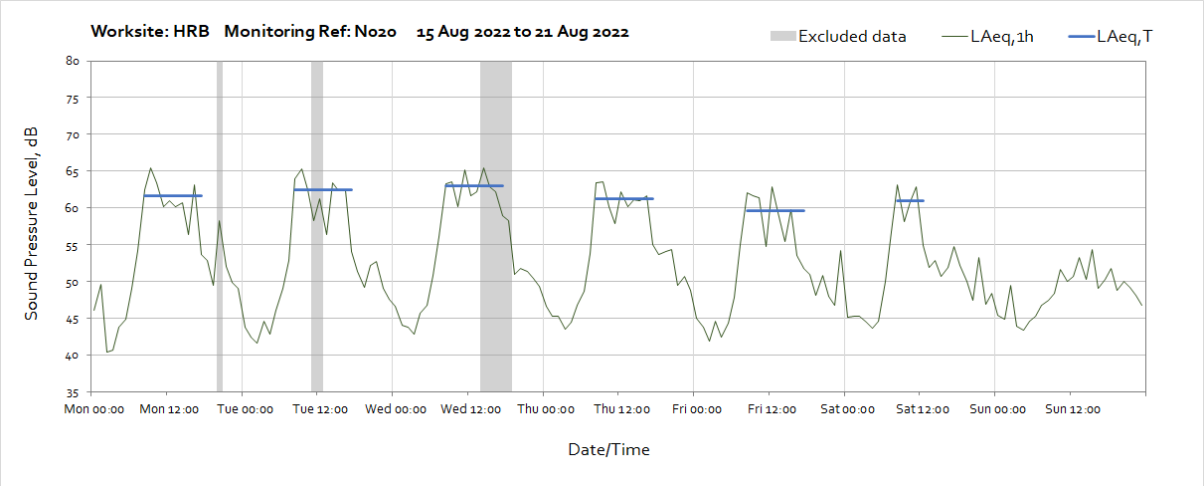
Date/Time


Worksite: HRB Monitoring Ref: No20 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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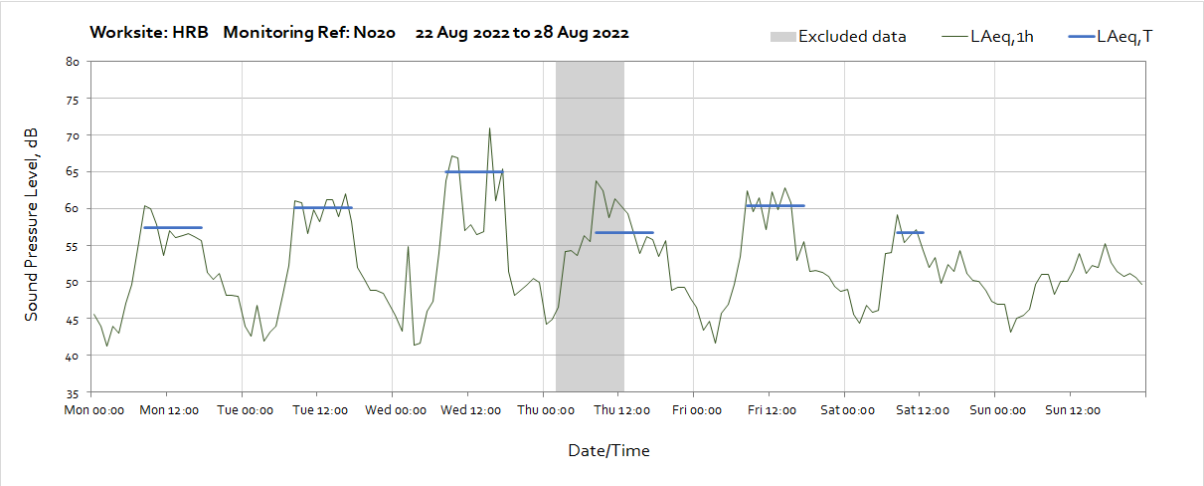
Date/Time


Worksite: HRB Monitoring Ref: No20 22 Aug 2022 to 28 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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70
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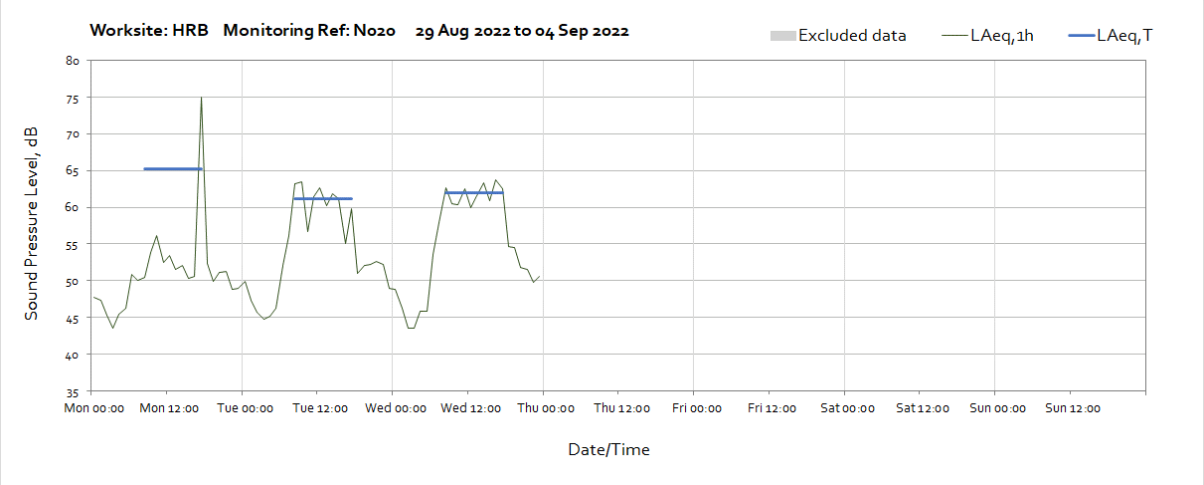
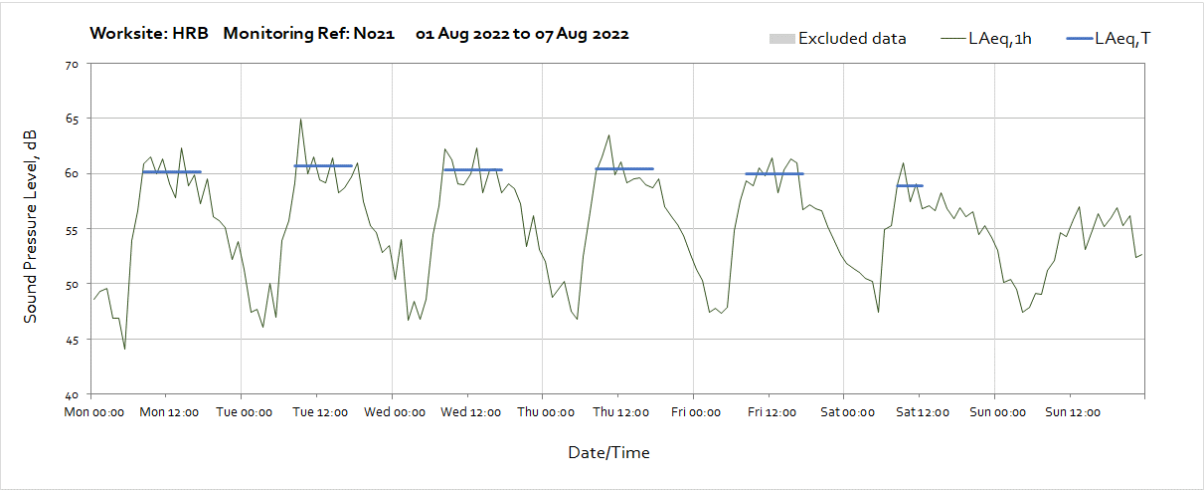
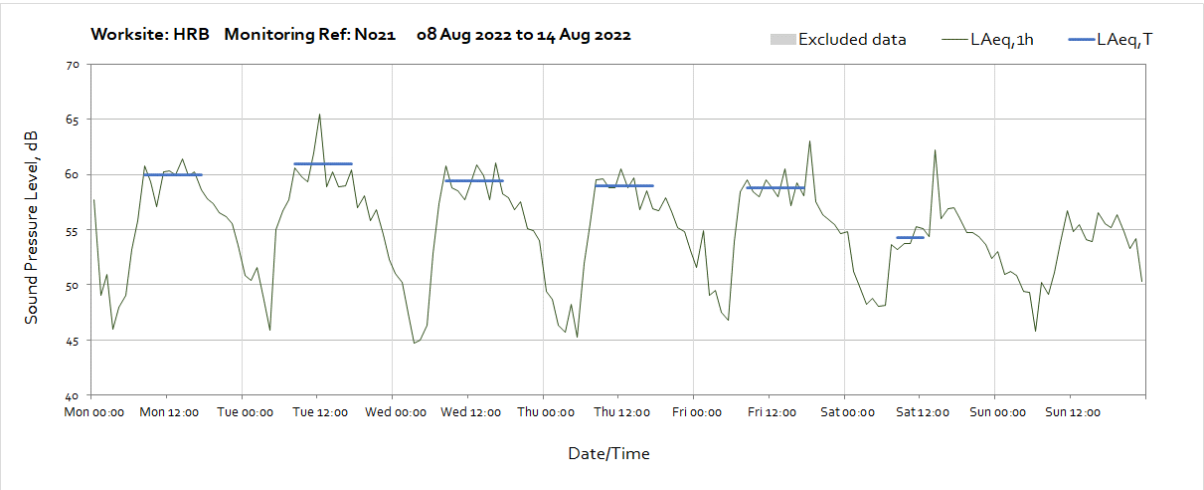
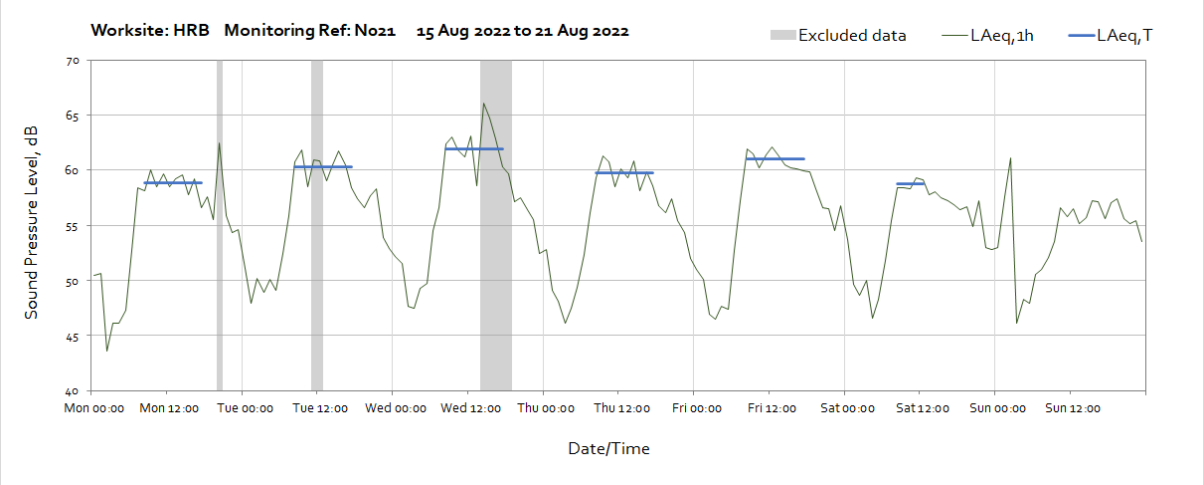
Date/Time



Worksite: HRB – Monitoring Ref: N021






Worksite: HRB Monitoring Ref: No21 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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Mon 00:00
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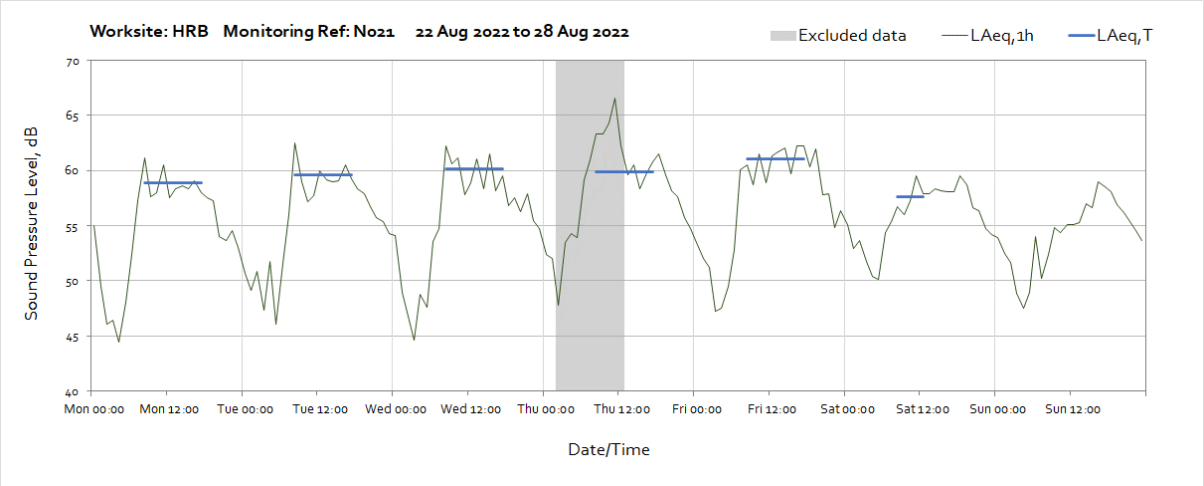
Date/Time


Worksite: HRB Monitoring Ref: No21 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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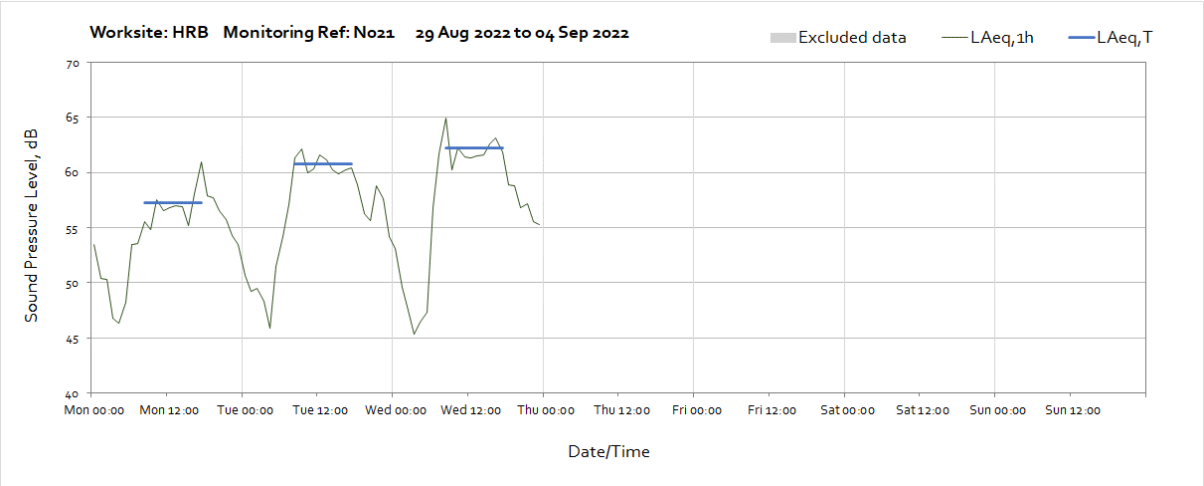
Date/Time


Worksite: HRB Monitoring Ref: No21 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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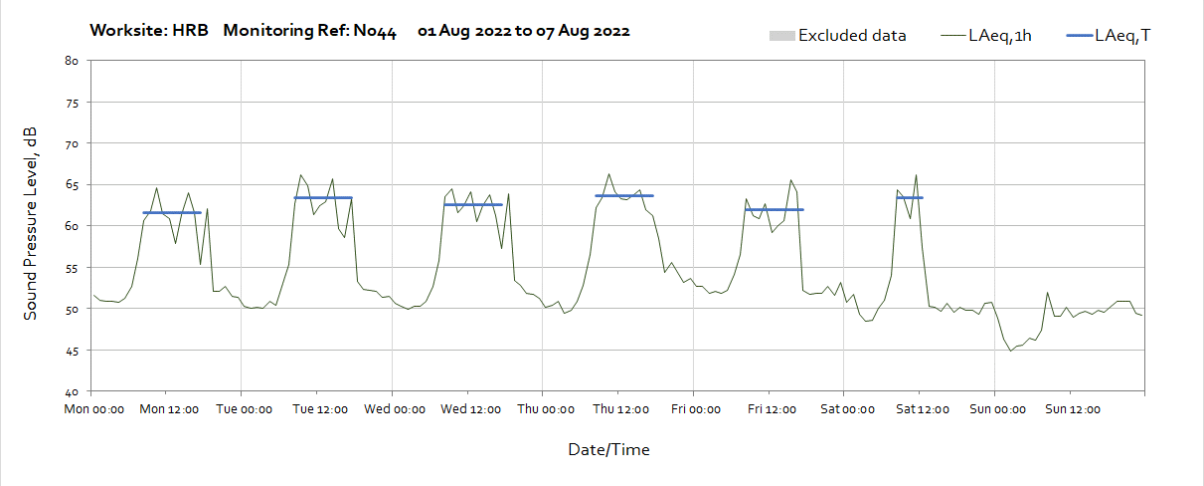
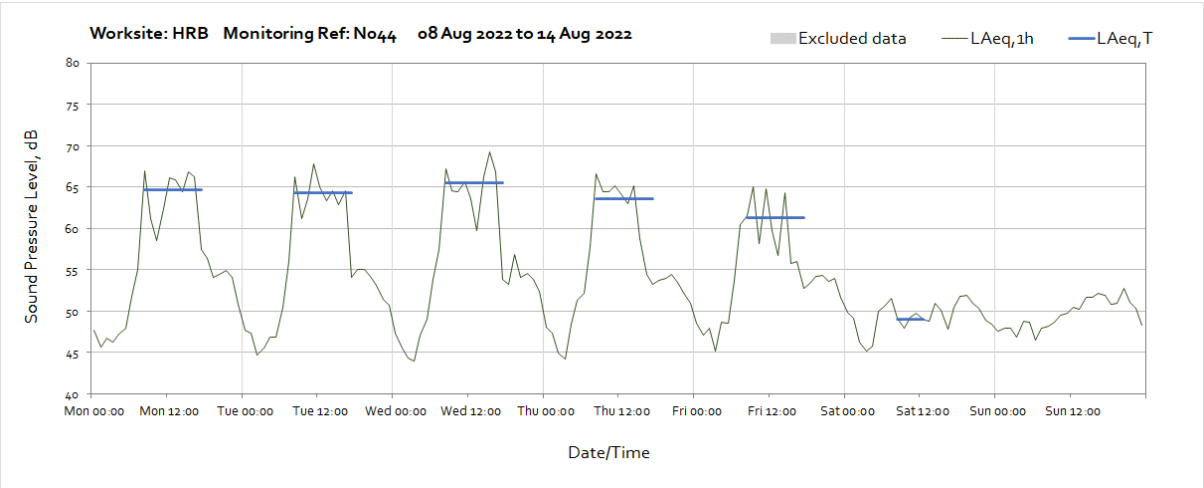
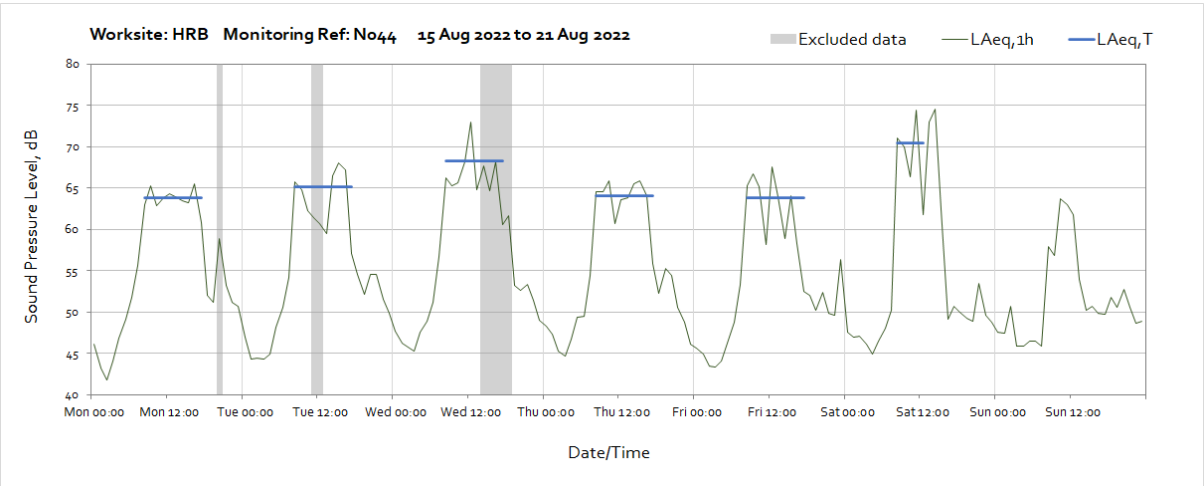
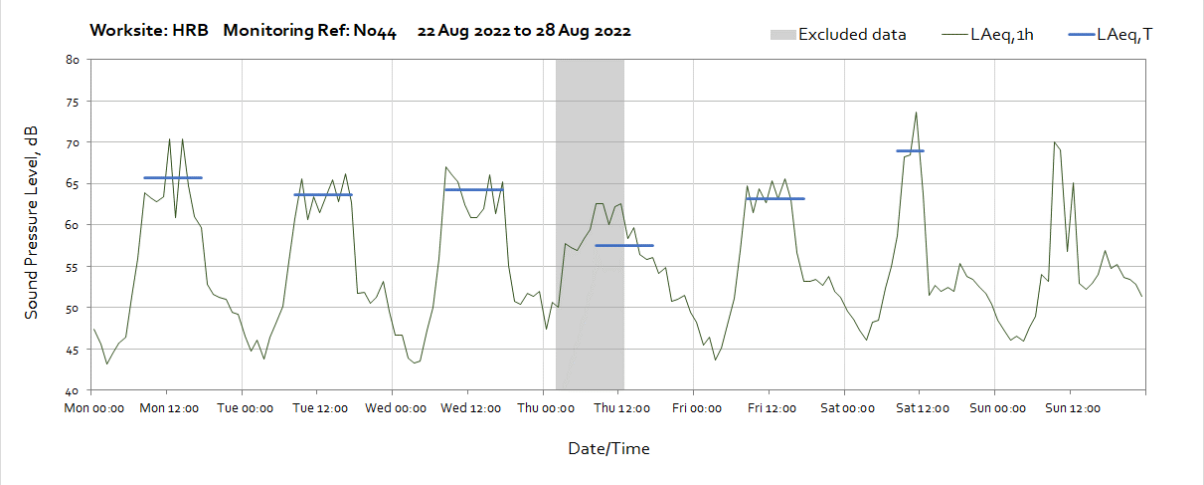
Date/Time

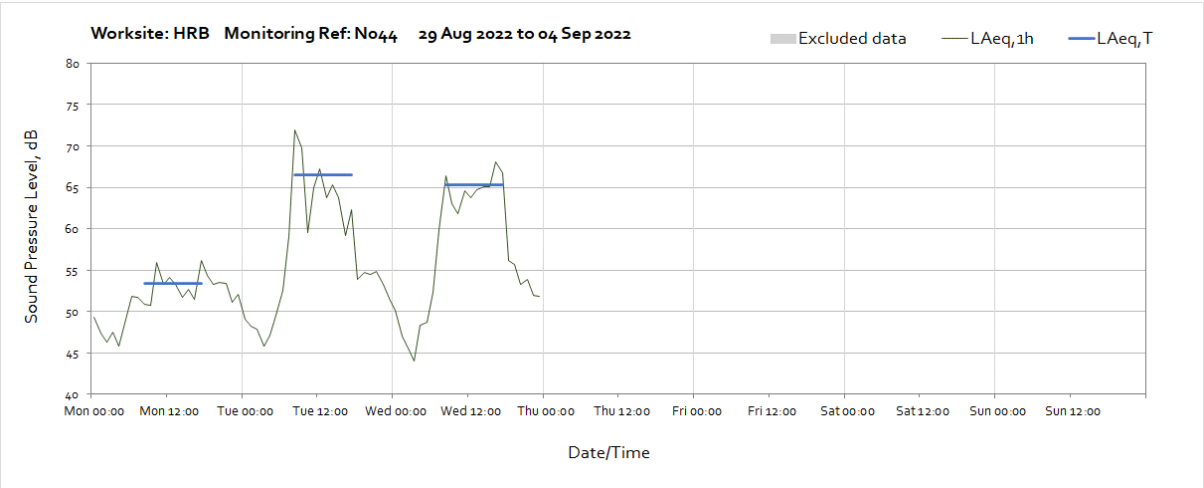
Worksite: HRB – Monitoring Ref: N044



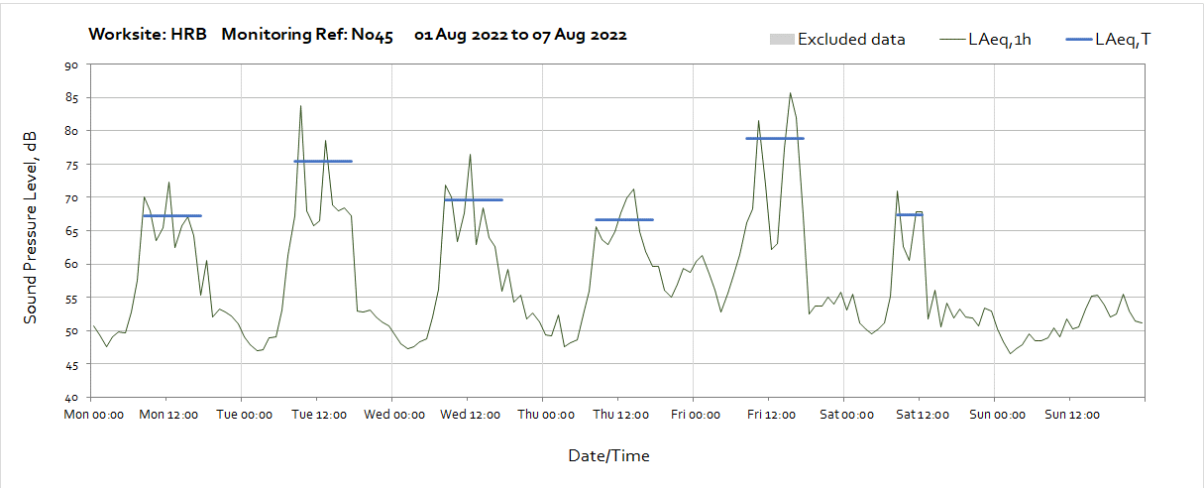


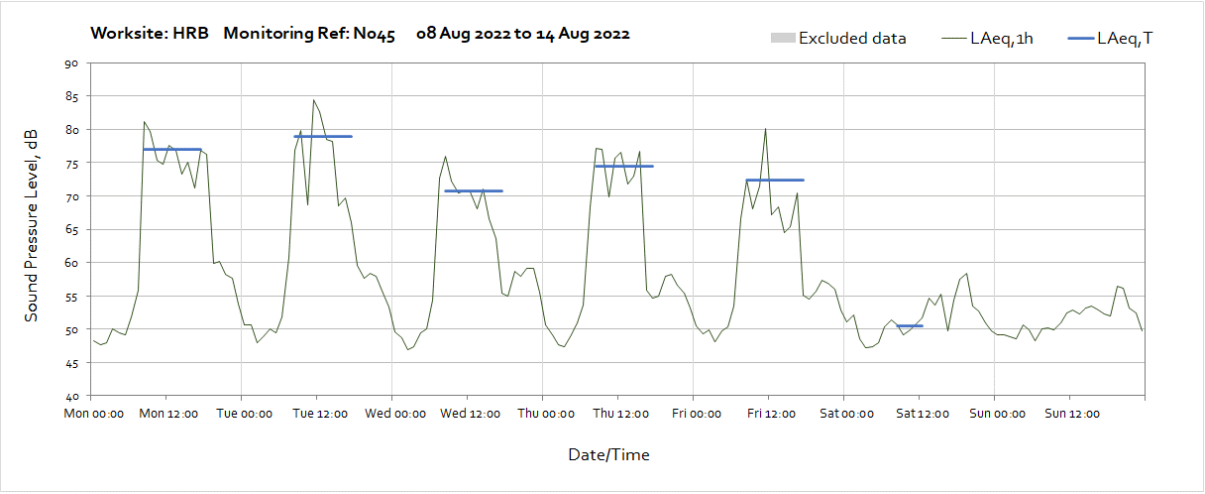






Worksite: HRB – Monitoring Ref: N045




Worksite: HRB Monitoring Ref: No45 08 Aug 2022 to 14 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
90
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75
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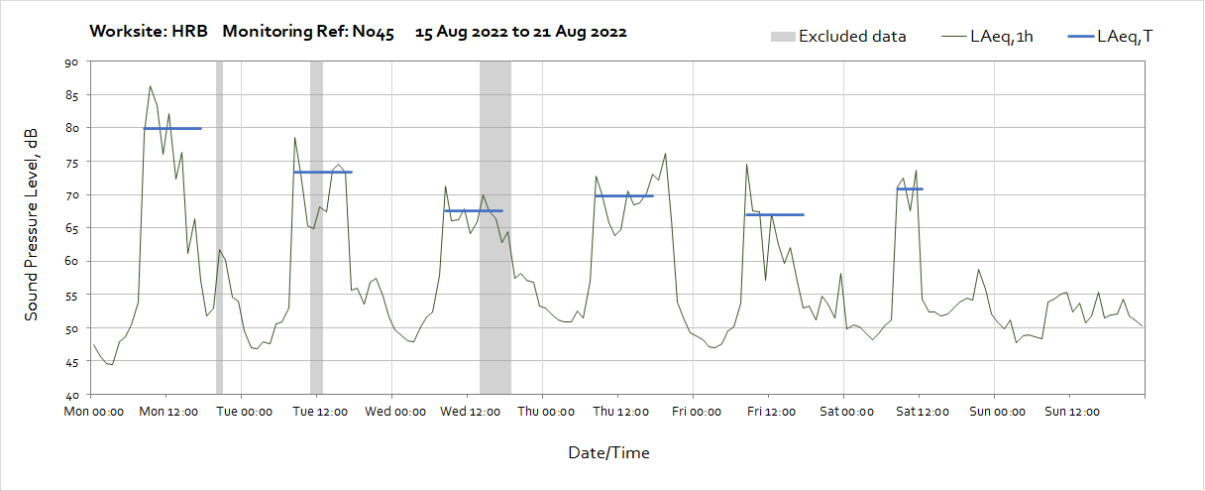
Date/Time


Worksite: HRB Monitoring Ref: No45 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
90
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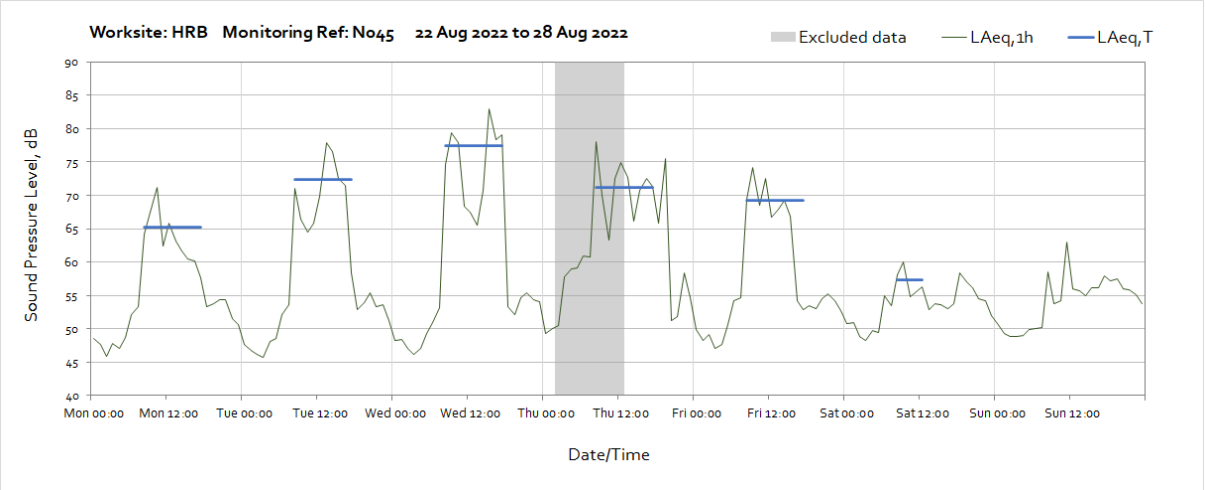
Date/Time


Worksite: HRB Monitoring Ref: No45 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
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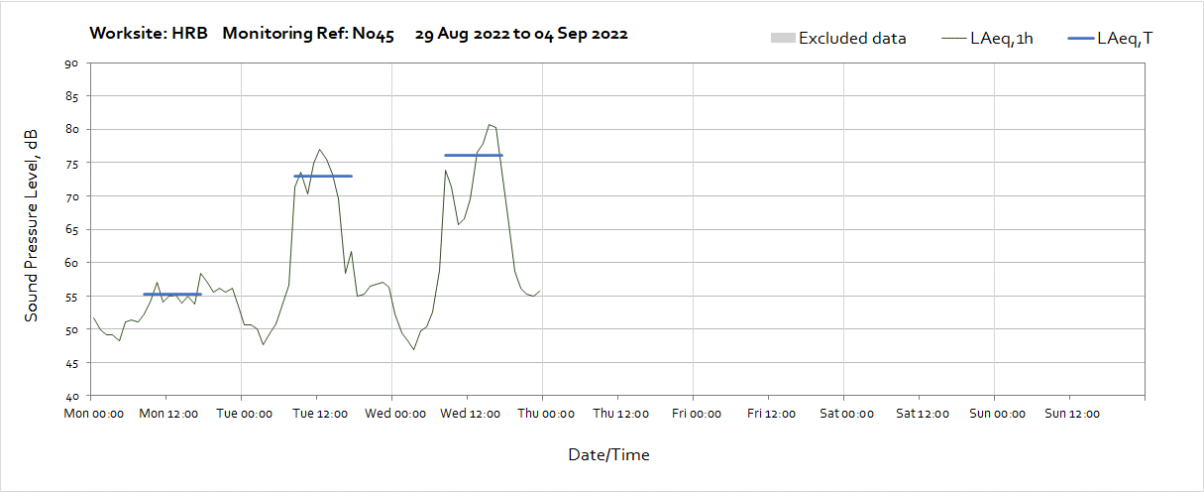
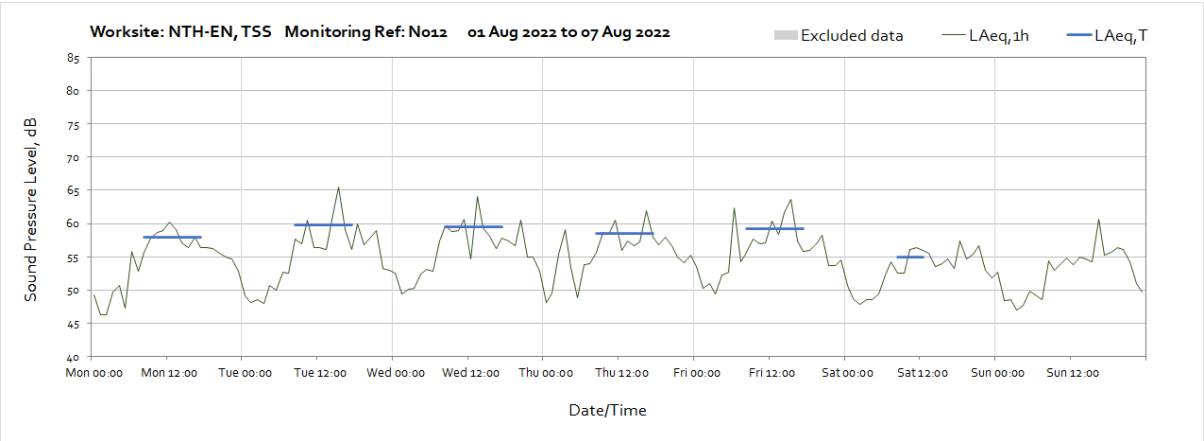
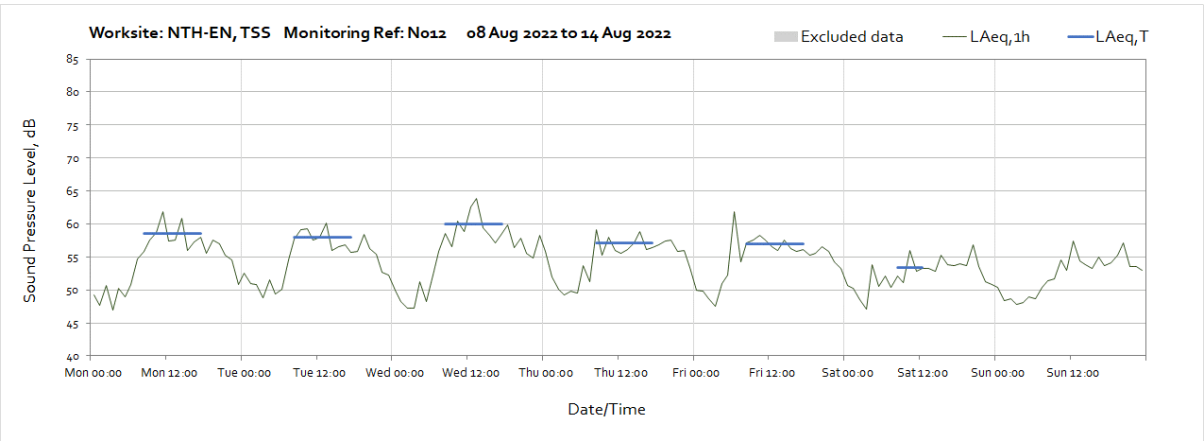
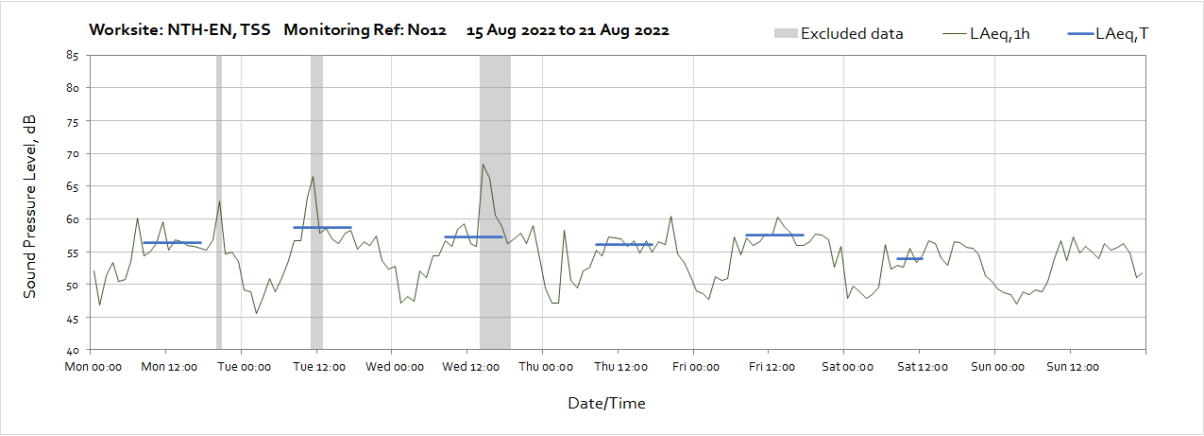
Date/Time



Worksite: NTH-EN, TSS – Monitoring Ref: N012






Worksite: NTH-EN, TSS Monitoring Ref: No12 15 Aug 2022 to 21 Aug 2022
Excluded data
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LAeq,T
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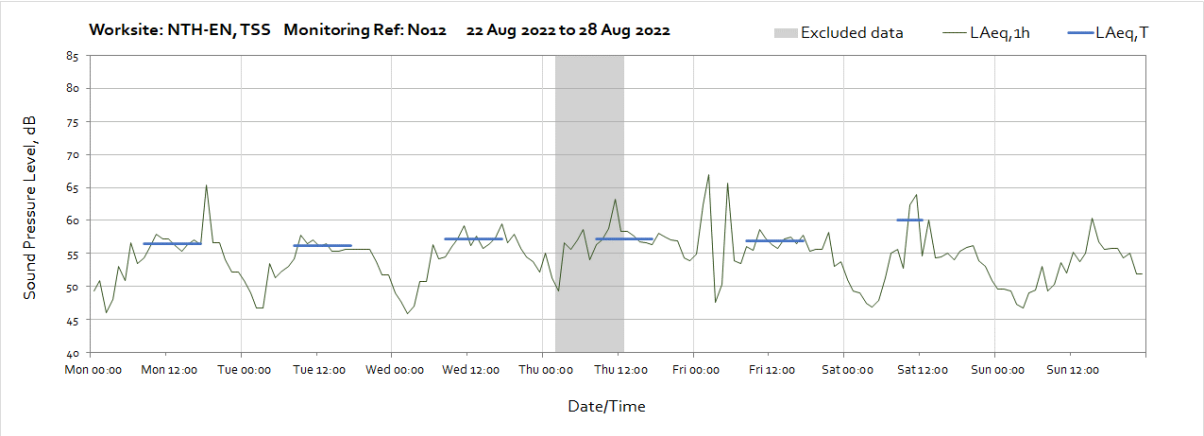
Date/Time


Worksite: NTH-EN, TSS Monitoring Ref: No12 22 Aug 2022 to 28 Aug 2022
Excluded data
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LAeq,T
Sound Pressure Level, dB
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80
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65
60
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Mon 00:00
Mon 12:00
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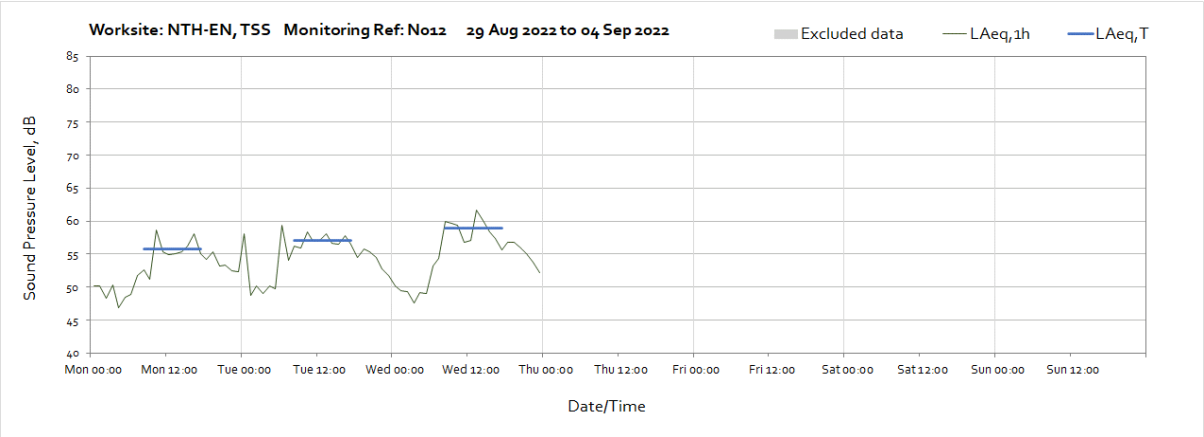
Sun 12:00
Date/Time


Worksite: NTH-EN, TSS Monitoring Ref: No12 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
85
80
75
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
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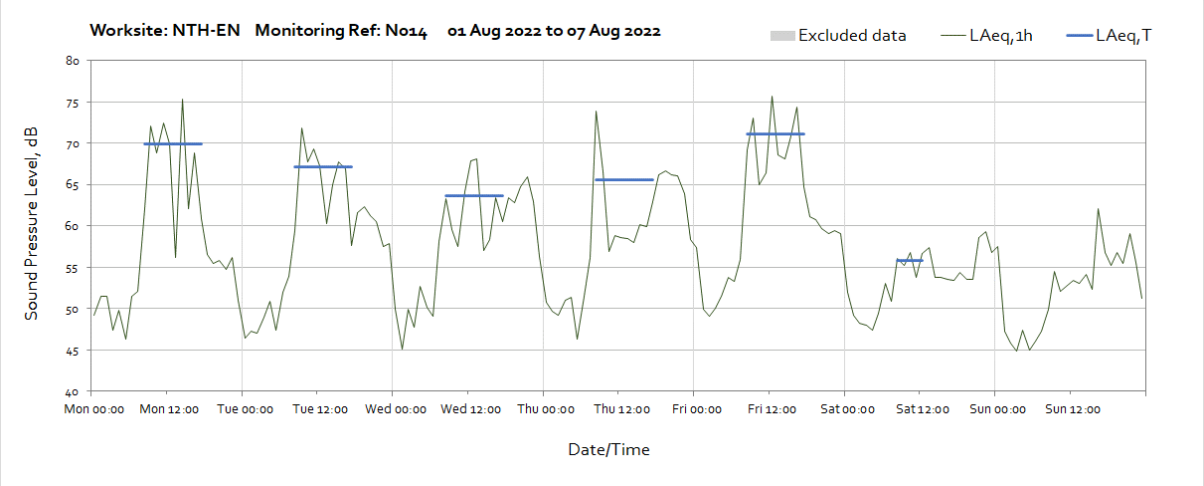
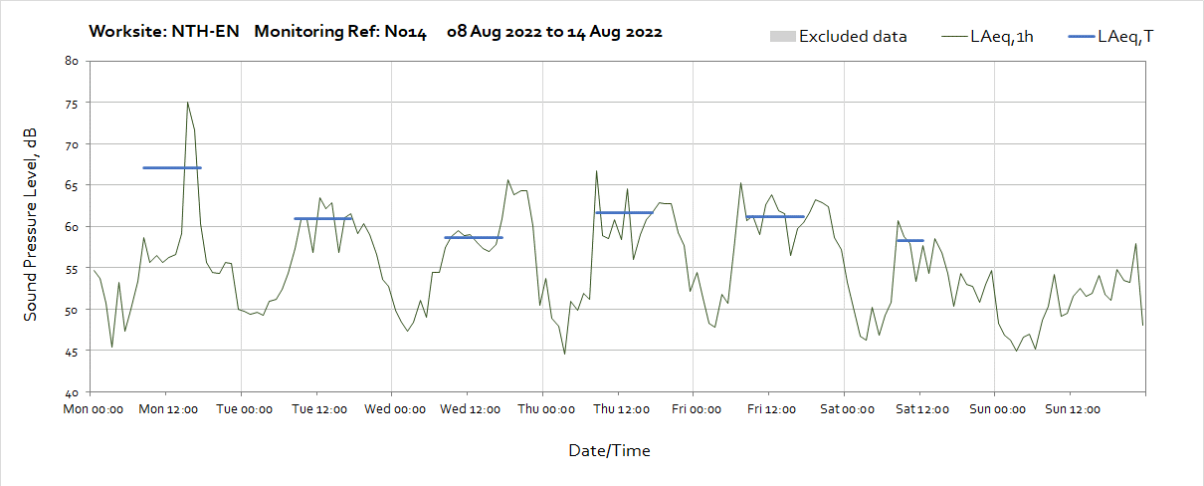
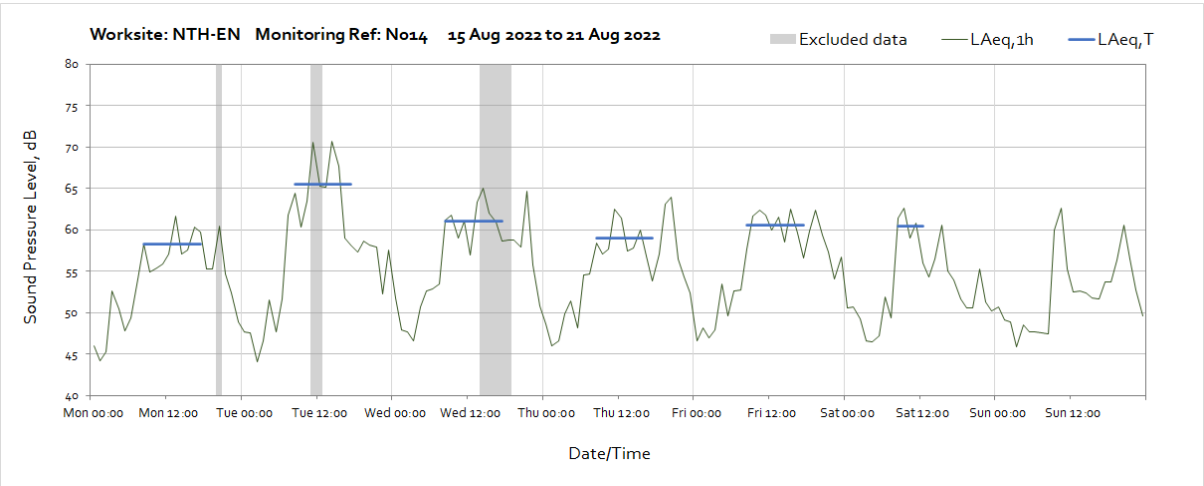
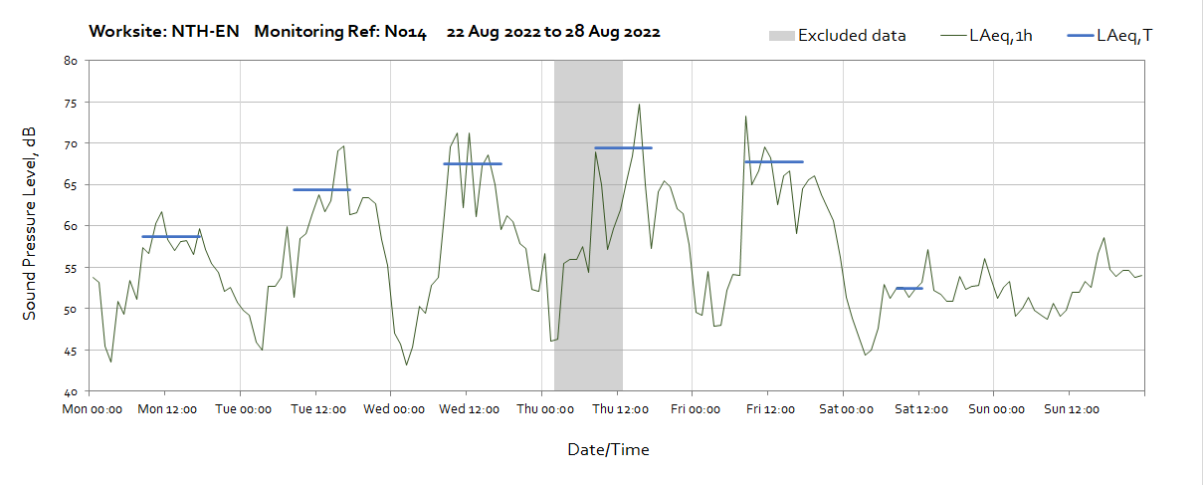
Sun 00:00
Sun 12:00
Date/Time

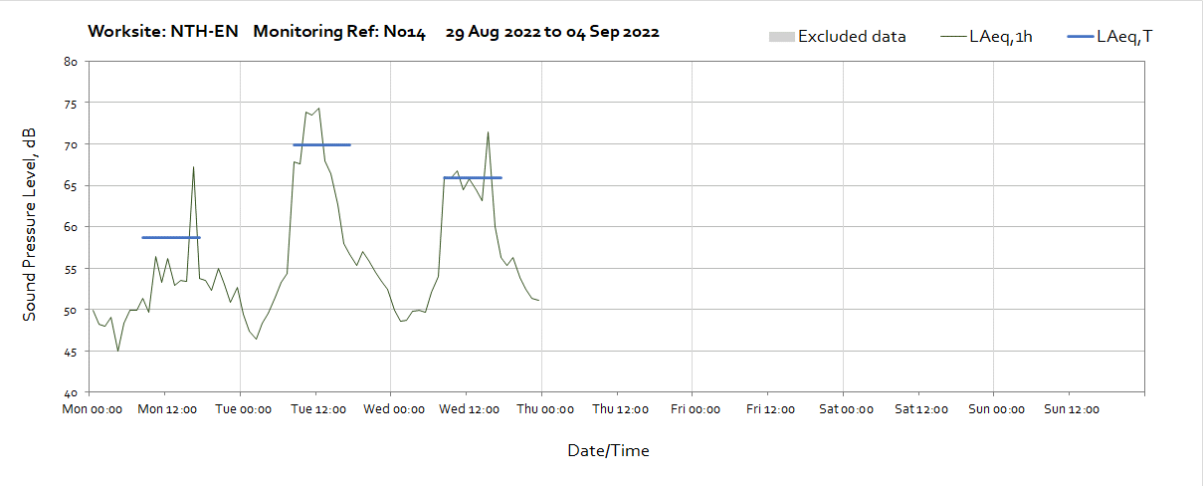
Worksite: NTH-EN – Monitoring Ref: N014



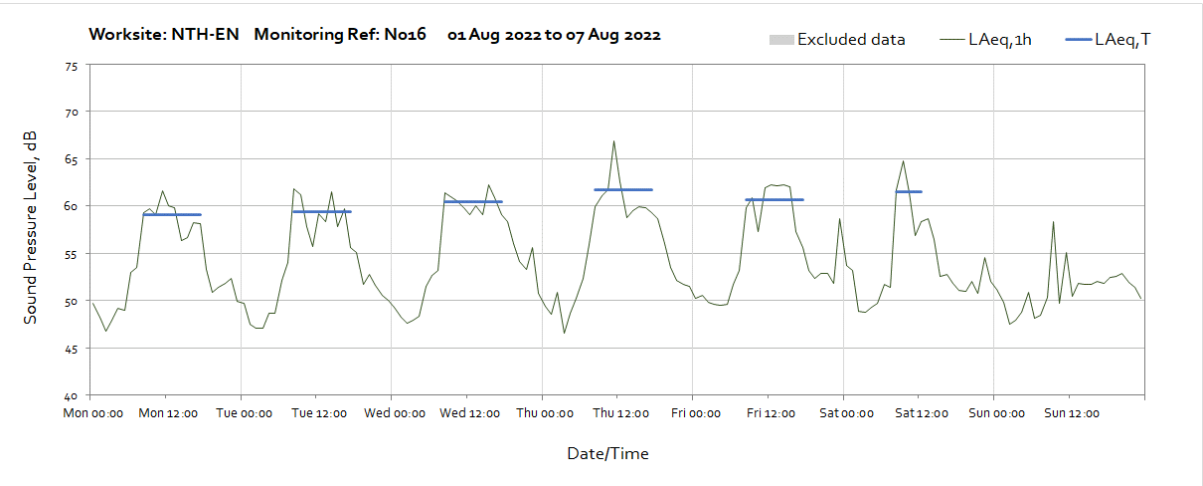


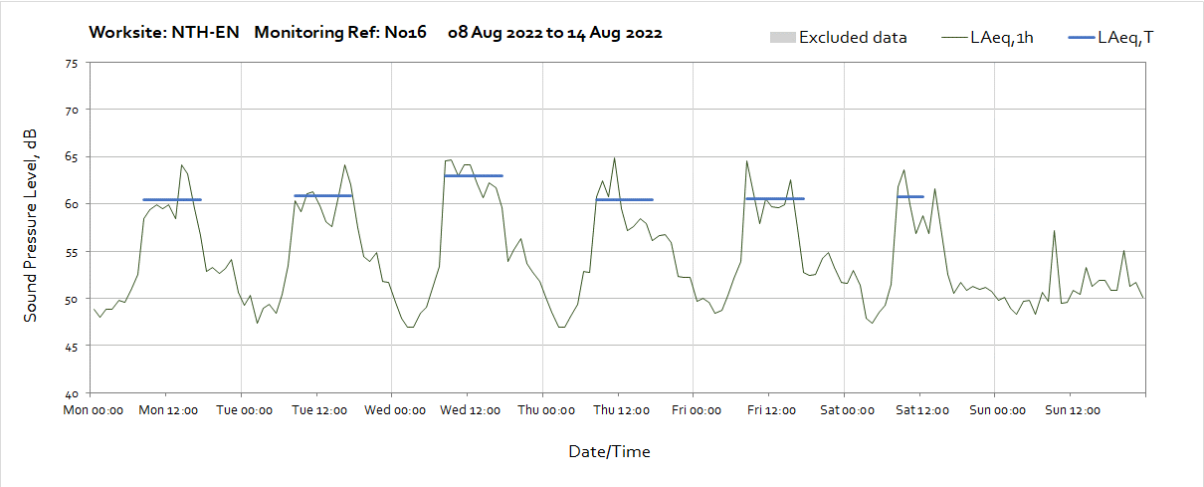






Worksite: NTH-EN – Monitoring Ref: N016




Worksite: NTH-EN Monitoring Ref: No16 08 Aug 2022 to 14 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
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55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
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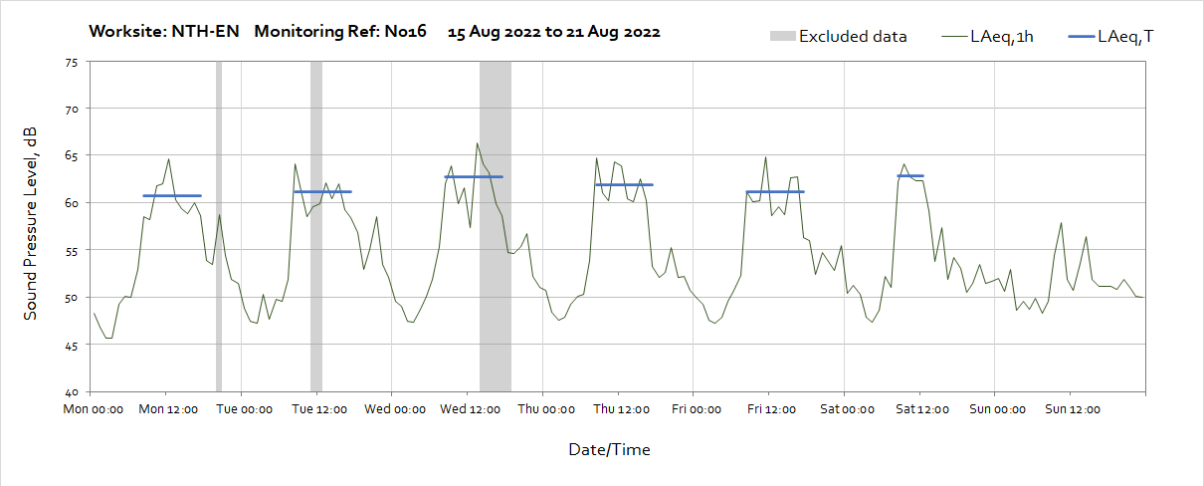
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: NTH-EN Monitoring Ref: No16 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
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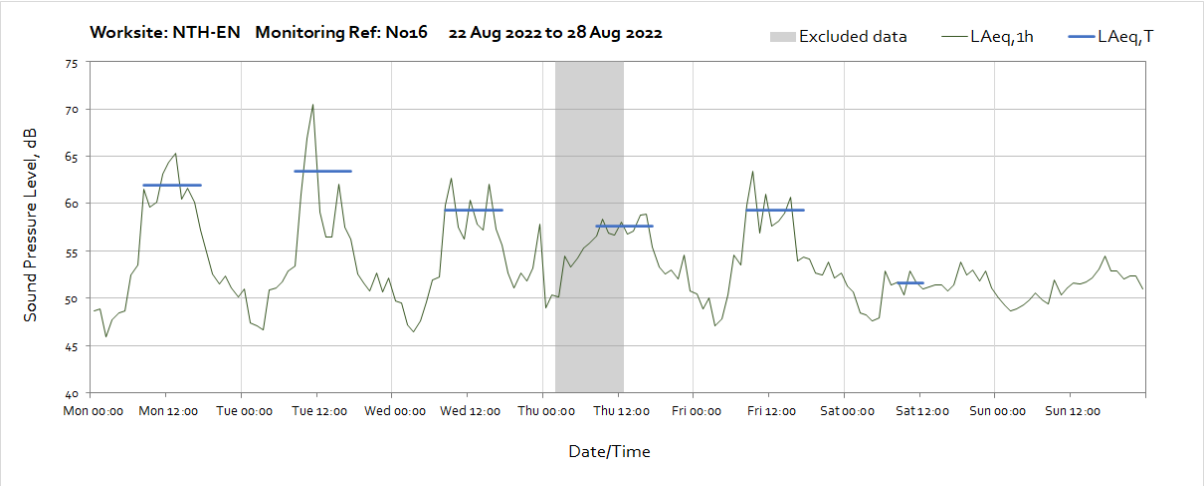
Sun 00:00
Sun 12:00
Date/Time


Worksite: NTH-EN Monitoring Ref: No16 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
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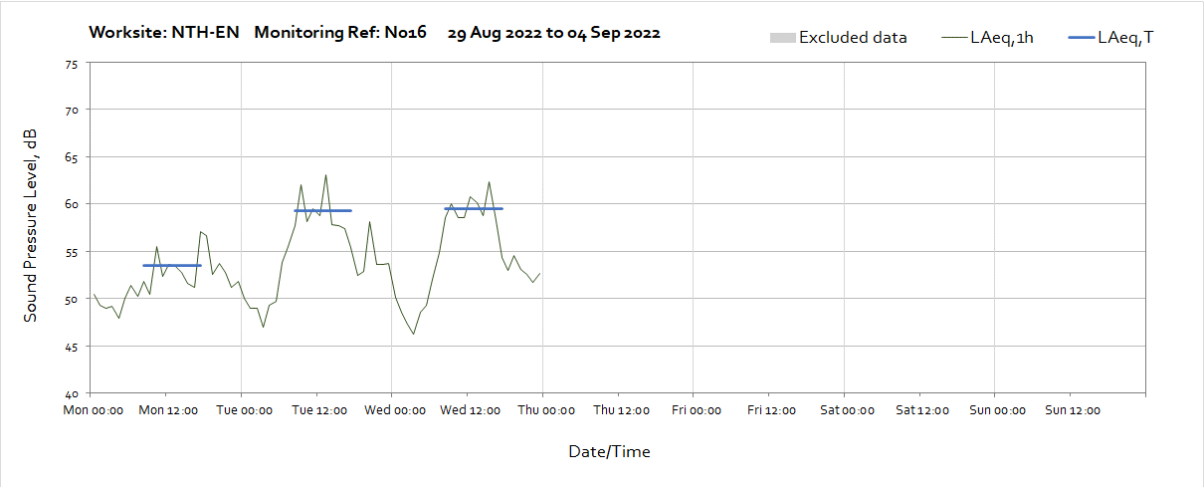
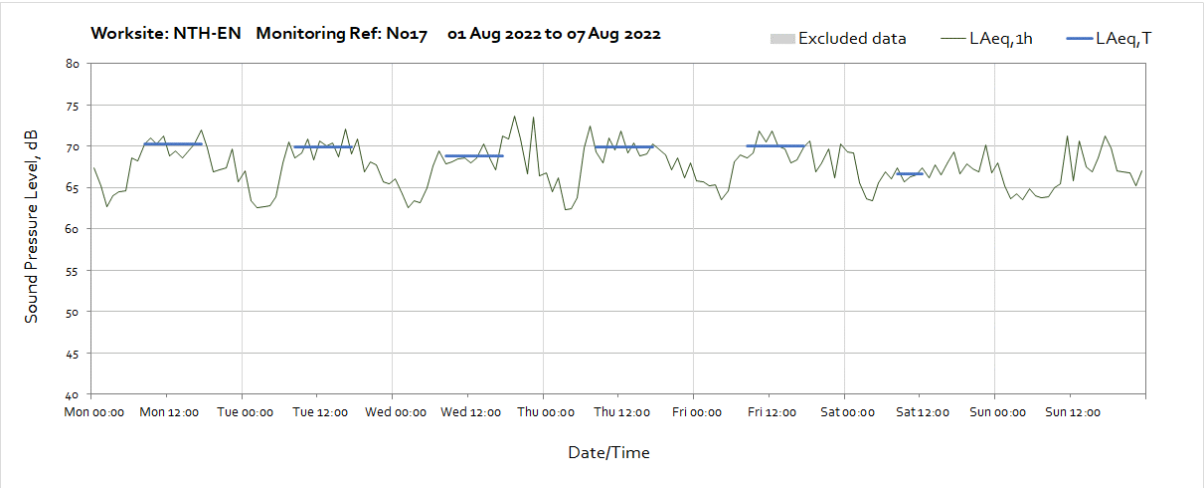
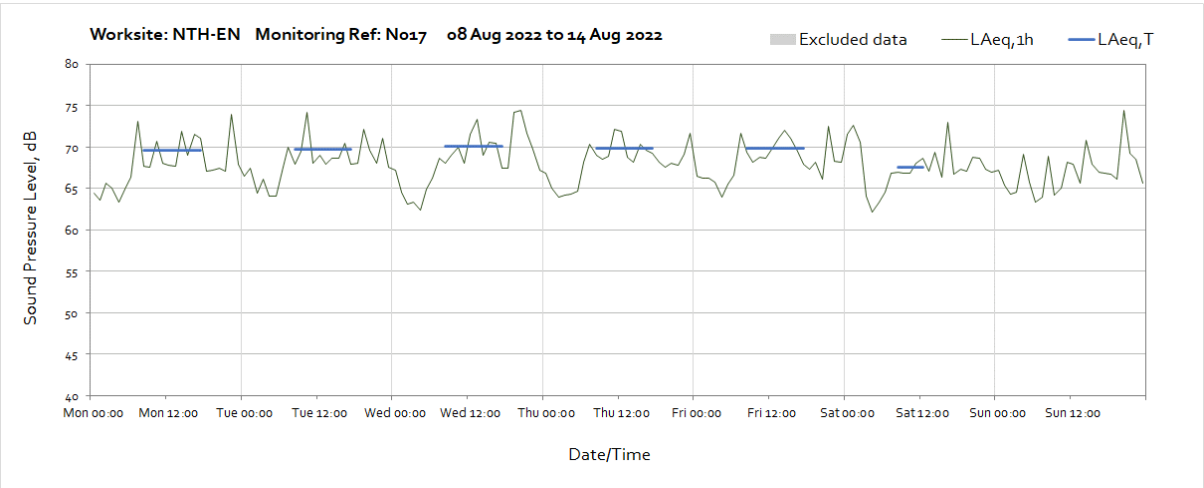
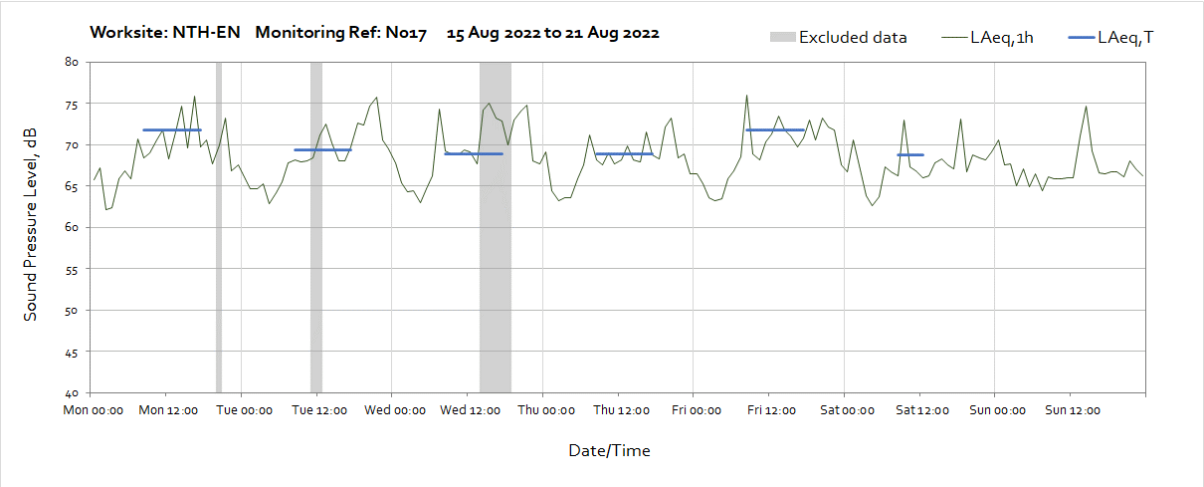
Sun 12:00
Date/Time



Worksite: NTH-EN – Monitoring Ref: N017






Worksite: NTH-EN Monitoring Ref: No17 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
80
75
70
65
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55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
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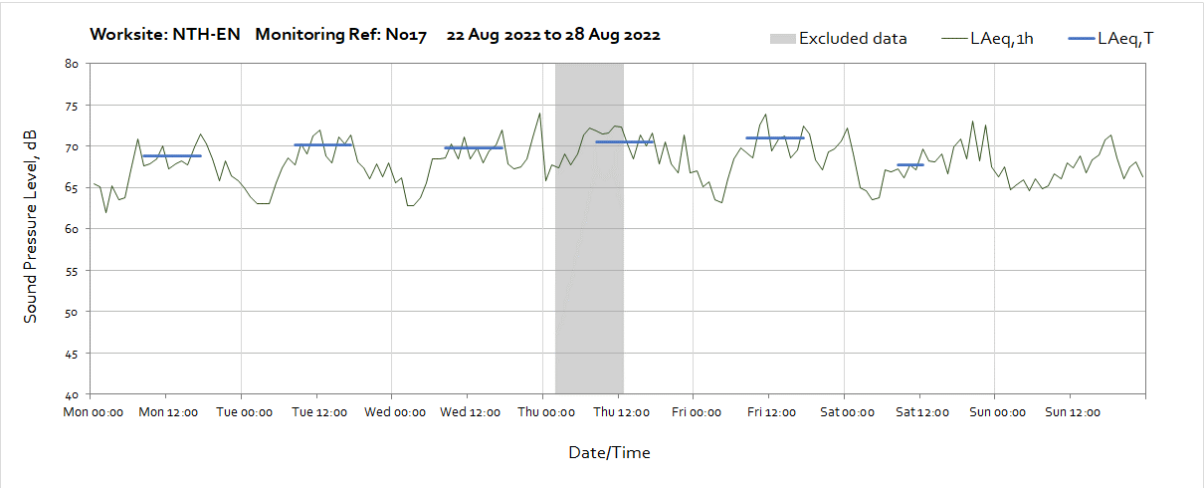
Date/Time


Worksite: NTH-EN Monitoring Ref: No17 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
80
75
70
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55
50
45
40
Mon 00:00
Mon 12:00
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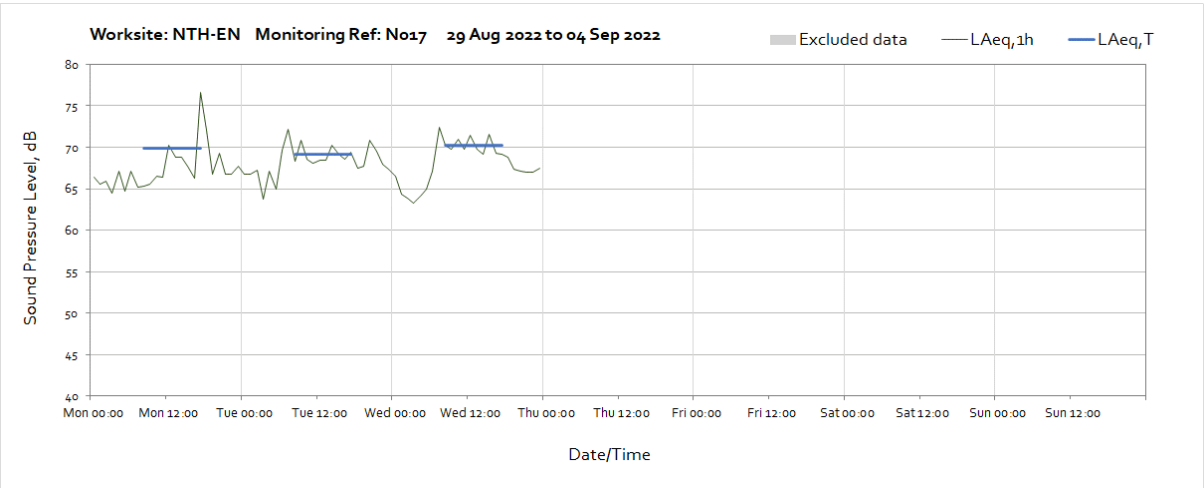
Date/Time


Worksite: NTH-EN Monitoring Ref: No17 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
80
75
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
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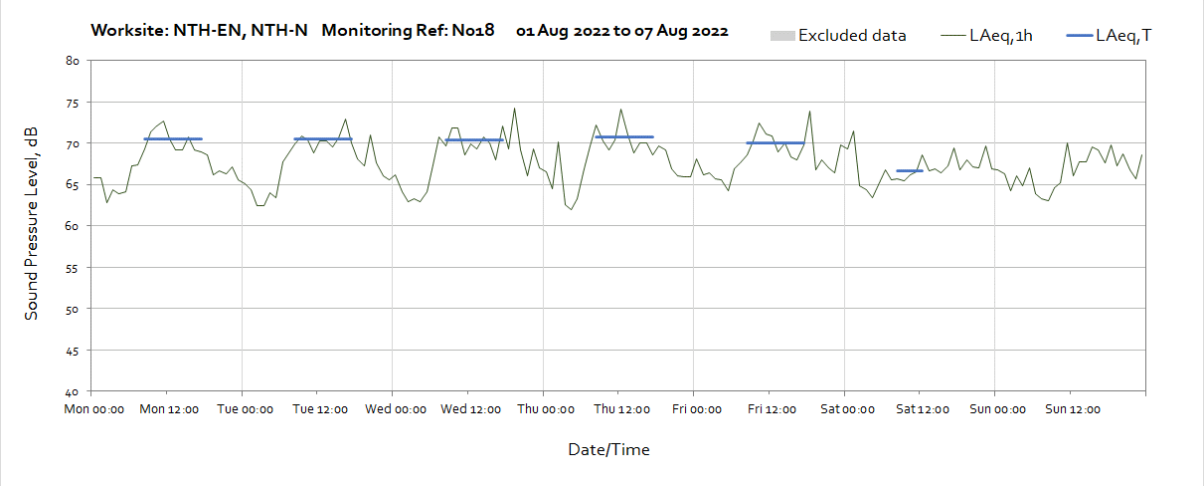
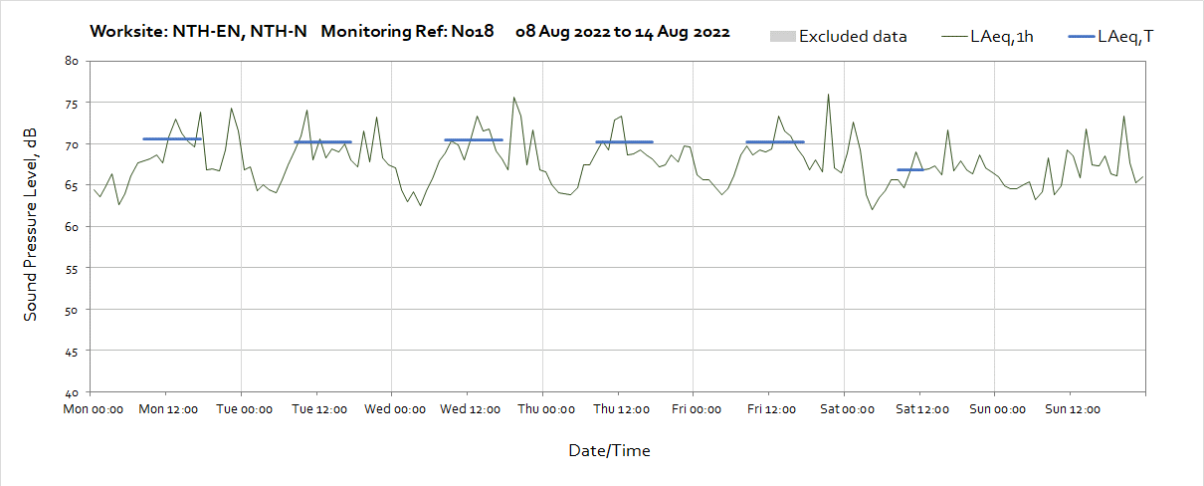
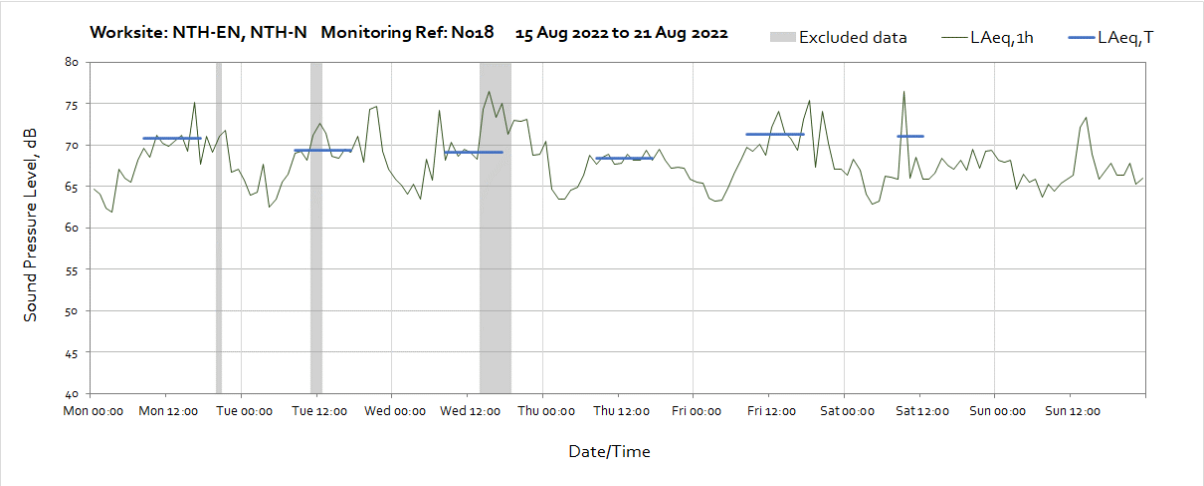
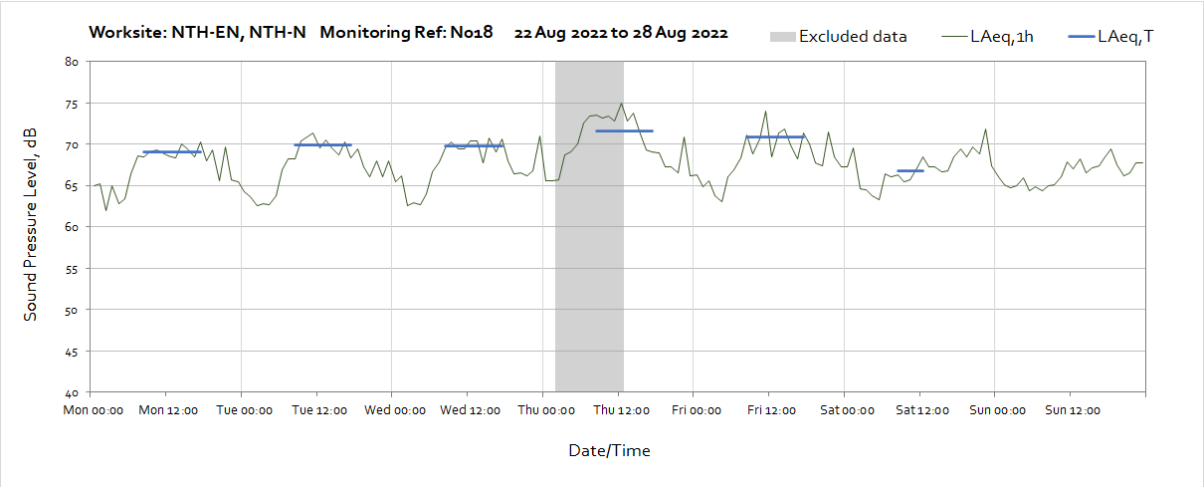
Date/Time

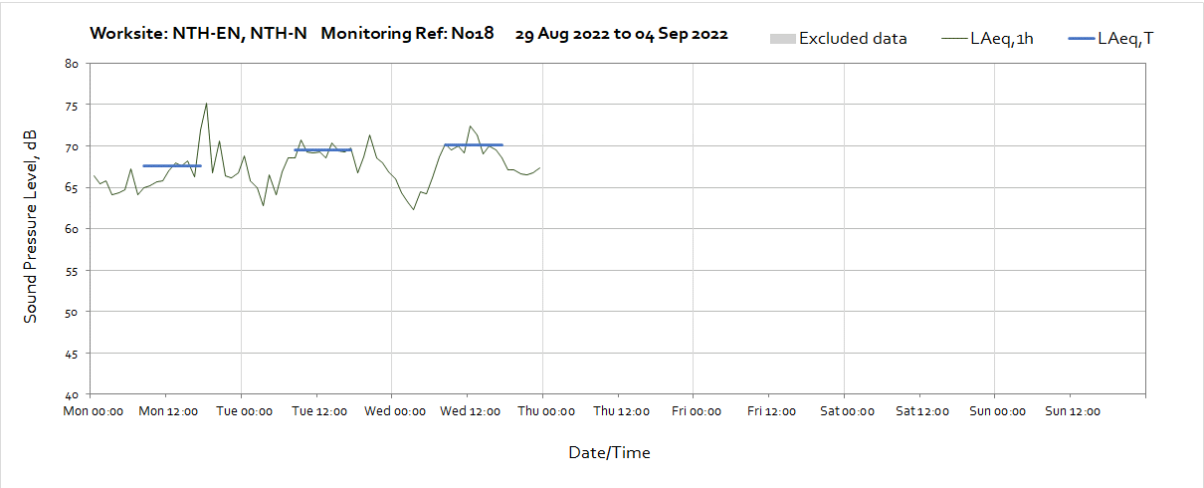
Worksite: NTH-EN, NTH-N – Monitoring Ref: N018



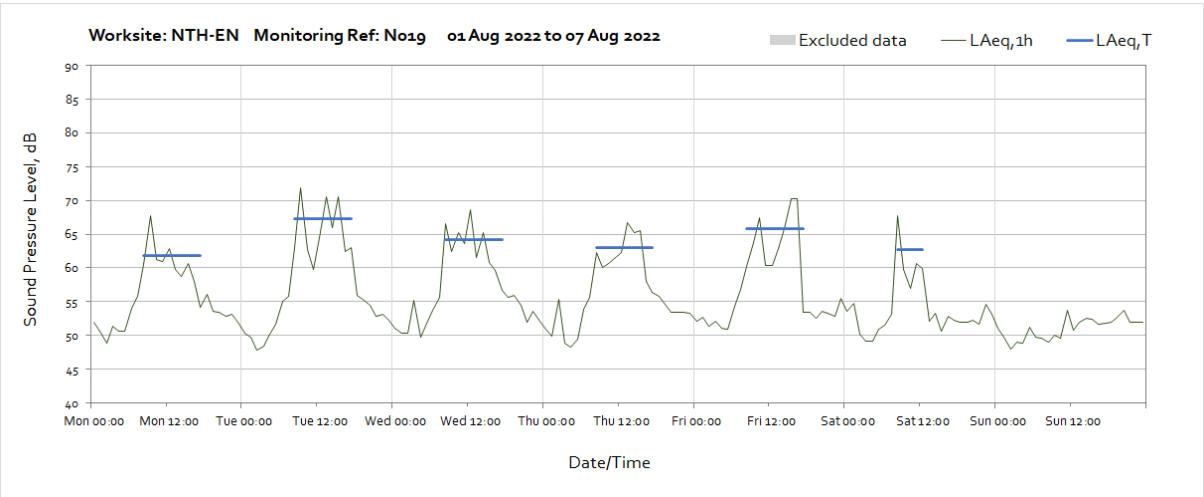


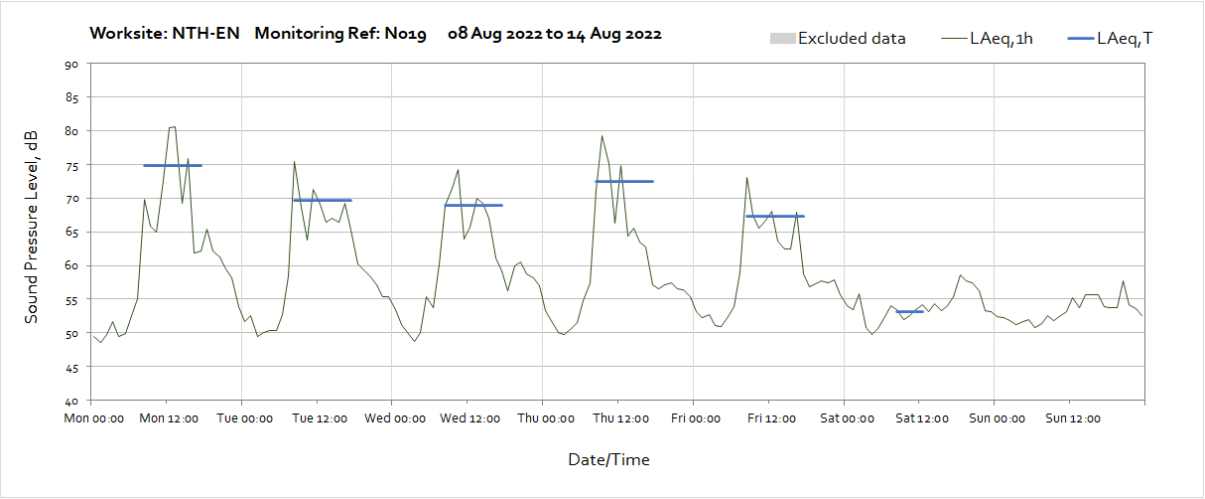


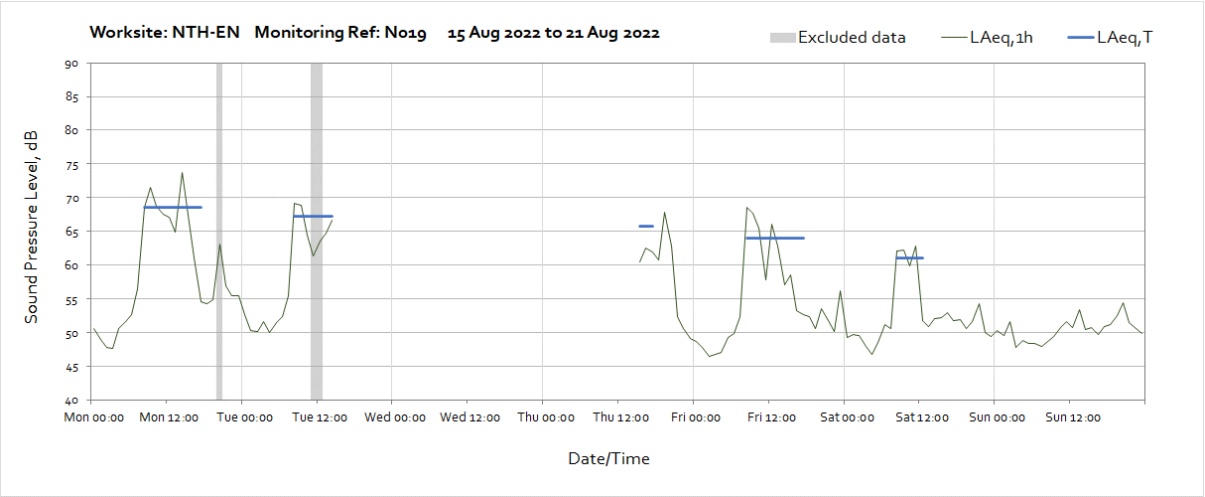




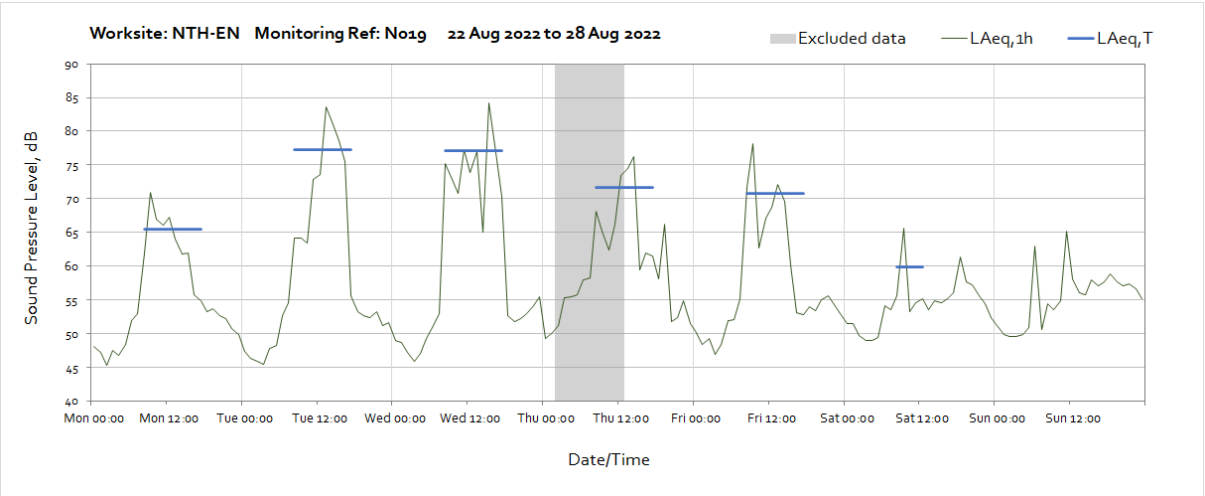
Worksite: NTH-EN – Monitoring Ref: N019

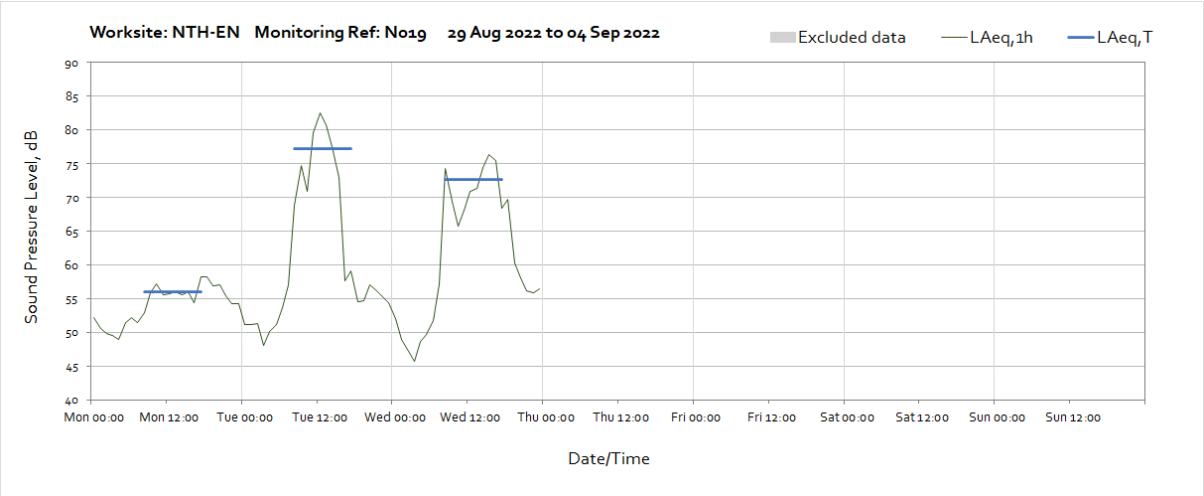




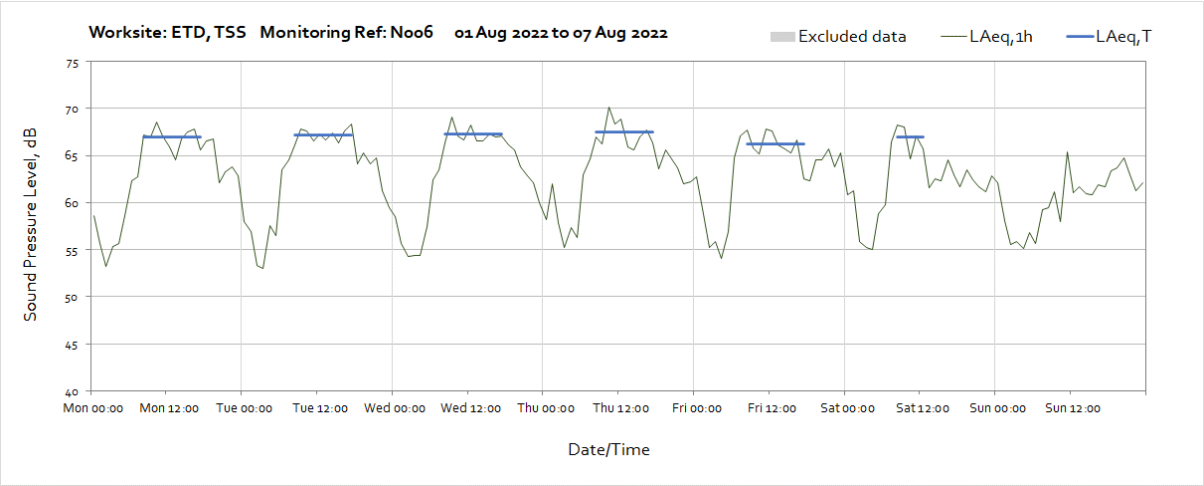


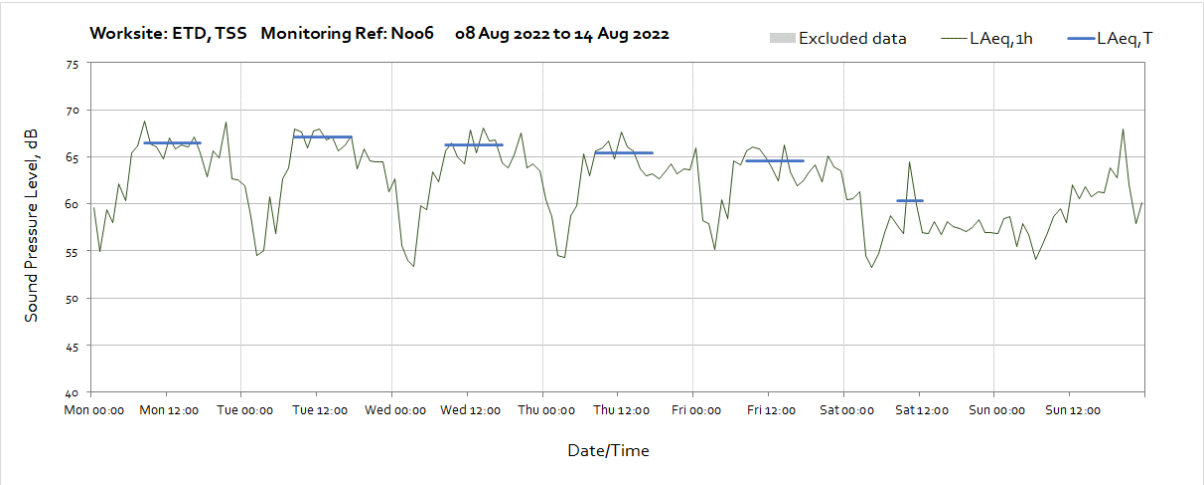
Note: Missing data from 15:00 on Tuesday 16th August until 15:00 on Thursday 18th August was due to loss of power to the monitoring station.

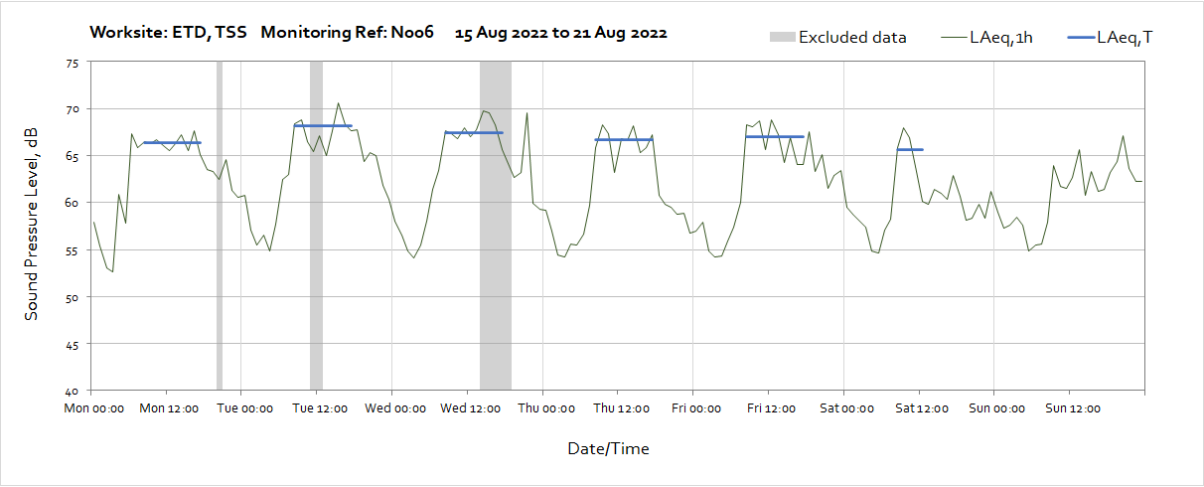




Worksite: ETD, TSS – Monitoring Ref: N006






Worksite: ETD, TSS Monitoring Ref: No06 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
55
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
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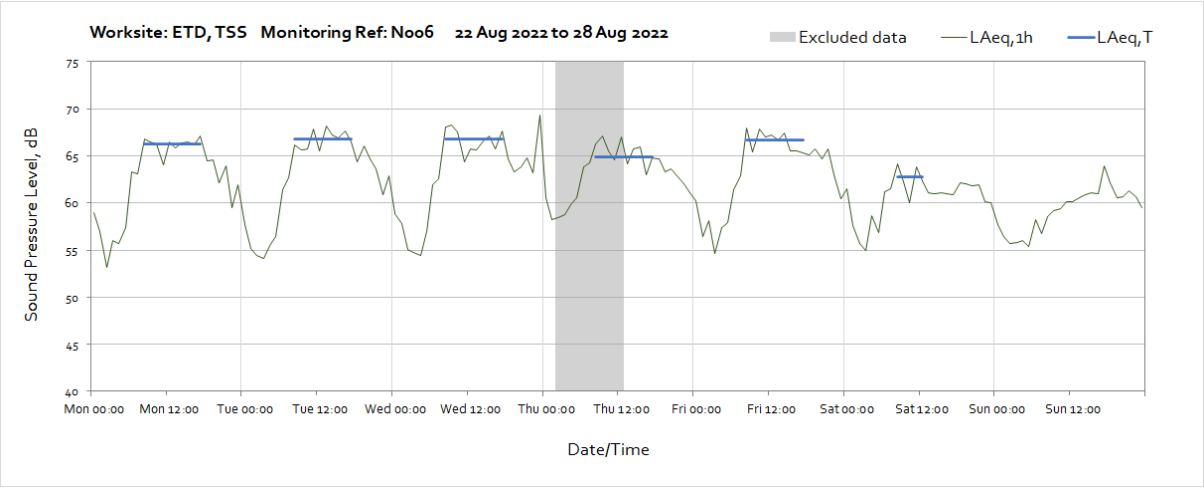
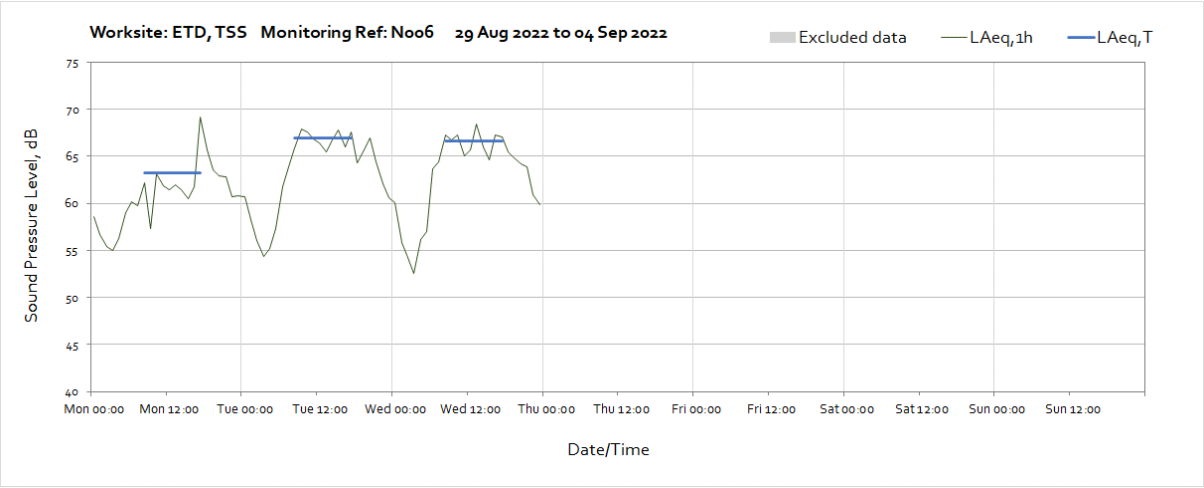
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: ETD, TSS Monitoring Ref: No06 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
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: ETD, TSS Monitoring Ref: No06 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
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
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Fri 12:00
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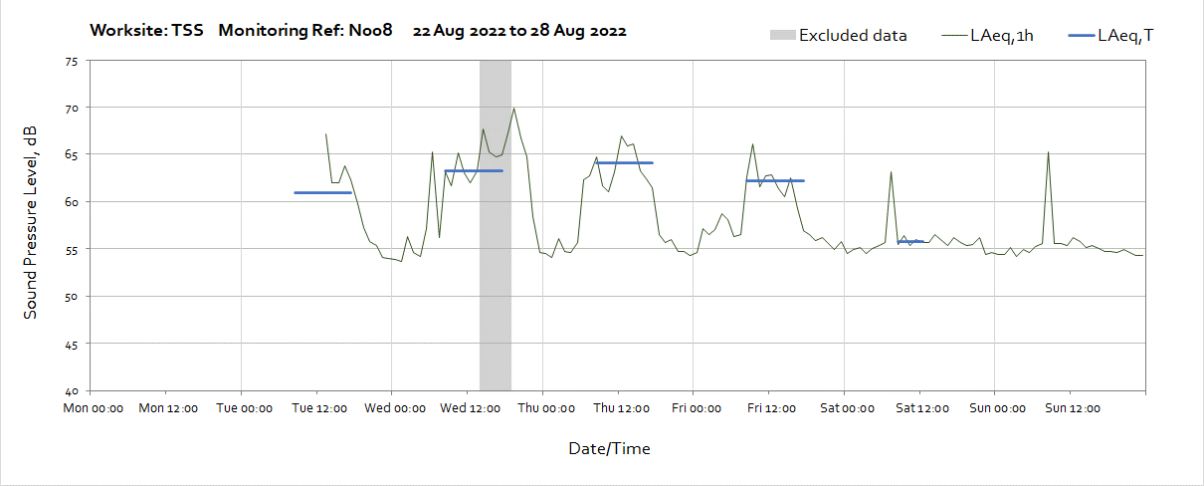
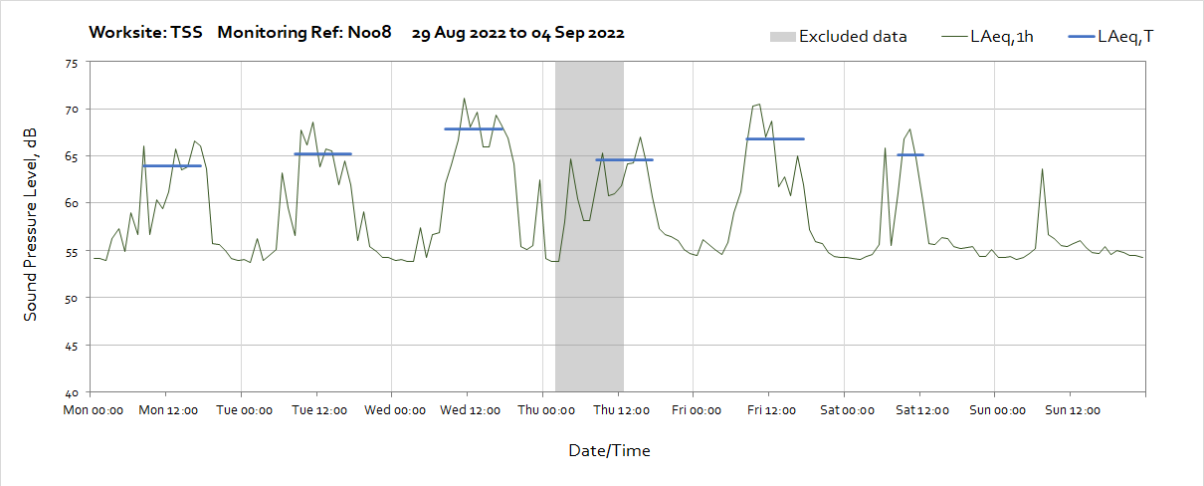
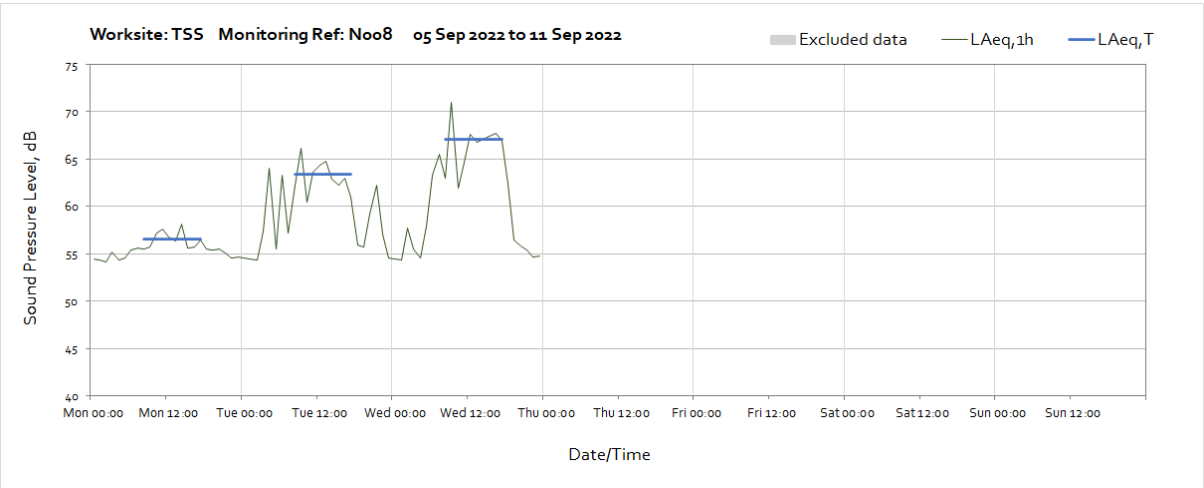
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

Worksite: TSS – Monitoring Ref: N008

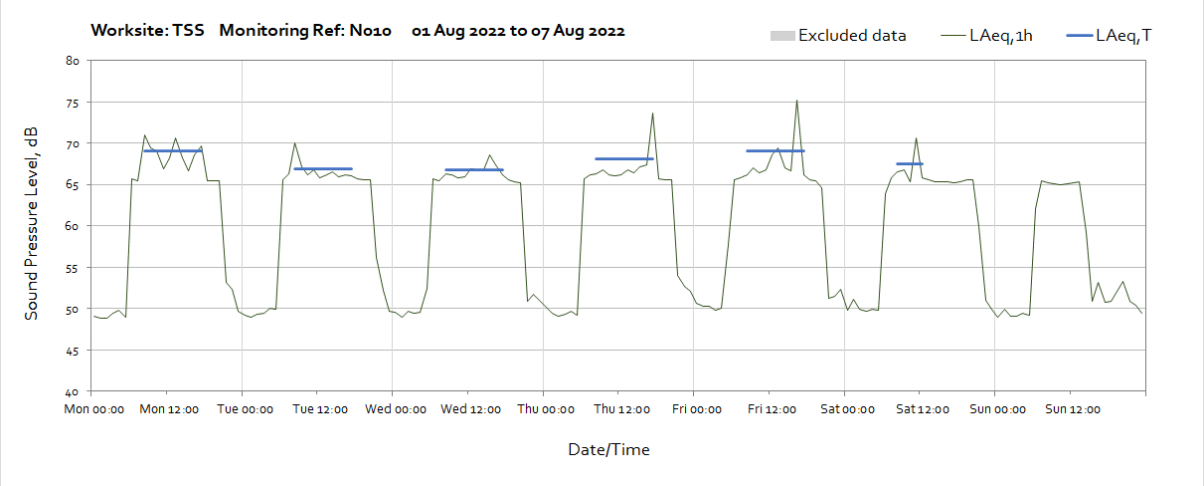


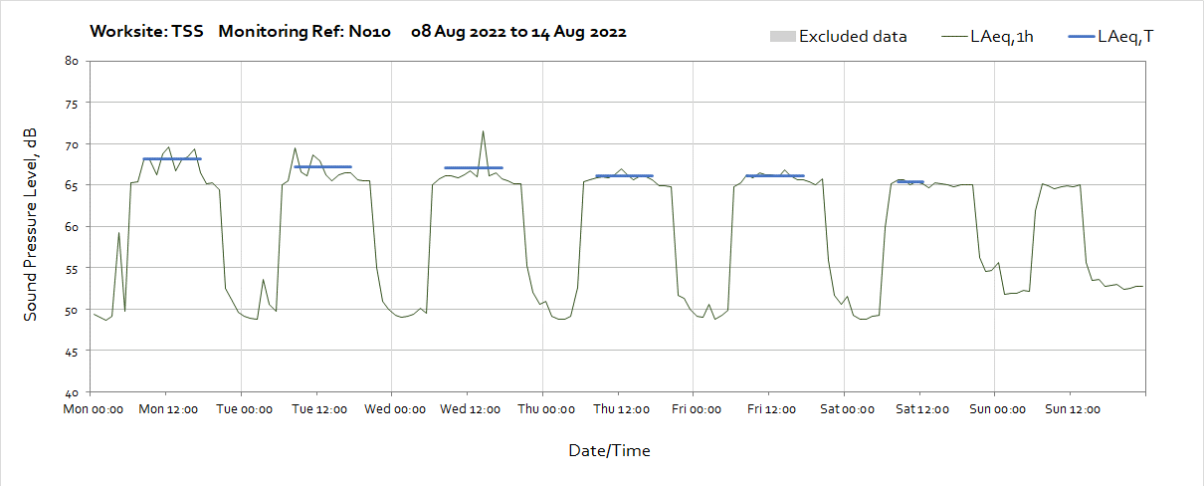
Note: Monitor installed at 13:00 on Tuesday 23rd August.

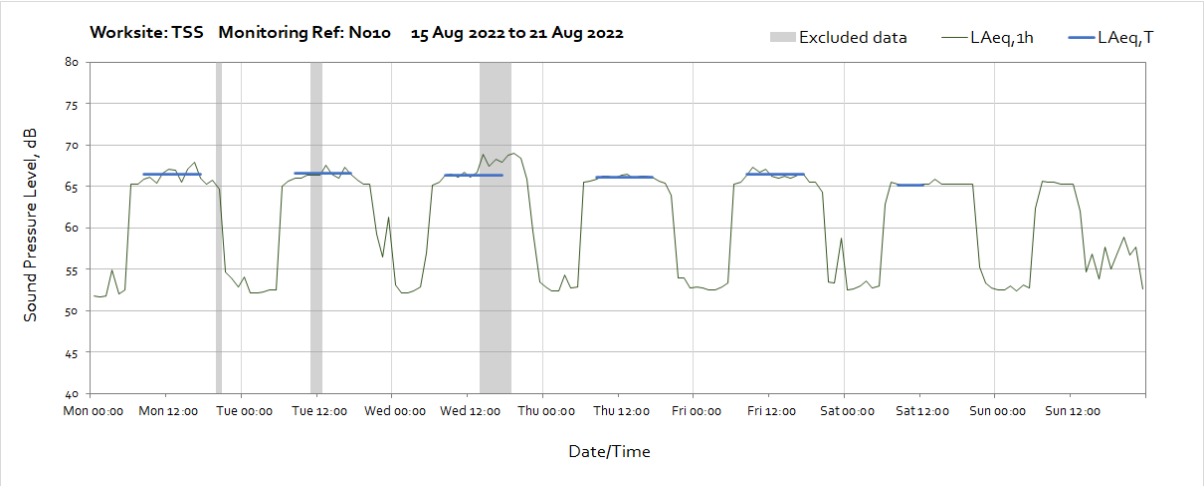


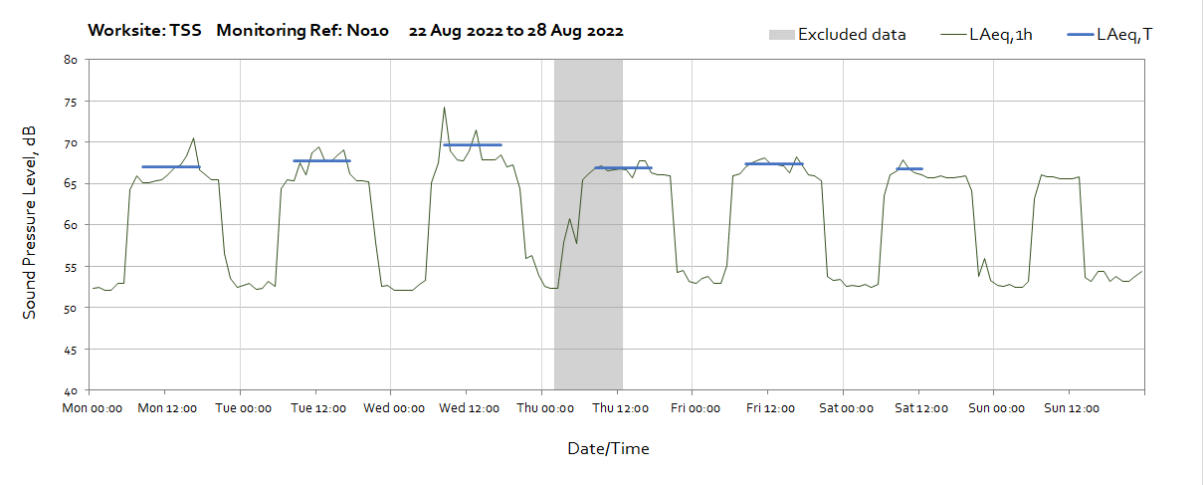


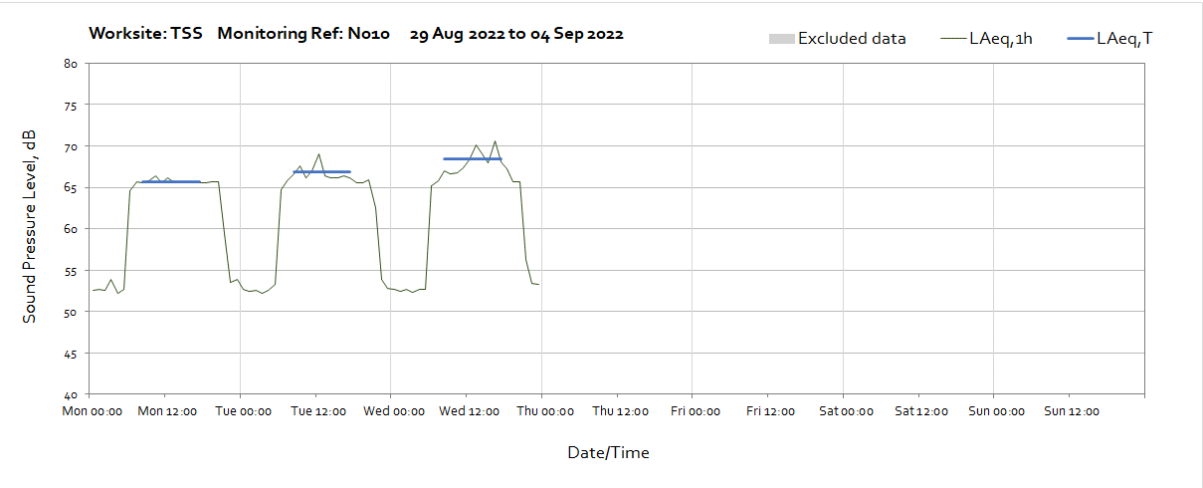
Worksite: TSS – Monitoring Ref: N010



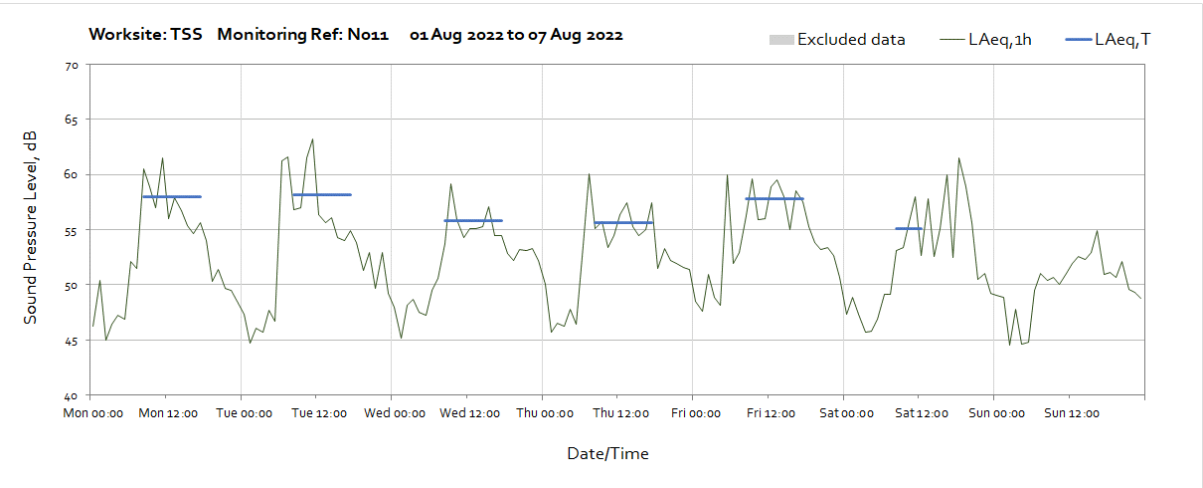


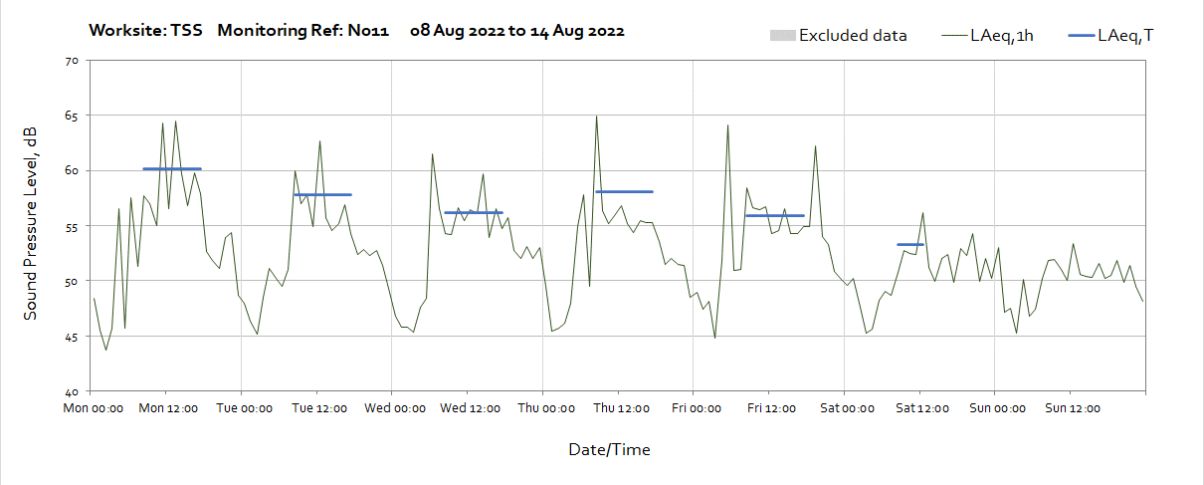






Worksite: TSS – Monitoring Ref: N011




Worksite: TSS Monitoring Ref: No11 08 Aug 2022 to 14 Aug 2022
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
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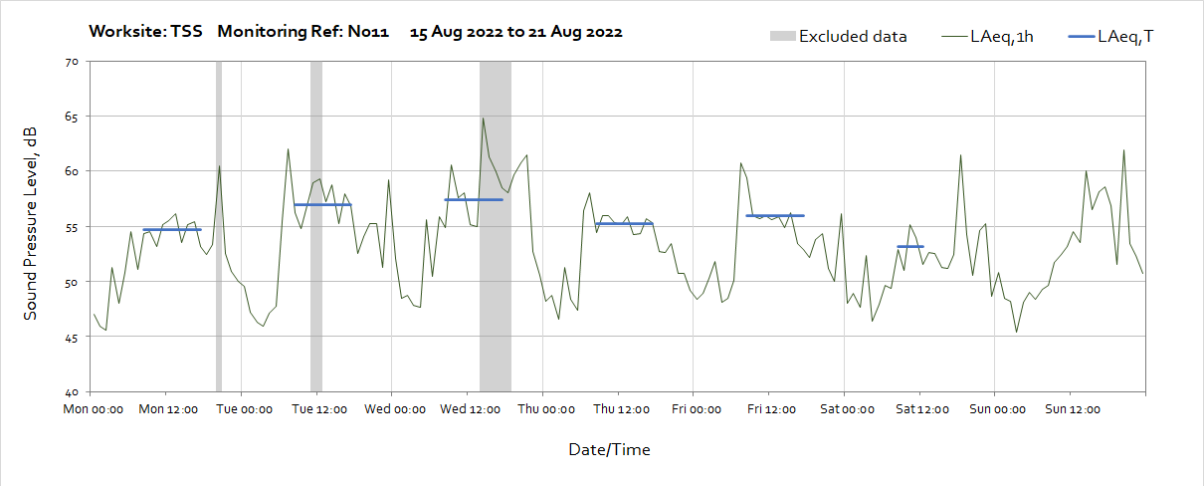
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: TSS Monitoring Ref: No11 15 Aug 2022 to 21 Aug 2022
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
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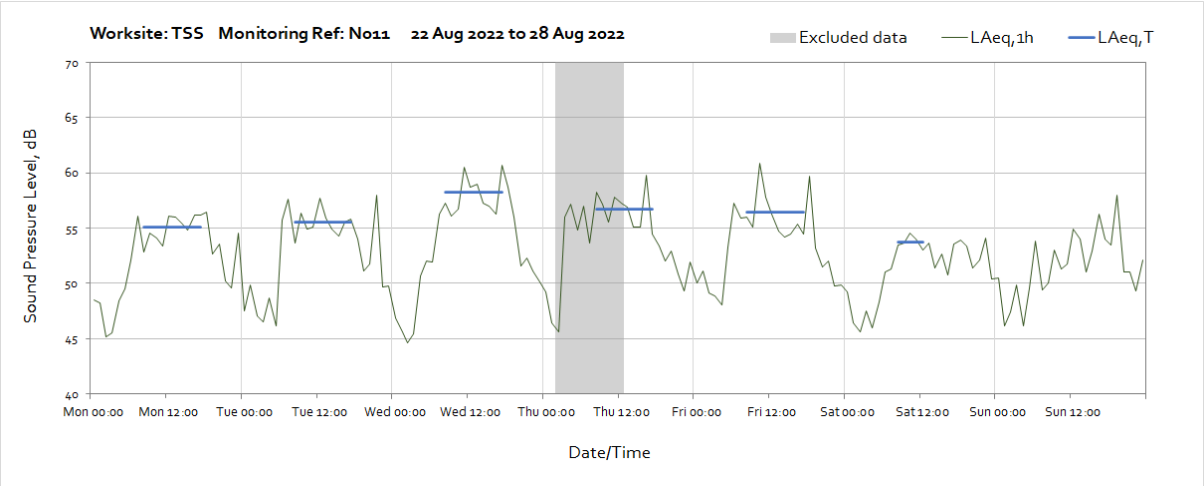
Sun 12:00
Date/Time


Worksite: TSS Monitoring Ref: No11 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
70
65
60
55
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45
40
Mon 00:00
Mon 12:00
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Tue 12:00
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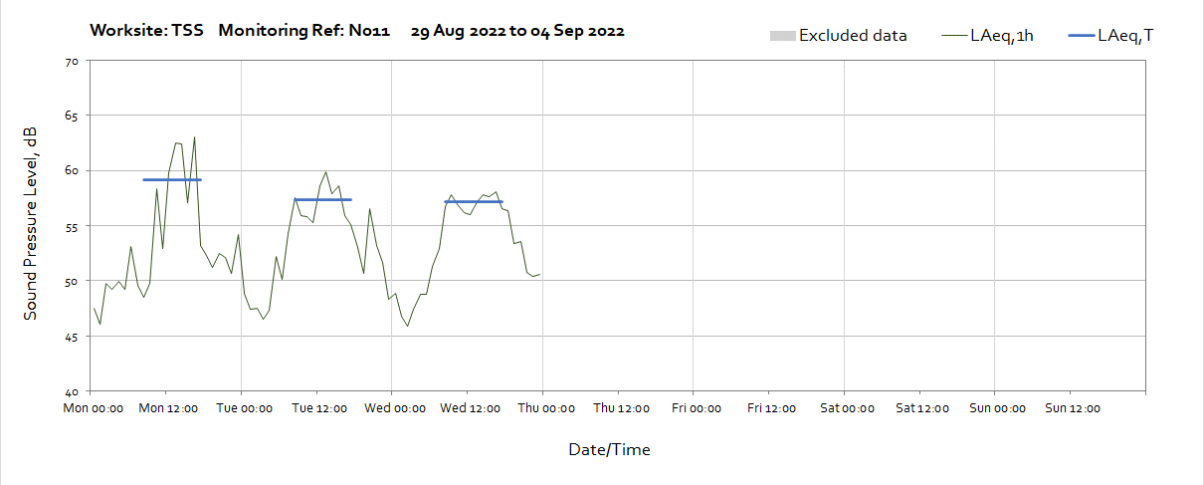
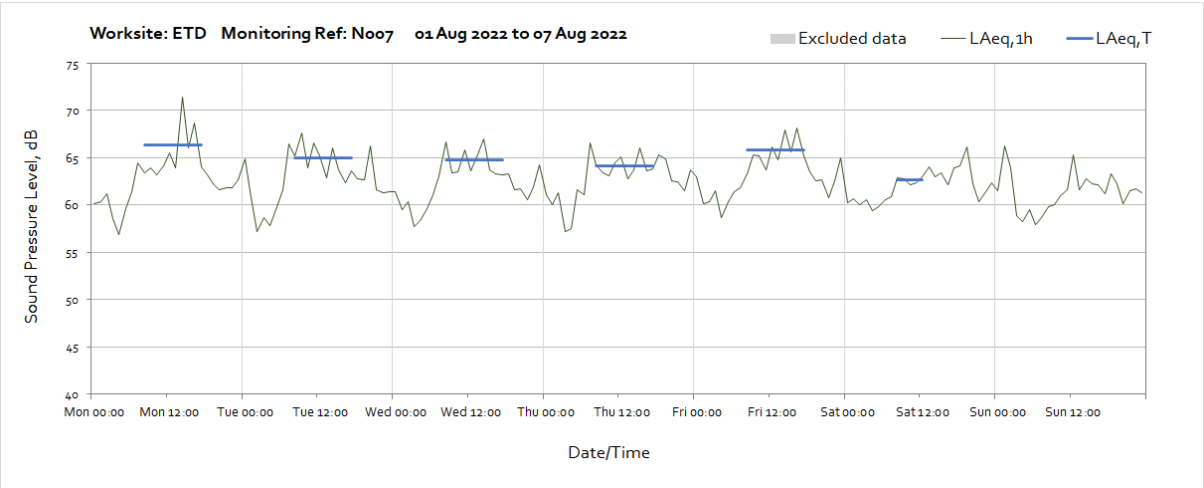
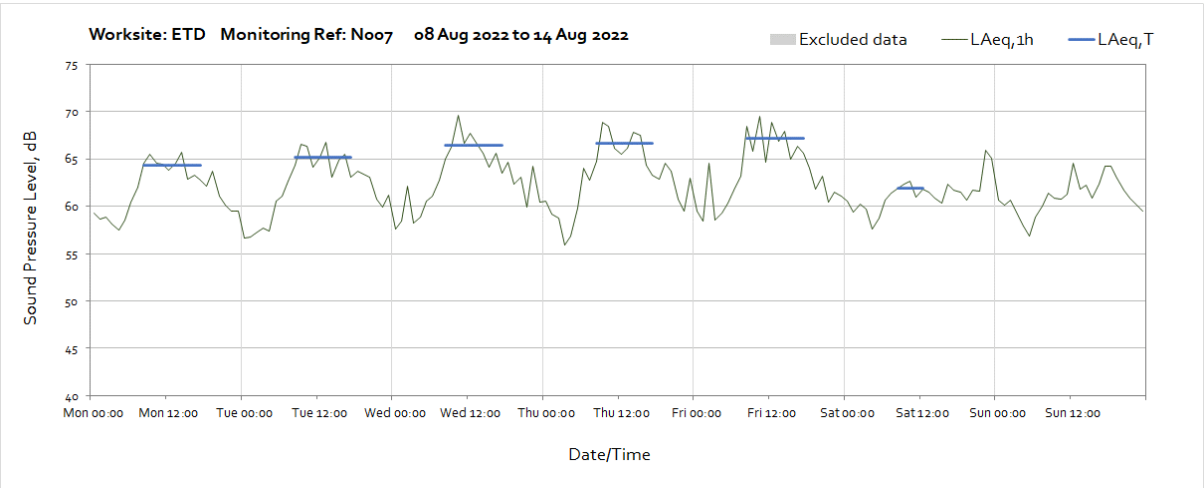
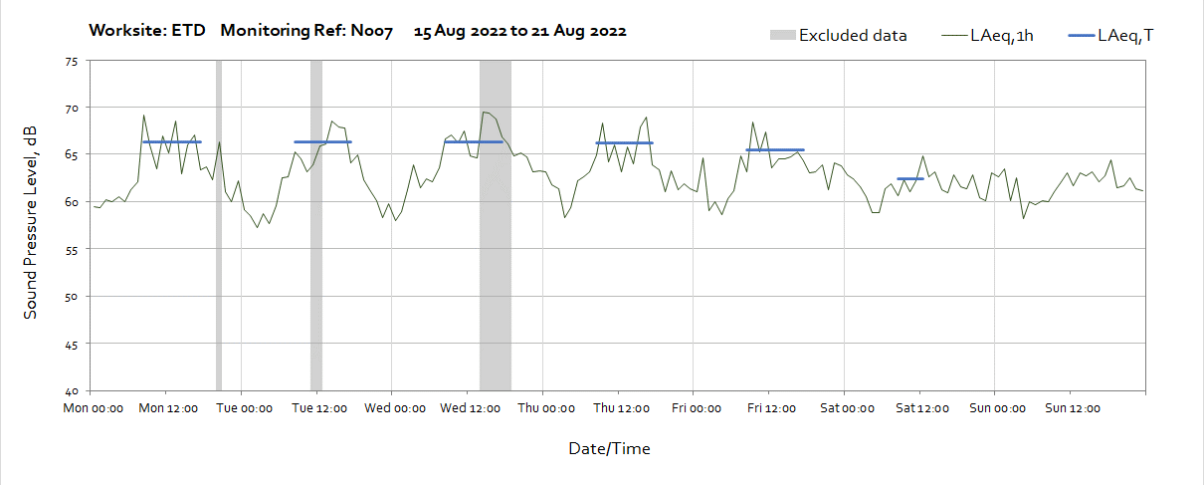
Sun 12:00
Date/Time

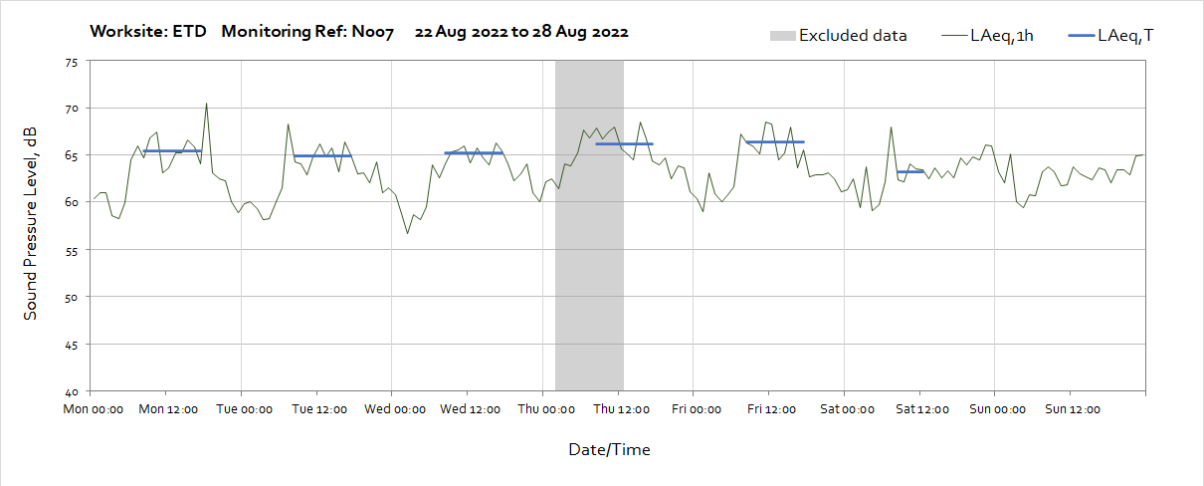


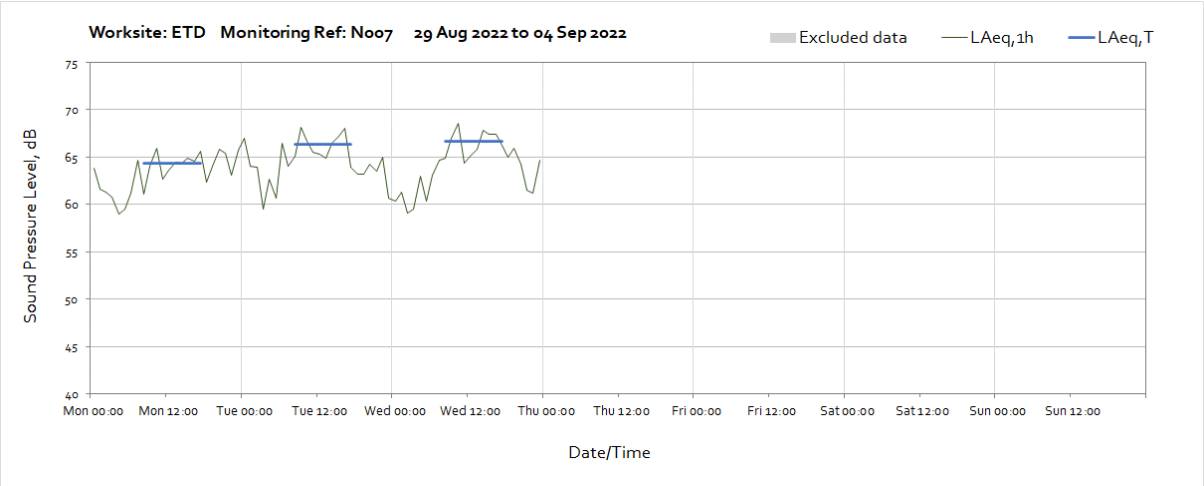
Worksite: ETD – Monitoring Ref: N007






Worksite: ETD Monitoring Ref: No07 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
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: ETD Monitoring Ref: No07 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
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: ETD Monitoring Ref: No07 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
75
70
65
60
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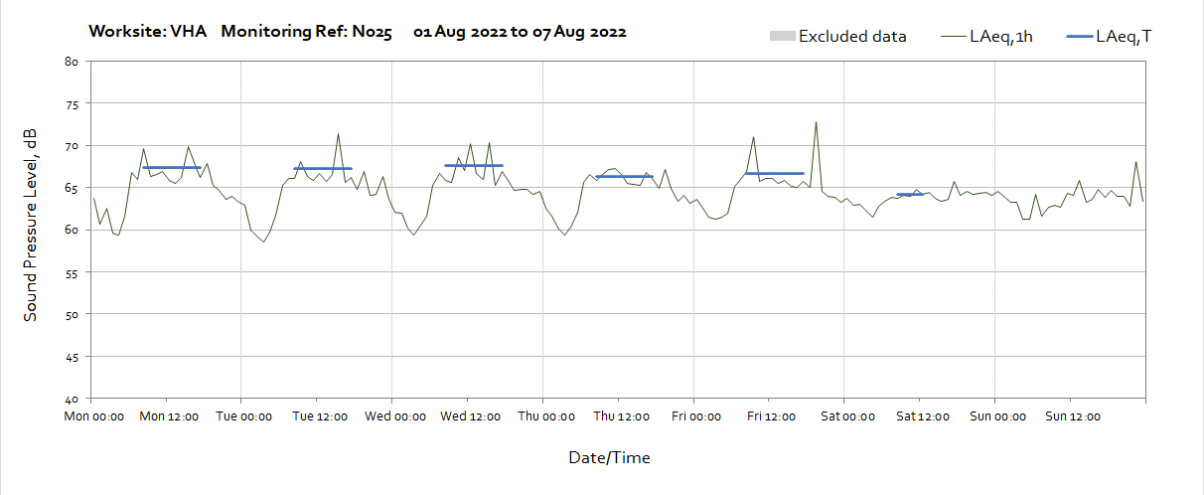
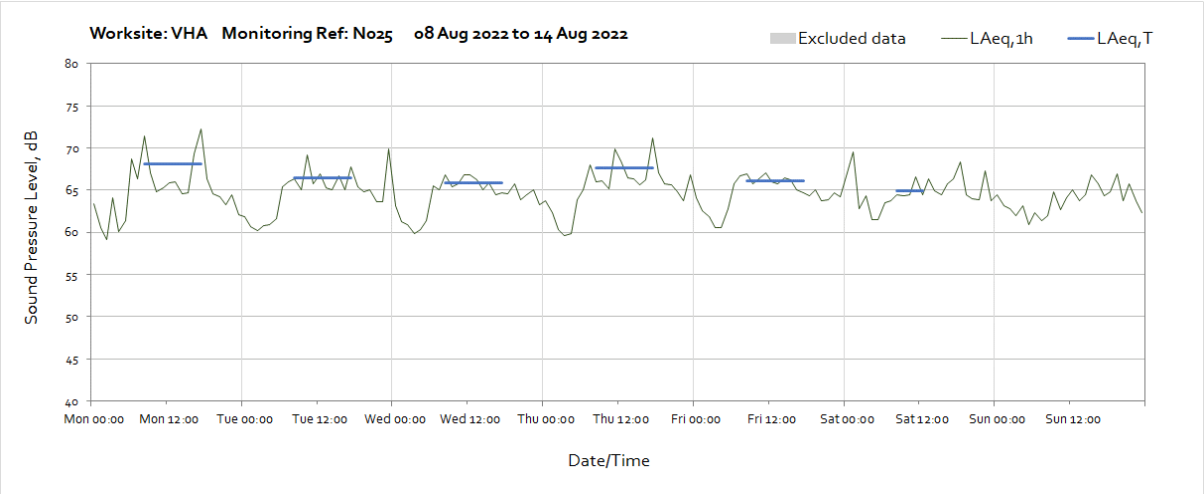
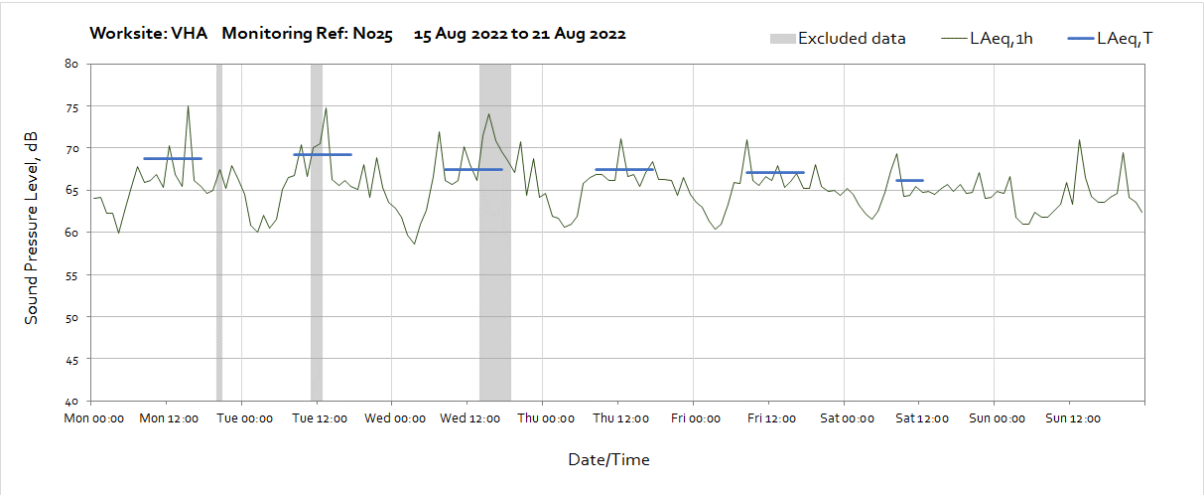
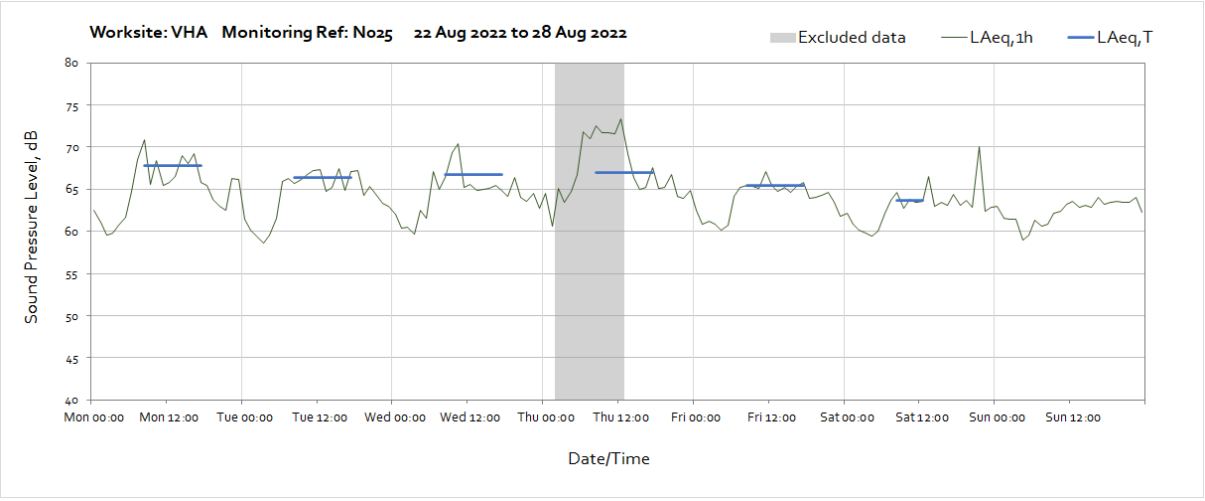
50
45
40
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

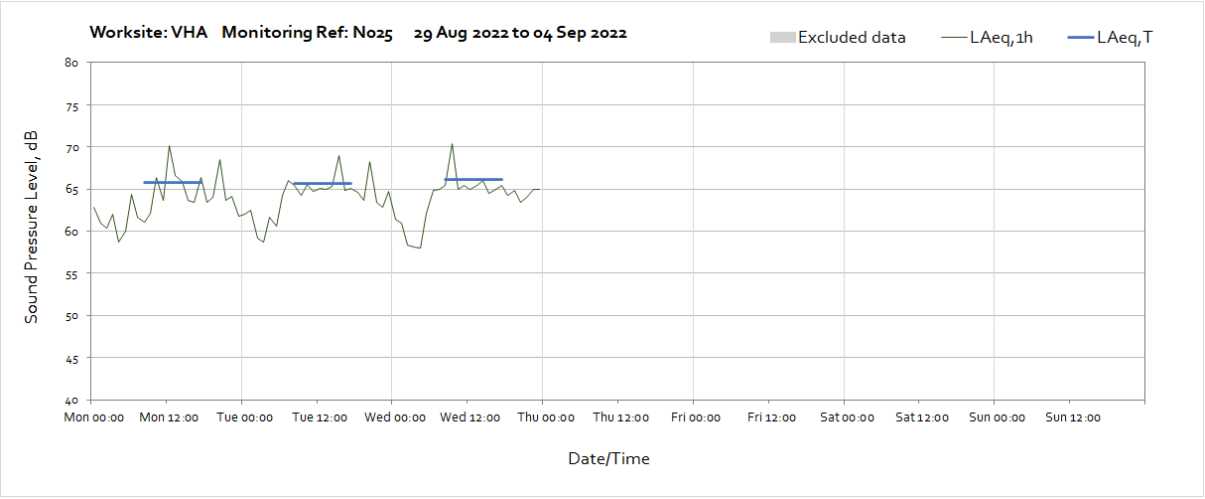
Vehicle Holding Area (VHA) – Monitoring Ref: N025



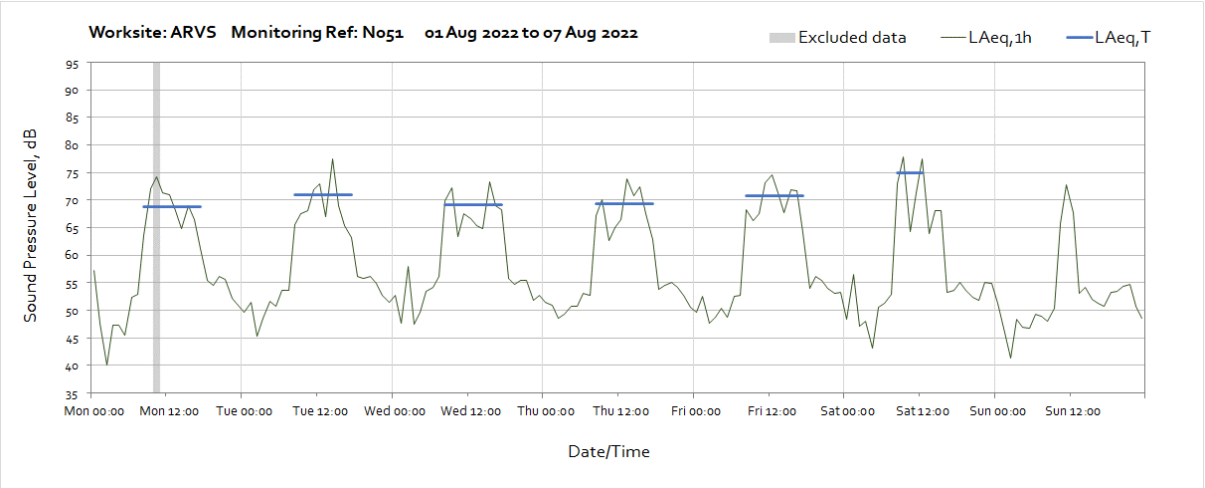


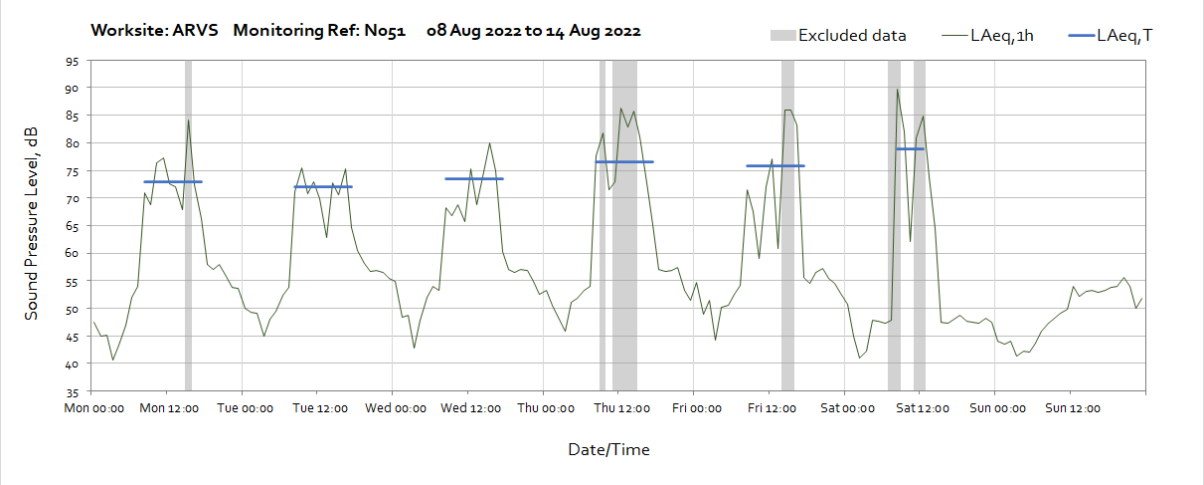


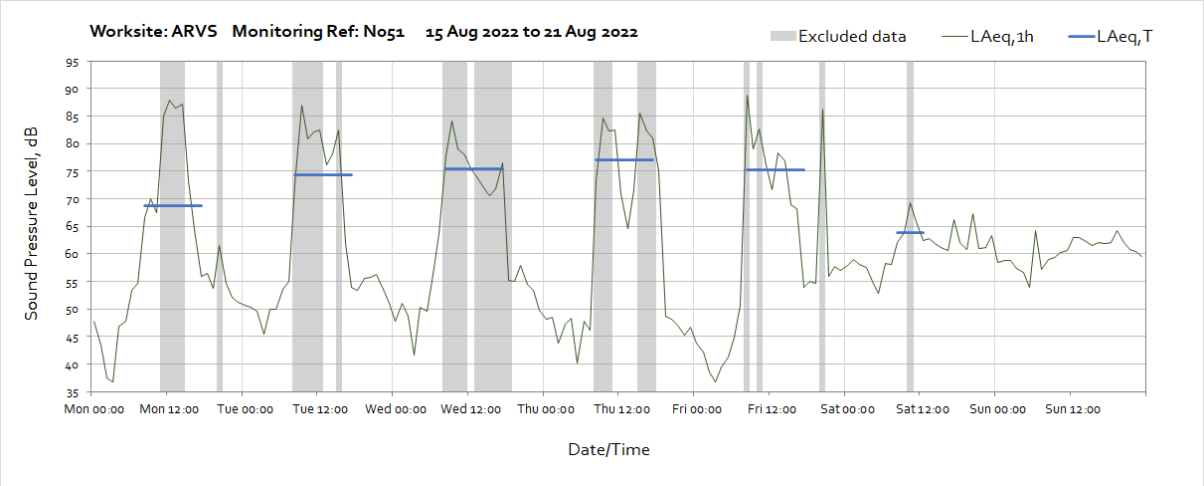




Adelaide Road Ventilation Shaft (ARVS) – Monitoring Ref: N051




Worksite: ARVS Monitoring Ref: No51 08 Aug 2022 to 14 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
95
90
85
80
75
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: ARVS Monitoring Ref: No51 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
95
90
85
80
75
70
65
60
55
50
45
40
35
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
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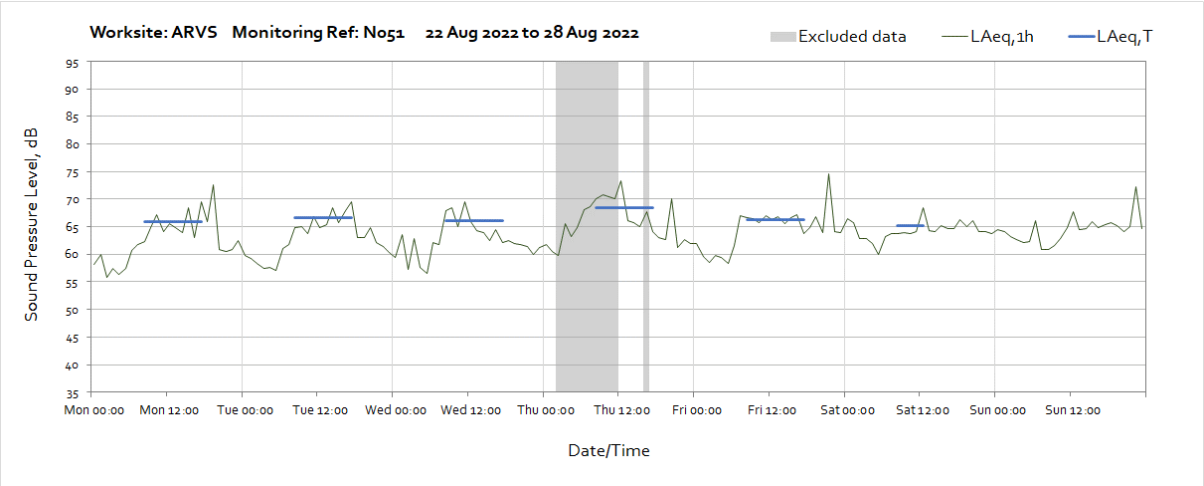
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: ARVS Monitoring Ref: No51 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
95
90
85
80
75
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
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Thu 12:00
Fri 00:00
Fri 12:00
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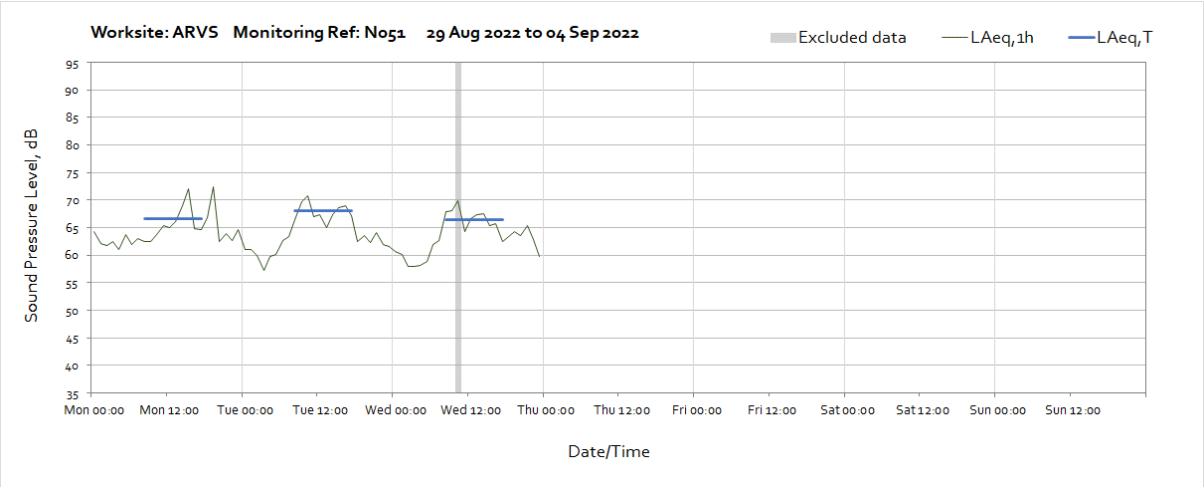
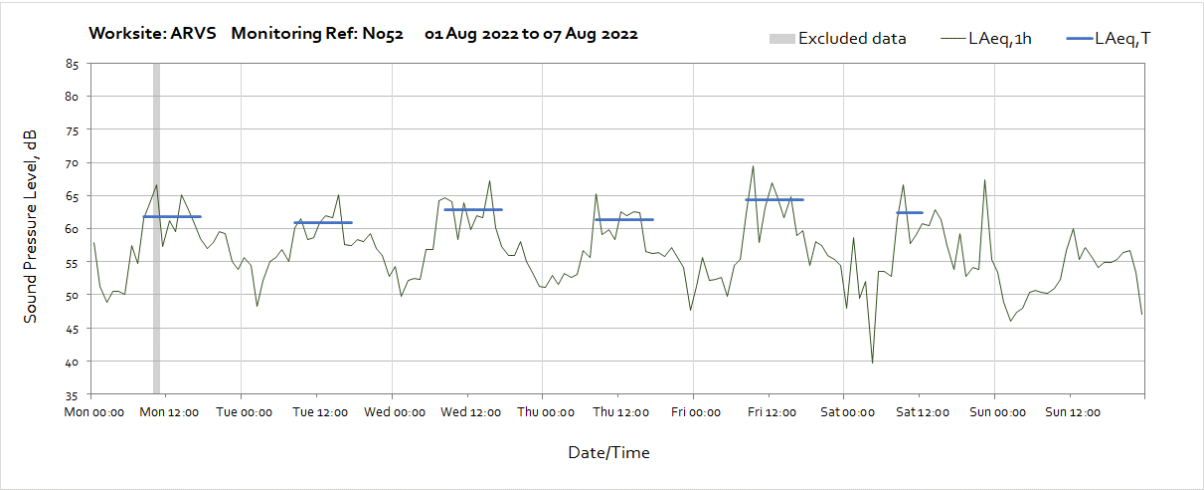
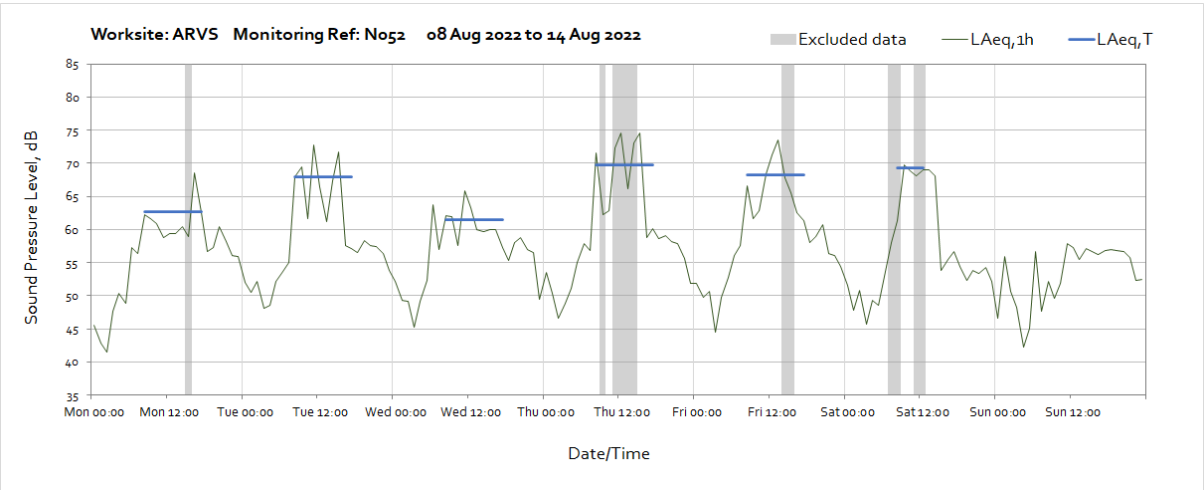
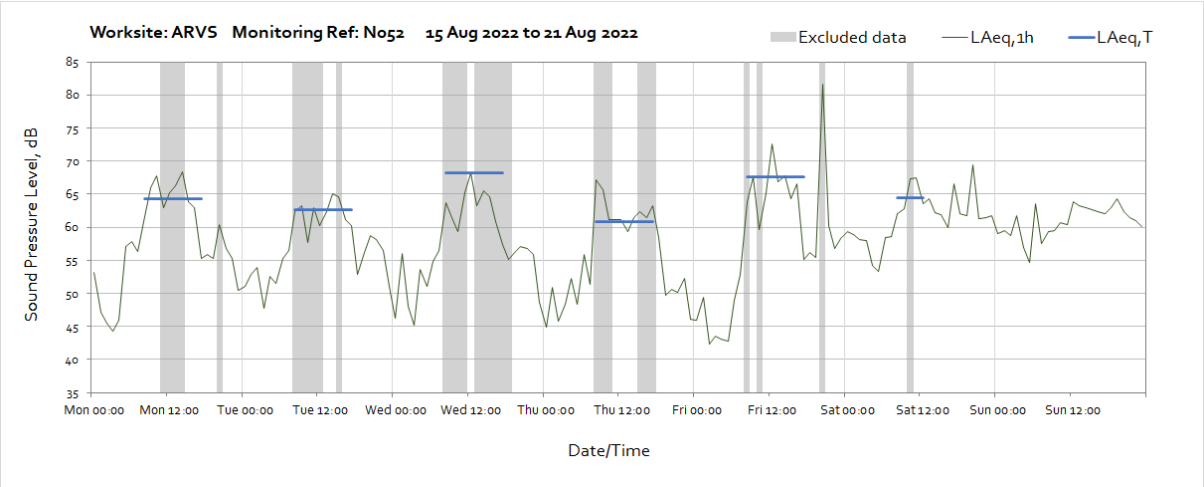
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time



Adelaide Road Ventilation Shaft (ARVS) – Monitoring Ref: N052






Worksite: ARVS Monitoring Ref: No52 15 Aug 2022 to 21 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
85
80
75
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
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Thu 12:00
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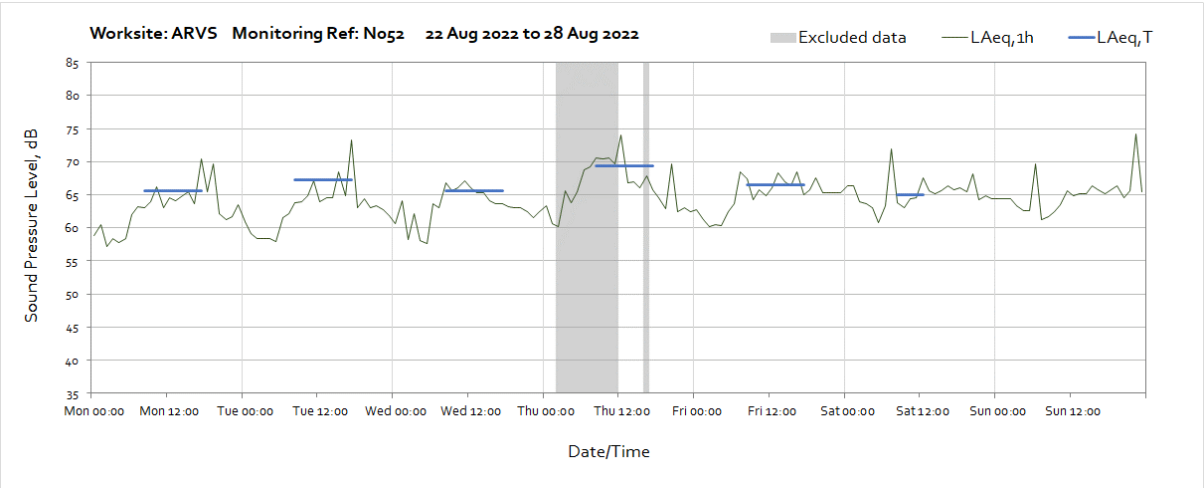
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: ARVS Monitoring Ref: No52 22 Aug 2022 to 28 Aug 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
85
80
75
70
65
60
55
50
45
40
35
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
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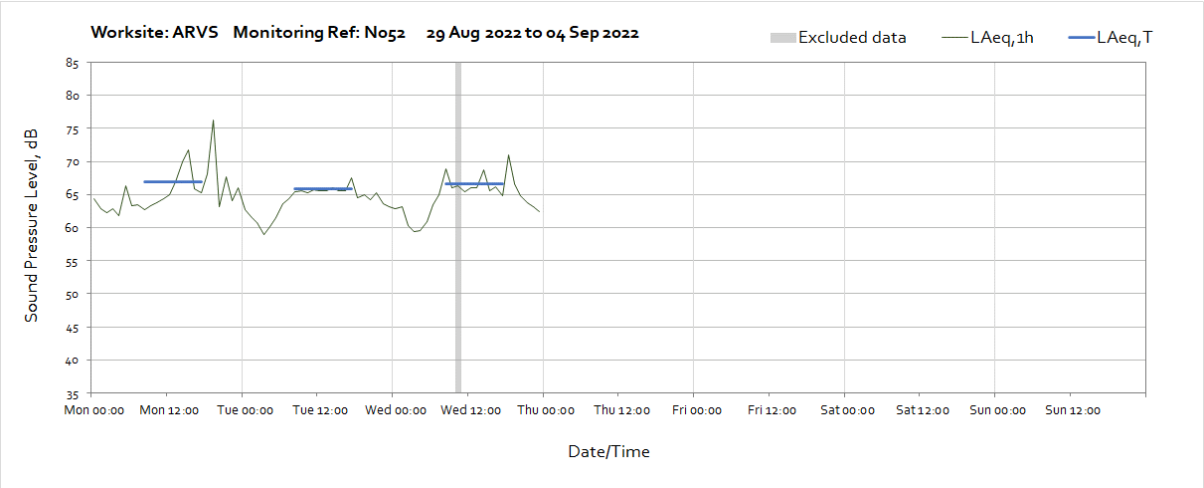
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: ARVS Monitoring Ref: No52 29 Aug 2022 to 04 Sep 2022
Excluded data
LAeq,1h
LAeq,T
Sound Pressure Level, dB
85
80
75
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
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Fri 12:00
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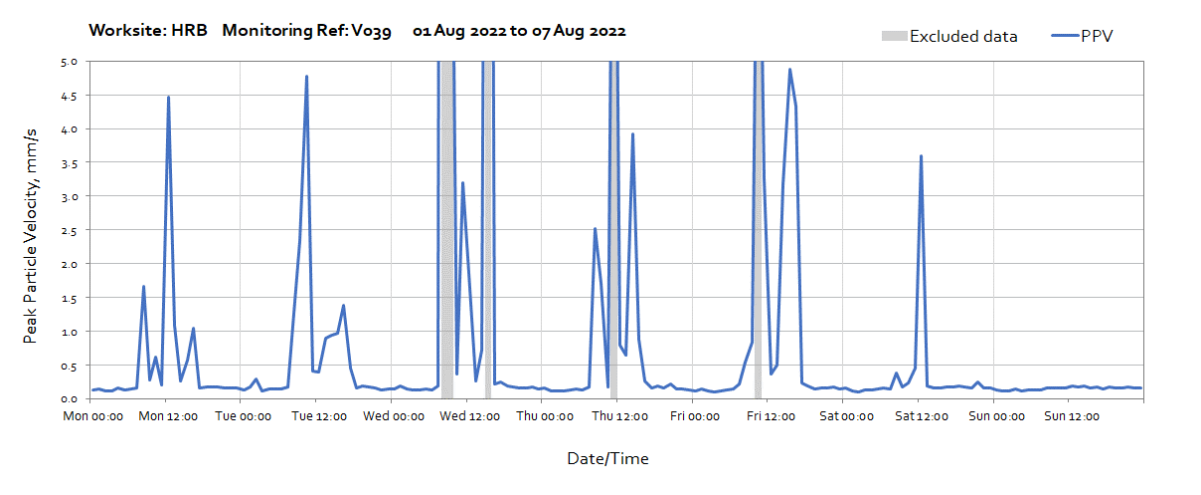
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

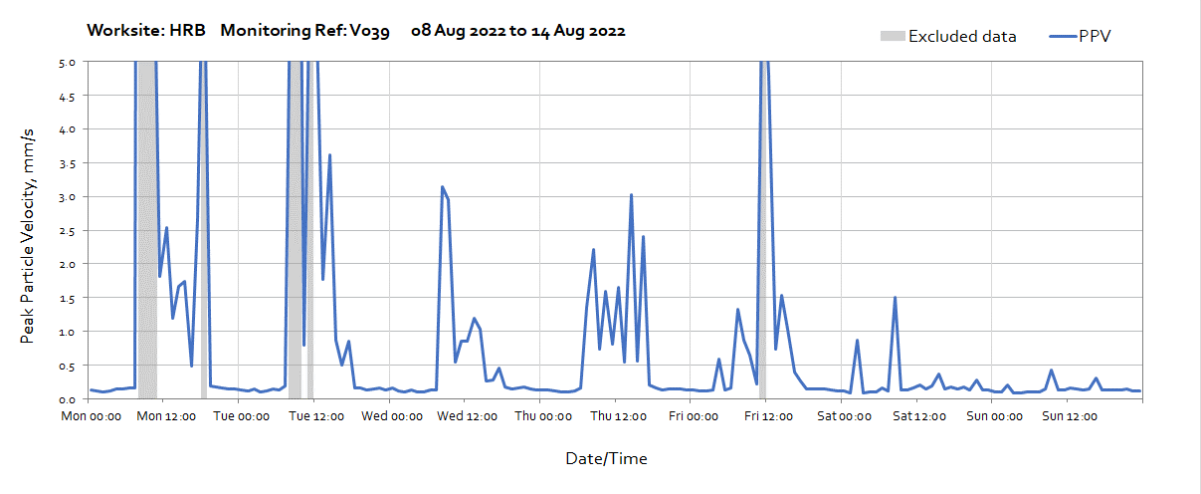
Vibration

The following graphs show the hourly measured peak particle velocity PPV recorded during the monitoring period. The graphs show the resultant PPV due to vibration components on three orthogonal axes x, y and z. Where resultant PPV data is not available (monitors V039 and V043), the highest vibration component in either of the three axes is presented for each 1hr measurement period respectively. Where high values of PPV were caused by local interference with the vibration monitor, which are not representative of HS2 construction works, these values have been greyed out in the following charts and have been excluded to calculate values in Table 4 of the main report.

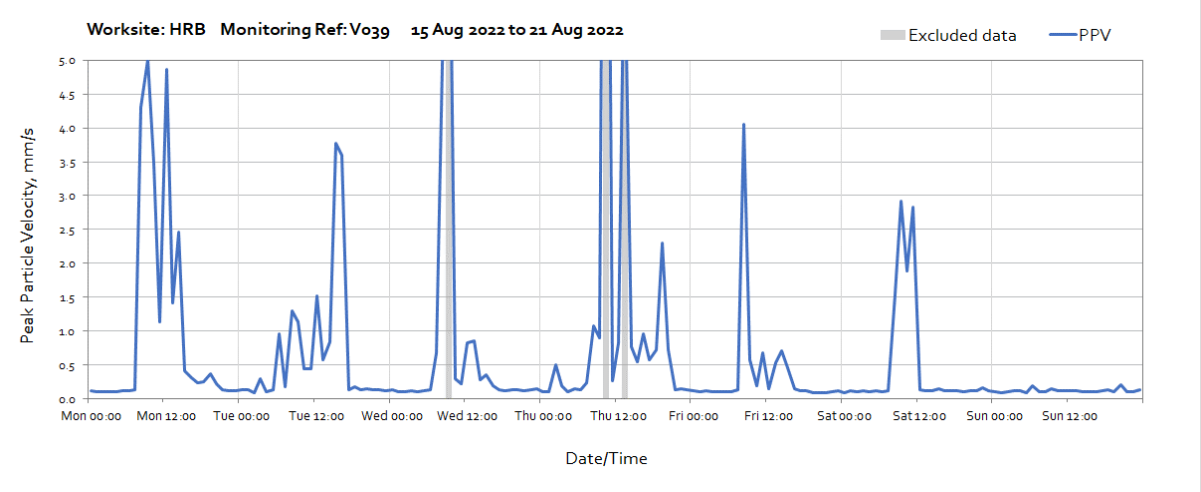
Worksite: HRB – Monitoring Ref: V039



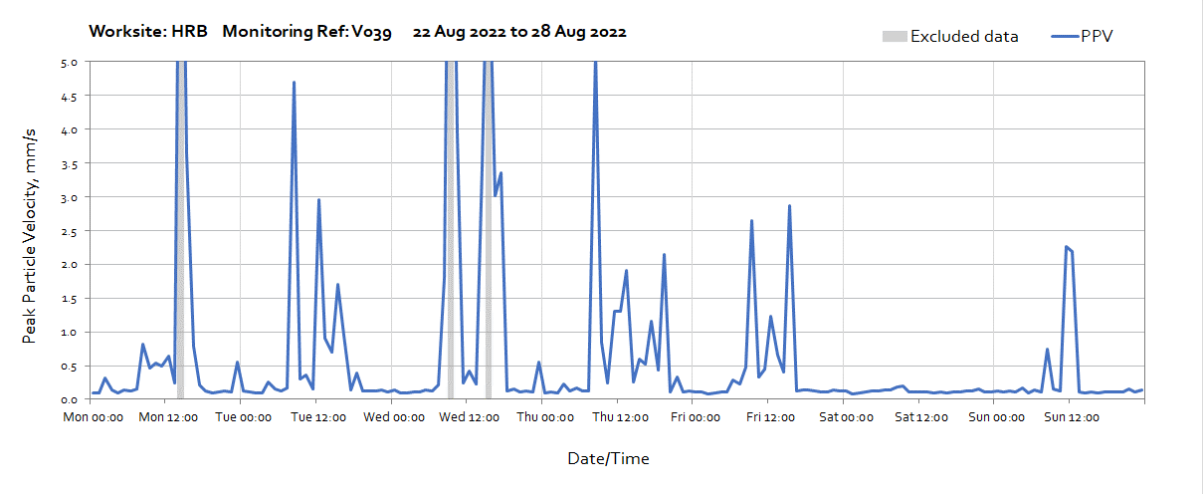
Note: High levels of vibration measured throughout the week were due to pile mat preparation activities undertaken near to the monitoring station. The monitoring station is mounted on a kentledge block along the hoarding in an area of disturbed ground, vibration is likely to be amplified compared to what is experienced at building. Attended monitoring has been booked to acquire more representative data for the receptor.



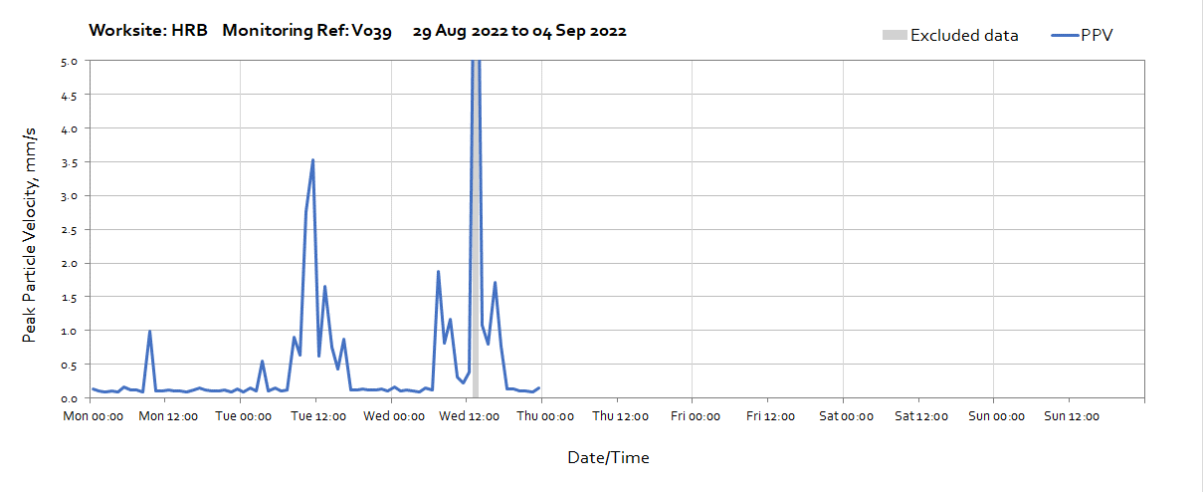
Note: High levels of vibration measured throughout the week were due to pile mat preparation activities undertaken near to the monitoring station. The monitoring station is mounted on a kentledge block along the hoarding in an area of disturbed ground, vibration is likely to be amplified compared to what is experienced at building. Attended monitoring has been booked to acquire more representative data for the receptor.



Note: High levels of vibration measured throughout the week were due to pile mat preparation activities undertaken near to the monitoring station. The monitoring station is mounted on a kentledge block along the hoarding in an area of disturbed ground, vibration is likely to be amplified compared to what is experienced at building. Attended monitoring has been booked to acquire more representative data for the receptor.

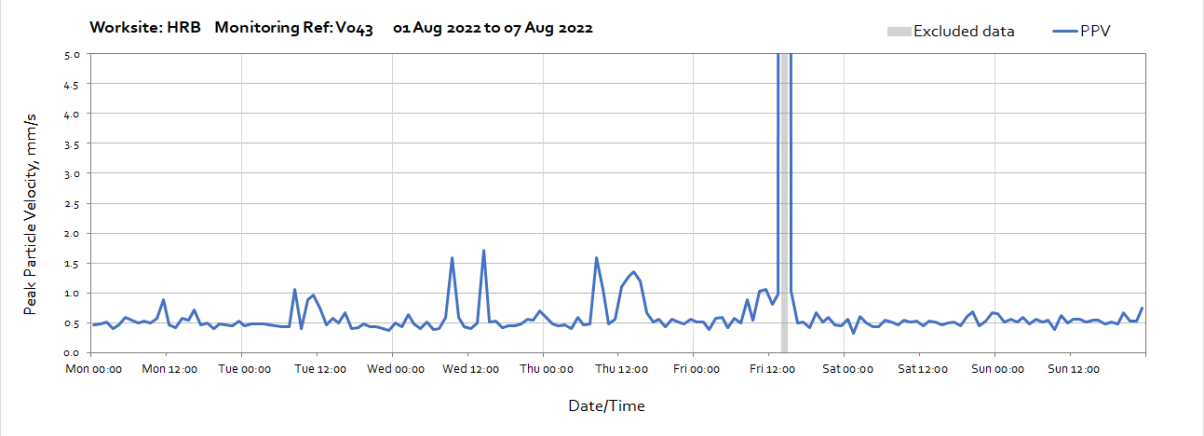


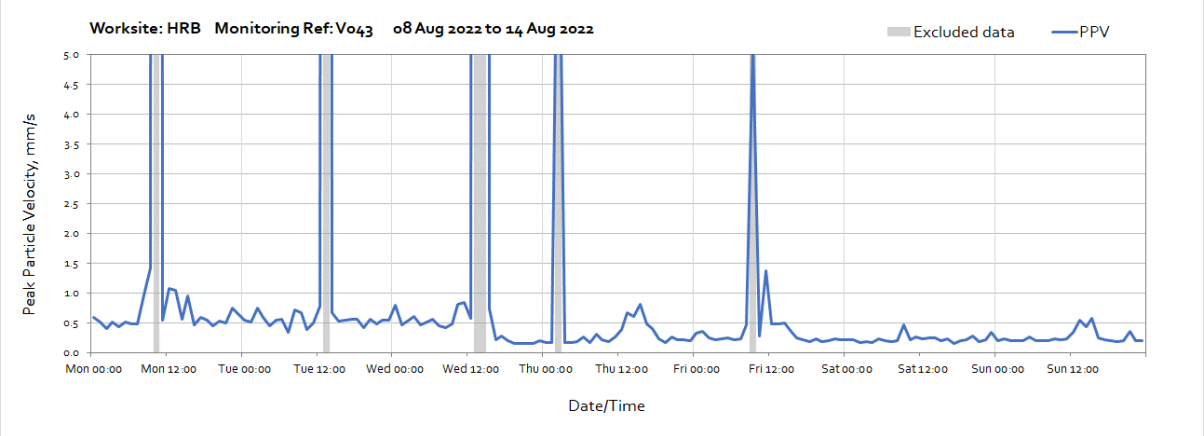
Note: High levels of vibration measured throughout the week were due to pile mat preparation activities undertaken near to the monitoring station. The monitoring station is mounted on a kentledge block along the hoarding in an area of disturbed ground, vibration is likely to be amplified compared to what is experienced at building. Attended monitoring has been booked to acquire more representative data for the receptor.

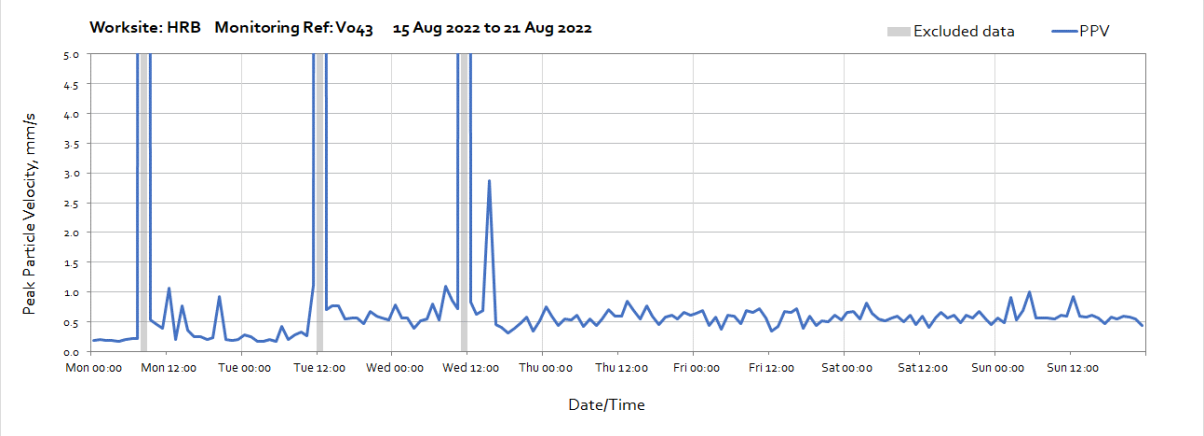


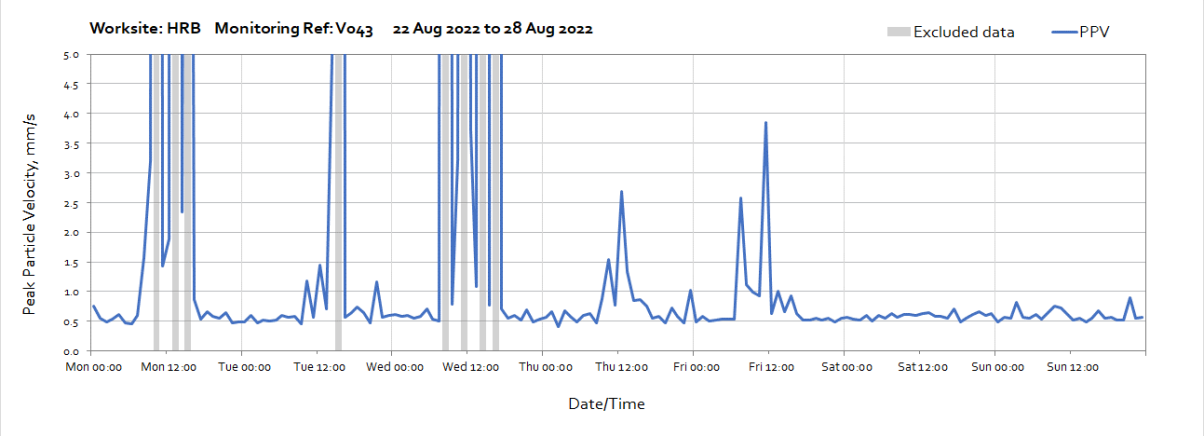
Note: High levels of vibration measured from 13:00 until 14:00 on Wednesday 31st August were due to pile mat preparation activities undertaken near to the monitoring station. The monitoring station is mounted on a kentledge block along the hoarding in an area of disturbed ground, vibration is likely to be amplified compared to what is experienced at building. Attended monitoring has been booked to acquire more representative data for the receptor.

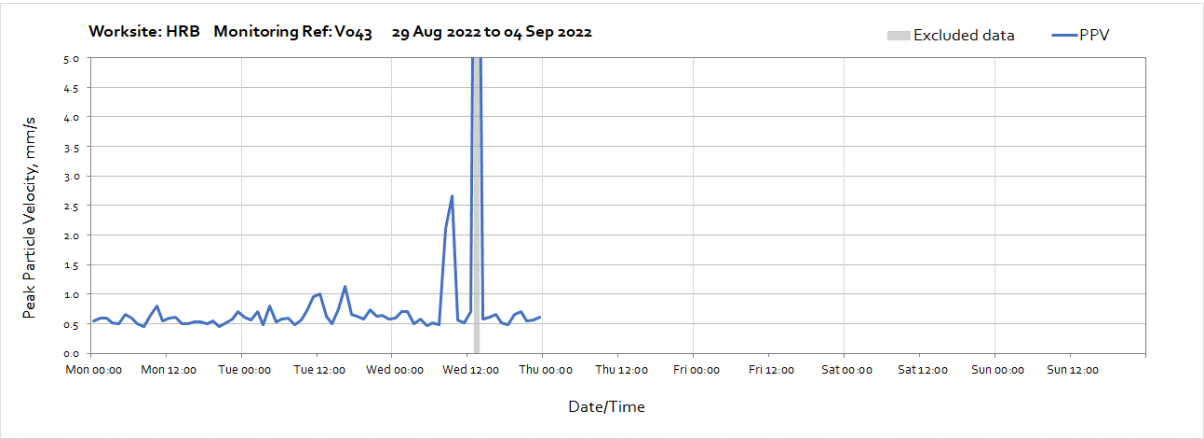
Worksite: HRB – Monitoring Ref: V043



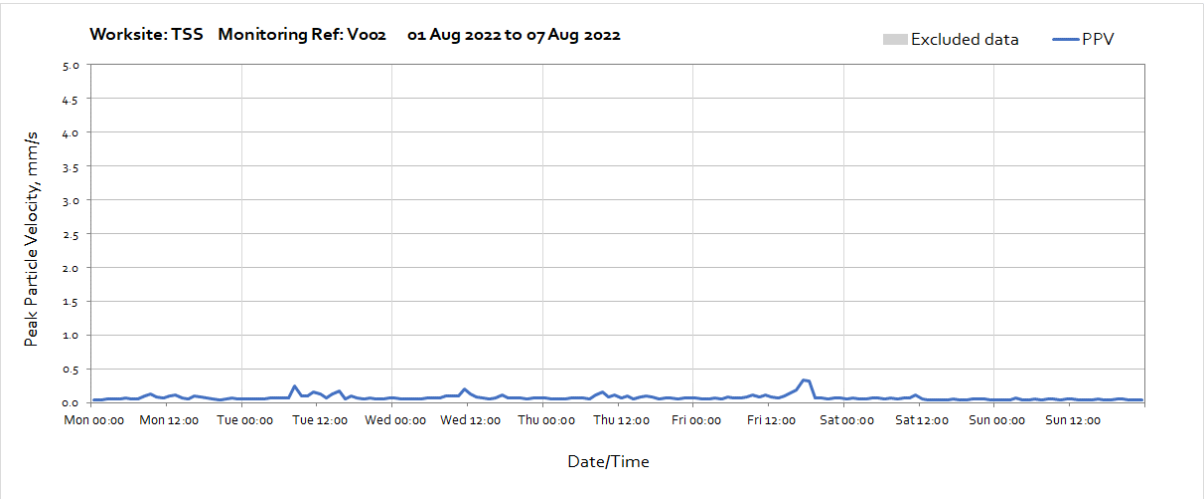


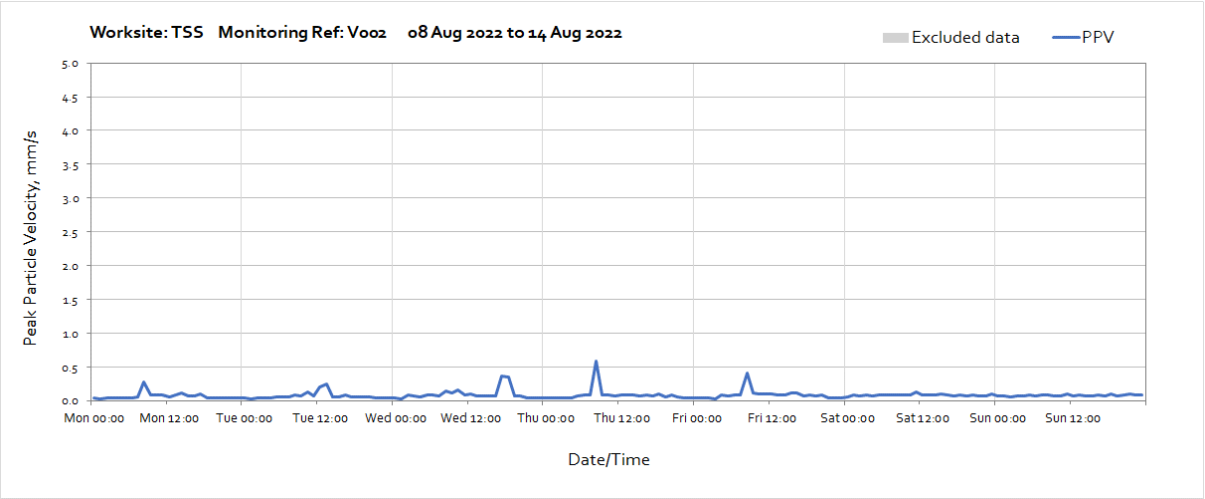


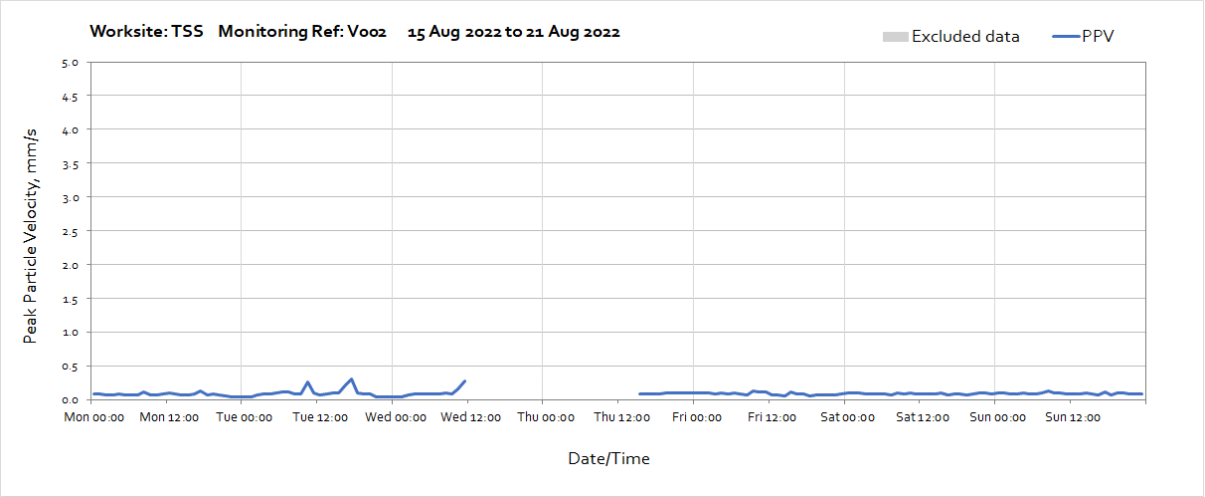




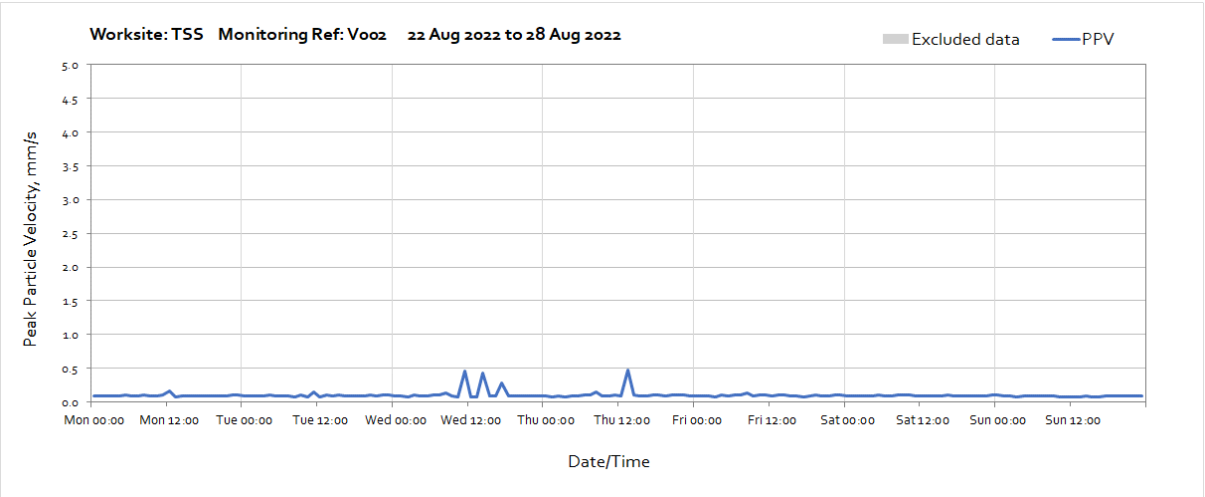
Worksite: TSS – Monitoring Ref: V002

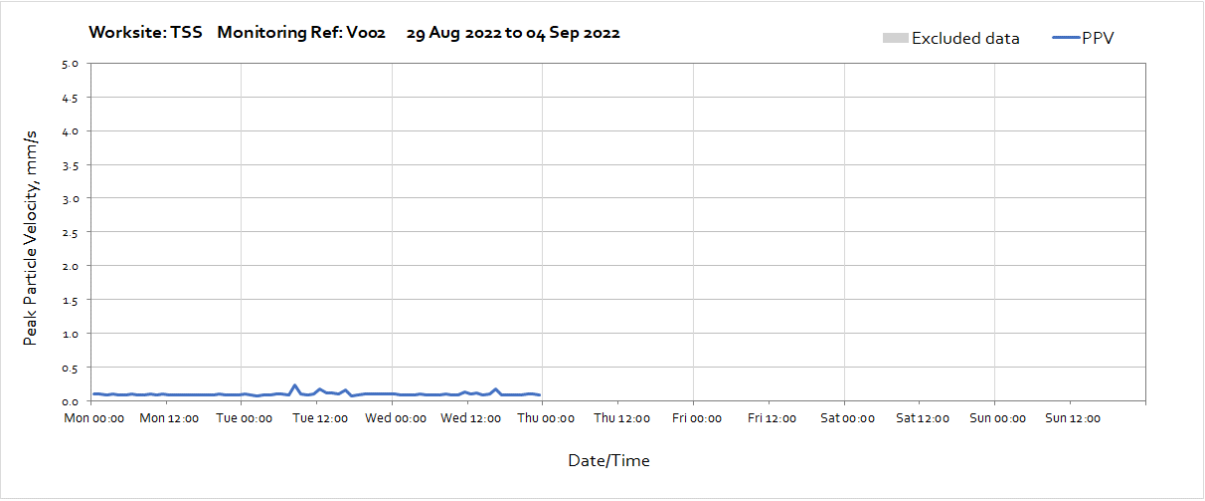




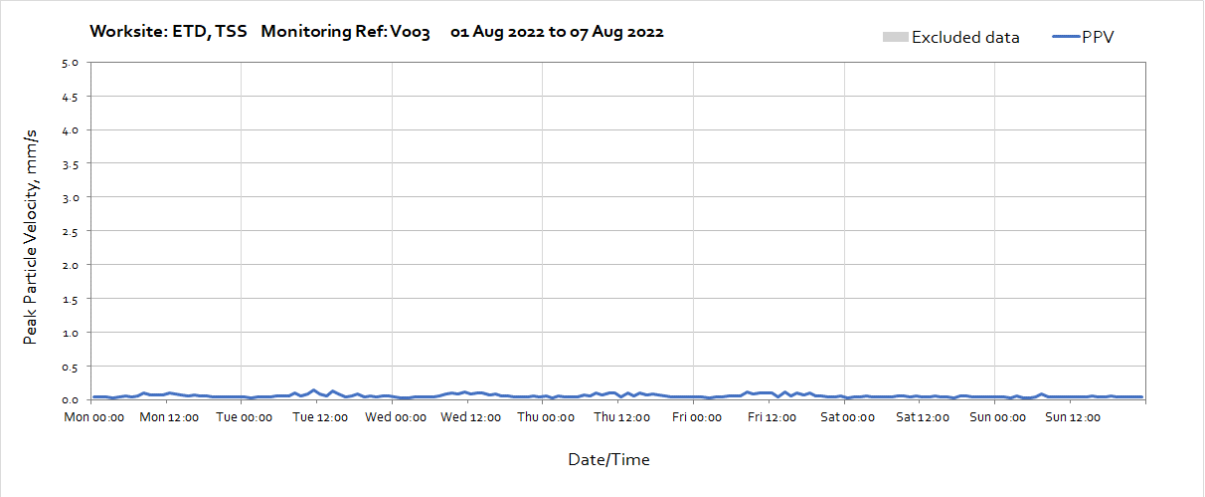


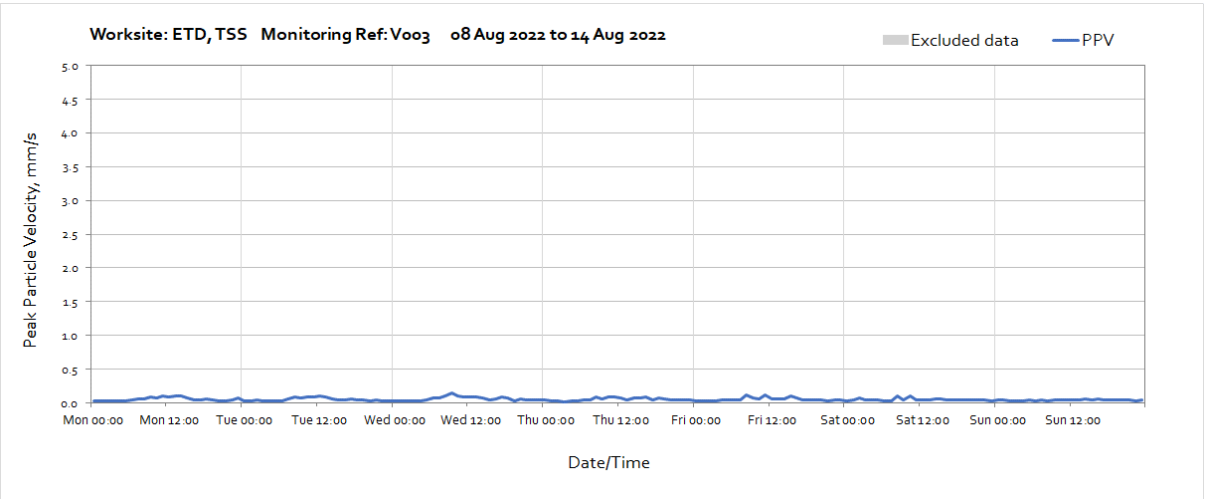
Note: Missing data from 13:00 on Wednesday 17th August until 14:00 on Thursday 19th August was due to loss of power to the monitoring station.

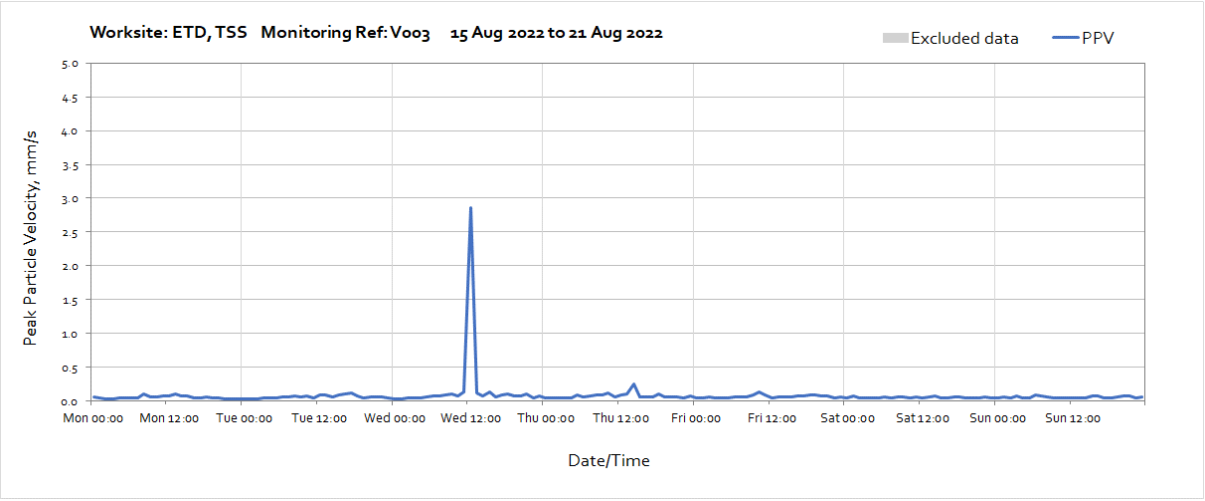




Worksite: ETD, TSS – Monitoring Ref: V003






Worksite: ETD, TSS Monitoring Ref: Vo03 15 Aug 2022 to 21 Aug 2022
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
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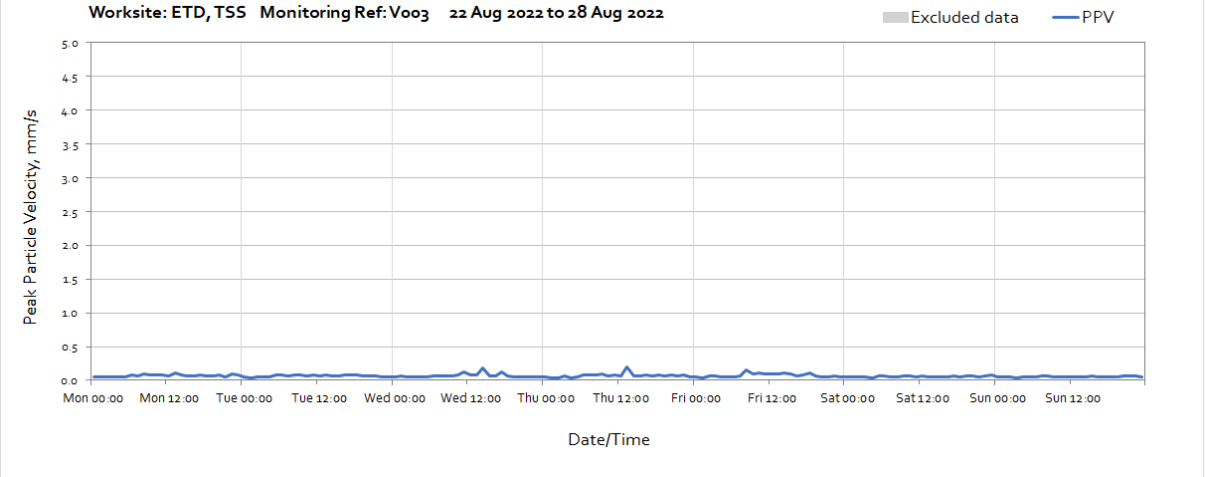
Date/Time


Worksite: ETD, TSS Monitoring Ref: Vo03 22 Aug 2022 to 28 Aug 2022
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
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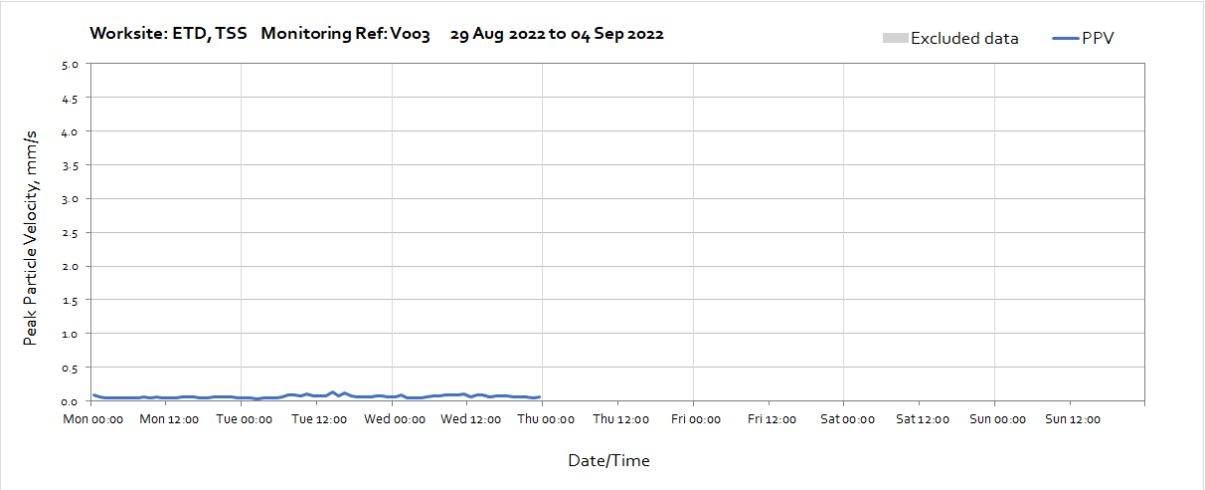
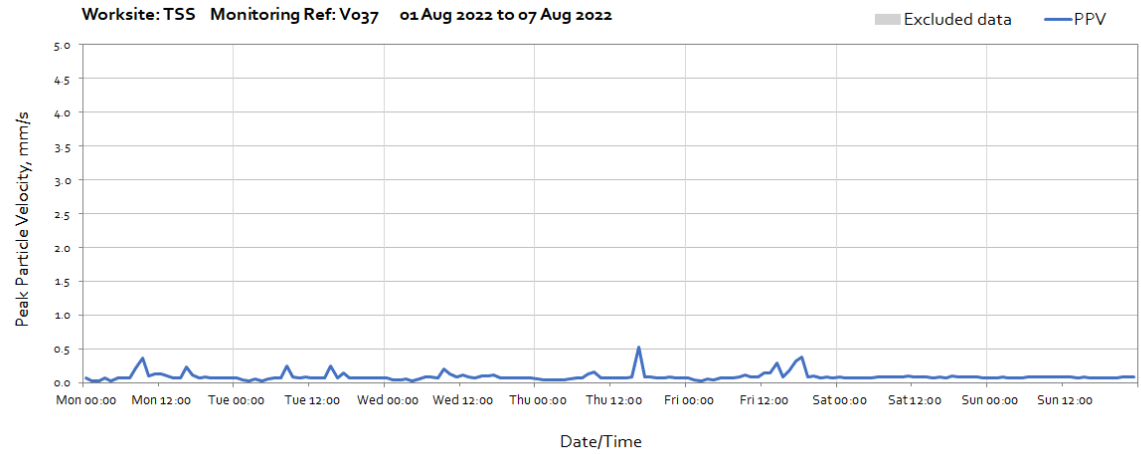
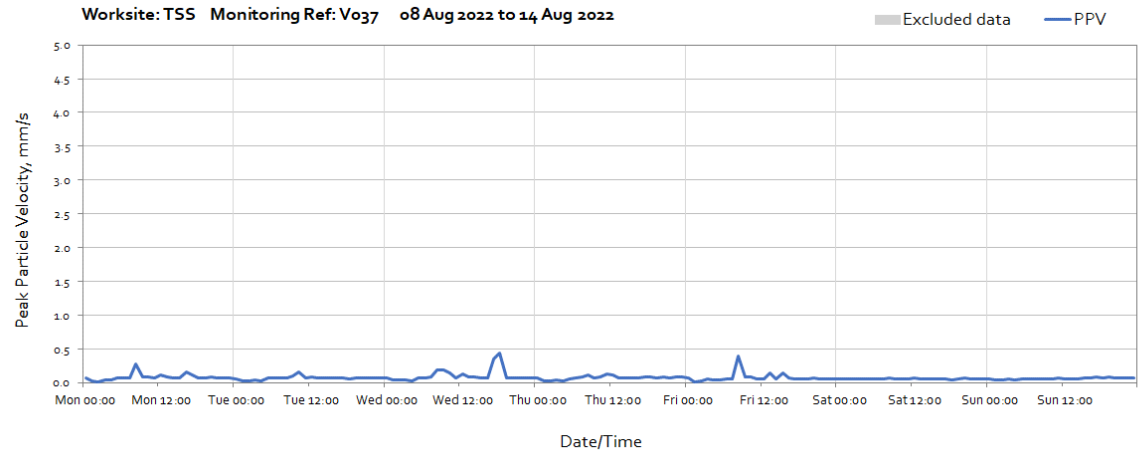
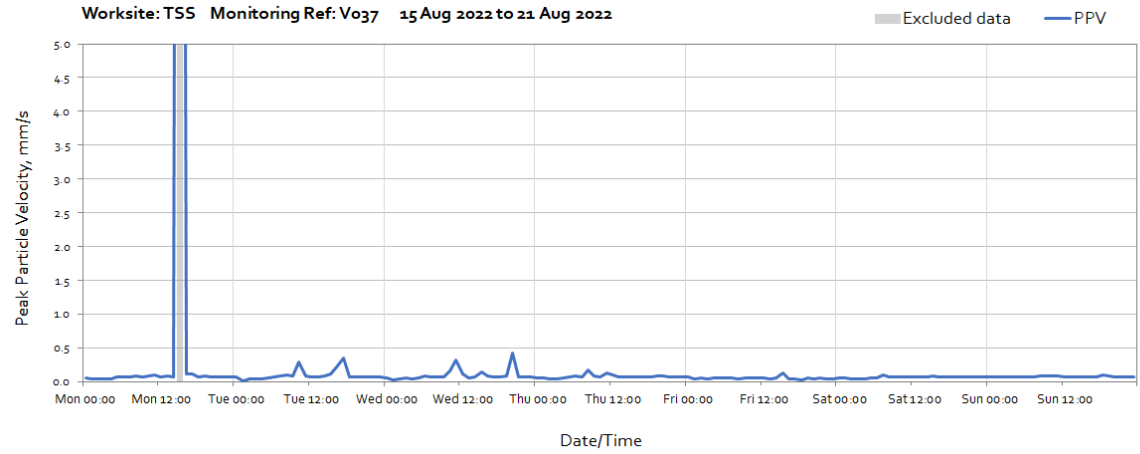
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

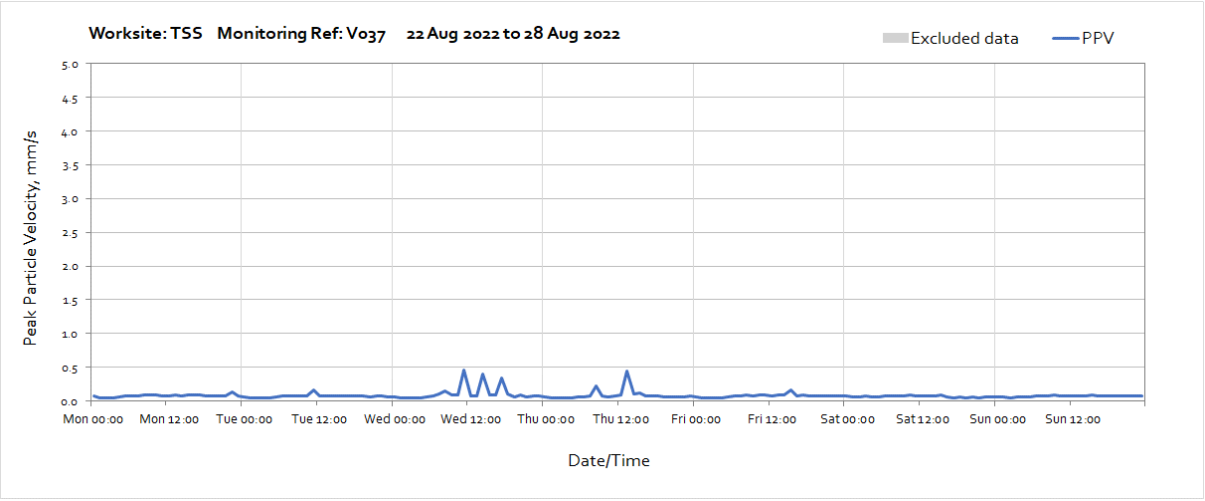

Worksite: ETD, TSS Monitoring Ref: Vo03 29 Aug 2022 to 04 Sep 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

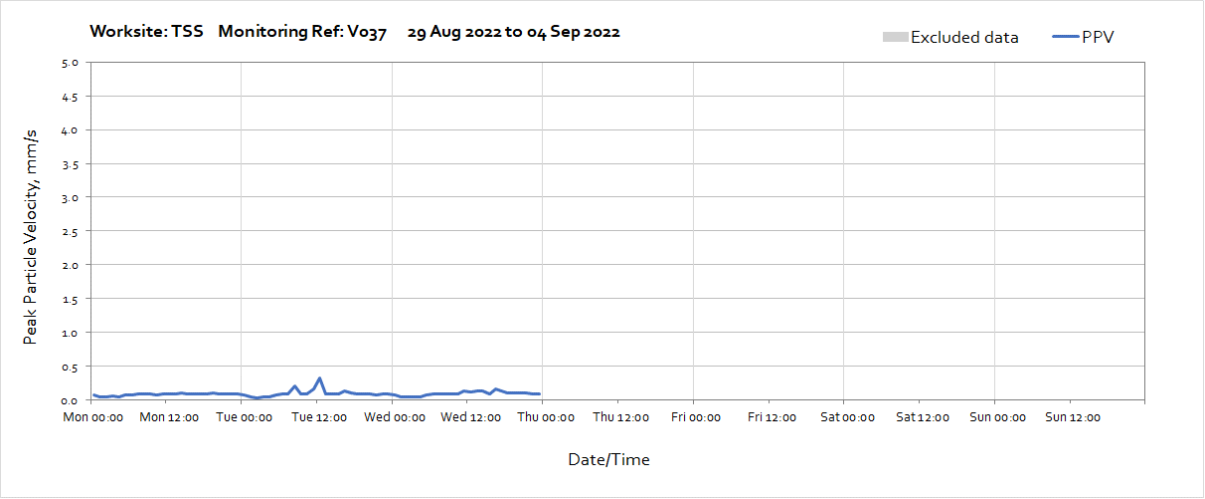
Worksite: TSS – Monitoring Ref: V037



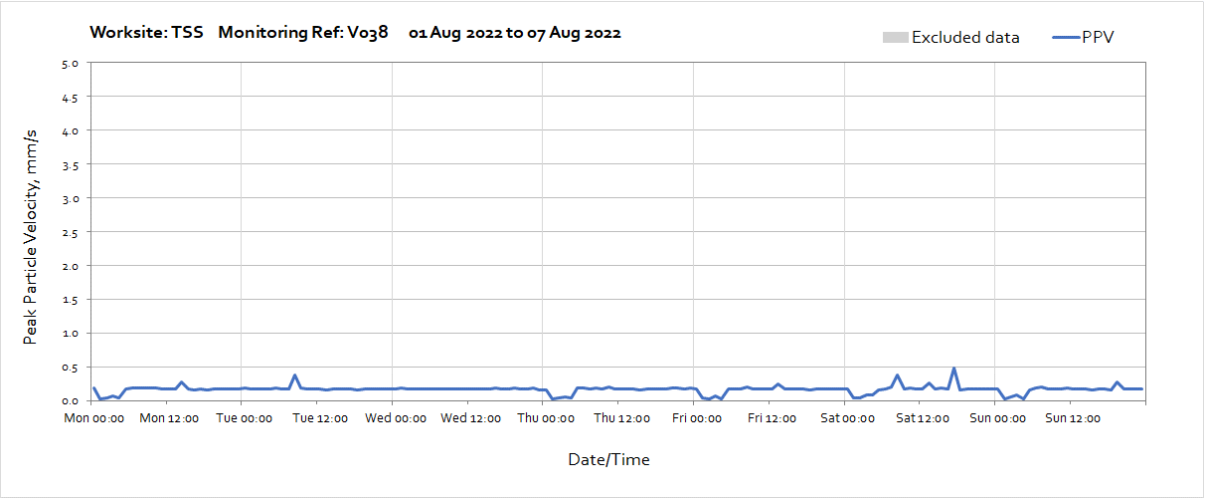


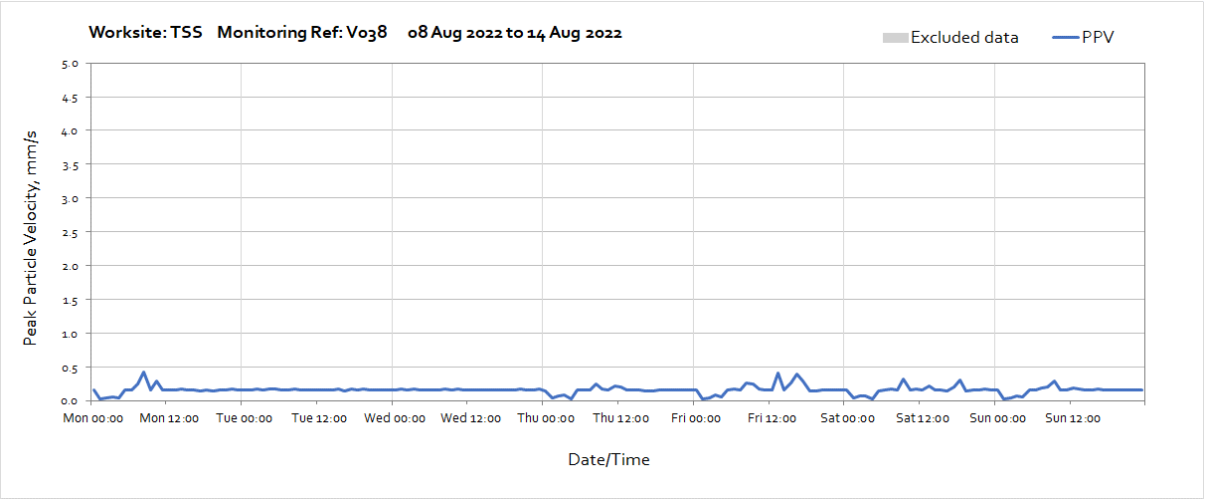


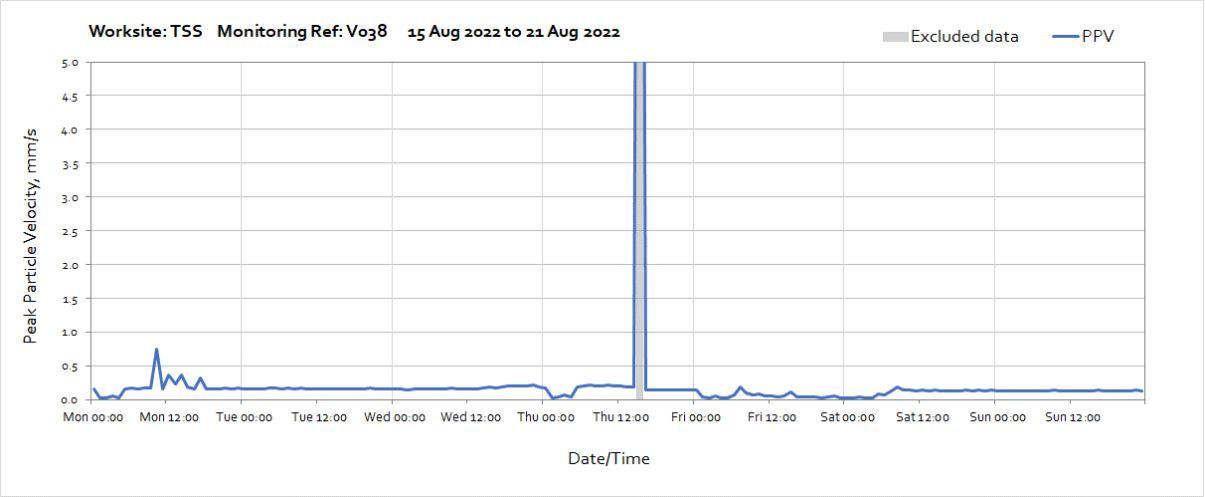


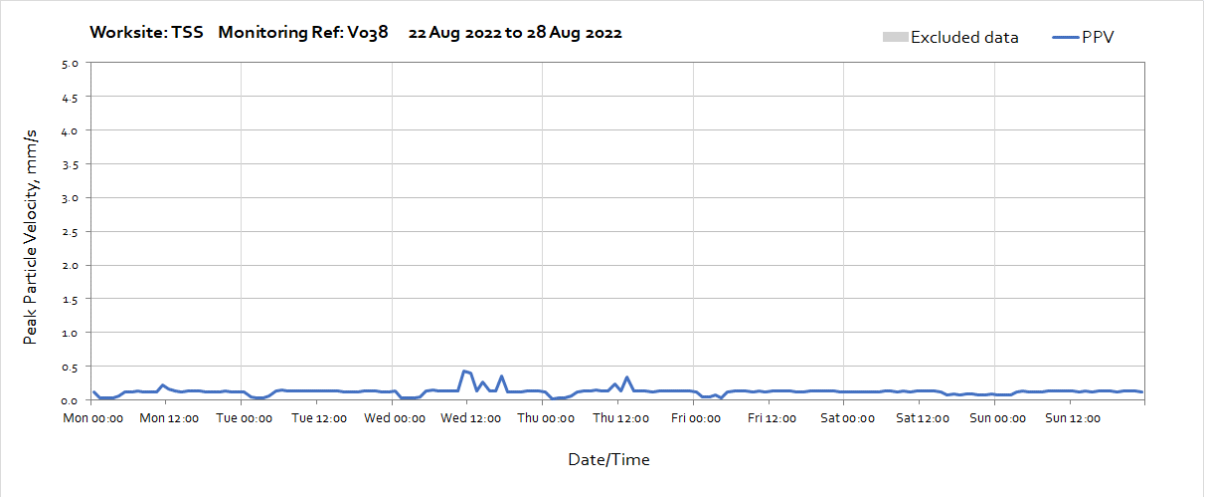


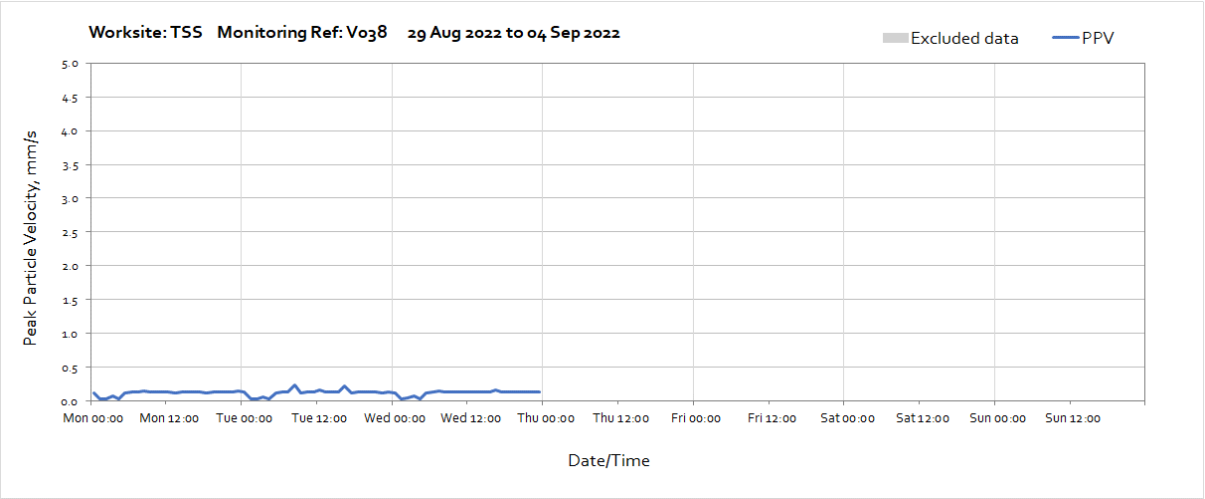
Worksite: TSS – Monitoring Ref: V038



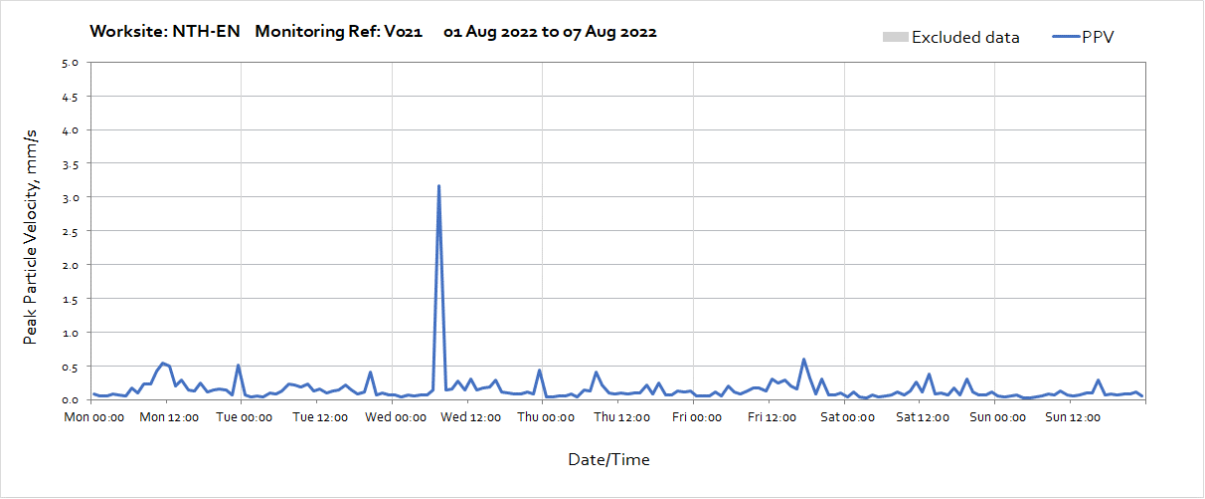

Worksite: TSS Monitoring Ref: V038 08 Aug 2022 to 14 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

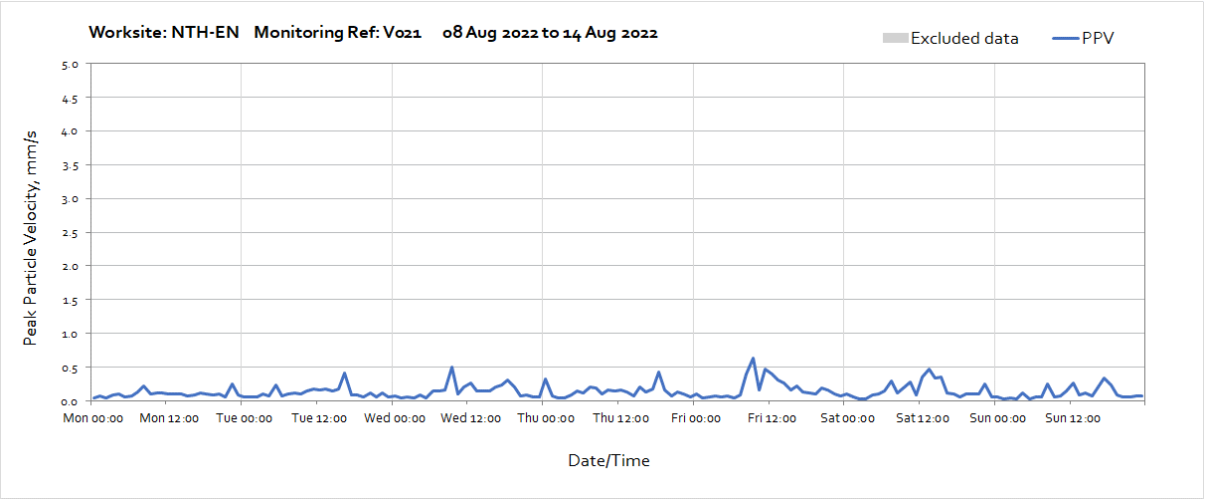

Worksite: TSS Monitoring Ref: V038 15 Aug 2022 to 21 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

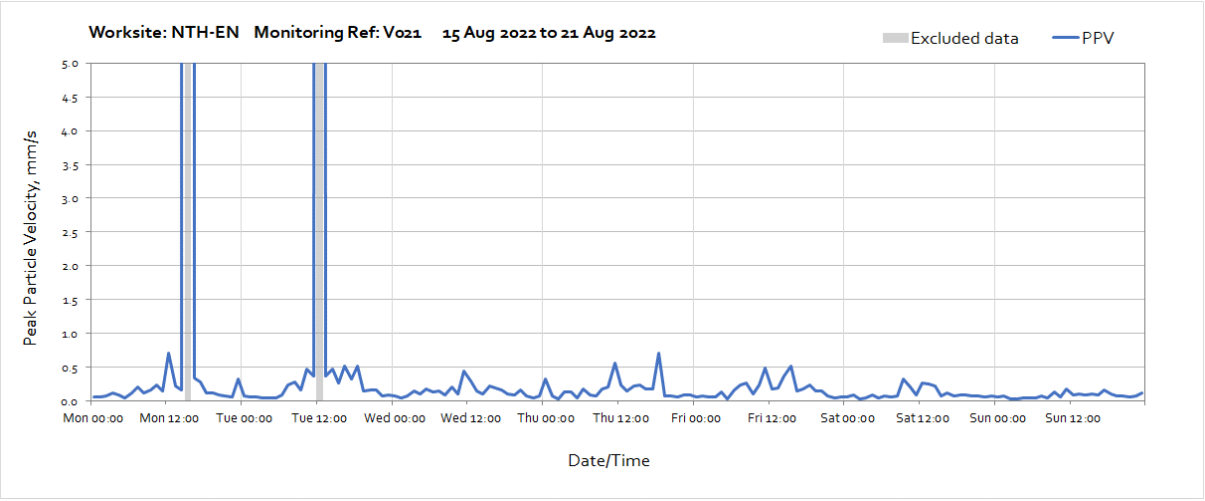

Worksite: TSS Monitoring Ref: V038 22 Aug 2022 to 28 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

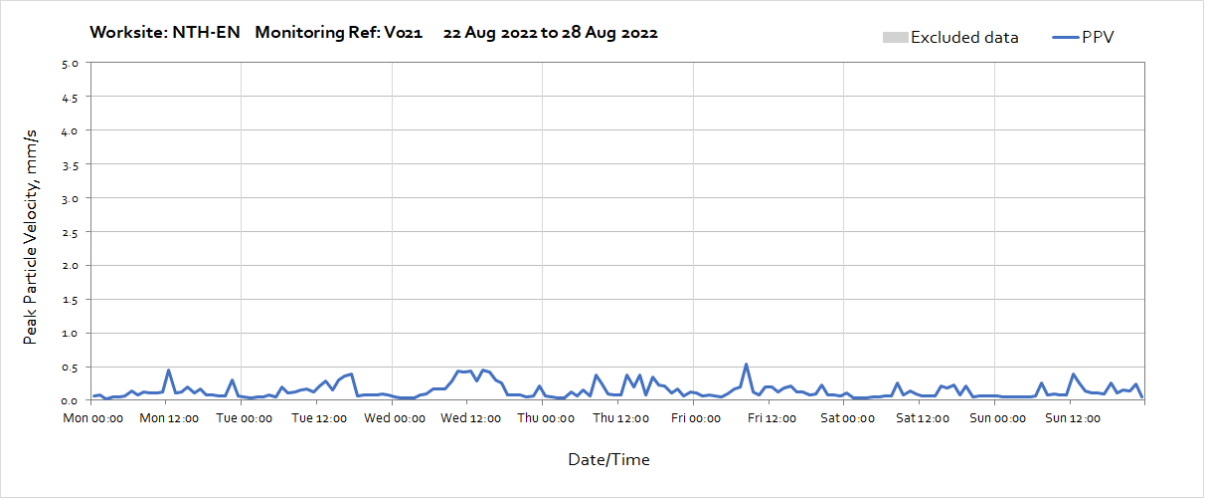


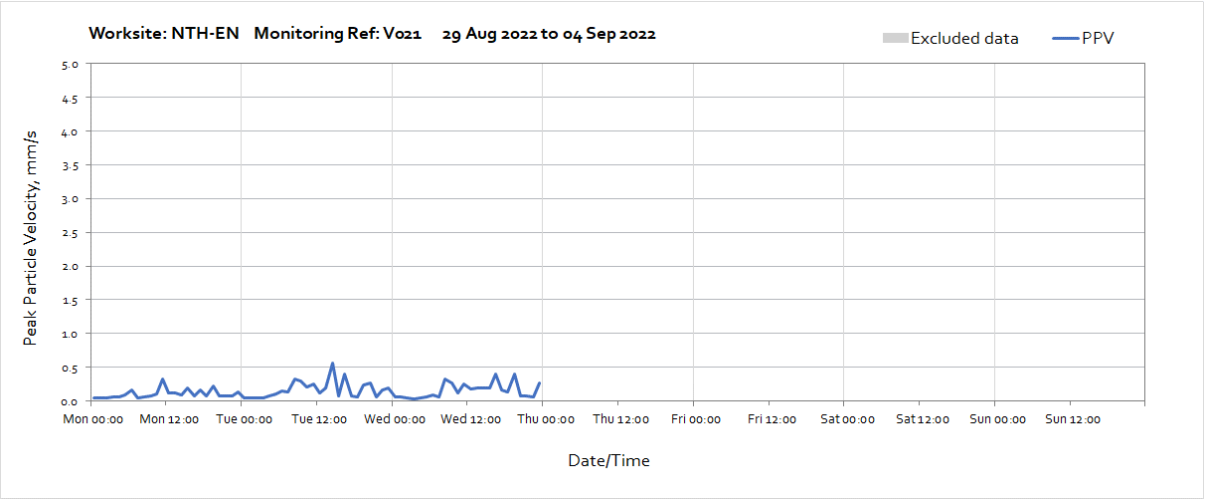
Worksite: NTH-EN – Monitoring Ref: V021



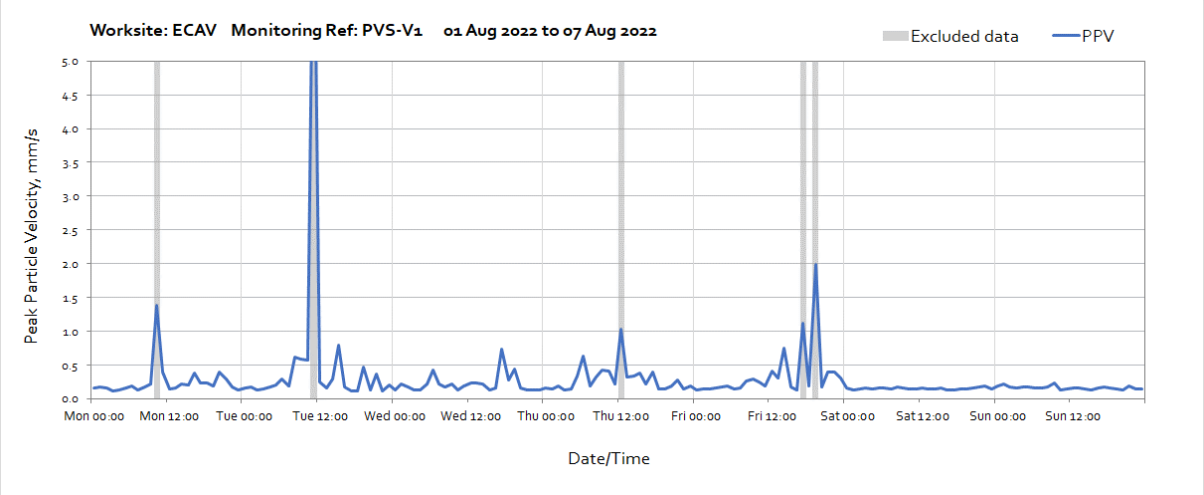


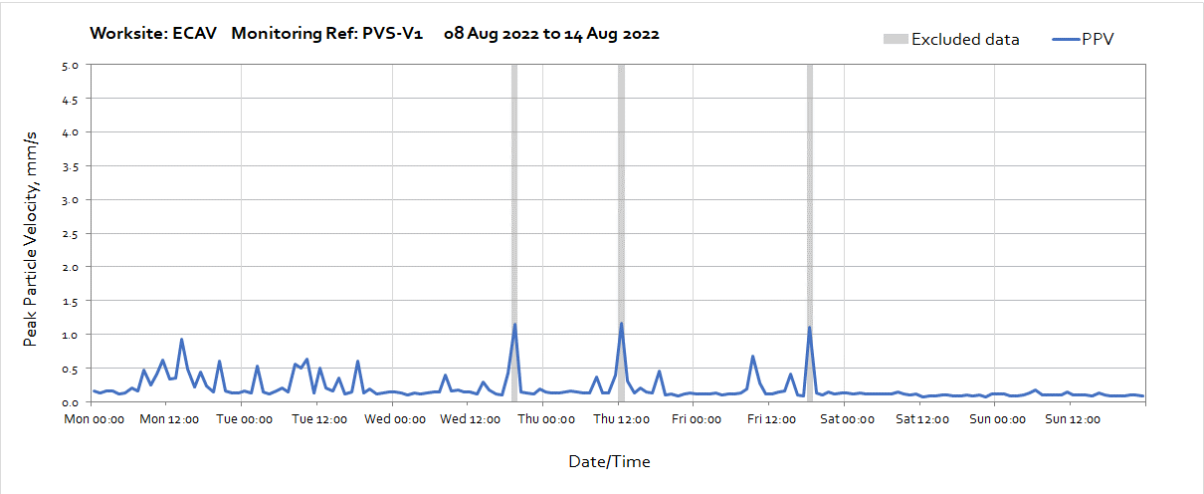

Worksite: NTH-EN Monitoring Ref: V021 15 Aug 2022 to 21 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

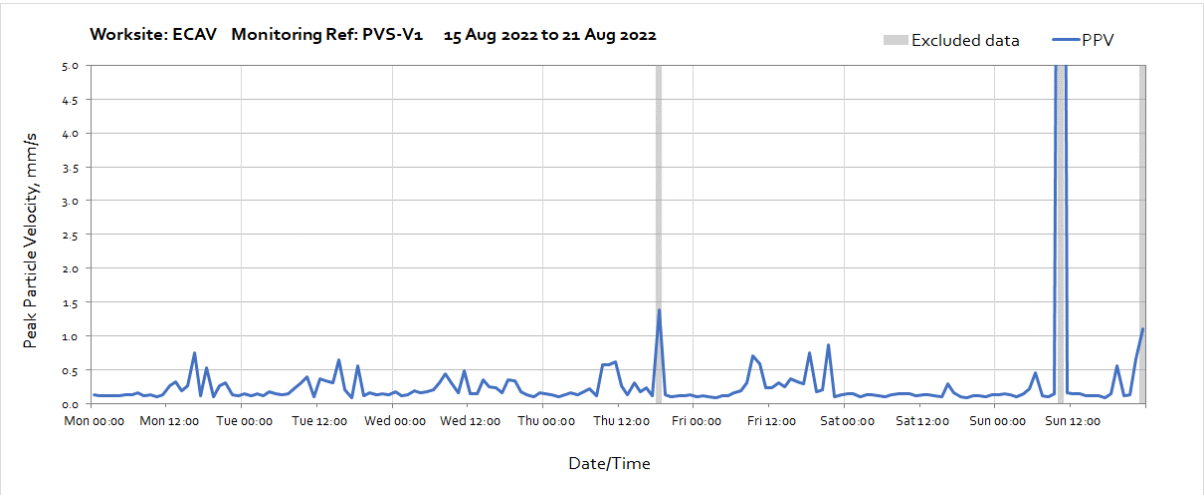

Worksite: NTH-EN Monitoring Ref: V021 22 Aug 2022 to 28 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

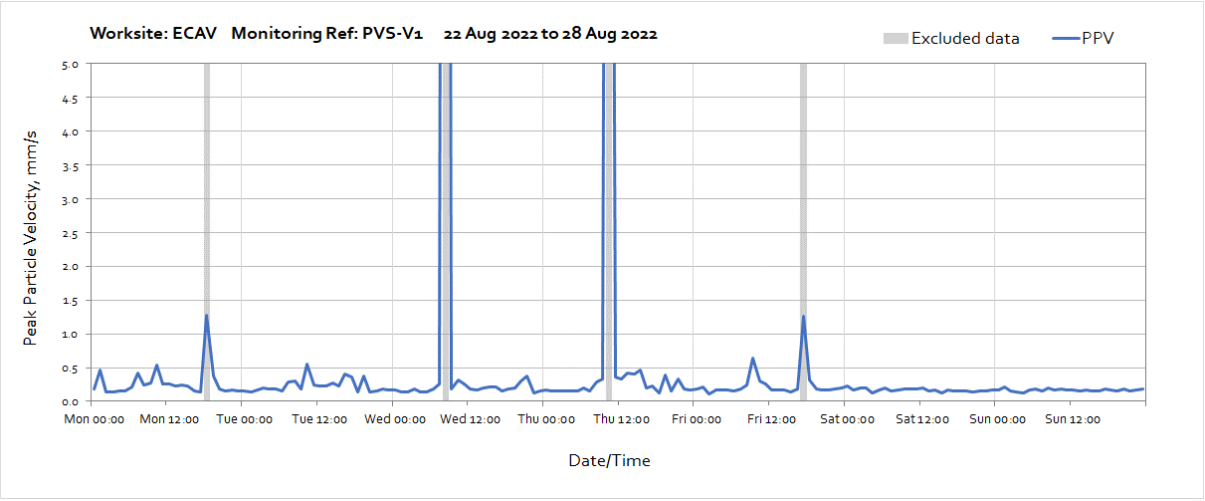

Worksite: NTH-EN Monitoring Ref: V021 29 Aug 2022 to 04 Sep 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

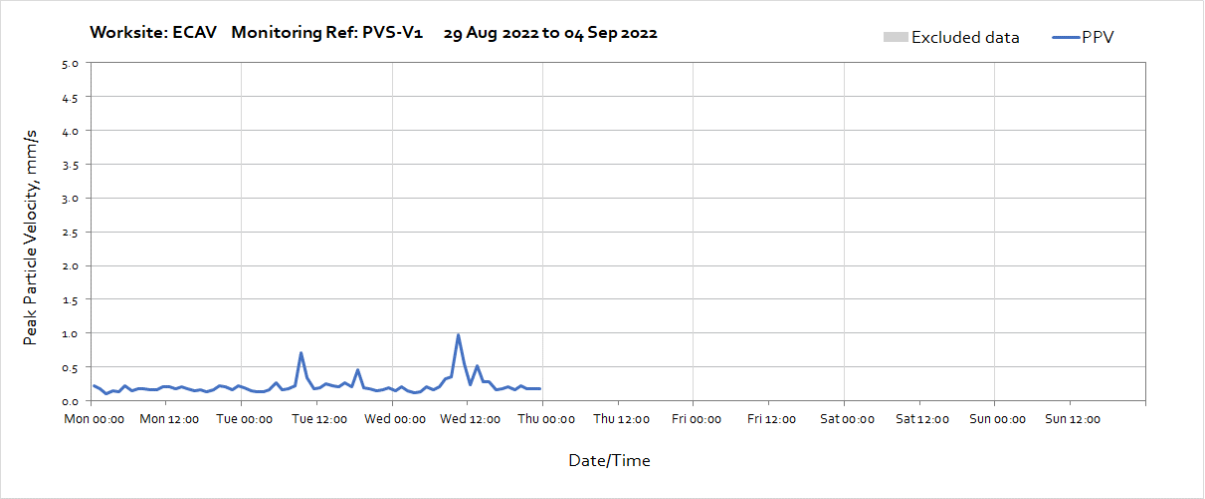
Worksite: ESC – Monitoring Ref: PVS-V1



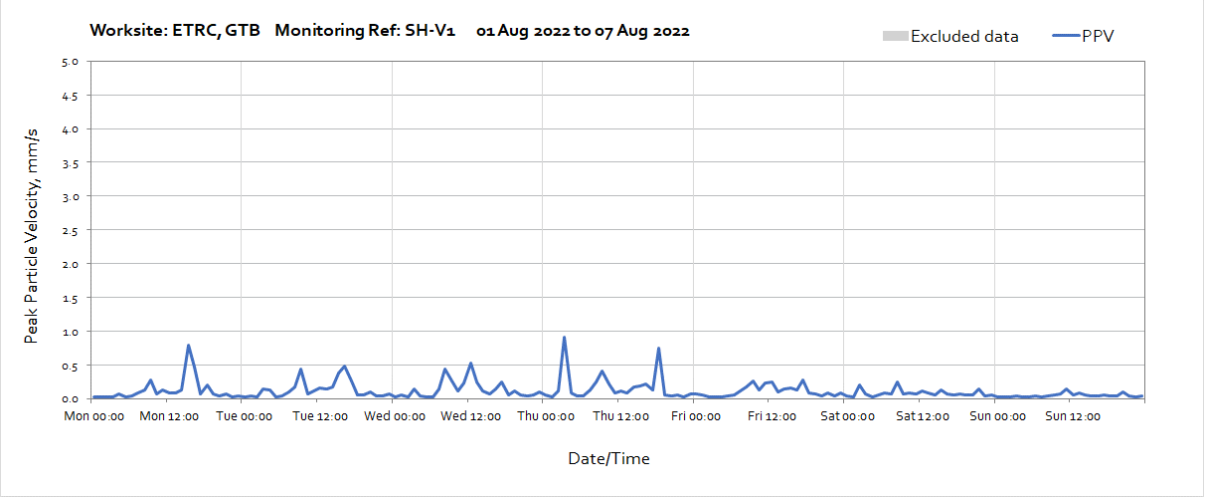


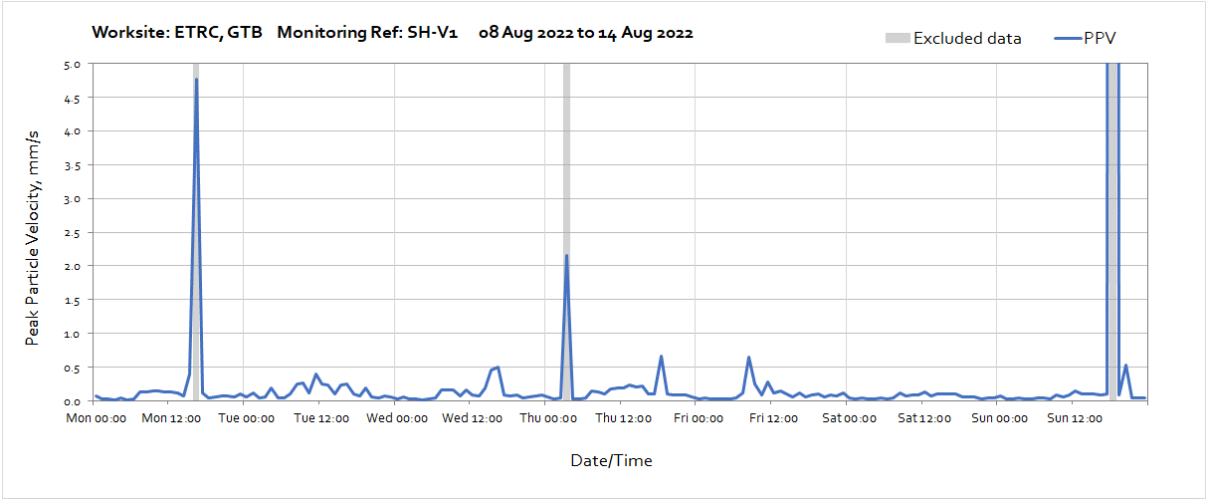


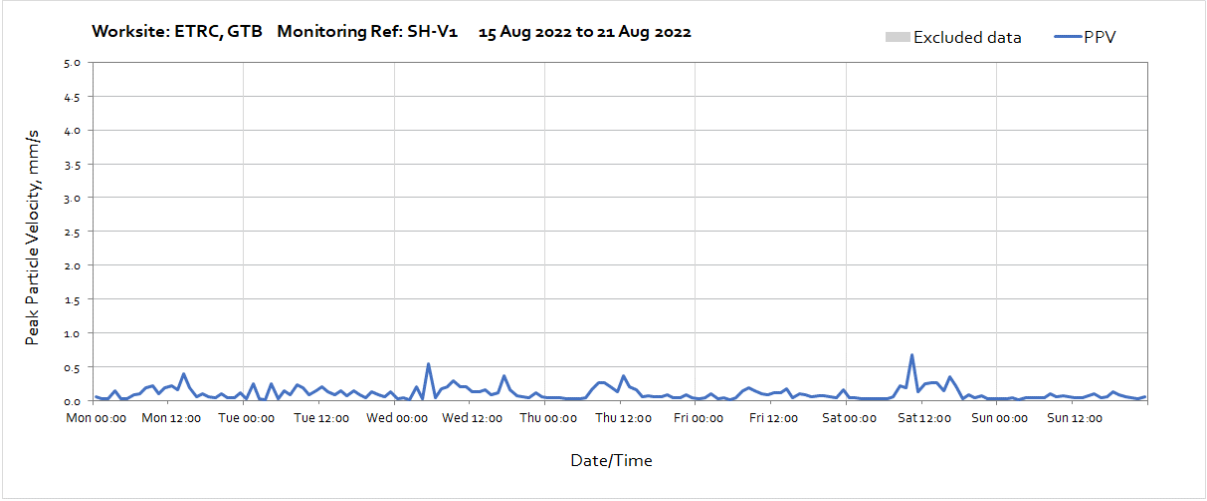


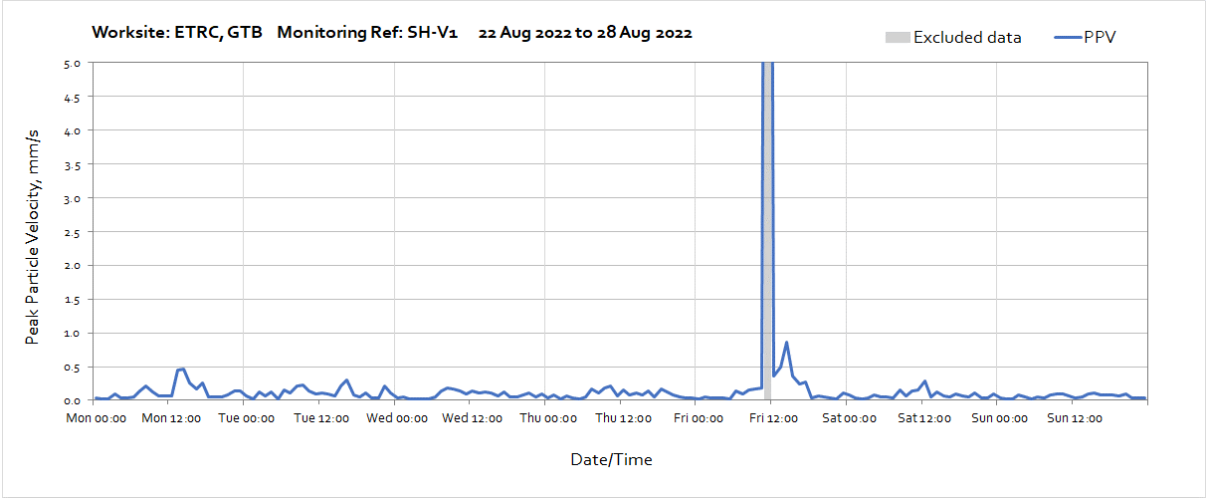


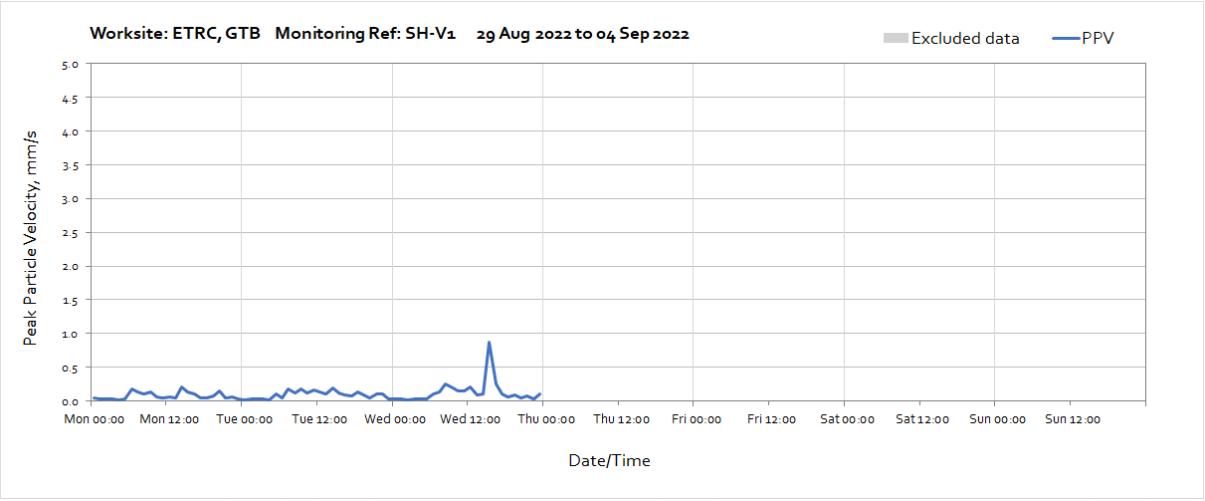
Worksite: ETRC & GTB – Monitoring Ref: SH-V1



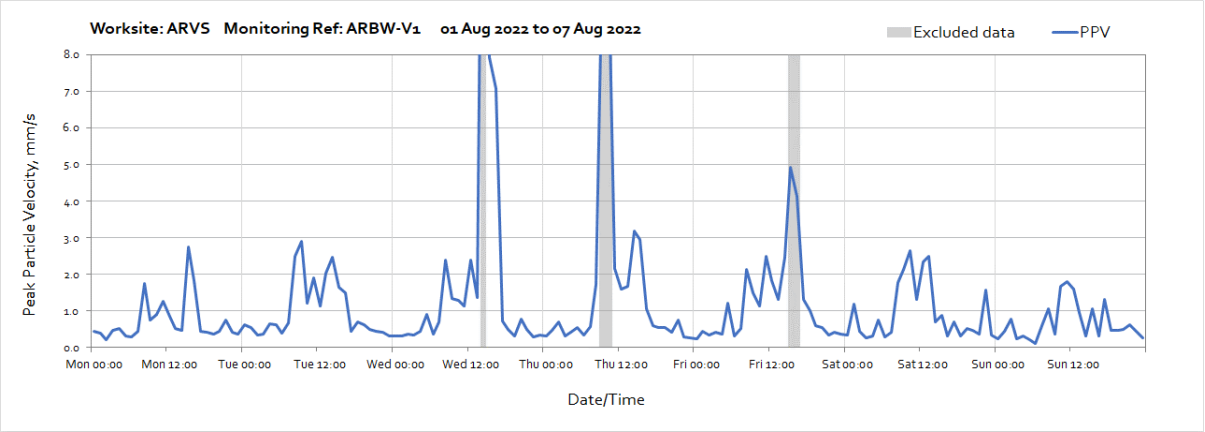

Worksite: ETRC, GTB Monitoring Ref: SH-V1 08 Aug 2022 to 14 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time


Worksite: ETRC, GTB Monitoring Ref: SH-V1 15 Aug 2022 to 21 Aug 2022
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

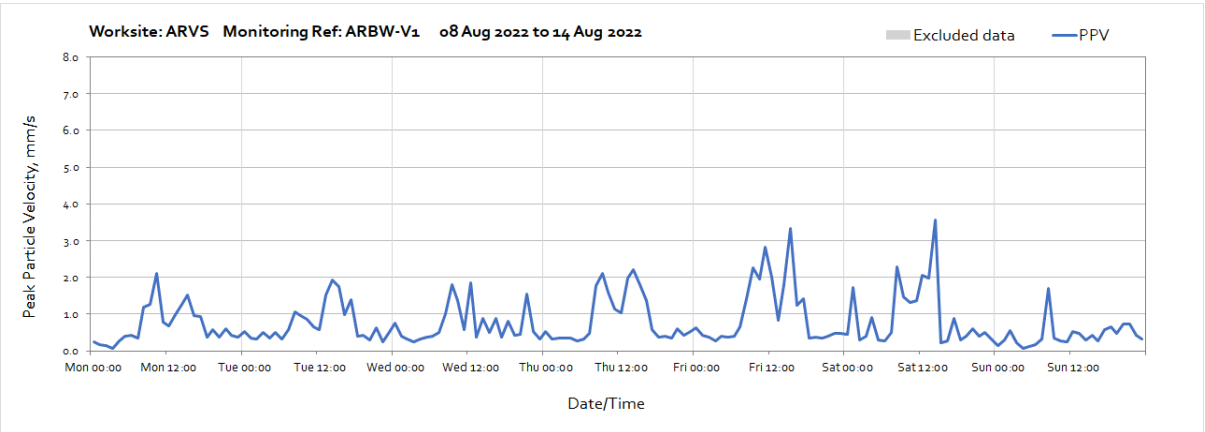

Worksite: ETRC, GTB Monitoring Ref: SH-V1 22 Aug 2022 to 28 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

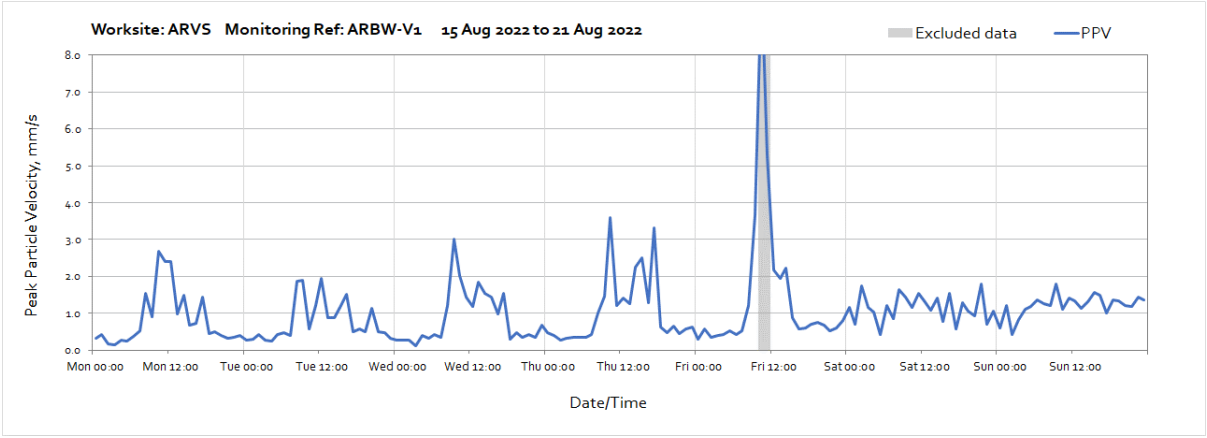


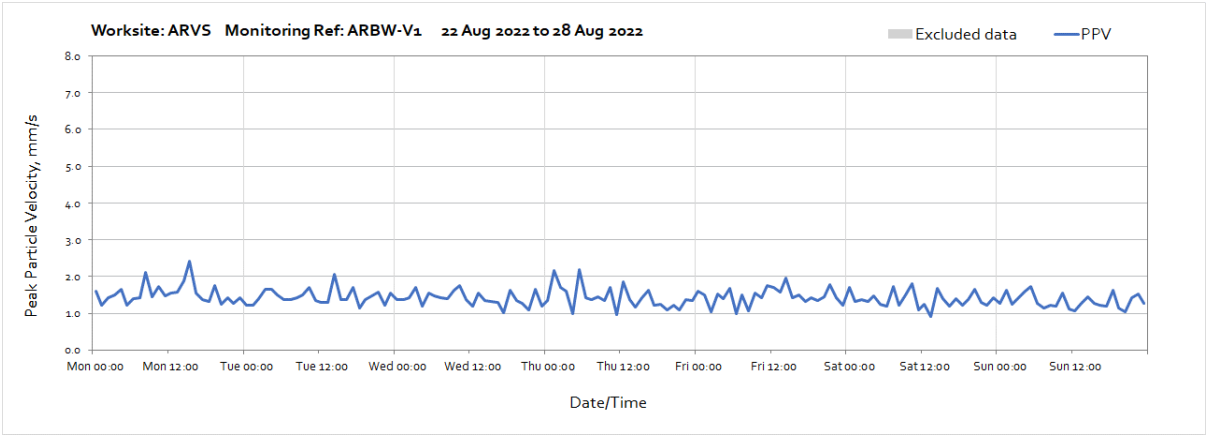
Worksite: ARVS – Monitoring Ref: ABRW-V1

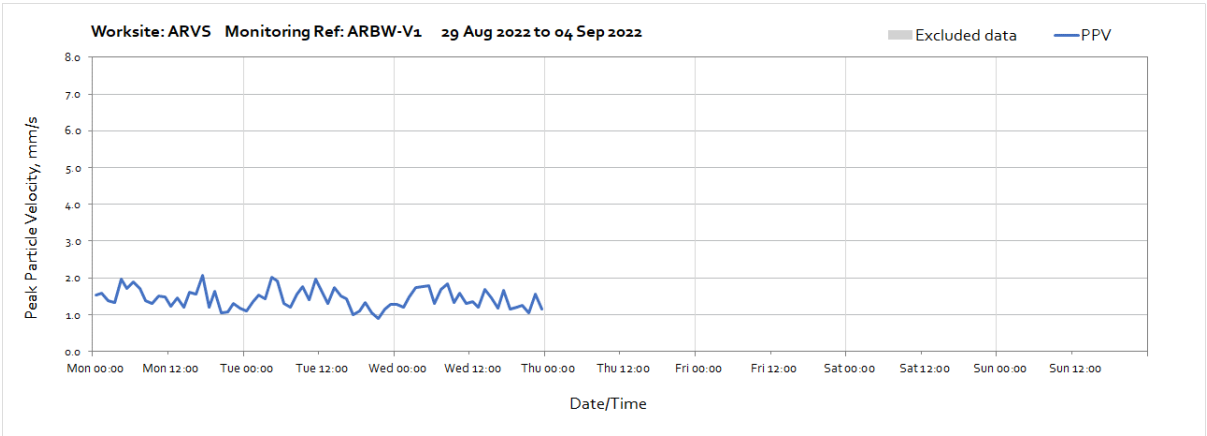


Note: High levels of vibration measured from 15:00 until 17:00 on Wednesday 3rd August were due to utilities work being undertaken in close proximity to the monitor. Vibration levels at the nearest receptor will be lower.

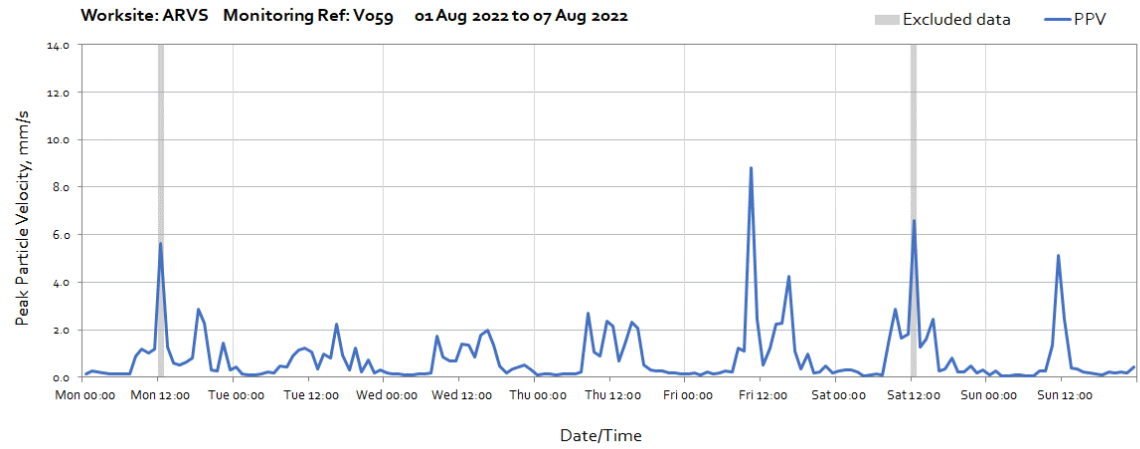



Worksite: ARVS Monitoring Ref: ARBW-V1 15 Aug 2022 to 21 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

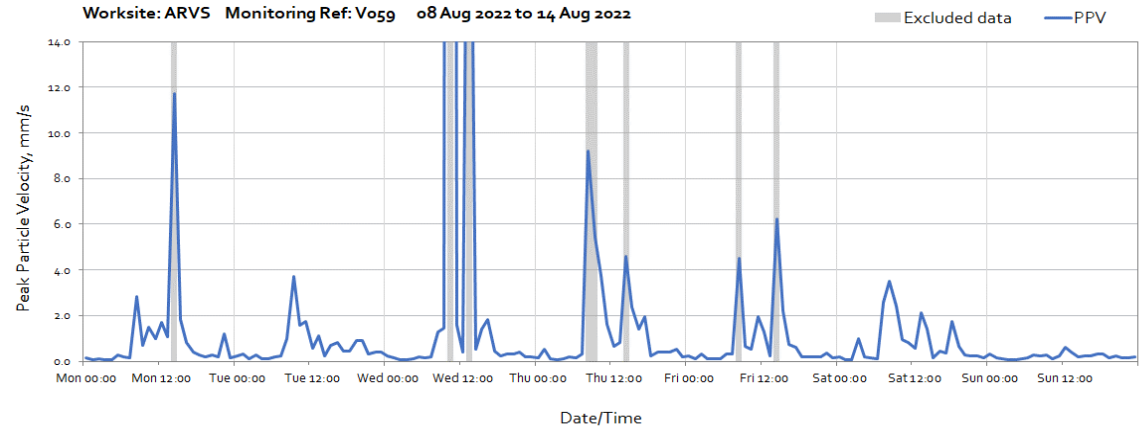

Worksite: ARVS Monitoring Ref: ARBW-V1 22 Aug 2022 to 28 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

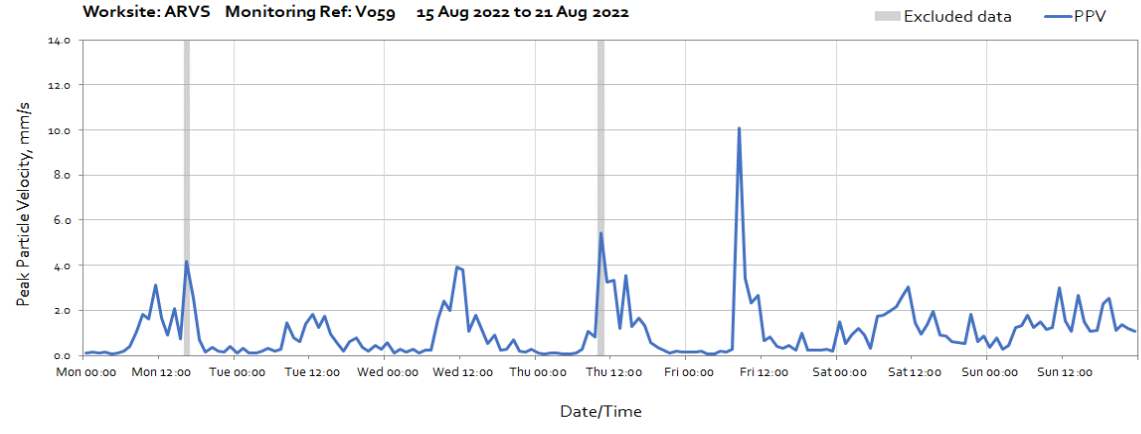

Worksite: ARVS Monitoring Ref: ARBW-V1 29 Aug 2022 to 04 Sep 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Mon 00:00
Mon 12:00
Tue 00:00
Tue 12:00
Wed 00:00
Wed 12:00
Thu 00:00
Thu 12:00
Fri 00:00
Fri 12:00
Sat 00:00
Sat 12:00
Sun 00:00
Sun 12:00
Date/Time

Worksite: ARVS – Monitoring Ref: V059

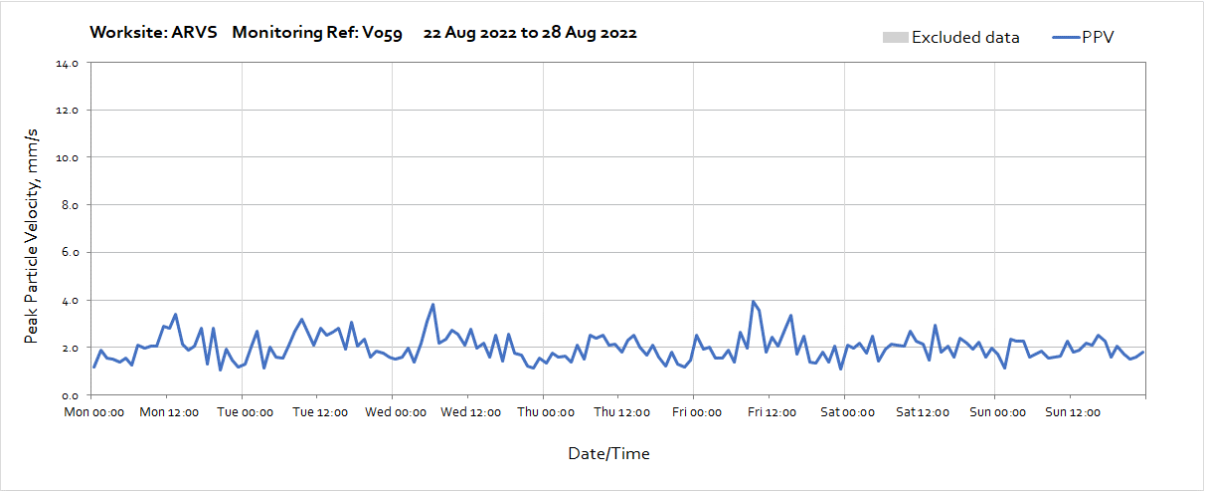


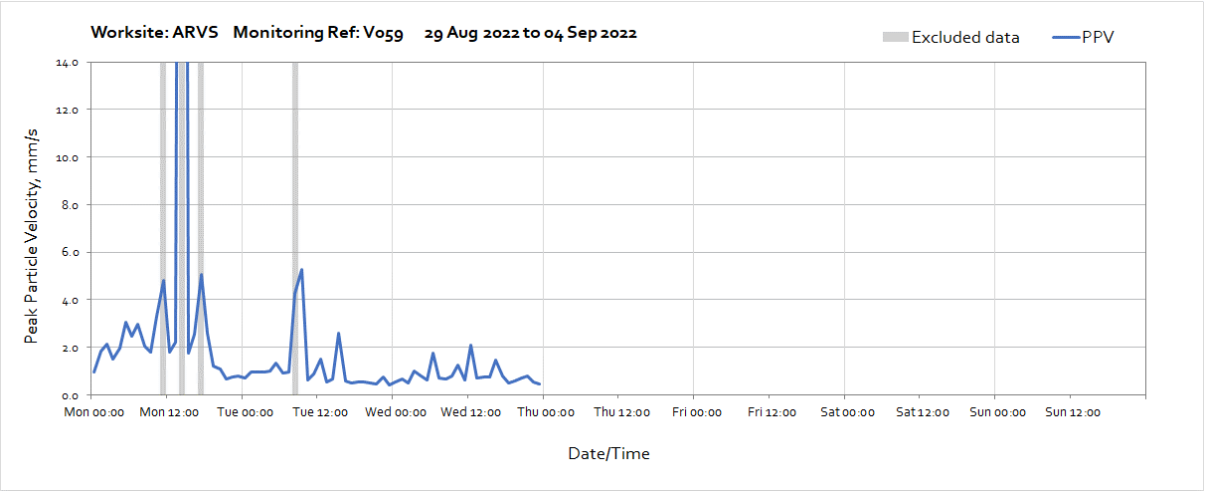
Note: High levels of vibration measured from 10:00 until 11:00 on Friday 5th August were due to utilities work being undertaken in close proximity to the monitor. Vibration levels at the nearest receptor will be lower.





Note: High levels of vibration measured from 08:00 until 09:00 on Friday 19th August were due to utilities work being undertaken in close proximity to the monitor. Vibration levels at the nearest receptor will be lower.


Worksite: ARVS Monitoring Ref: V059 22 Aug 2022 to 28 Aug 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
14.0
12.0
10.0
8.0
6.0
4.0
2.0
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: ARVS Monitoring Ref: V059 29 Aug 2022 to 04 Sep 2022
Excluded data
PPV
Peak Particle Velocity, mm/s
14.0
12.0
10.0
8.0
6.0
4.0
2.0
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