

Construction Noise and Vibration Monthly Report – November 2025

Buckinghamshire

Non-Technical Summary	1
Abbreviations and Descriptions	5
1 Introduction	6
1.2 Measurement Locations	13
2 Summary of Results	16
2.1 Summary of Measured Noise Levels	16
2.2 Exceedances of the LOAEL and SOAEL	22
2.3 Exceedances of Trigger Level	26
2.4 Complaints	26
Appendix A Site Locations	27
Appendix B Monitoring Locations	44
Appendix C Data	58

List of tables

Table 1: Table of Abbreviations	5
Table 2: Monitoring Locations	13
Table 3: Summary of Measured dB L_{Aeq} Data over the Monitoring Period	17
Table 4: Summary of Measured PPV Data over the Monitoring Period	22
Table 5: Summary of Exceedances of LOAEL and SOAEL	23
Table 6: Summary of Exceedances of Trigger Levels	26
Table 7: Summary of Complaints	26

Non-Technical Summary

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

Within this period monitoring was undertaken at the following worksites:

- Noise and vibration were undertaken in the vicinity of A422 Turweston North worksite (ref.: A422 TN), where overbridge and viaduct construction, earthworks, compound development and A422 temporary bridge and road diversion works were underway.
- Noise and vibration were undertaken in the vicinity of School End (ref.: SE) and Hermitage Chetwode (ref.: HC), worksites where tarmac installation, cutting works, water management, de-vegetation, site access and haul road operation and maintenance, utility works and landscape bunding were underway.
- Noise and vibration were undertaken in the vicinity of Twyford worksite (ref.: TW), where de-vegetation, viaduct works and steel fixing were underway.
- Noise and vibration were undertaken in the vicinity of West Street Overbridge worksite (ref.: WSO), where soil filling and retention, parapet installation, utility works and trial hole installation were underway.
- Noise and vibration were undertaken in the vicinity of Calvert worksite (ref.: CAL), where concrete production, material movements, formwork reinforced concrete works, waterproofing, drainage and road realignment works were underway.
- Noise and vibration were undertaken in the vicinity of Woodlands worksite (ref.: WDL), where technical backfill, stabilisation works, haulage of aggregate and dig and replace were underway.
- Noise and vibration were undertaken in the vicinity of Quainton worksite (ref.: QAR), where earthworks, utility and approach works were underway.
- Noise and vibration were undertaken in the vicinity of Waddesdon worksite (ref.: WAD), where culvert construction, material deliveries and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Thames Valley Viaduct worksite (ref.: TVV), where formwork installation, lifting operations and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Aylesbury Golf Course worksite (ref.: GC), where earthworks, culvert and utility works were underway.

- Noise and vibration were undertaken in the vicinity of Oat Close worksite (ref: OC), where relief road, overbridge works, and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Risborough Road worksite (ref.: RR), where road tie-in works were underway.
- Noise and vibration were undertaken in the vicinity of Nash Lee Lane worksite (ref.: NLL), where concrete pours, footbridge construction, excavation and wall trimming were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Green Tunnel worksite (ref.: WGT), where portal works, tunnel works, precast installation, formwork reinforced concrete works, waterproofing, highway works, Grove Farm underbridge and culvert works and Ellesborough Road works were underway.
- Noise and vibration were undertaken in the vicinity of Rocky Lane Embankment worksite (ref.: RLE), where culvert works and ditch filling were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Dean Viaduct worksite (ref.: WDV), where bay propping works, abutment works, concrete pours and carpentry works were underway.
- Noise and vibration were undertaken in the vicinity of South Heath worksite (ref.: SH), where earthworks, drainage works, utility works, general site activities, overbridge construction and ground investigation works were underway.
- Noise and vibration were undertaken in the vicinity of North Portal worksite (ref.: NP), where earthworks, utility works, general site activities, culvert works, overbridge construction, ground investigation works, site access and haul road construction and operation were underway.
- Noise and vibration were undertaken in the vicinity of Chesham Road worksite (ref.: CHSM), where general site activities, internal and external building works, demobilisation and landscaping were underway.
- Noise and vibration were undertaken in the vicinity of Little Missenden Vent Shaft worksite (ref.: LM), where site operation, tunnel connections, headhouse superstructure works and building construction were underway.
- Noise and vibration were undertaken in the vicinity of Amersham Vent Shaft worksite (ref.: AM), where site operation, external and internal building works, pre-casting of boundary wall, steel, cladding and drainage works were underway.
- Noise and vibration were undertaken in the vicinity of Chalfont St Giles Vent Shaft worksite (ref.: CSG), where site operation, road maintenance, demobilisation and internal and external building works were underway.

- Noise and vibration were undertaken in the vicinity of Chalfont St Peter Vent Shaft worksite (ref.: CSP), where site operation, road maintenance, demobilisation and internal and external building works were underway.
- Noise and vibration were undertaken in the vicinity of Colne Valley Viaduct worksite, which is partly located in the London Borough of Hillingdon (LBH), (ref.: CVV), where compound operations and demobilisation, access road construction, pumping water management, satellite compound welfare works, environmental maintenance, deck and landscaping works and general site works were underway.

Further works, where monitoring did not take place, were also undertaken at the following locations:

- Grovehill Embankment (Westbury) where excavation and replace were underway.
- School End North where bulk excavation, vegetation clearance, stockpiling, drainage, pond maintenance and excavation, fencing works and vehicle movements were underway.
- Godington where site access road construction, topsoil stripping and vegetation clearance were underway.
- Addison Road where drainage, earthworks and ditch construction were underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks were underway.
- Bat Mitigation Structure where concrete pours, arch installation and technical backfill were underway.
- Greatmoor Culverts where drainage works and backfilling were underway.
- CAG 2 Underbridge where technical backfilling was underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where parapet installation and soil retention were underway.
- QUA36 Overbridge where beam installation was underway.
- QUA26 and QUA28 where technical backfilling, formwork installation, steel fixing and approach works were underway.
- Hills Farm where stockpile filling and maintenance were underway.
- Edgcott Road Overbridge where road realignment works and steel fixing were underway.
- SLC/13 Overbridge where technical backfilling was underway.

- Station Road Overbridge where formwork reinforced concrete works and panel installation were underway.
- Culvert No3 where installation of culvert units and waterproofing were underway.
- A418 Compound where earthworks and utility works were underway.
- Along A41 where concrete batching plant operation was underway.
- Fleet Marston where earthworks, culvert and overbridge works were underway.
- Small Dean Viaduct where drainage works, slab pours, steel fixing, formwork installation, concrete pours, deck installation, preparation works, parapet stitches scabbling, scaffolding removal and installation, compound demobilisation and repair works were underway.
- Bowood Lane where jointing, headwall installation, reinforcement works and formwork installation were underway.

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

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

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

Abbreviations and Descriptions

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

Table 1: Table of Abbreviations

Acronym/Term	Definition
$L_{Aeq,T}$	See equivalent continuous sound pressure level
Ambient sound	A description of the all-encompassing sound at a given location and time which will include sound from many sources near and far. Ambient sound can be quantified in terms of the equivalent continuous sound pressure level, $L_{pAeq,T}$
Decibel(s), or dB	Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure (measured in Pascal (Pa)). Because of this wide range, a level scale called the decibel (dB) scale, based on a logarithmic ratio, is used in sound measurement. Audibility of sound covers a range of approximately 0-140dB.
Decibel(s) A-weighted, or dB(A)	The human ear system does not respond uniformly to sound across the detectable frequency range and consequently instrumentation used to measure sound is weighted to represent the performance of the ear. This is known as the 'A weighting' and is written as 'dB(A)'.
Equivalent continuous sound pressure level, or $L_{Aeq,T}$	An index used internationally for the assessment of environmental sound impacts. It is defined as the notional unchanging level that would, over a given period of time (T), deliver the same sound energy as the actual time-varying sound over the same period. Hence fluctuating sound levels can be described in terms of an equivalent single figure value, typically expressed as a decibel level.
Exclusion of data	Measurement of noise levels can be affected by weather conditions such as prolonged periods of rain, 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.
- 1.1.2 Monitoring data and interpretive reports are to be provided to each relevant local authority on a monthly basis and shall include a summary of the construction activities occurring, the data recorded over the monitoring period, any complaints received, any periods in exceedance of agreed trigger levels, the results of any investigations and any actions taken or mitigation measures implemented. This report provides noise data, and interpretation thereof, for monitoring carried out by HS2 within the Buckinghamshire (BS) Local Authority area for the period 1st to 30th November 2025.
- 1.1.3 Active construction sites in the local authority area where monitoring was undertaken during this period include:
- A422 Turweston North worksite, ref.: A422 TN (see Plan 1 in Appendix A), where works activities included:
 - Overbridge construction including scaffolding works, steel fixing, deliveries, waterproofing, concrete pours, drainage installation, material movements and backfilling.
 - Viaduct construction including plank installation, lifting operations and edge protection.
 - Earthworks including breaking out rock, cutting, excavation and drainage installation.
 - Compound development.
 - A422 temporary bridge and road diversion.
 - School End worksite, ref.: SE (see Plan 2 in Appendix A) and Hermitage Chetwode Worksite ref.: HC (see plan 2 in Appendix A), where works activities included:

- Tarmac installation.
- Cutting works including step cutting and installation of drainage blanket.
- Water management including v-ditch installation, pumping and silt fencing installation.
- De-vegetation.
- Site access and mass haul road operation and maintenance.
- Utility works.
- Landscape bunding.
- Twyford worksite, ref.: TW (see Plan 2 in Appendix A), where works activities included:
 - De-vegetation.
 - Viaduct works, including steel fixing, formwork, concrete works and striking.
 - Steel fixing.
- West Street Overbridge worksite, ref.: WSO (see Plan 2 in Appendix A), where works activities included:
 - Soil filling and retention.
 - Parapet installation.
 - Utility works, including drainage.
 - Trial hole installation.
- Calvert worksite, ref.: CAL (see Plan 3 in Appendix A) where works activities included:
 - Concrete production.
 - Material movements.
 - Formwork reinforced concrete works.
 - Waterproofing.
 - Drainage works.
 - Road realignment works.
- Woodlands worksite, ref.: WDL (see Plan 4 in Appendix A) where works activities included:
 - Technical backfill.

- Stabilisation works.
- Haulage of aggregate.
- Dig and replace.
- Quainton worksite, ref.: QAR (see Plan 4 in Appendix A) where works activities included:
 - Earthworks.
 - Utility works.
 - Approach works.
- Waddesdon worksite, ref.: WAD (see Plan 5 in Appendix A), where works activities included:
 - Culvert construction.
 - Material deliveries.
 - Earthworks.
- Thames Valley Viaduct worksite, ref.: TVV (see Plan 5 in Appendix A), where works activities included:
 - Formwork installation.
 - Lifting operations.
 - Earthworks.
- Aylesbury Golf Course worksite, ref.: GC (see Plan 6 in Appendix A), where works activities included:
 - Earthworks.
 - Culvert works.
 - Utility works.
- Oat Close worksite, ref.: OC (see Plan 6 in Appendix A), where works activities included:
 - Relief road works including drainage.
 - Overbridge works including drainage and repairs.
 - Earthworks.
- Risborough Road worksite, ref.: RR (see Plan 6 in Appendix A), where works activities included:

- Road tie-in works.
- Nash Lee Lane worksite, ref.: NLL (see Plan 6 in Appendix A), where works activities included:
 - Concrete pours.
 - Footbridge construction including base slab construction and steel assembly.
 - Excavation.
 - Wall trimming.
- Wendover Green Tunnel worksite, ref.: WGT (see Plan 7 in Appendix A), where works activities included:
 - Portal works including, water tank demolition and base removal, stone deliveries, stone crushing works, excavation and platform preparation.
 - Tunnel works including installation of rockfall protection system and installation of equipment.
 - Precast installation.
 - Formwork reinforced concrete works.
 - Waterproofing.
 - Highway works including drainage installation, digging, capping and subbase installation.
 - Grove farm underbridge including waterproofing, construction and operation of site access road.
 - Grove Farm culvert including grouting, installation of foam and segment deliveries.
 - Ellesborough Road works including construction of invert slab and gantry erection.
- Rocky Lane Embankment worksite, ref.: RLE (see Plan 7 in Appendix A), where works activities included:
 - Culvert works including blinding, installation of precast units and jointing.
 - Ditch filling.
- Wendover Dean Viaduct worksite, ref.: WDV (see Plan 7 in Appendix A), where works activities included:
 - Propping works, including installation, striking and offloading.
 - Abutment works.

- Concrete pours.
- Carpentry works.
- South Heath worksite, ref.: SH (see Plan 8 in Appendix A), where works activities included:
 - Earthworks.
 - Drainage works.
 - Utility works.
 - General site activities.
 - Overbridge construction.
 - Ground investigation works.
 - Site access and haul road construction and operation.
- North Portal worksite, ref.: NP (see Plan 8 in Appendix A), where works activities included:
 - Operation of site plant.
 - Platform construction.
 - Piling platform reinstatement.
 - Porous portal structure works.
 - Building construction.
 - Batching plant operation and distribution of material.
 - Tunnel walkway slip forming.
 - Utilities works, including drainage.
- Chesham Road worksite, ref.: CHSM (see Plan 8 in Appendix A), where works activities included:
 - General site activities.
 - Internal and external building works, including cladding works.
 - Demobilisation.
 - Landscaping.
- Little Missenden Vent Shaft worksite ref.: LM (see Plan 9 in Appendix A), where works activities included:
 - General site activities including operation of plant.

- Tunnel connection works.
- Headhouse superstructure concrete works.
- Building construction internal and external works.
- Amersham Vent Shaft worksite, ref.: AM (see Plan 10 in Appendix A), where works activities included:
 - General site activities, including operation of plant.
 - External and internal building works.
 - Pre-casting of boundary wall.
 - Steel and cladding works.
 - Drainage works.
- Chalfont St Giles Vent Shaft worksite, ref.: CSG (see Plan 11 in Appendix A), where works activities included:
 - General site activities, including operation of plant.
 - Road maintenance.
 - Internal and external building works.
 - Demobilisation.
- Chalfont St Peter Vent Shaft worksite, ref.: CSP (see Plan 12 in Appendix A), where works activities included:
 - Operation of plant.
 - Road maintenance.
 - Internal and external building works.
 - Demobilisation.
- Colne Valley Viaduct – Load Test Pile 1 worksite, which is partly located in the London Borough of Hillingdon (LBH), ref.: CVV (see Plan 13 in Appendix A), where works activities included:
 - Compound operations and demobilisation.
 - Access road construction.
 - Pumping water management.
 - Satellite compound welfare.
 - Environmental maintenance.

- Deck finishes including preparation and operation of storage yards, installation of below deck access provision, traffic management, delivery of parapets, installation of noise barriers, troughs, pipes, steel works and other minor materials, installation of stairs, operation of support plant, waterproofing, slab construction, noise barrier foundations, concrete panel installation, masking wall installation, embankment works and structural health monitoring.
- Landscaping works including removal of cofferdams, drainage, vegetation clearance, earthworks cut and filling and road construction.
- General site works.

1.1.4 Further works, where monitoring did not take place, were also undertaken at:

- Grovehill Embankment (Westbury) where excavation and replace were underway.
- School End North where bulk excavation, vegetation clearance, stockpiling, drainage, pond maintenance and excavation, fencing works and vehicle movements were underway.
- Godington where site access road construction, topsoil stripping and vegetation clearance were underway.
- Addison Road where drainage, earthworks and ditch construction were underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks were underway.
- Bat Mitigation Structure where concrete pours, arch installation and technical backfill were underway.
- Greatmoor Culverts where drainage works and backfilling were underway.
- CAG 2 Underbridge where technical backfilling was underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where parapet installation and soil retention were underway.
- QUA36 Overbridge where beam installation was underway.
- QUA26 and QUA28 where technical backfilling, formwork installation, steel fixing and approach works were underway.
- Hills Farm where stockpile filling and maintenance were underway.
- Edgcott Road Overbridge where road realignment works and steel fixing were underway.

- SLC/13 Overbridge where technical backfilling was underway.
- Station Road Overbridge where formwork reinforced concrete works and panel installation were underway.
- Culvert No3 where installation of culvert units and waterproofing were underway.
- A418 Compound where earthworks and utility works were underway.
- Along A41 where concrete batching plant operation was underway.
- Fleet Marston where earthworks, culvert and overbridge works were underway.
- Small Dean Viaduct where drainage works, slab pours, steel fixing, formwork installation, concrete pours, deck installation, preparation works, parapet stitches scabbling, scaffolding removal and installation, compound demobilisation and repair works were underway.
- Bowood Lane where jointing, headwall installation, reinforcement works and formwork installation were underway.

1.1.5 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-two (32) noise and seven (7) vibration monitoring installations were active in November in the BS area. Table 2 summarises the location of noise and vibration monitoring installations within the BS area in November 2025.

1.2.2 The noise monitor at measurement location ref.: WT-NMP1, worksite ref.: WGT, was removed at the start of November as works in the vicinity have ceased.

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

Table 2: Monitoring Locations

Worksite Reference	Measurement Reference	Address
A422 TN	TN-NMP1	Turweston, Brackley
SE	SE-NMP1	School End, Chetwode

Worksite Reference	Measurement Reference	Address
	SE-Vib1	School End, Chetwode
HC	HC-NMP1	Hermitage, Chetwode
TW	TW-NMP1	Twyford, Buckinghamshire
WSO	WSO-NMP1	West Street, Twyford
	PF-Vib1	Twyford, Buckinghamshire
CAL	SHC-NMP1	School Hill Compound, Calvert
	BRA-Vib1	13 Brackley Lane, Calvert Village
	FCC-NMP1	Calvert South
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton
	WDL-Vib1	Station Road, Quainton
	WC-Vib1	Quainton, Buckinghamshire
QAR	QAR-NMP2	Station Road, Quainton
	SR-Vib1	Station Road, Quainton
	LSF-NMP1	Upper South Farm
WAD	WAD-NMP2	Waddesdon, Buckinghamshire
TVV	TVV-NMP1	Aylesbury, Buckinghamshire
GC	GC-NMP1	Aylesbury, Buckinghamshire
OC	MF-NMP1	Moat Farm, Marsh Lane
RR	RR-NMP1	Stoke Mandeville, Aylesbury
NLL	NLL-NMP2	Nash Lee Lane, Nash Lee
WGT	ER-NMP1	Ellesborough Rd, Wendover
	ER-Vib1	Ellesborough Rd, Wendover
	BL-NMP1	Bacombe Lane, Wendover
	WGT-NMP1	Wendover, Aylesbury
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath
	PKF-NMP1	Park Farm, South Heath
NP	BFH-NMP1	Bury Farm, Great Missenden
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath
	BLH-NMP1	Bayleys Hatch, South Heat, Great Missenden
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath
AM	AM-NMP1	Amersham Vent Shaft Worksite, Whielden Lane, Amersham
LM	LM-NMP1	Little Missenden, A413, Amersham

Worksite Reference	Measurement Reference	Address
	PWC-NMP1	Patricia Holmes, Little Missenden Vent Shaft Worksite, Amersham
CSG	CSG-NMP1	Chalfont St Giles Vent Shaft Worksite, Bottom House Farm Lane
CSP	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite, Chesham Lane, Chalfont St. Peter

2 Summary of Results

2.1 Summary of Measured Noise 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
A422 TN	TN-NMP1	Turweston, Brackley	Free-field	49.2 (52.2)	52.8 (57.6)	48.7 (55.8)	46.0 (53.3)	43.6 (52.2)	44.8 (47.2)	49.0 (49.7)	49.4 (52.7)	48.3 (62.4)	41.0 (46.4)	48.1 (53.6)	45.1 (49.1)
SE	SE-NMP1	School End, Chetwode	Free-field	52.0 (54.4)	58.5 (62.7)	42.2 (53.1)	40.2 (52.7)	38.4 (51.7)	48.6 (52.3)	56.3 (60.4)	53.4 (56.3)	47.2 (58.2)	36.5 (46.8)	42.2 (47.3)	38.1 (46.1)
HC	HC-NMP1	Hermitage, Chetwode	Free-field	54.6 (58.6)	59.1 (62.2)	43.3 (52.5)	41.3 (53.0)	40.3 (56.0)	53.2 (56.4)	56.8 (59.4)	55.5 (58.5)	47.6 (56.9)	37.6 (45.9)	43.4 (48.8)	40.0 (47.6)
TW	TW-NMP1	Twyford	Free-field	43.4 (55.8)	48.3 (54.2)	42.0 (54.3)	40.4 (49.4)	38.7 (50.5)	41.6 (46.0)	46.8 (50.9)	44.3 (48.8)	40.4 (47.2)	37.8 (47.9)	43.0 (51.6)	38.4 (44.8)
WSO	WSO-NMP1	West Street, Twyford	Free-field	49.8 (59.3)	51.4 (57.7)	43.0 (53.0)	42.3 (58.4)	42.9 (58.8)	44.8 (47.6)	47.2 (49.3)	43.6 (47.3)	42.2 (50.5)	39.0 (55.6)	43.5 (52.7)	40.9 (58.9)
CAL	SHC-NMP1	School Hill Compound, Calvert	Free-field	56.7 (63.0)	60.6 (68.3)	52.3 (64.7)	52.2 (67.0)	51.9 (67.1)	55.0 (59.1)	59.7 (65.4)	60.2 (65.1)	55.7 (72.8)	50.1 (63.7)	53.6 (65.3)	50.6 (55.7)
	FCC-NMP1	Calvert South	Free-field	54.1 (62.0)	55.3 (66.8)	42.9 (48.1)	41.5 (51.2)	40.7 (51.5)	53.4 (58.3)	50.7 (55.8)	48.2 (57.2)	45.3 (57.6)	39.3 (45.8)	47.3 (70.1)	40.0 (44.7)
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Free-field	61.3 (67.0)	65.0 (74.5)	50.3 (73.0)	49.9 (67.1)	49.7 (70.7)	56.5 (61.8)	63.7 (68.0)	61.9 (65.1)	51.9 (58.5)	48.7 (62.8)	59.4 (73.6)	45.6 (53.0)

OFFICIAL

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
QAR	QAR-NMP2	Station Rd, Quainton	Free-field	49.0 (51.8)	50.9 (63.1)	46.6 (51.3)	43.8 (48.8)	41.7 (50.2)	46.2 (48.3)	48.8 (51.4)	48.7 (53.6)	49.5 (68.6)	39.6 (46.0)	46.5 (51.3)	40.8 (46.7)
	LSF-NMP1	Upper South Farm	Free-field	54.1 (59.5)	58.8 (60.4)	42.4 (48.7)	40.0 (52.8)	38.7 (52.1)	50.2 (54.3)	55.3 (59.3)	52.8 (59.4)	48.7 (61.1)	36.9 (42.8)	54.2 (66.8)	38.7 (46.0)
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Free-field	51.1 (57.9)	52.8 (68.4)	47.2 (53.4)	45.2 (59.2)	42.7 (56.6)	45.2 (50.0)	48.4 (51.6)	48.3 (51.9)	45.9 (54.7)	40.2 (55.6)	46.3 (52.4)	41.8 (48.5)
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	Free-field	47.3 (53.0)	52.1 (66.9)	44.8 (49.9)	44.0 (51.7)	41.1 (53.0)	45.5 (48.1)	48.1 (50.1)	45.9 (50.4)	47.5 (59.5)	40.4 (47.7)	46.2 (61.2)	41.1 (49.6)
GC	GC-NMP1	Aylesbury, Buckinghamshire	Free-field	46.3 (49.4)	48.9 (52.8)	44.5 (60.9)	43.5 (54.3)	39.2 (51.4)	43.4 (48.0)	46.3 (47.6)	45.3 (48.0)	45.1 (54.1)	37.8 (43.1)	47.0 (67.1)	39.8 (47.8)
OC	MF-NMP1	Aylesbury, Buckinghamshire	Free-field	52.8 (60.6)	55.4 (61.4)	50.7 (54.7)	48.8 (57.2)	45.1 (57.8)	48.3 (51.2)	51.5 (54.6)	50.8 (55.4)	50.6 (57.6)	42.2 (54.7)	49.5 (56.2)	45.3 (52.5)
RR	RR-NMP1	Stoke Mandeville, Aylesbury	Free-field	57.2 (62.2)	56.4 (60.7)	56.3 (59.9)	53.6 (58.3)	49.0 (59.7)	52.3 (56.0)	55.1 (59.2)	56.6 (59.5)	56.1 (62.1)	47.8 (54.5)	55.0 (59.7)	49.5 (63.6)

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
NLL	NLL-NMP2	Nash Lee Lane, Nash Lee	Free-field	53.9 (56.3)	55.1 (58.7)	52.1 (54.5)	49.9 (54.7)	46.4 (54.2)	49.6 (53.3)	53.0 (55.7)	51.8 (52.8)	50.8 (53.7)	45.0 (53.3)	51.4 (59.4)	46.3 (53.8)
WGT	ER-NMP1	Ellesborough Rd, Wendover	Free-field	56.6 (61.0)	55.9 (60.1)	54.4 (59.2)	51.9 (56.6)	49.0 (59.6)	52.9 (54.7)	55.4 (56.9)	57.0 (59.0)	54.9 (66.2)	48.8 (54.5)	54.4 (58.0)	48.4 (59.3)
	BL-NMP1	Bacombe Lane, Wendover	Free-field	47.3 (50.7)	50.0 (60.5)	45.6 (48.8)	44.2 (51.9)	40.0 (48.7)	44.4 (45.9)	46.4 (48.0)	46.4 (48.2)	48.9 (67.3)	39.6 (46.9)	47.0 (58.0)	40.8 (48.6)
	WGT-NMP1	Wendover, Aylesbury	Free-field	55.0 (59.0)	54.1 (58.3)	54.1 (58.7)	52.6 (68.0)	48.9 (58.4)	50.8 (54.0)	54.2 (57.7)	55.3 (58.9)	52.6 (58.7)	46.7 (54.4)	53.2 (58.7)	47.7 (54.1)
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Free-field	54.1 (56.4)	54.0 (57.3)	51.7 (53.4)	50.5 (72.1)	44.3 (54.0)	48.8 (49.5)	54.7 (59.3)	53.1 (54.1)	53.8 (75.6)	44.5 (56.2)	52.6 (63.9)	45.1 (51.1)
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover	Free-field	53.5 (57.9)	58.3 (62.3)	49.9 (54.3)	48.1 (54.5)	45.5 (55.3)	49.5 (50.5)	51.2 (54.6)	54.1 (61.8)	49.6 (58.1)	46.0 (53.1)	51.0 (56.6)	45.4 (52.1)
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath	Free-field	45.5 (49.7)	57.4 (61.0)	47.2 (53.4)	45.6 (54.6)	41.7 (55.2)	43.1 (45.6)	51.8 (56.7)	50.9 (53.2)	54.5 (86.7)	41.1 (61.2)	48.9 (56.9)	40.8 (44.3)
	PKF-NMP1	Park Farm, South Heath	Free-field	45.6 (49.5)	52.7 (59.4)	47.4 (56.3)	45.3 (58.8)	43.4 (59.9)	44.7 (49.3)	49.5 (55.3)	54.1 (68.2)	50.6 (66.1)	40.2 (54.5)	49.0 (57.8)	42.5 (48.5)

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Saturday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)					Sunday / Public Holiday Average $L_{Aeq,T}$ (Highest Day $L_{Aeq,T}$)	
				0700 - 0800	0800 - 1800	1800 - 1900	1900 - 2200	2200 - 0700	0700 - 0800	0800 - 1300	1300 - 1400	1400 - 2200	2200 - 0700	0700 - 2200	2200 - 0700
NP	BFH-NMP1	Bury Farm, Great Missenden	Free-field	42.0 (47.4)	52.3 (59.1)	48.6 (53.2)	44.7 (52.4)	40.2 (54.8)	36.2 (41.4)	50.0 (54.1)	49.6 (55.1)	48.4 (64.0)	37.9 (42.2)	47.7 (60.9)	40.1 (46.8)
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath	Free-field	(46.5) (52.9)	(54.2) (56.4)	(49.7) (59.4)	47.6 (54.4)	44.1 (54.6)	45.0 (48.0)	51.7 (54.6)	50.7 (53.6)	52.2 (64.5)	42.5 (46.5)	49.1 (58.9)	43.0 (46.5)
	BLH-NMP1	Bayleys Hatch, South Heath, Great Missenden	Free-field	(46.9) (48.3)	50.0 52.9	46.2 (48.4)	44.5 (49.3)	39.2 (48.3)	44.0 (45.4)	51.9 (59.6)	53.4 (61.8)	50.0 (62.4)	38.6 (43.2)	48.9 (60.7)	39.2 (48.4)
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	Free-field	54.0 (56.4)	56.8 (60.6)	56.4 (59.2)	54.3 (58.7)	47.4 (56.4)	50.7 (51.8)	56.1 (59.1)	57.1 (58.9)	55.1 (58.6)	47.1 (52.7)	55.0 (59.7)	46.5 (50.4)
AM	AM-NMP1	Whielden Lane, Amersham	Free-field	61.1 (63.1)	63.7 (67.6)	62.5 (64.6)	59.9 (63.0)	53.6 (60.5)	57.8 (59.5)	60.6 (61.5)	61.4 (61.6)	60.7 (63.7)	55.1 (60.7)	60.4 (63.9)	53.4 (57.6)
LM	LM-NMP1	Little Missenden, A413, Amersham	Free-field	55.1 (57.3)	56.5 (58.7)	56.8 (58.9)	54.5 (57.5)	47.7 (55.2)	51.3 (52.5)	55.4 (59.0)	55.7 (58.1)	55.4 (60.0)	47.6 (52.3)	54.4 (57.4)	47.8 (51.7)
	PWC-NMP1	Patricia Holmes, LM Worksite, Amersham	Free-field	60.1 (61.6)	61.1 (62.3)	61.6 (62.9)	59.2 (62.1)	52.2 (58.0)	55.9 (56.5)	60.0 (63.0)	60.5 (61.8)	60.0 (63.7)	52.6 (57.1)	58.9 (61.4)	52.5 (55.9)

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
CSG	CSG-NMP1	CSG Worksite, Bottom House Farm Lane	Free-field	44.4 (49.1)	49.3 (54.6)	44.7 (50.4)	43.3 (48.5)	37.4 (44.3)	47.1 (50.0)	47.4 (49.9)	45.4 (49.5)	44.3 (50.8)	35.5 (41.7)	46.5 (51.1)	38.1 (44.0)
CSP	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite	Free-field	45.4 (47.2)	49.5 (51.1)	45.7 (46.3)	48.6 (58.9)	41.9 (47.0)	42.8 (42.8)	48.7 (48.7)	51.4 (51.4)	47.0 (49.1)	39.1 (43.2)	49.6 (53.3)	38.5 (42.2)

- 2.1.2 Table 4 presents a summary of the measured vibration levels at the 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
SE	SE-Vib1	School End, Chetwode	2.17 (X-axis)
WDL	WDL-Vib1	Station Road, Quainton	0.97 (X-axis)
	WC-Vib1	Quainton, Buckinghamshire	8.96 (Y-axis)
QAR	SR-Vib1	Station Road, Quainton	1.53 (X-axis)
CAL	BRA-Vib1	13 Brackley Lane, Calvert Village	1.78 (Z-axis)
WSO	PF-Vib1	Twyford, Buckinghamshire	1.64 (Y-axis)
WGT	ER-Vib1	46, Ellesborough Rd, Wendover	2.51 (Z-axis)

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

<https://data.gov.uk/dataset/24542ae7-dd44-444f-b259-871c4cc43b5e/environmental-monitoring-data>.

2.2 Exceedances of the LOAEL and SOAEL

- 2.2.1 The lowest observed adverse effect level (LOAEL) is defined in the Planning Practice Guidance – Noise (PPG) as the level above which “noise starts to cause small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life”.
- 2.2.2 The significant observed adverse effect level (SOAEL) is defined in the ‘Planning Practice Guidance – Noise’ as the level above which “noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in

difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.

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

2.2.4 Where reported construction noise levels exceed the LOAEL and SOAEL 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.

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

Table 5: Summary of Exceedances of LOAEL and SOAEL

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
A422 TN	TN-NMP1	Turweston, Brackley	All days	All periods	No exceedance	No exceedance
SE	SE-NMP1	School End, Chetwode	All days	All periods	No exceedance	No exceedance
HC	HC-NMP1	Hermitage, Chetwode	All days	All periods	No exceedance	No exceedance
TW	TW-NMP1	Twyford	All days	All periods	No exceedance	No exceedance
WSO	WSO-NMP1	West Street, Twyford	Weekday	0700-0800	3	No exceedance
CAL	SHC-NMP1	School Hill Compound, Calvert	All days	All periods	Not applicable*	Not applicable*
	FCC-NMP1	Calvert South	Weekday	0700-0800 0800-1800	2 1	No exceedance No exceedance
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Weekday	0700-0800	16	No exceedance
				0800-1800	13	No exceedance
				1800-1900	2	No exceedance
			Saturday	0700-0800	2	No exceedance
				0800-1300	4	No exceedance
				1300-1400	4	No exceedance
				1400-2200	9	No exceedance

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
QAR	QAR-NMP2	Station Rd, Quainton	Weekday	0800-1800	1	No exceedance
	LSF-NMP1	Upper South Farm	Weekday Saturday	0700-0800 1300-1400 1400-2200	1 2 4	No exceedance No exceedance No exceedance
GC	GC-NMP1	Aylesbury, Buckinghamshire	All days	All periods	No exceedance	No exceedance
OC	MF-NMP1	Moat Farm, Marsh Lane	All days	All periods	No exceedance	No exceedance
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Weekday	0800-1800	1	No exceedance
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	All days	All periods	No exceedance	No exceedance
RR	RR-NMP1	Stoke Mandeville, Aylesbury	All days	All periods	No exceedance	No exceedance
NLL	NLL-NMP2	Nash Lee Lane, Nash Lee	All days	All periods	No exceedance	No exceedance
WGT	ER-NMP1	Ellesborough Rd, Wendover	All days	All periods	No exceedance	No exceedance
	BL-NMP1	Bacombe Lane, Wendover	All days	All periods	No exceedance	No exceedance
	WT-NMP1	A413, Wendover	All days	All periods	No exceedance	No exceedance
	WGT-NMP1	Wendover, Aylesbury	All days	All periods	No exceedance	No exceedance
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	All days	All periods	No exceedance	No exceedance
WDV	WDV-NMP1	A413, Wendover	All days	All periods	No exceedance	No exceedance

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath	Saturday	1400-2200	1	No exceedance
	PKF-NMP1	Park Farm, South Heath	Saturday	1400-2200	1	No exceedance
NP	BFH-NMP1	Bury Farm, Great Missenden	All days	All periods	No exceedance	No exceedance
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath	All days	All periods	No exceedance	No exceedance
	BLH-NMP1	Bayleys Hatch, South Heath, Great Missenden	All days	All periods	No exceedance	No exceedance
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	All days	All periods	No exceedance	No exceedance
AM	AM-NMP1**	Whielden Lane, Amersham	All days	All periods	Not applicable*	No exceedance
LM	LM-NMP1**	Little Missenden Vent Shaft Worksite	All days	All periods	No exceedance	No exceedance
	PWC-NMP1	Patricia Holmes, Little Missenden Vent Shaft Worksite, Amersham	All days	All periods	Not applicable*	Not applicable*
CSG	CSG-NMP1**	Chalfont St Giles Vent Shaft	All days	All periods	No exceedance	No exceedance
CSP	CSP-NMP2**	Chalfont St Peter Vent Shaft Worksite	All days	All periods	No exceedance	No exceedance

* The LOAEL or SOAEL has not been assessed due to high baseline levels.

** A distance correction has been applied when calculating exceedances of the LOAEL and SOAEL.

2.2.6 There were exceedances of the LOAEL due to HS2 construction works at eight (8) monitoring locations during weekday and Saturday daytime and evening periods.

2.2.7 No exceedances of the SOAEL were recorded due to HS2 construction works during November 2026.

2.3 Exceedances of Trigger Level

- 2.3.1 Table 6 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 6: Summary of Exceedances of Trigger Levels

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

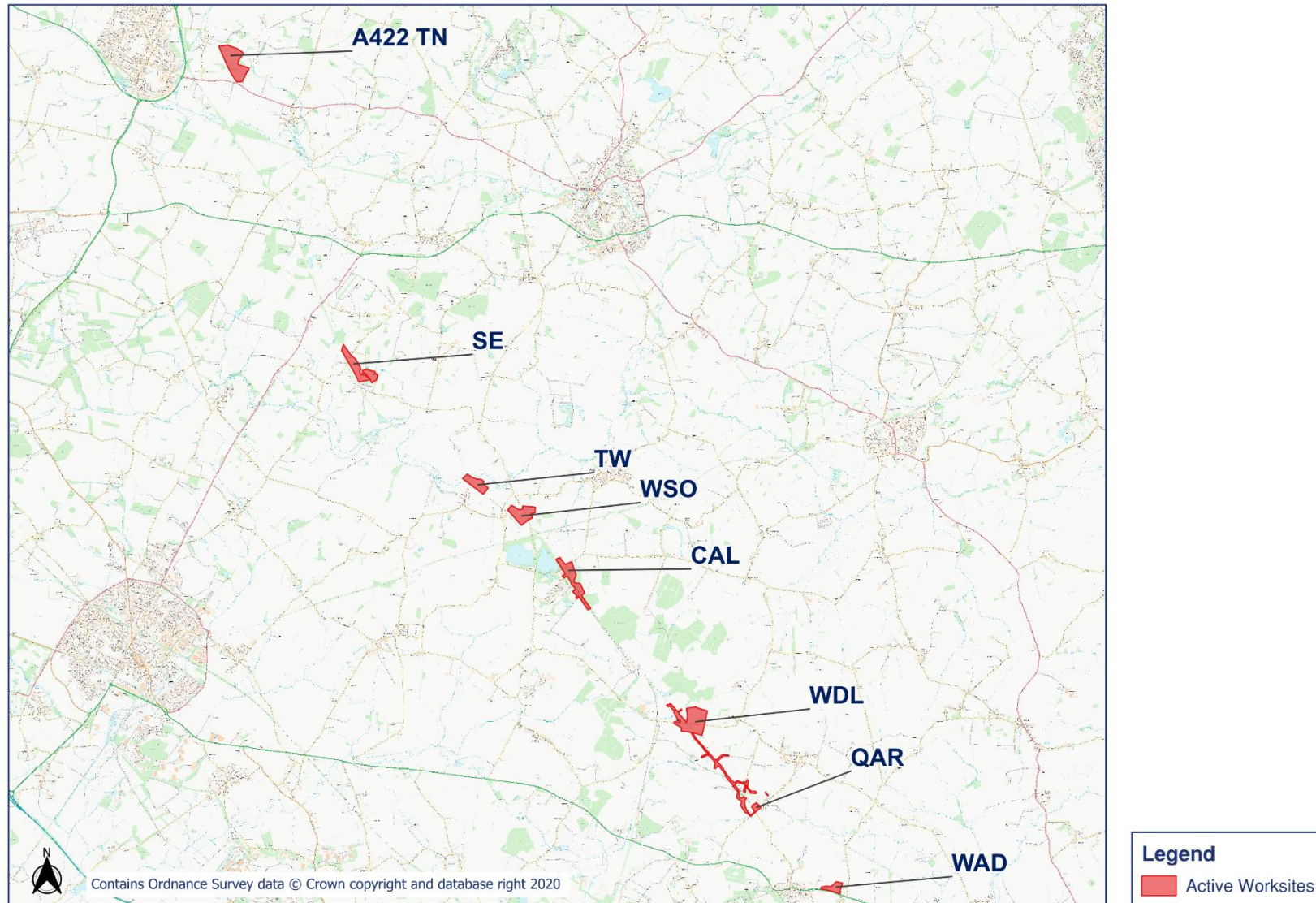
2.4 Complaints

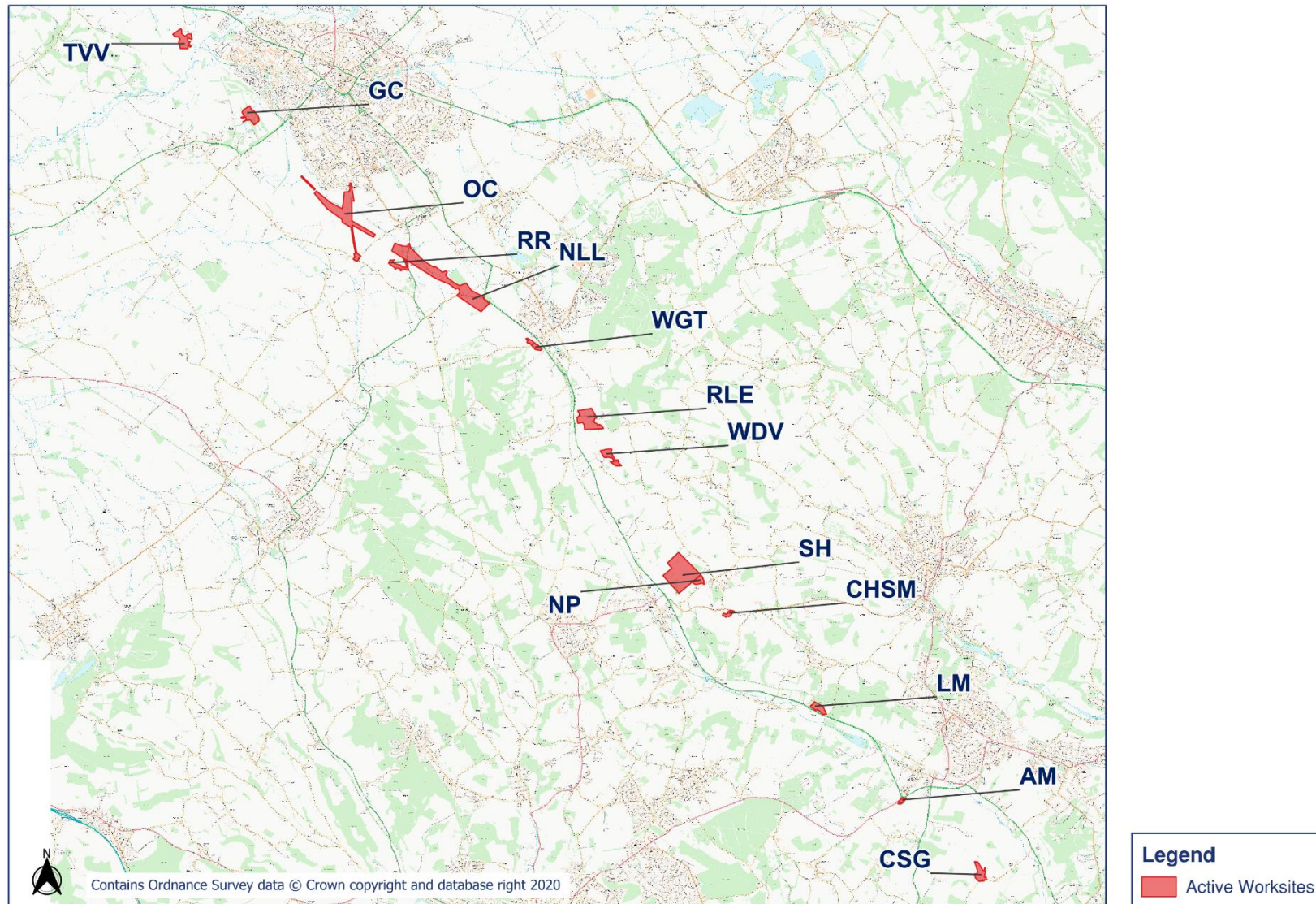
- 2.4.1 Table 7 provides a summary of complaint information related to noise and vibration received during the reporting period, along with the findings of any investigation.

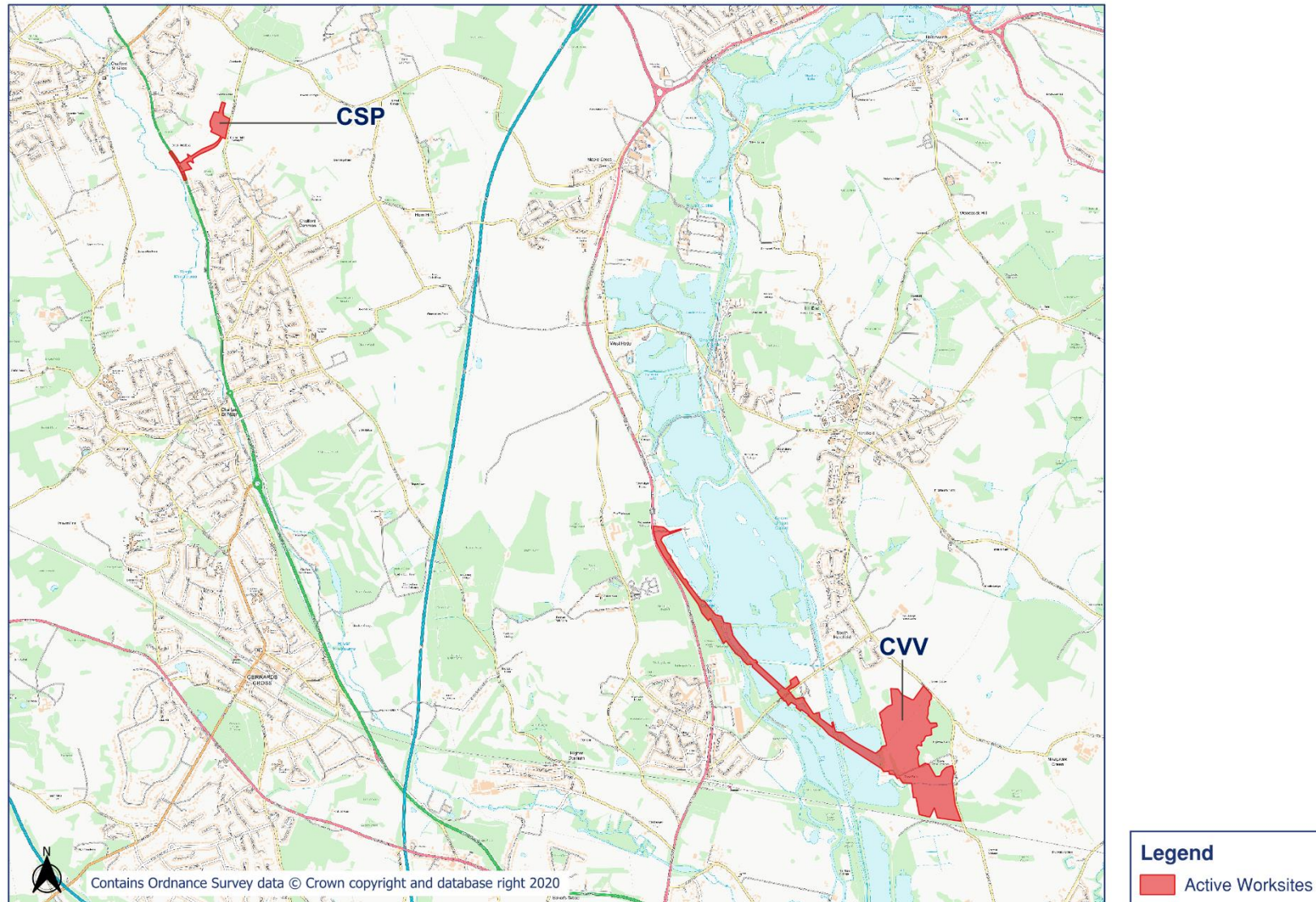
Table 7: Summary of Complaints

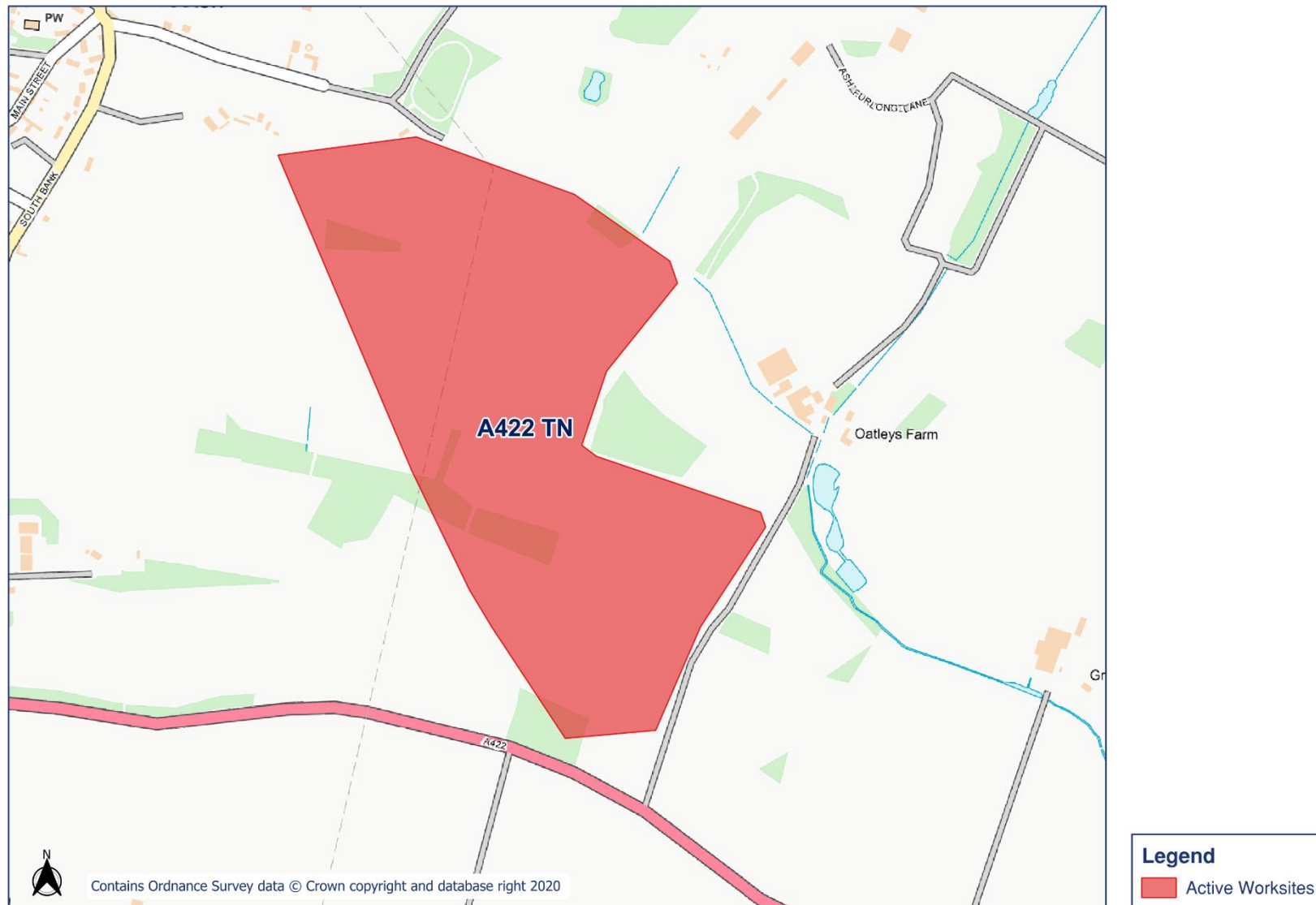
Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
-	-	-	-	-

Appendix A Site Locations



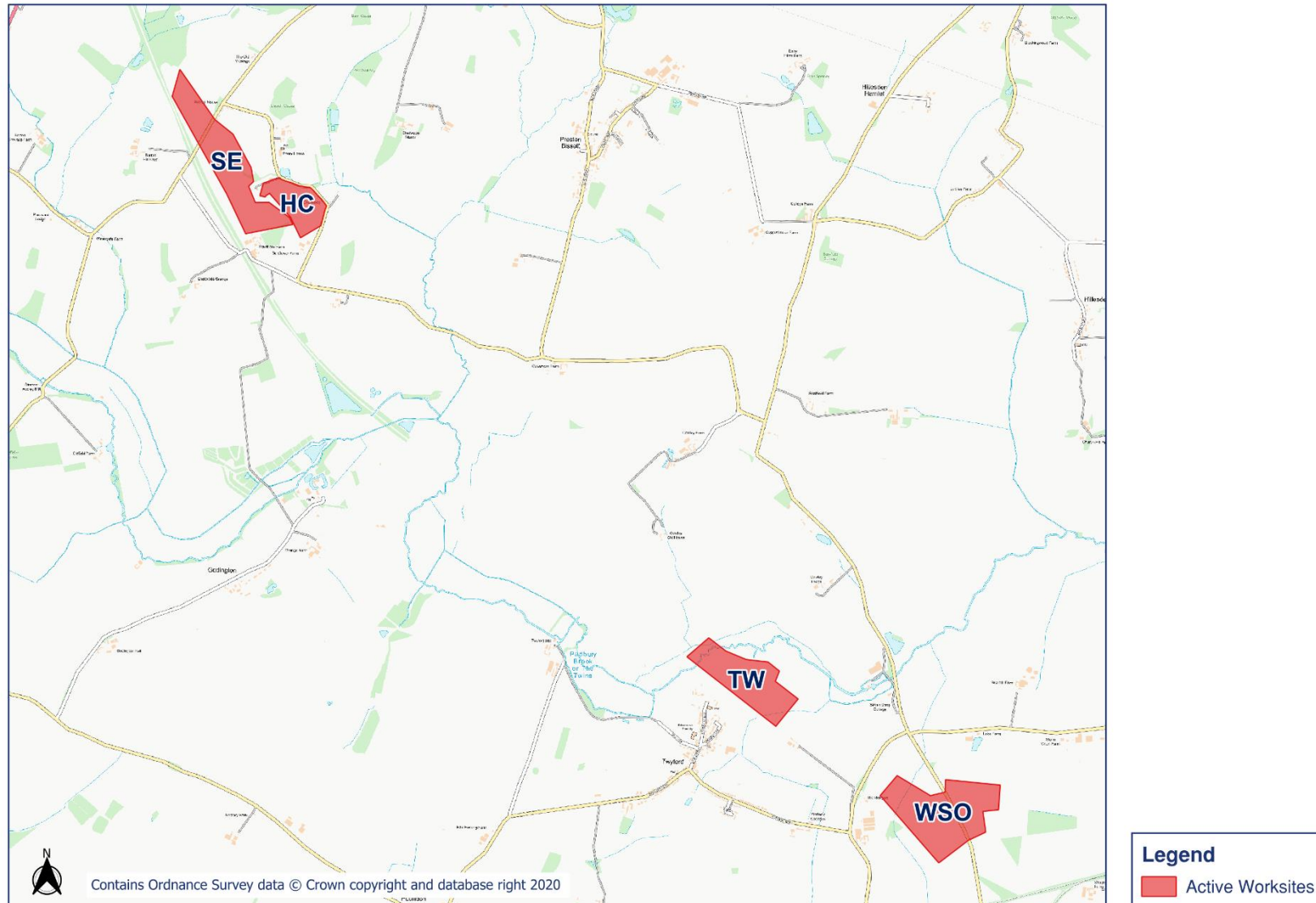


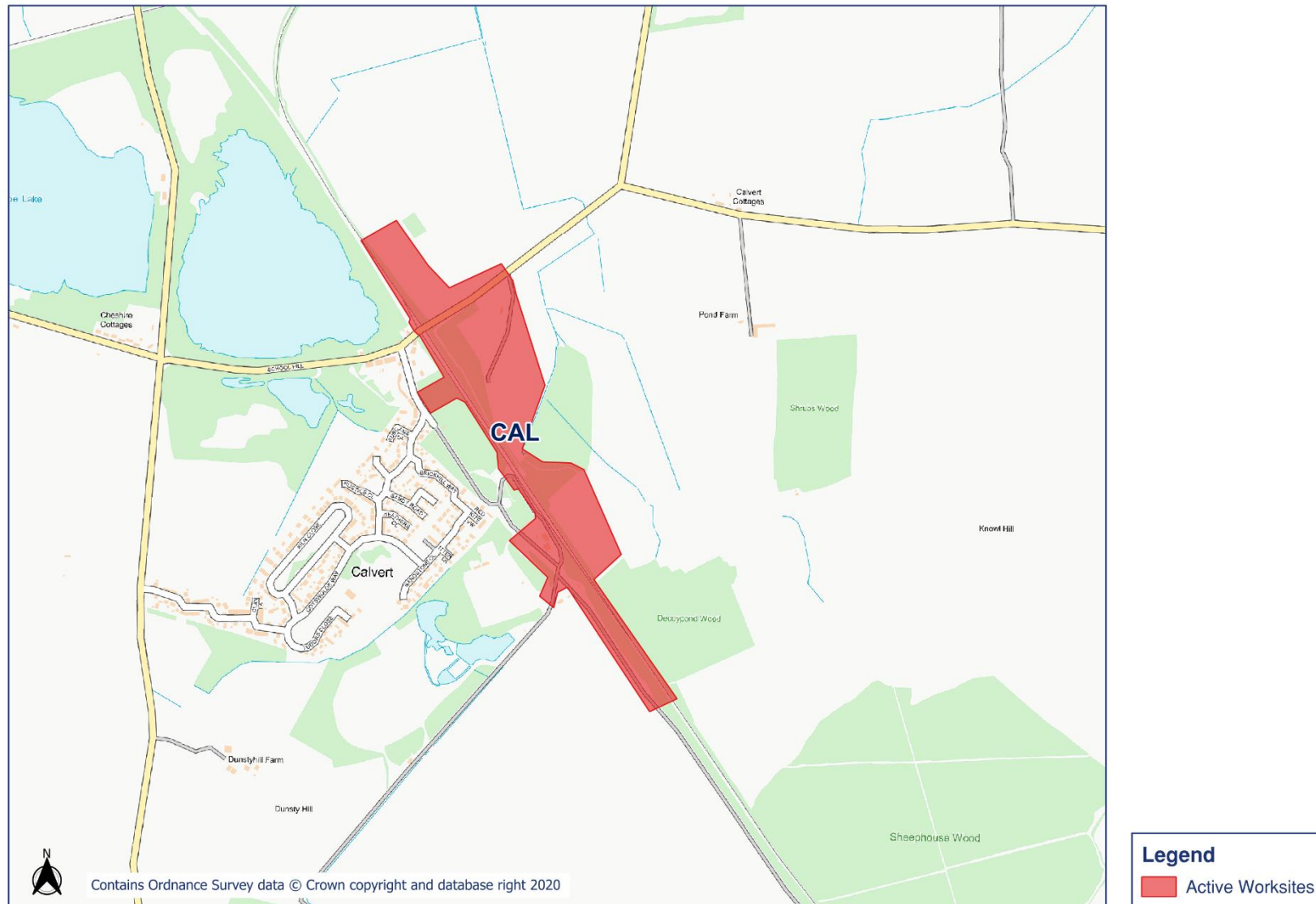


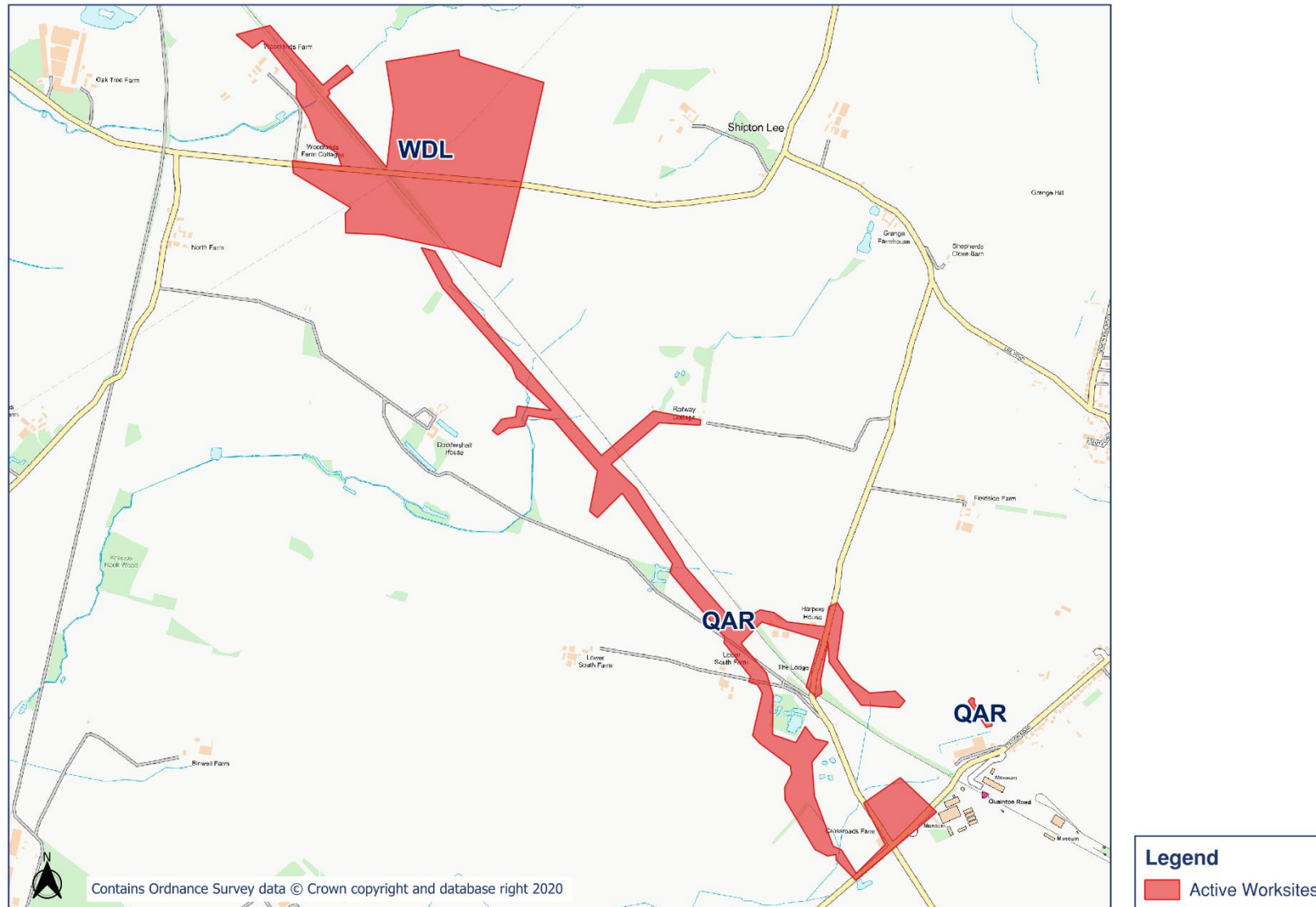


HS2

Worksite Identification Plan - 2

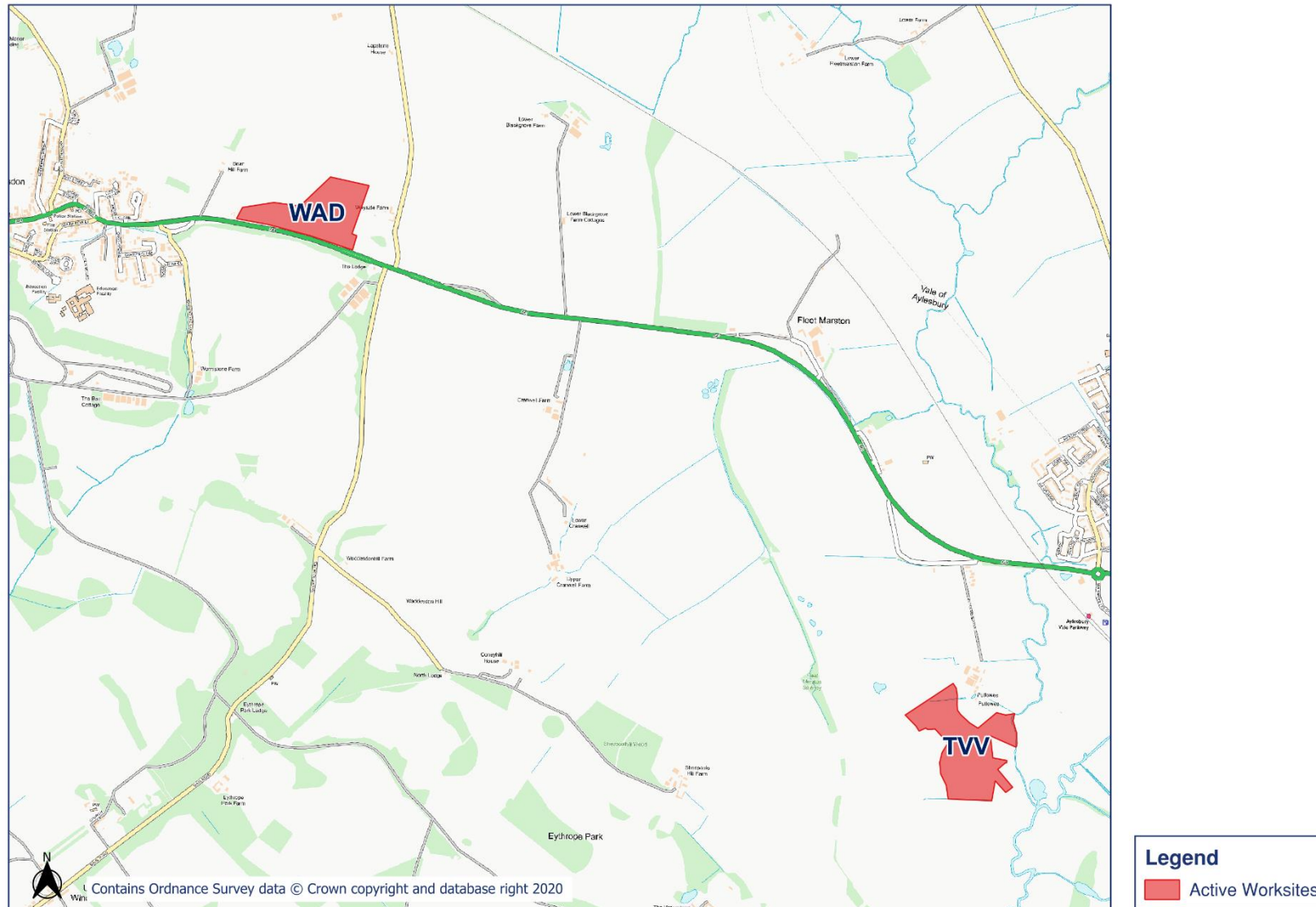






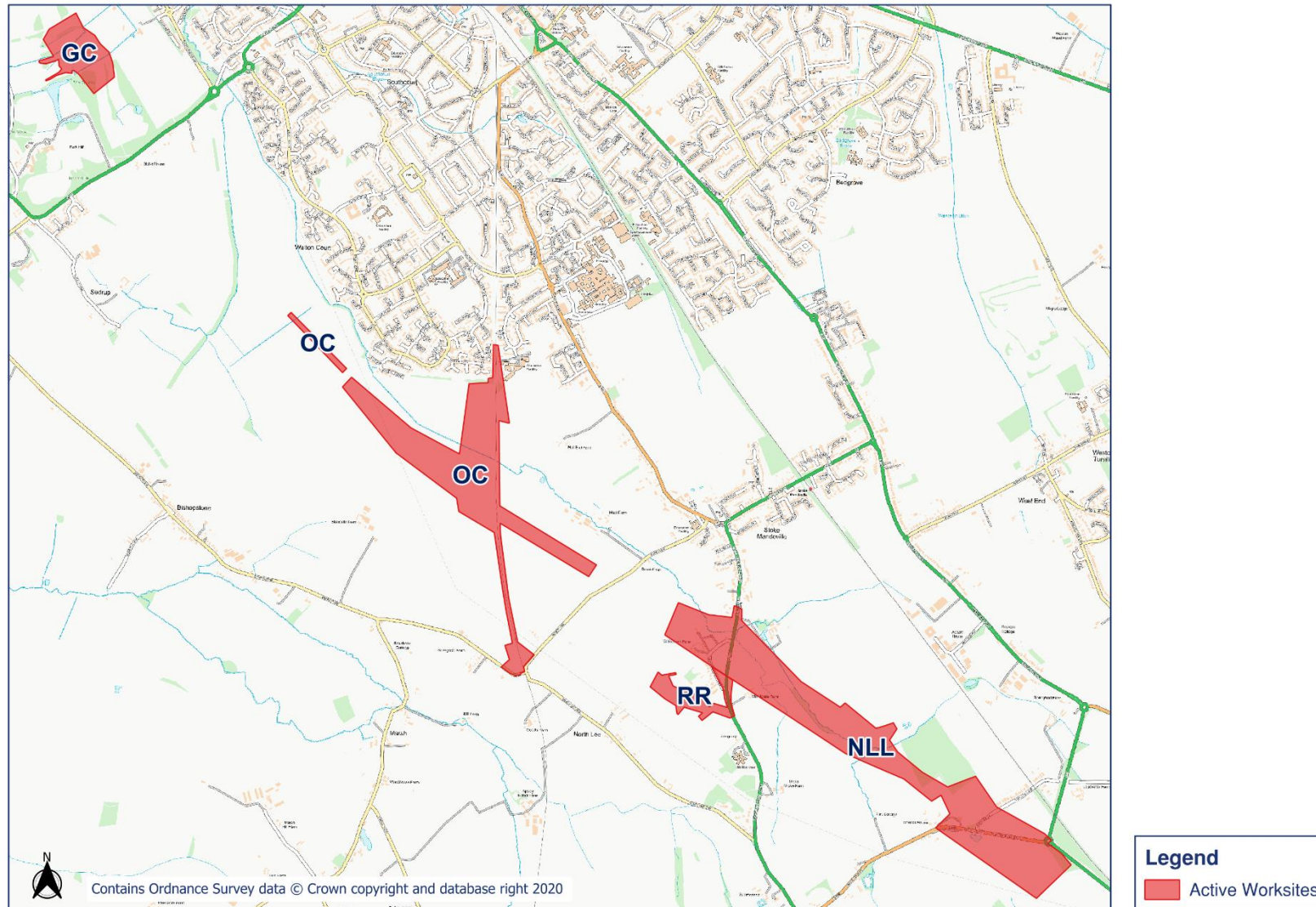
HS2

Worksite Identification Plan - 5



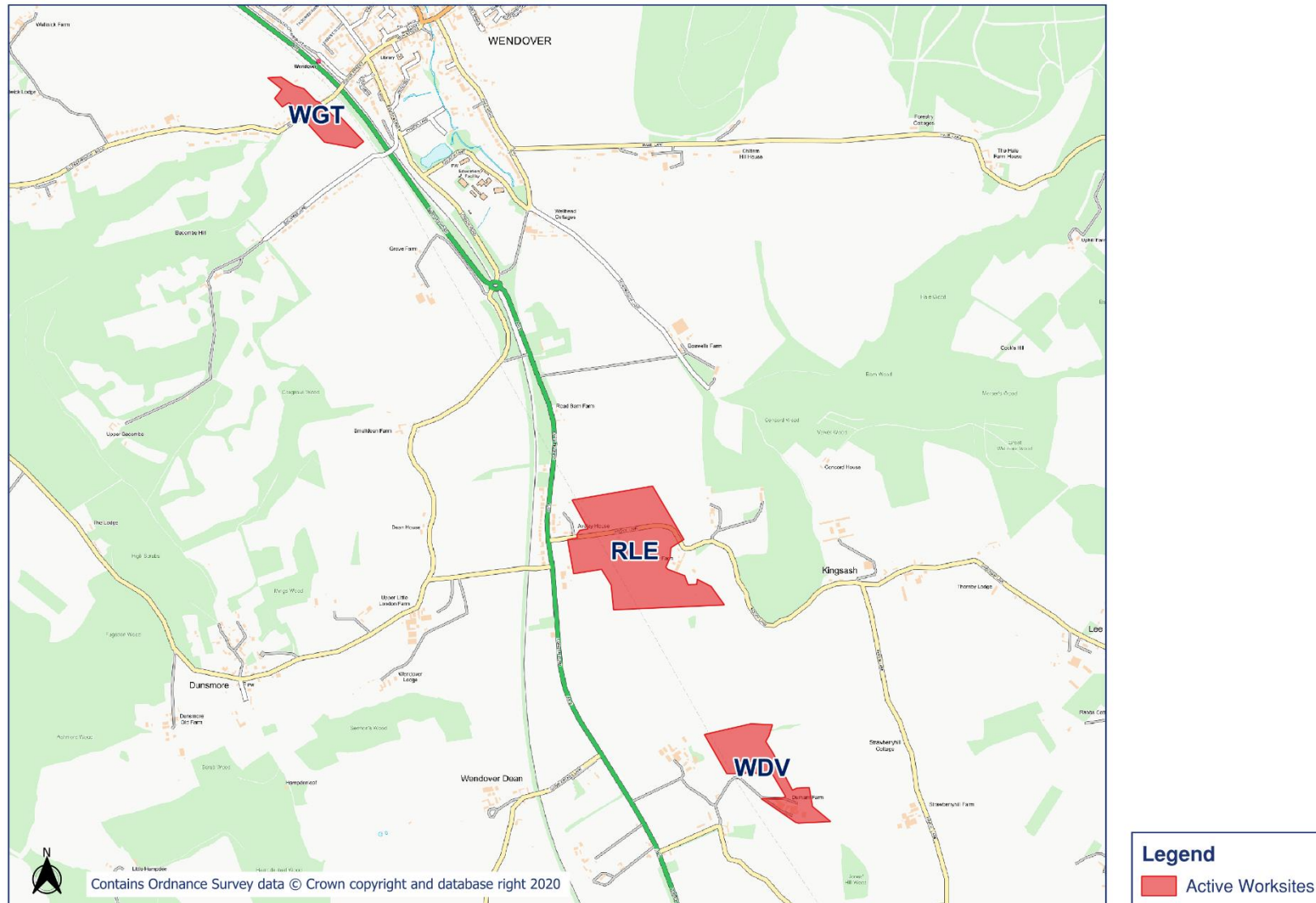
HS2

Worksite Identification Plan - 6



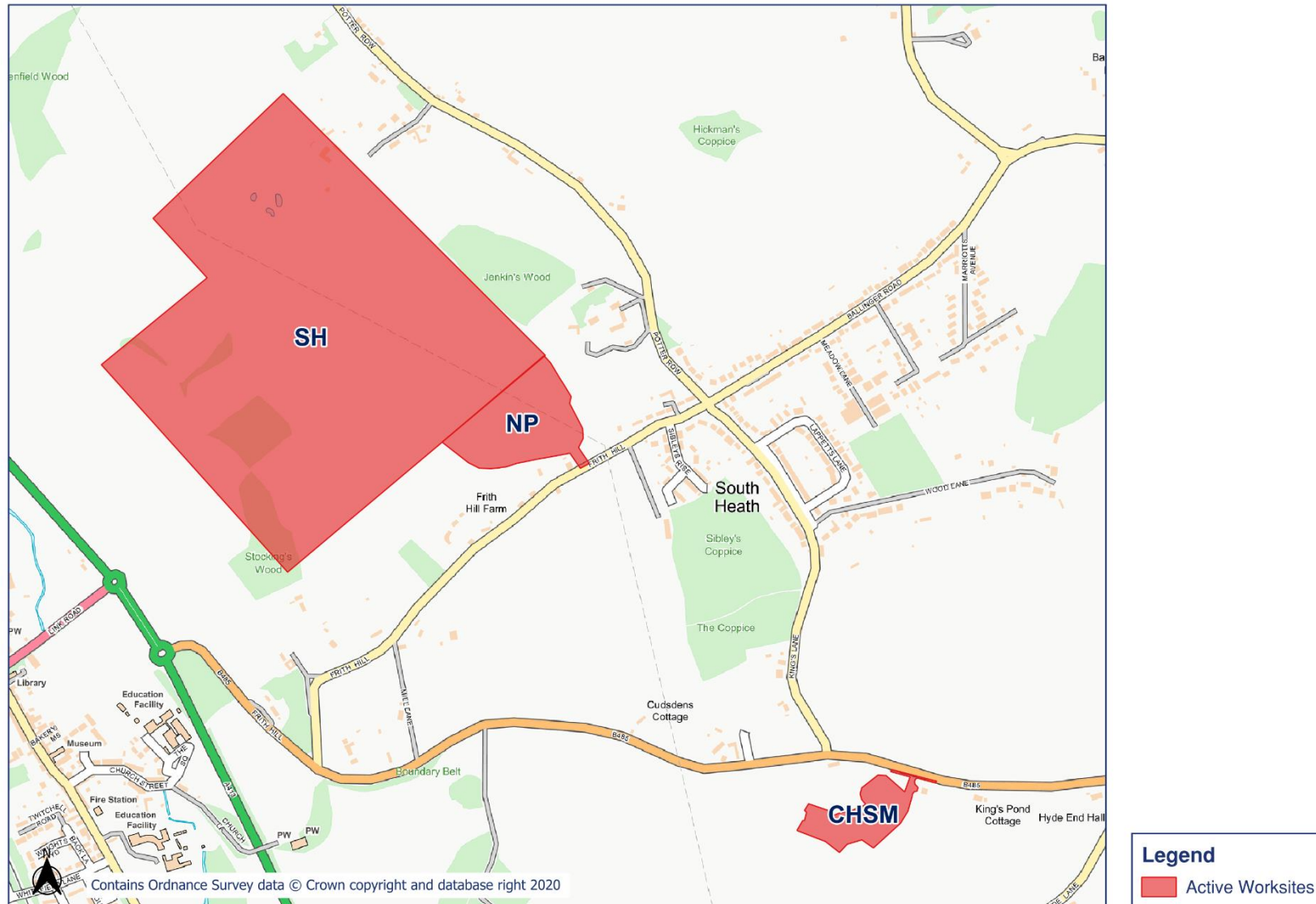
HS2

Worksite Identification Plan - 7



HS2

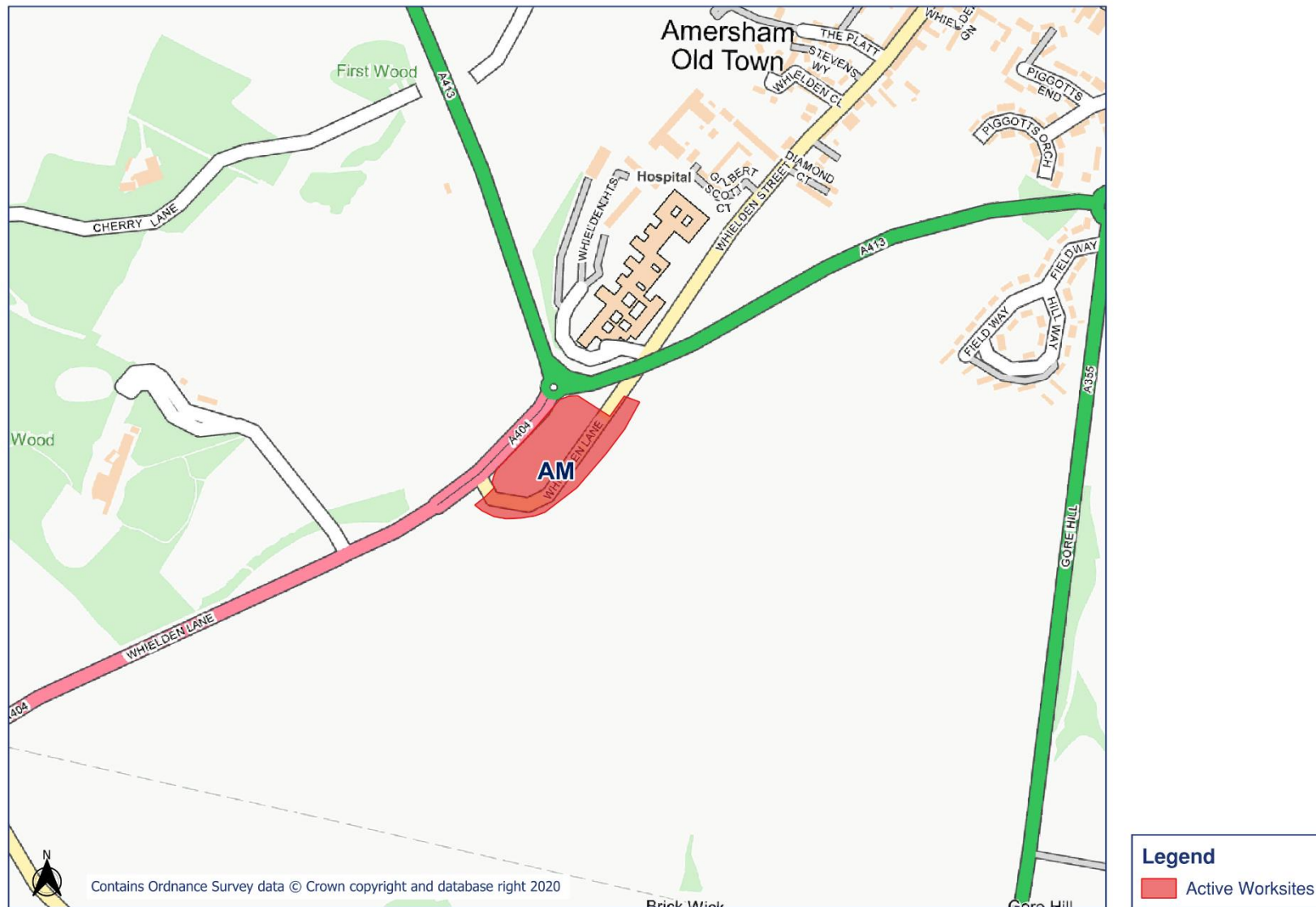
Worksite Identification Plan - 8





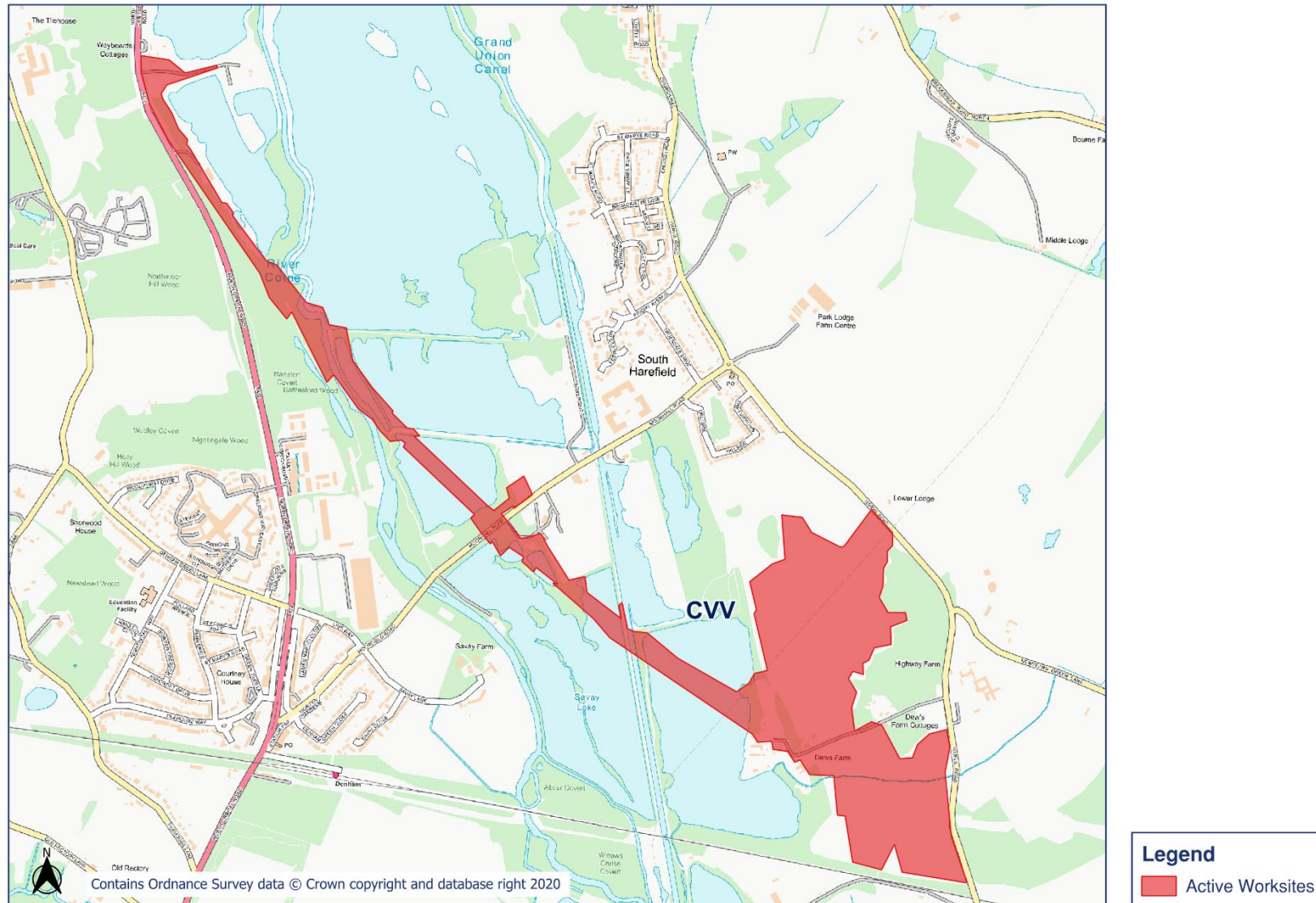
HS2

Worksite Identification Plan - 10

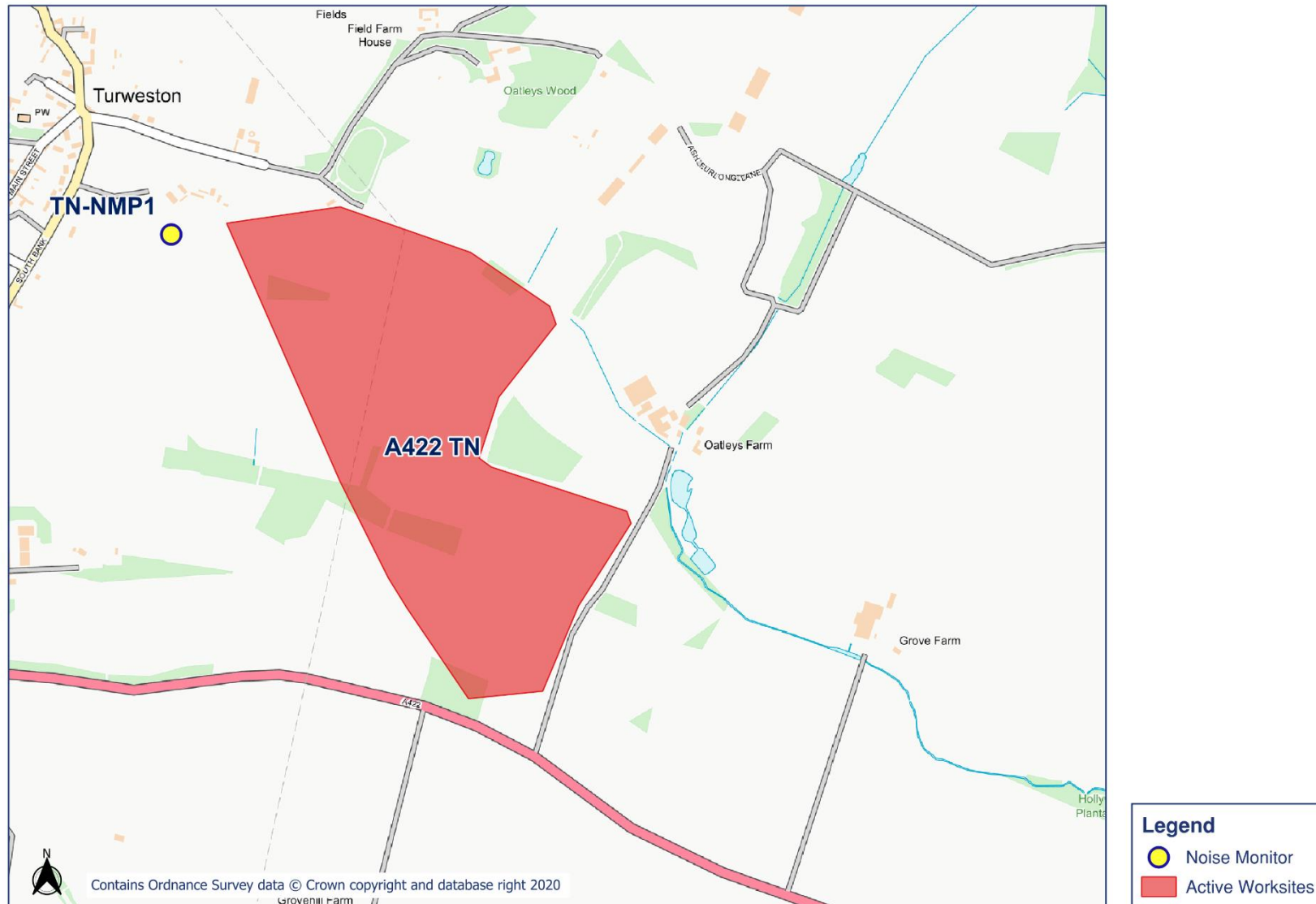


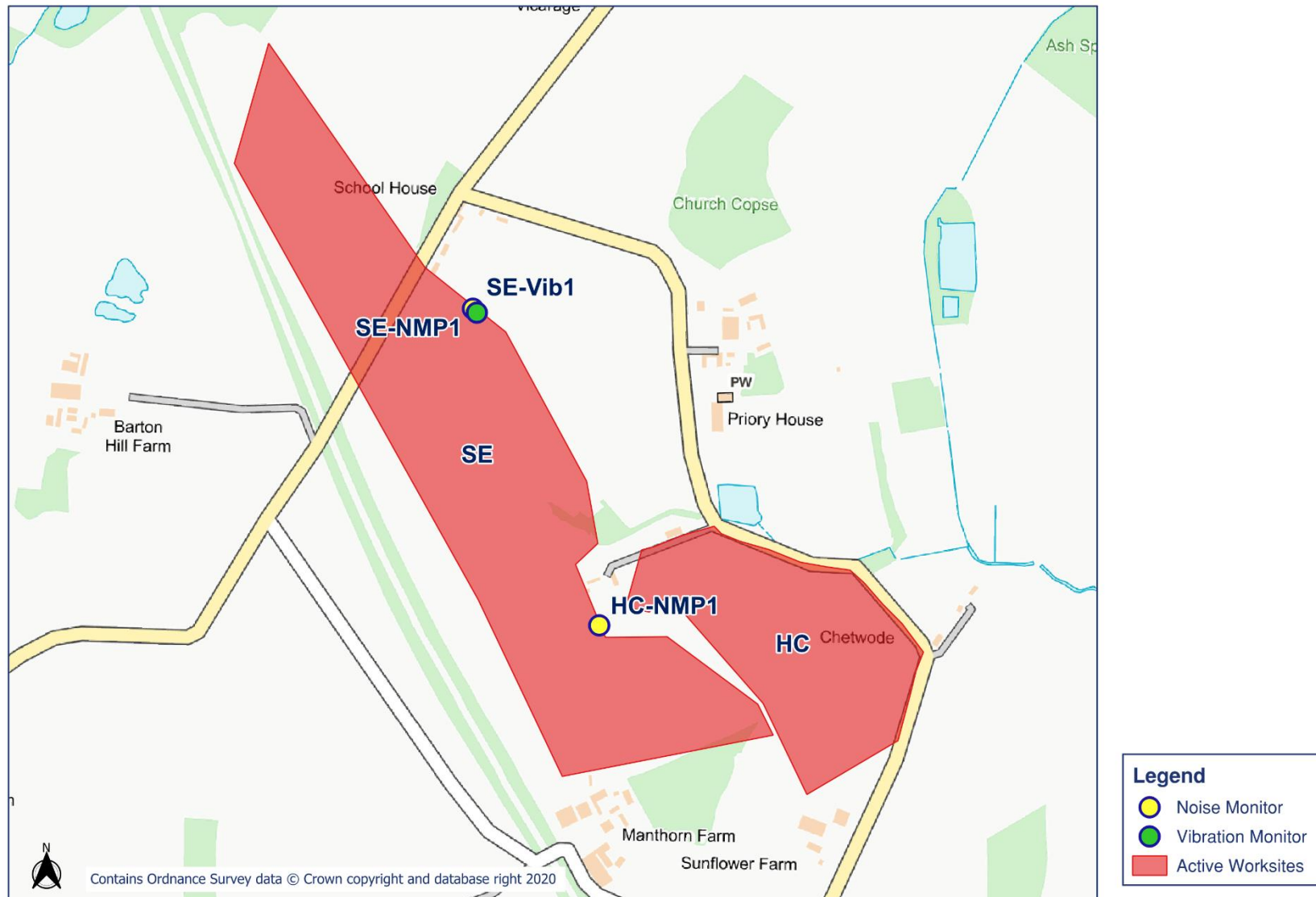


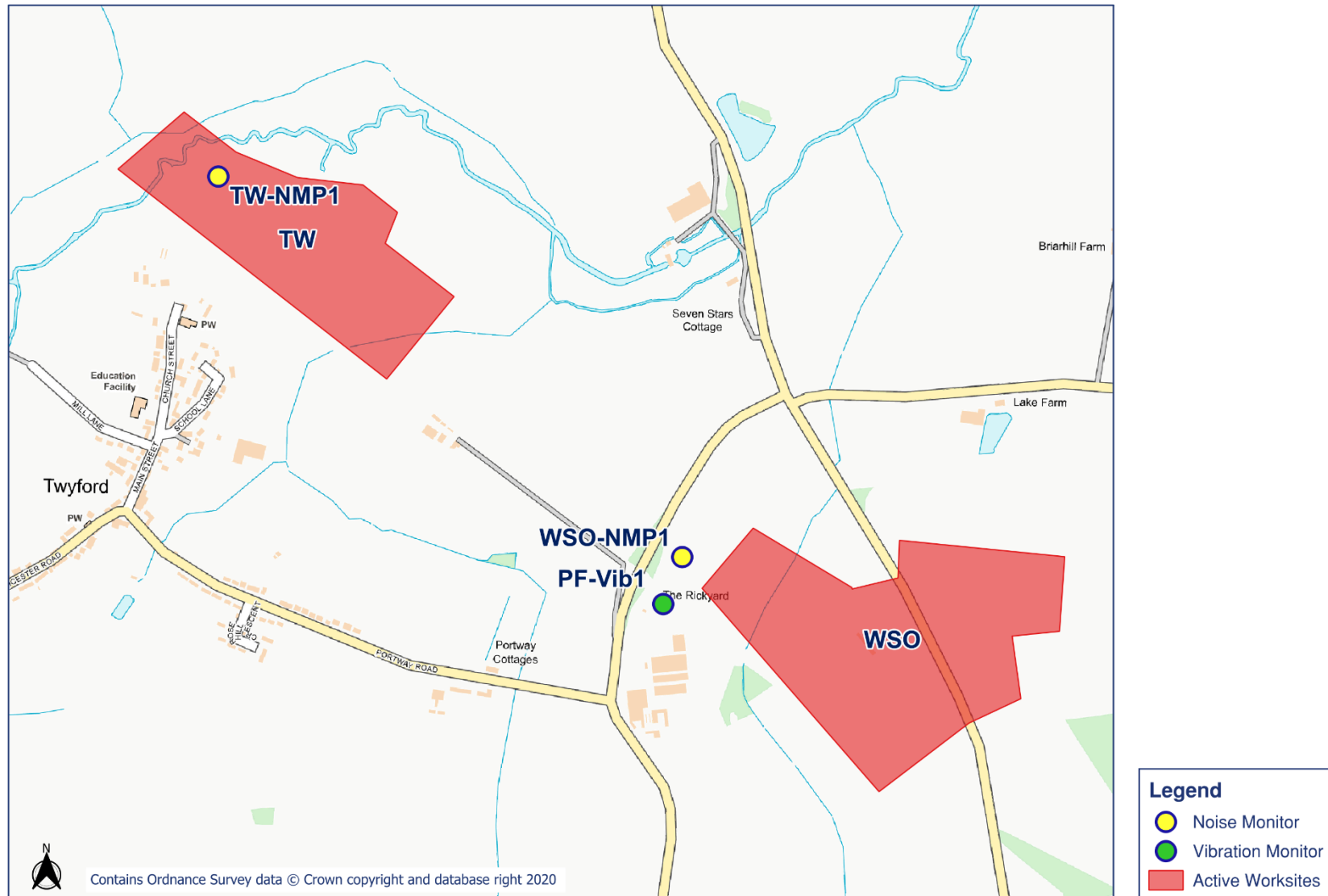


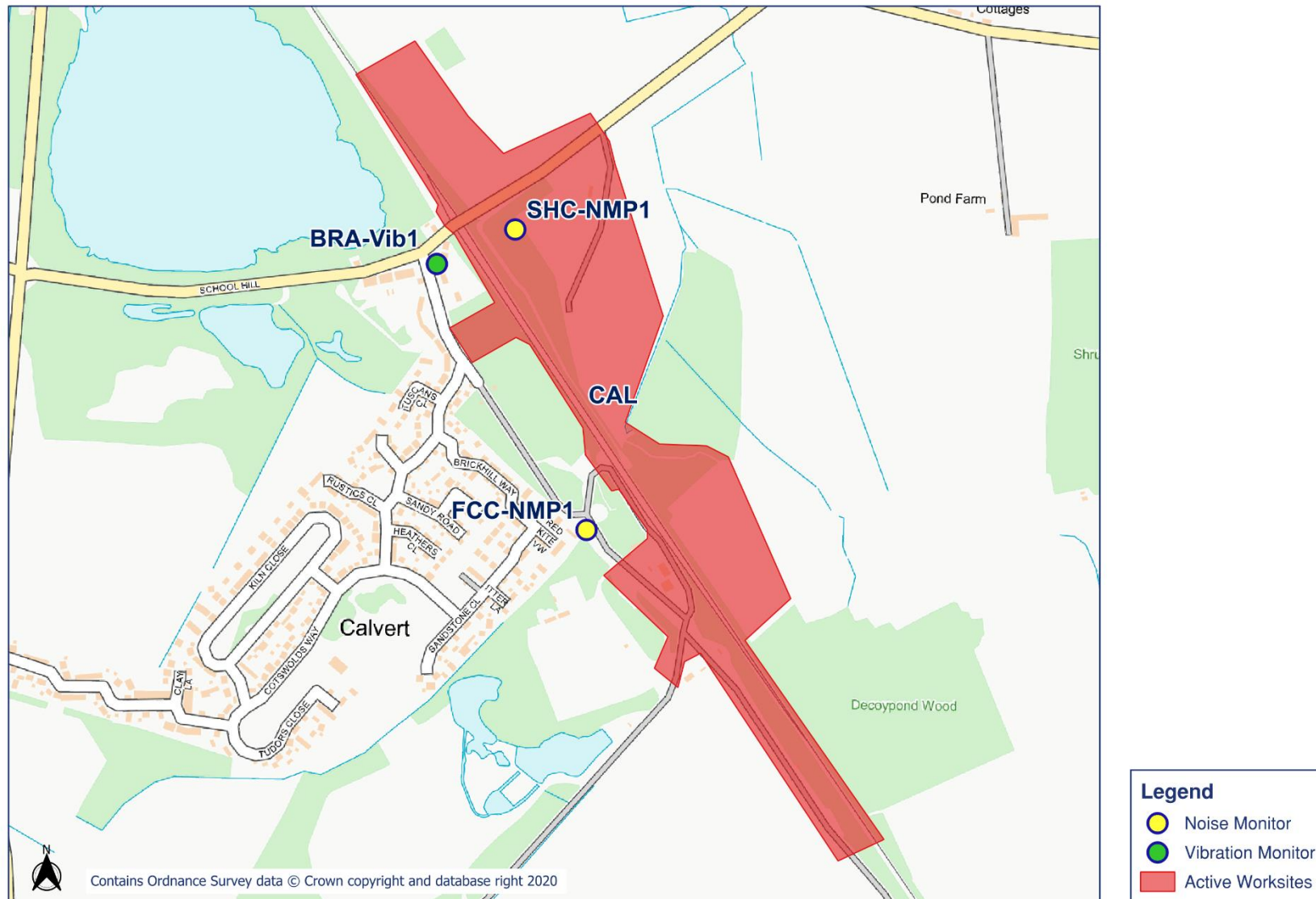


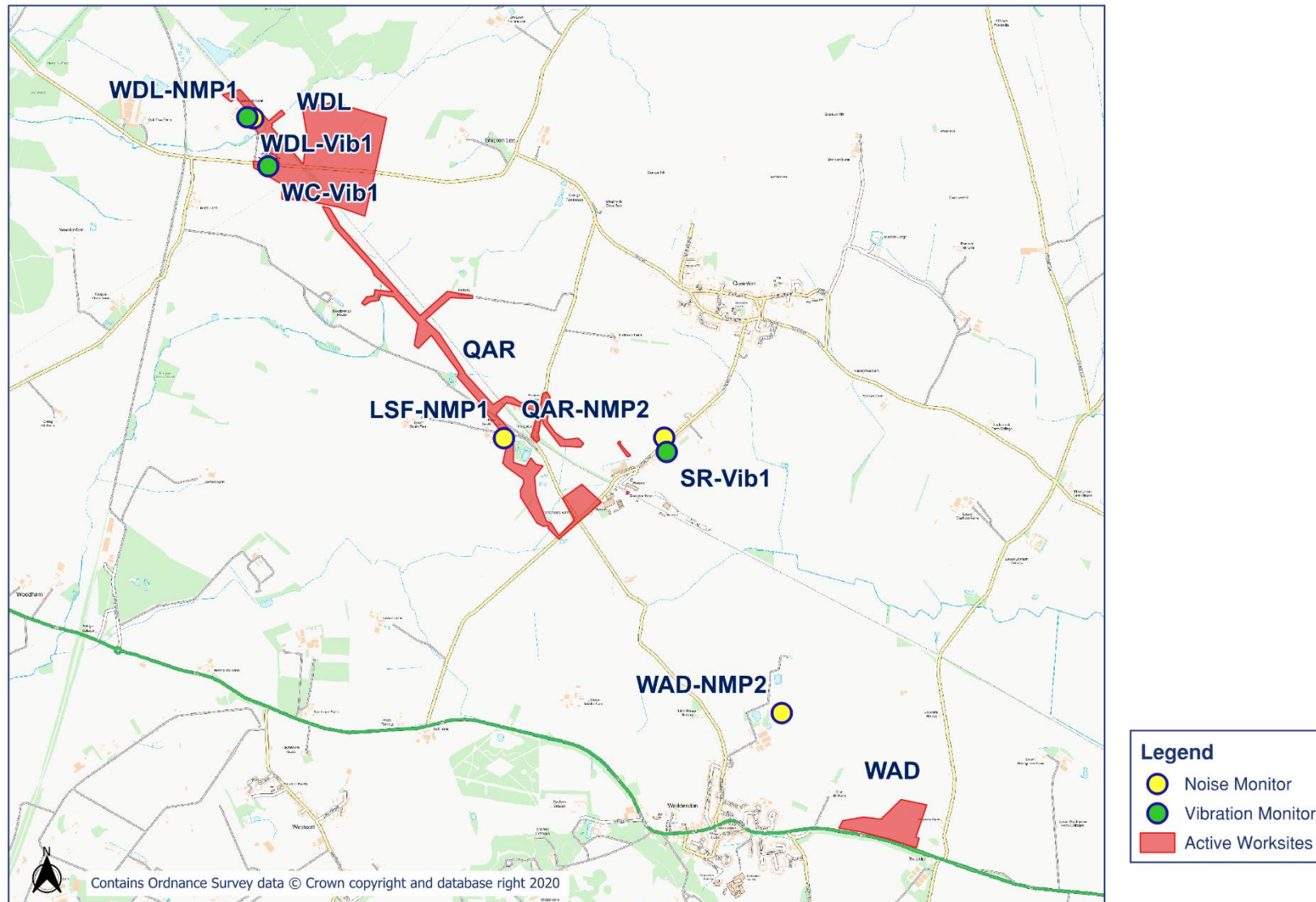
Appendix B Monitoring Locations

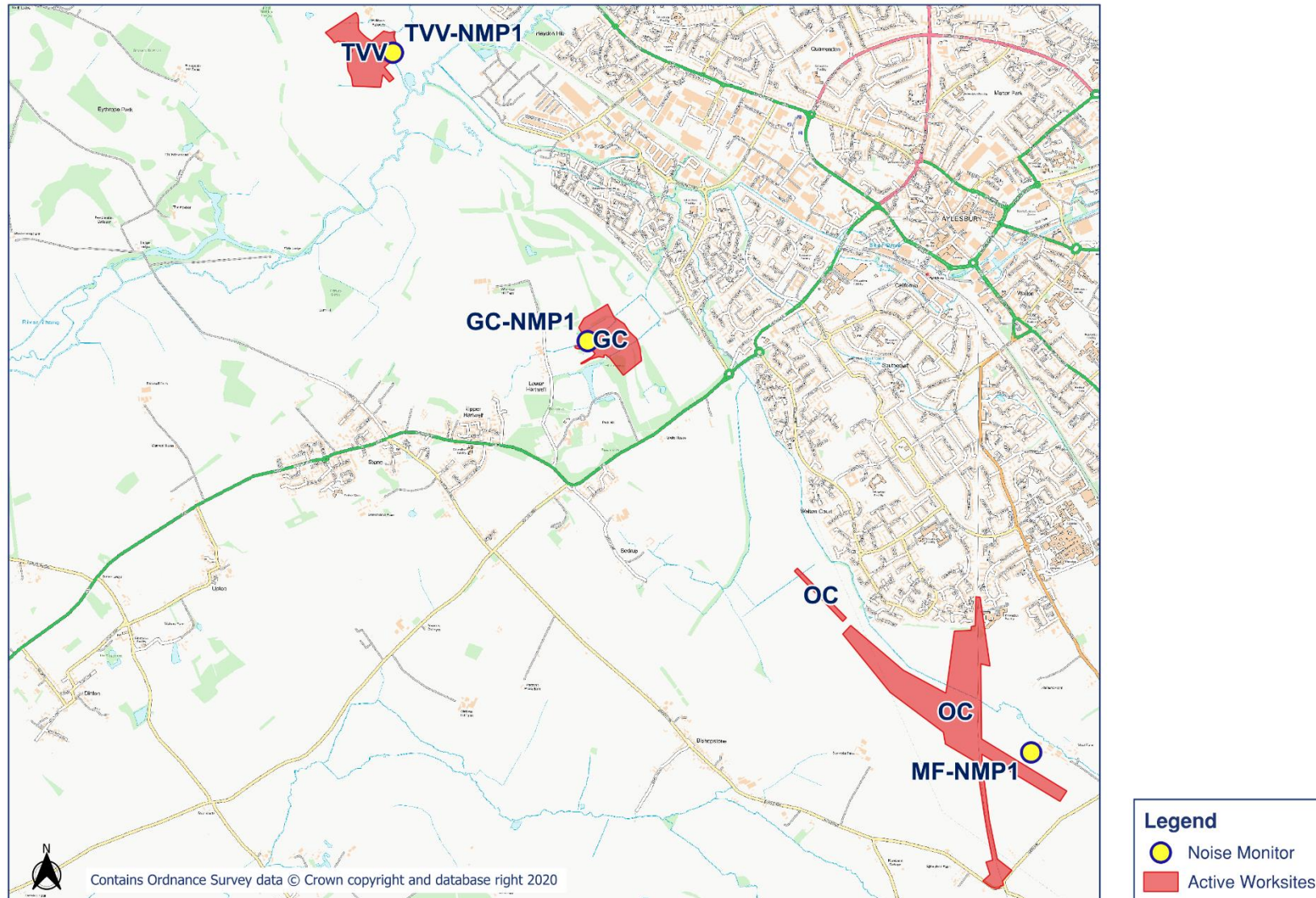


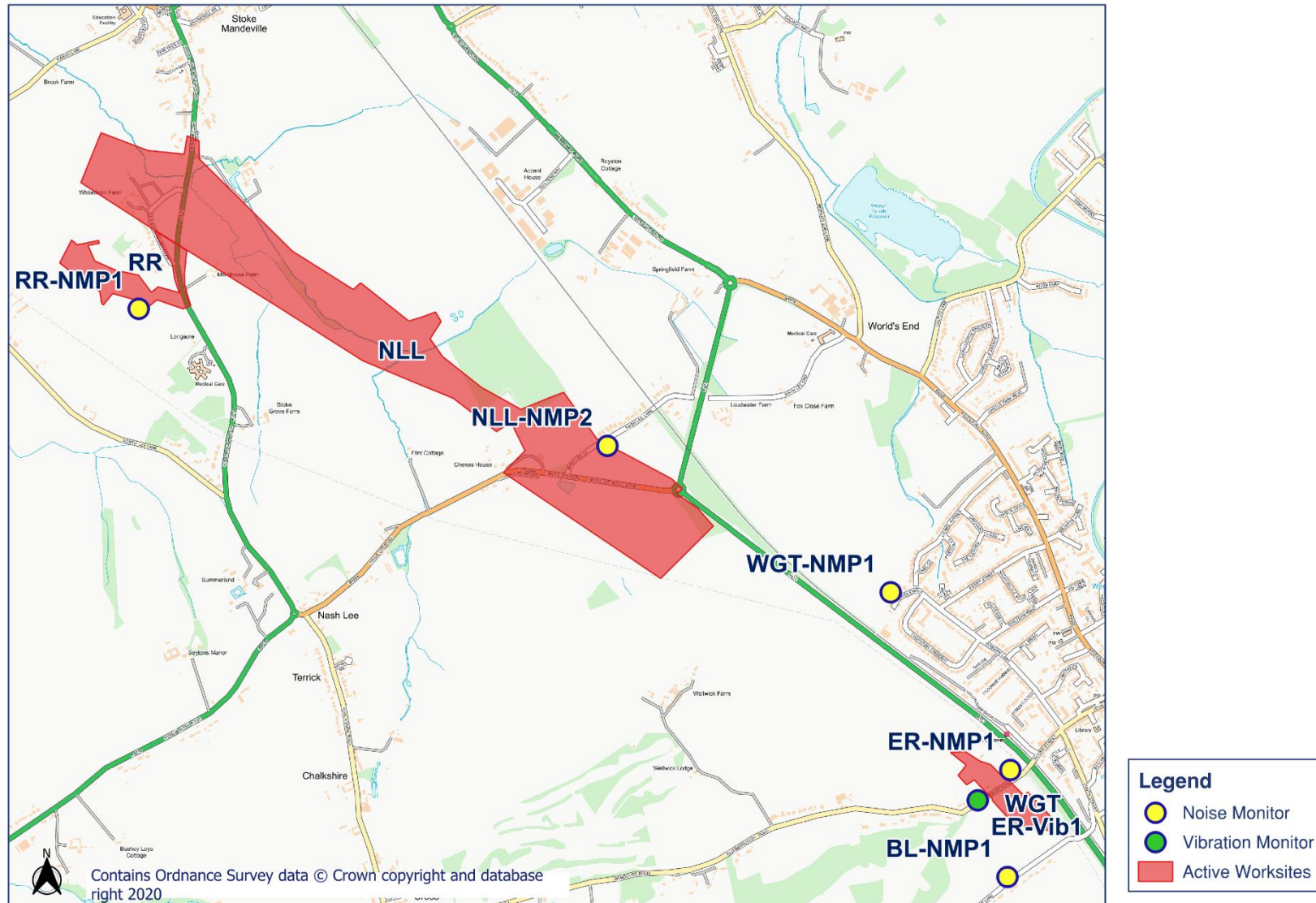


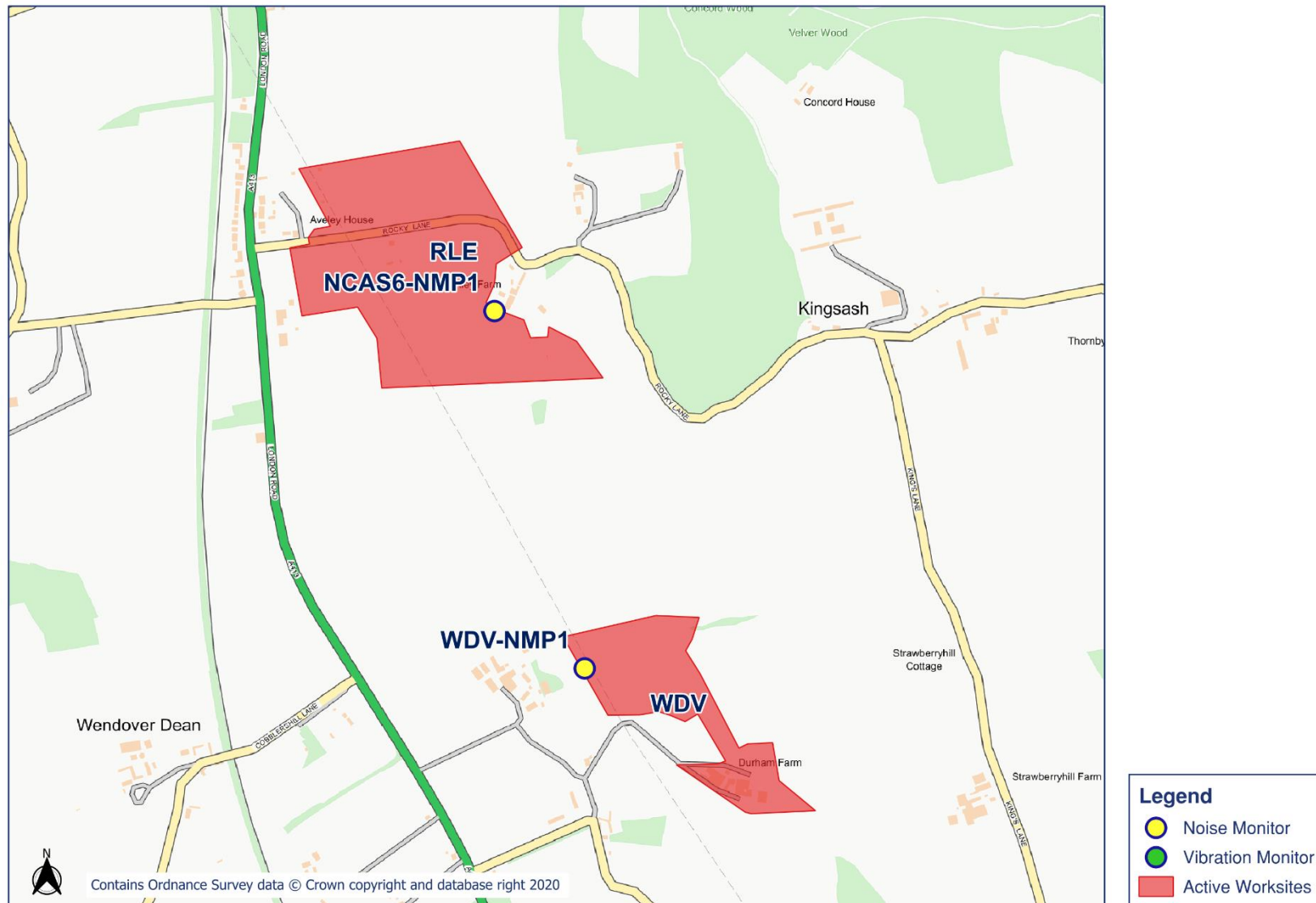






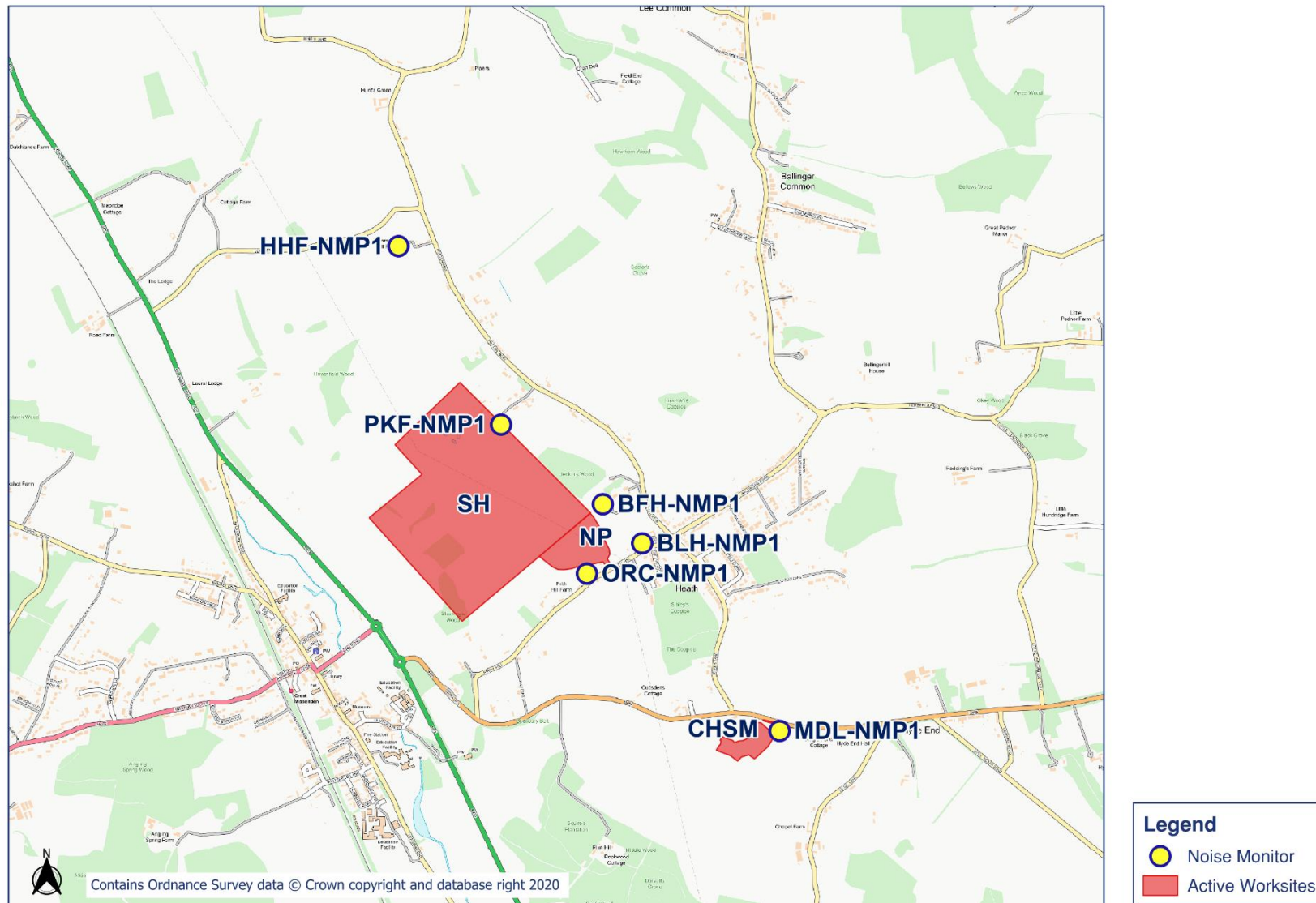






HS2

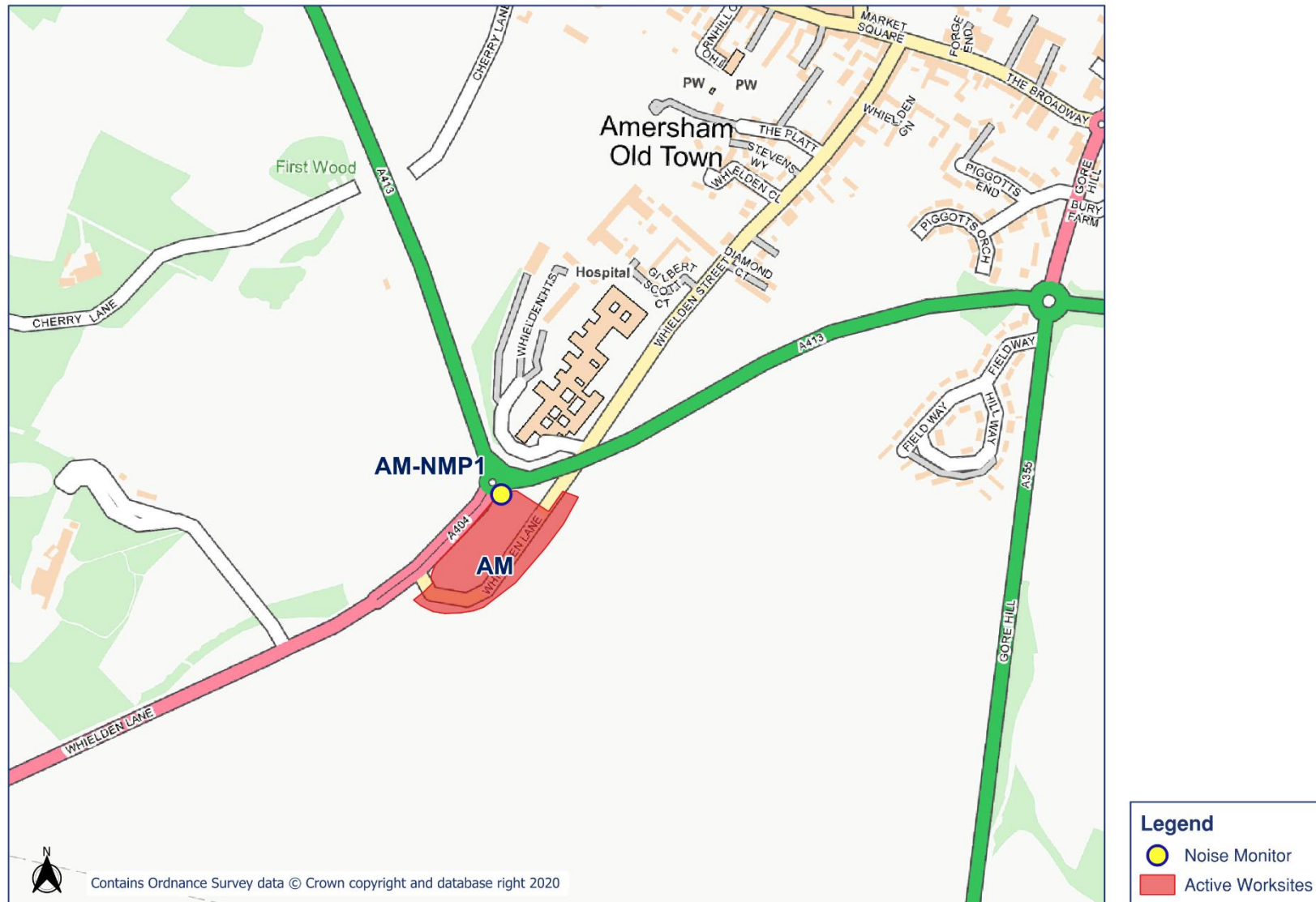
Noise and Vibration Monitoring Plan - 9

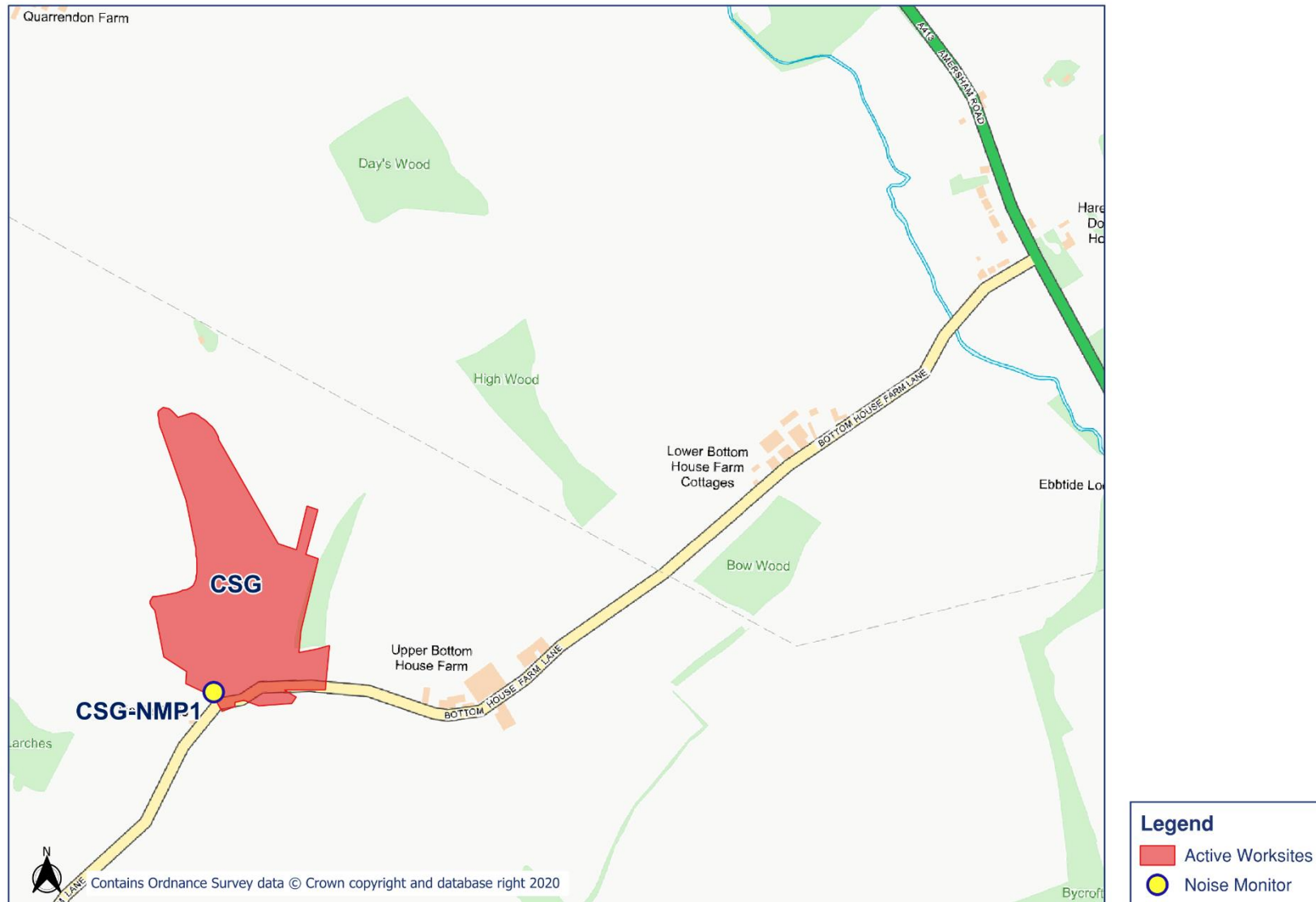


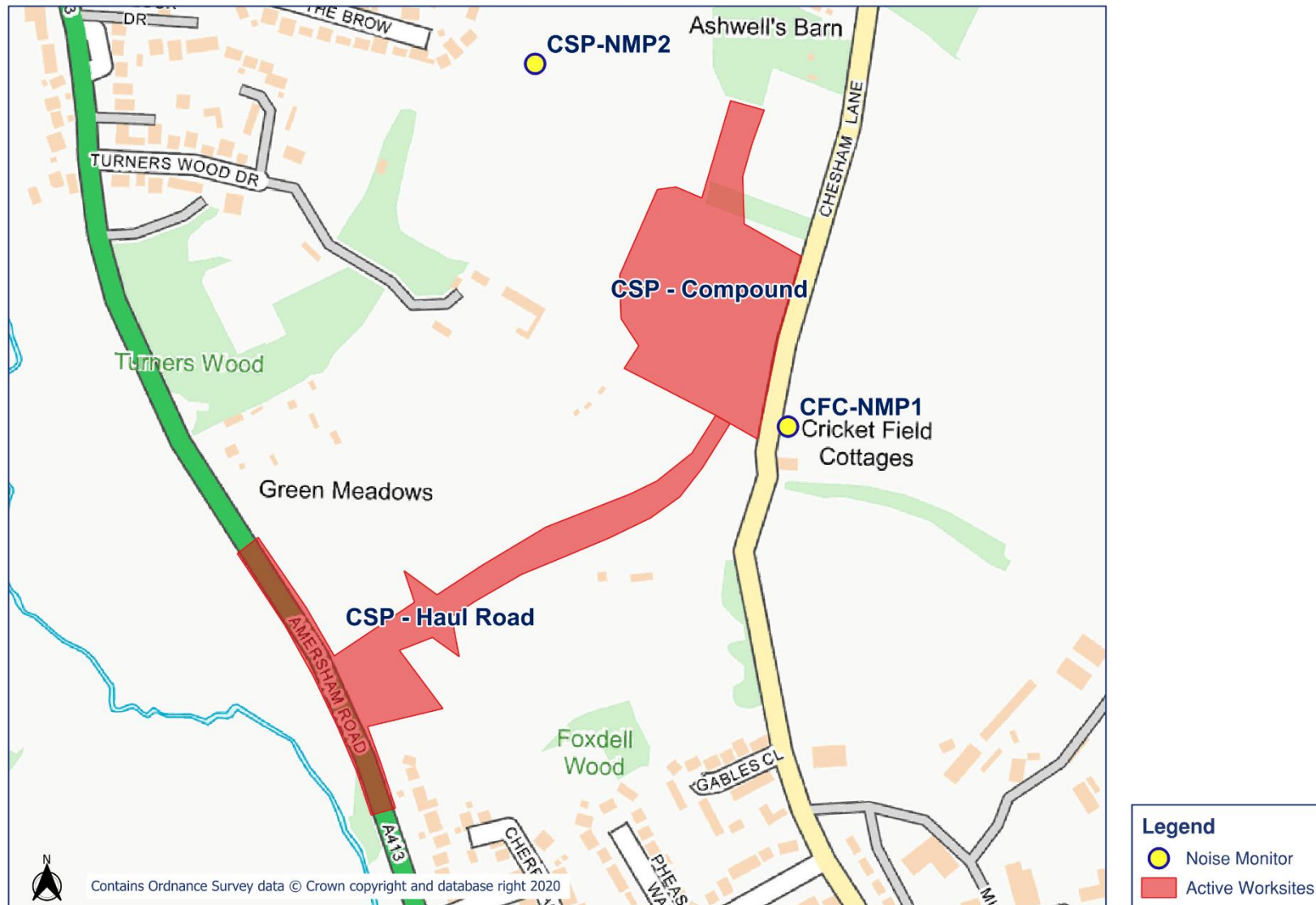


Noise and Vibration Monitoring Plan - 11

Noise and Vibration Monitoring Plan - 11





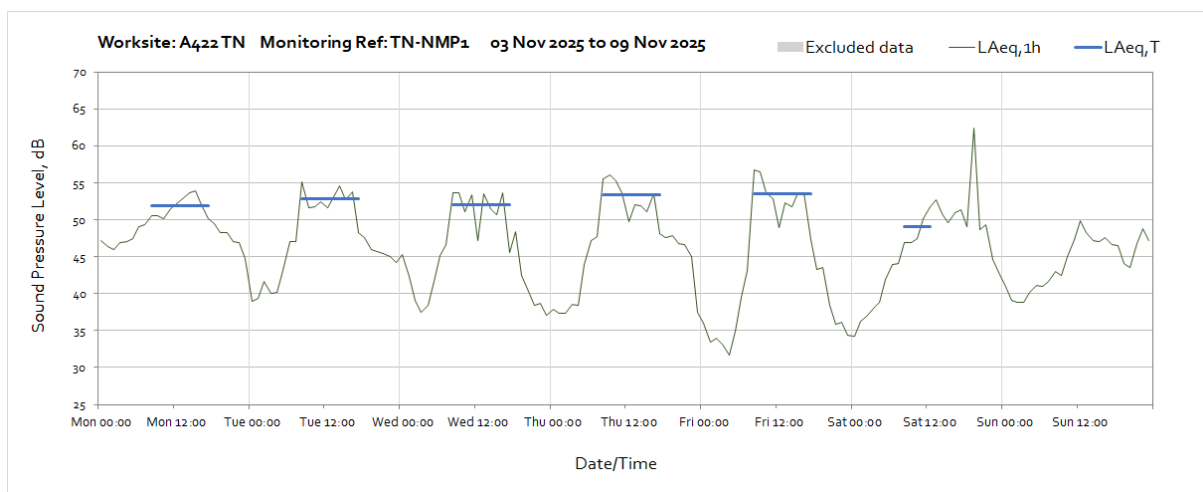
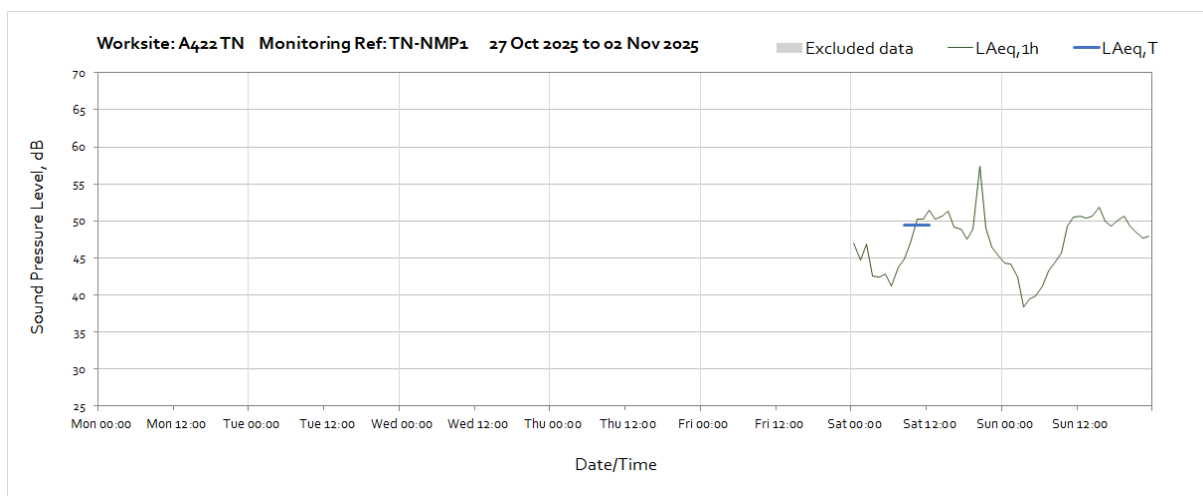


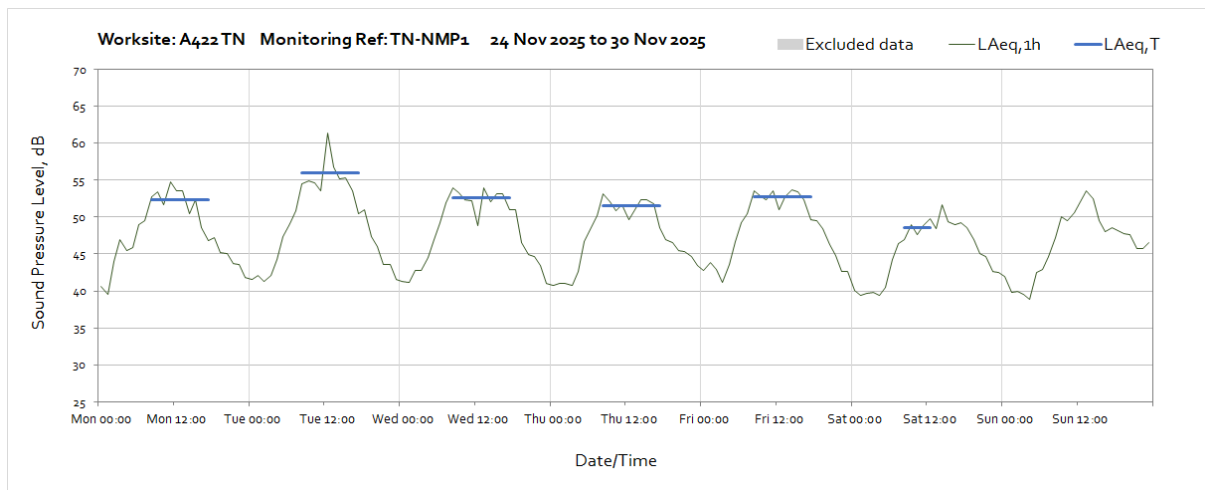
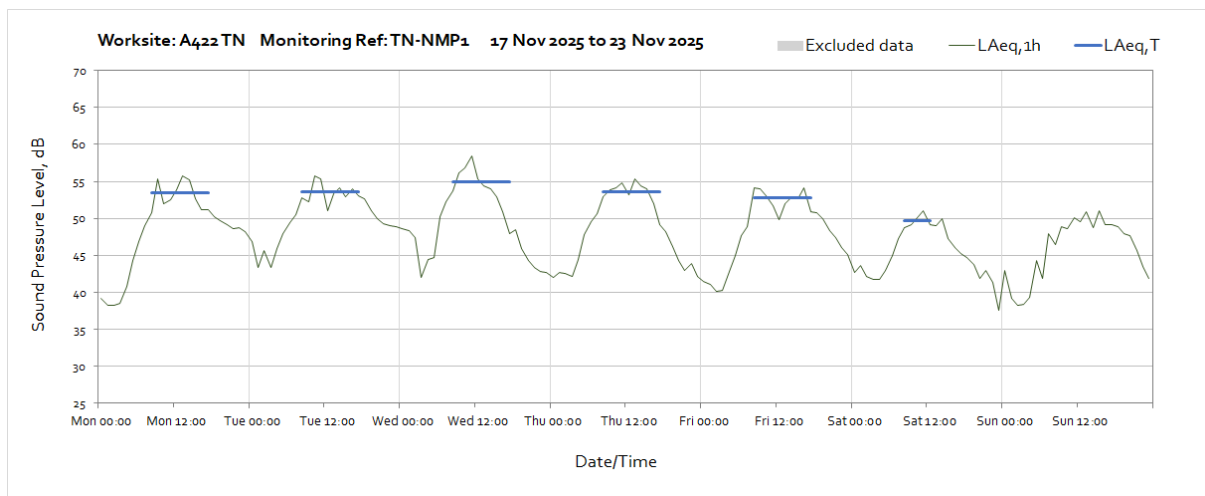
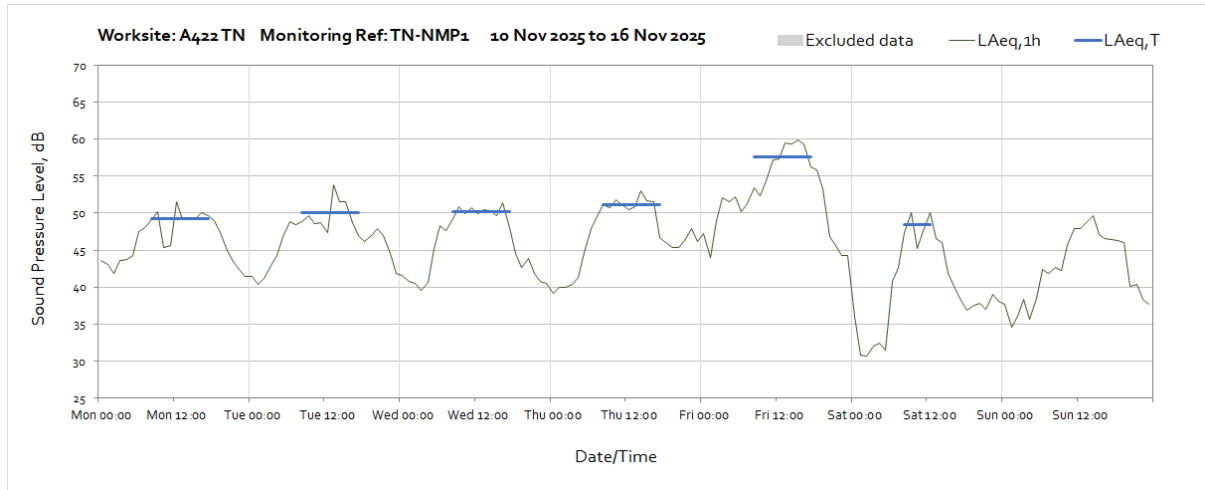
Appendix C Data

Noise

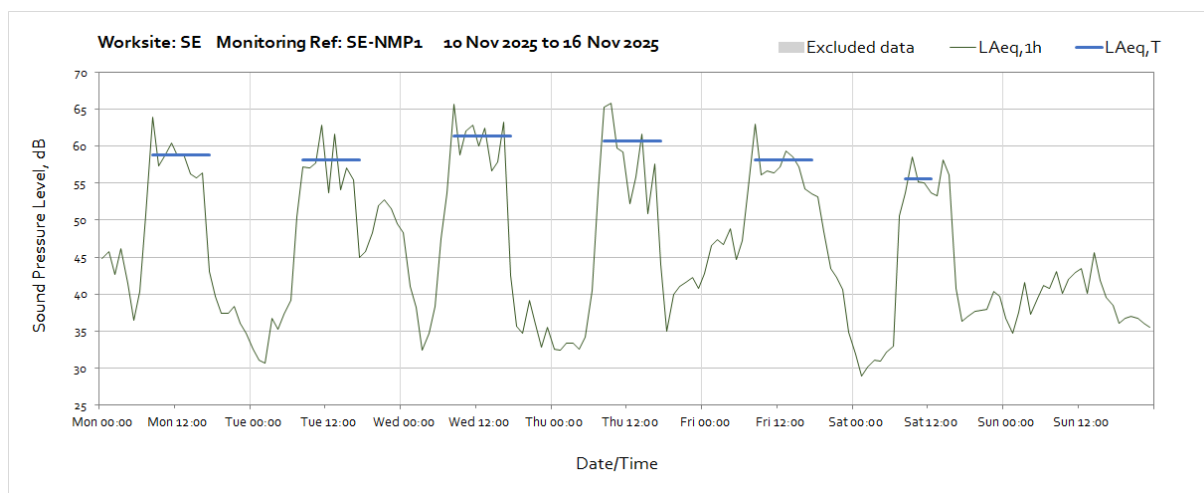
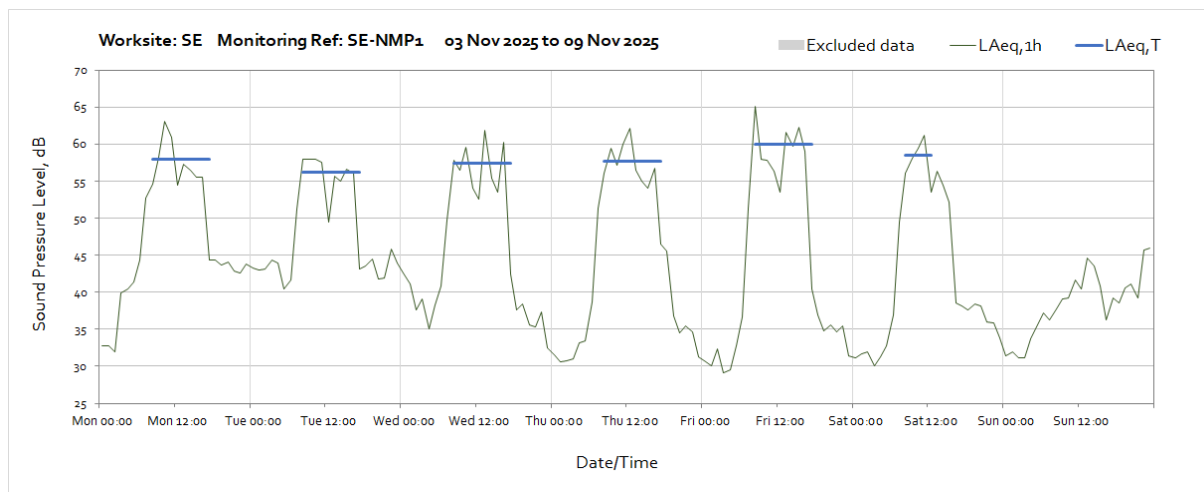
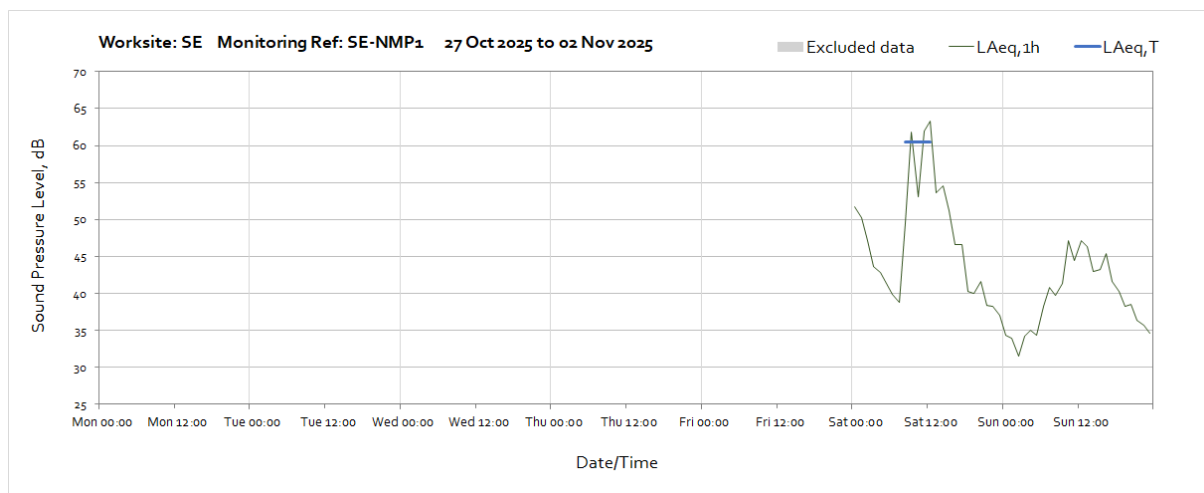
The following graphs show the hourly measured ambient noise level $L_{Aeq,1h}$ and, where relevant, the averaged noise level $L_{Aeq,T}$ values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods where noise levels are adversely affected by weather or only measured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

Worksite: A422 TN – Monitoring Ref: TN-NMP1

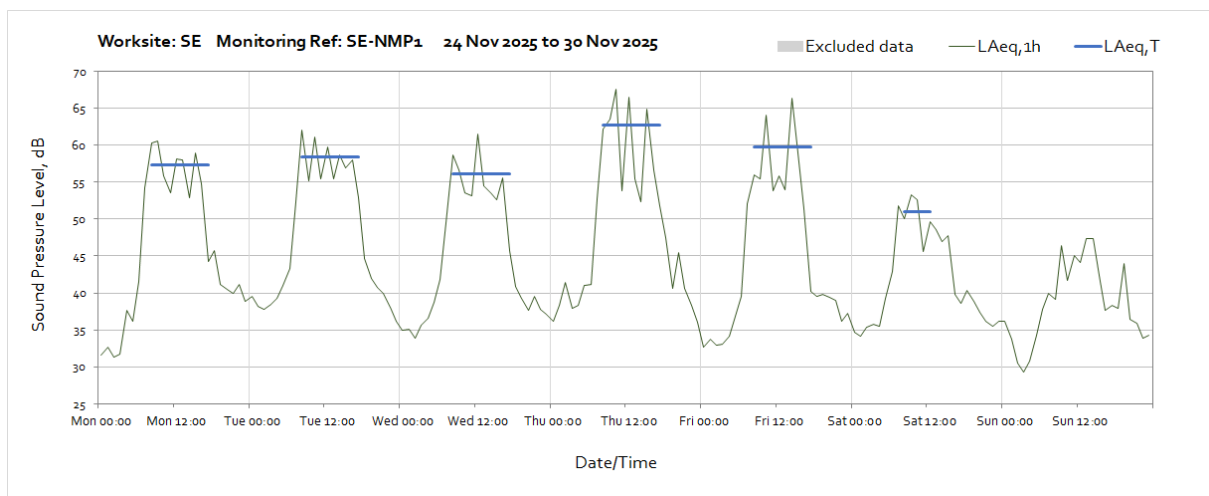
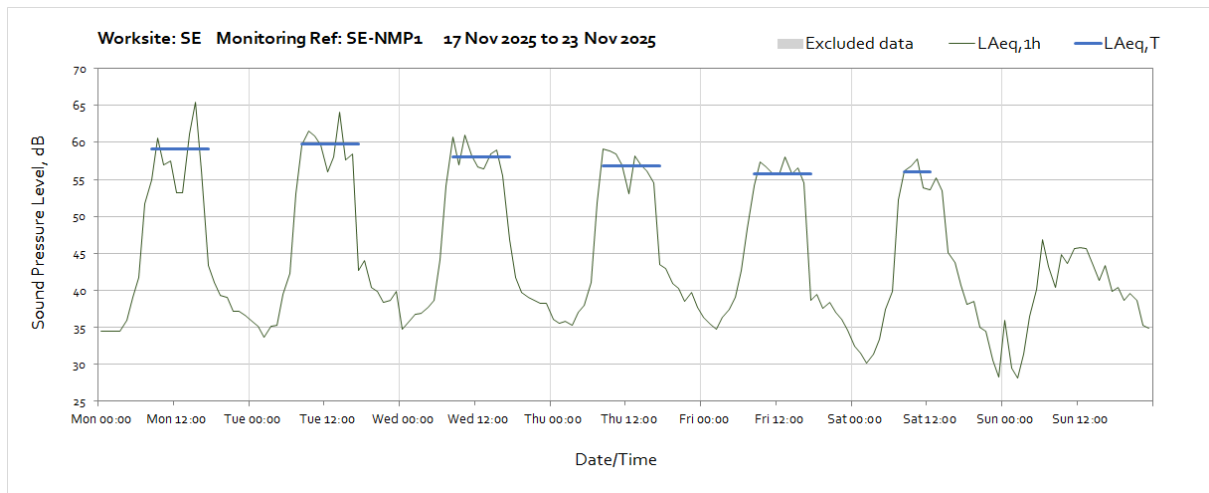




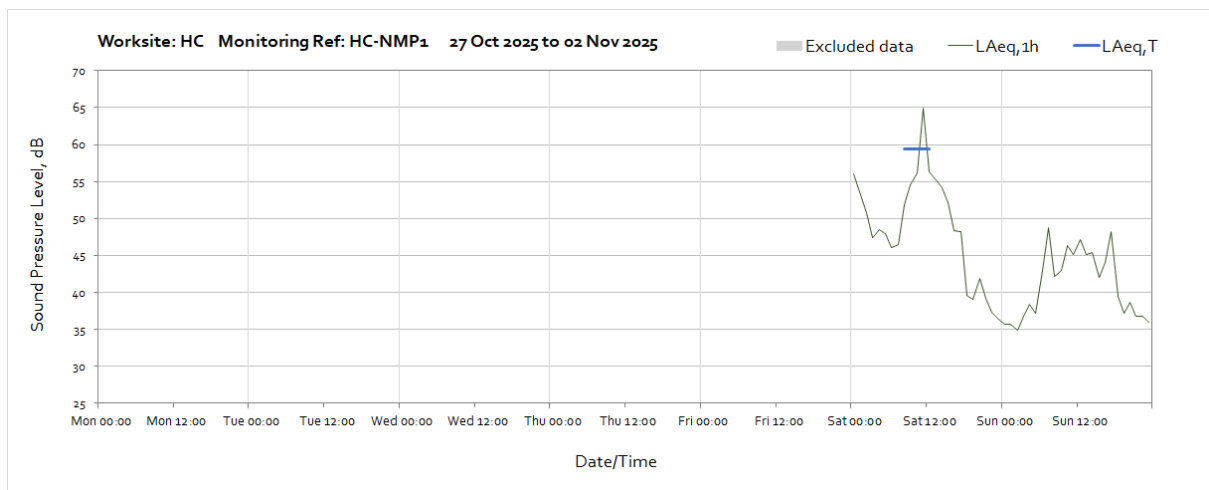
Worksite: SE – Monitoring Ref: SE-NMP1

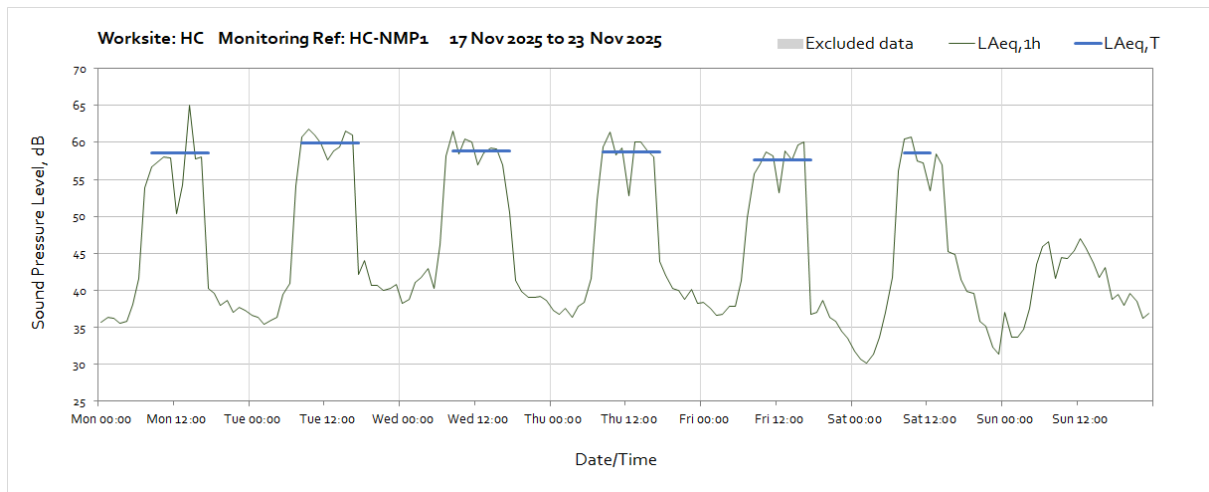
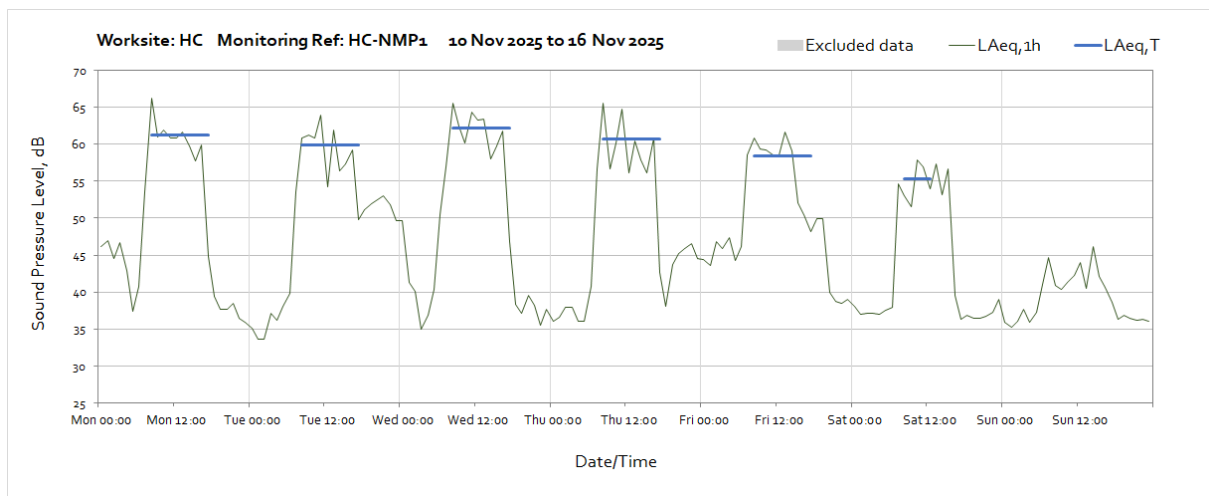
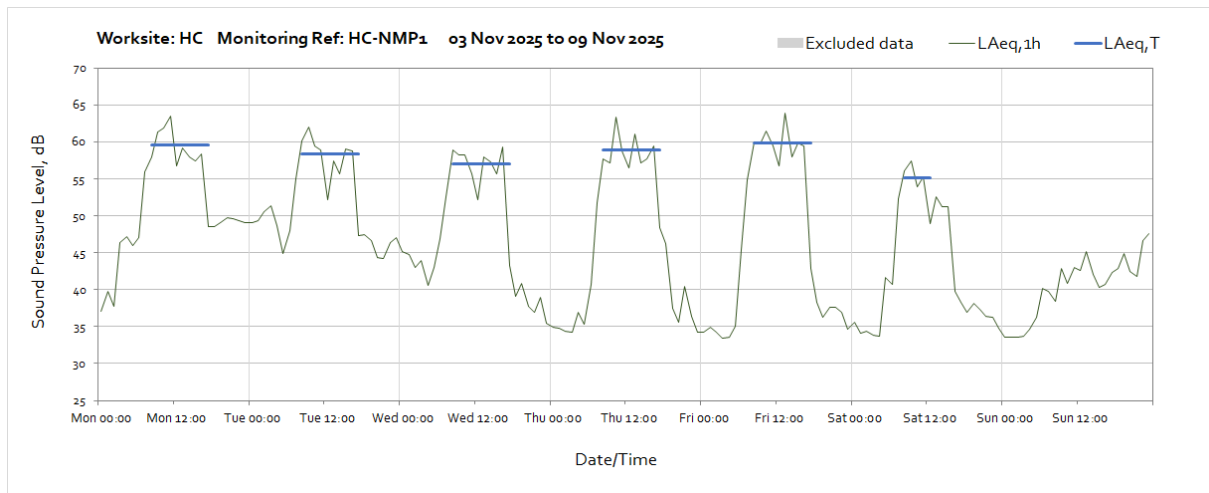


OFFICIAL

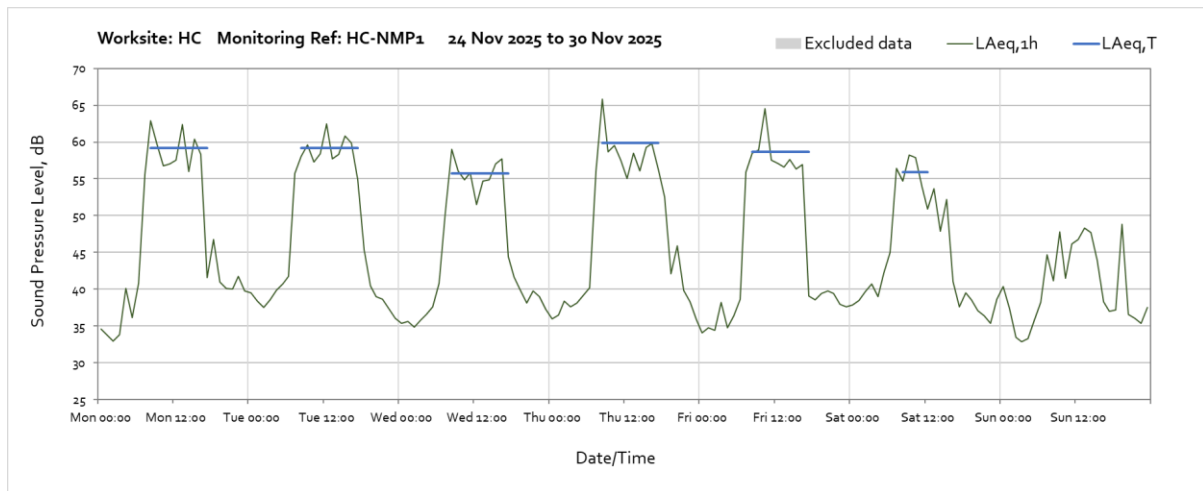


Worksite: HC – Monitoring Ref: HC-NMP1

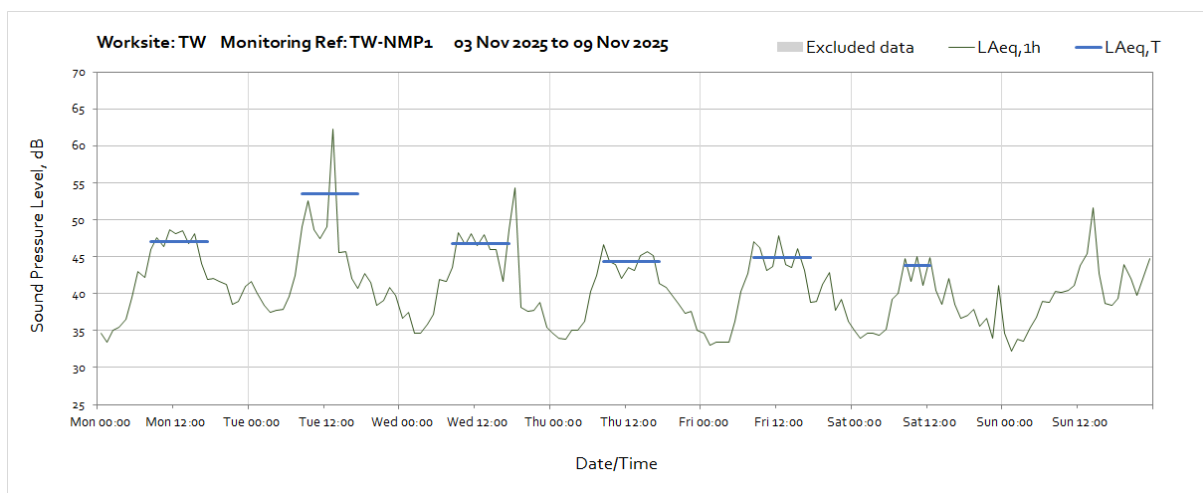
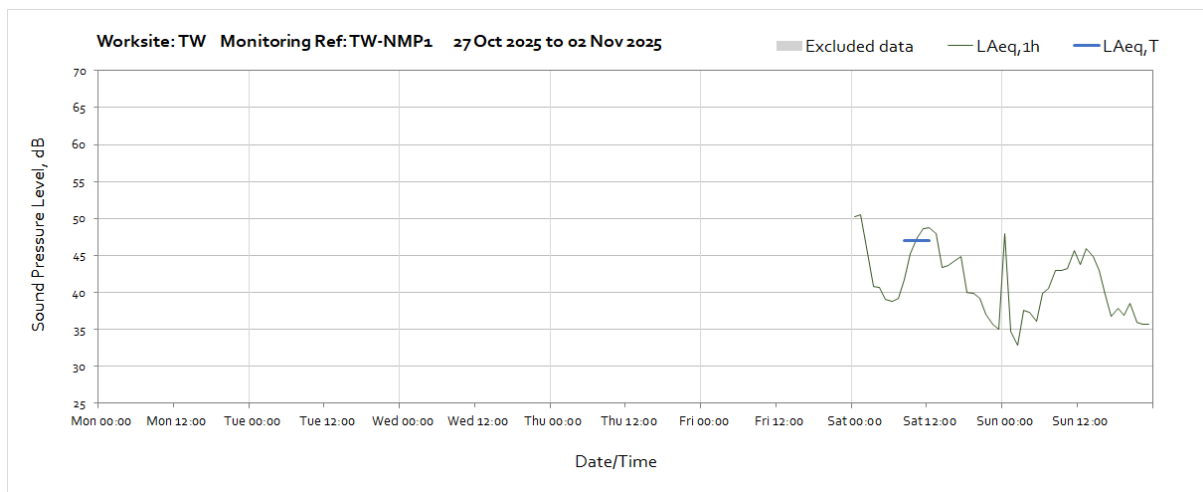


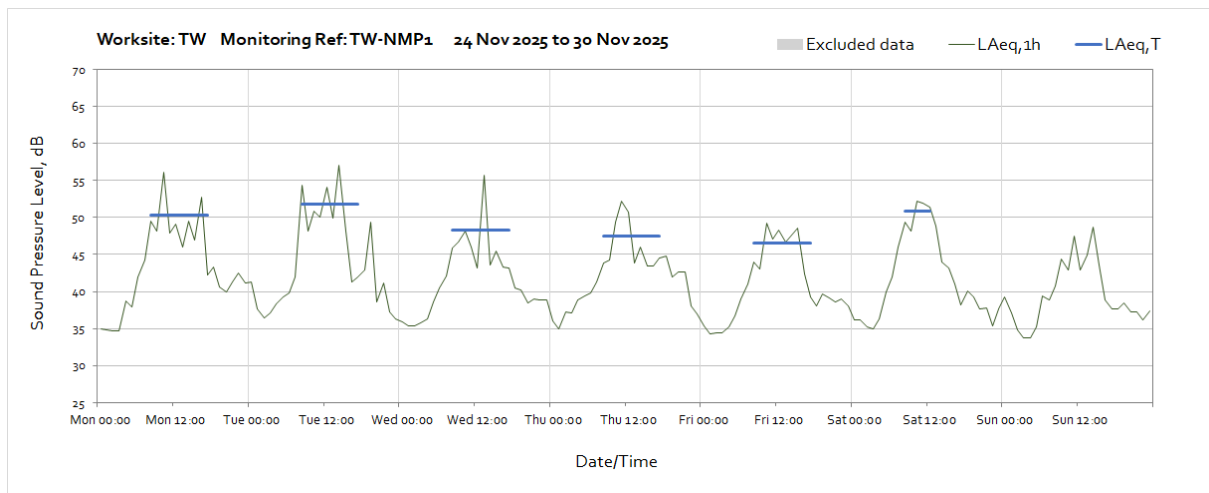
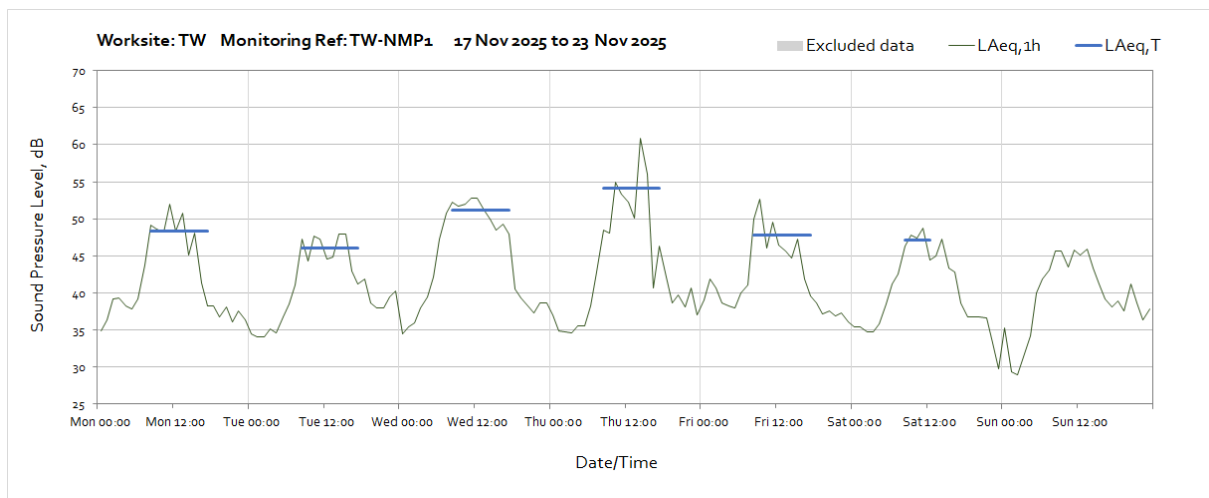
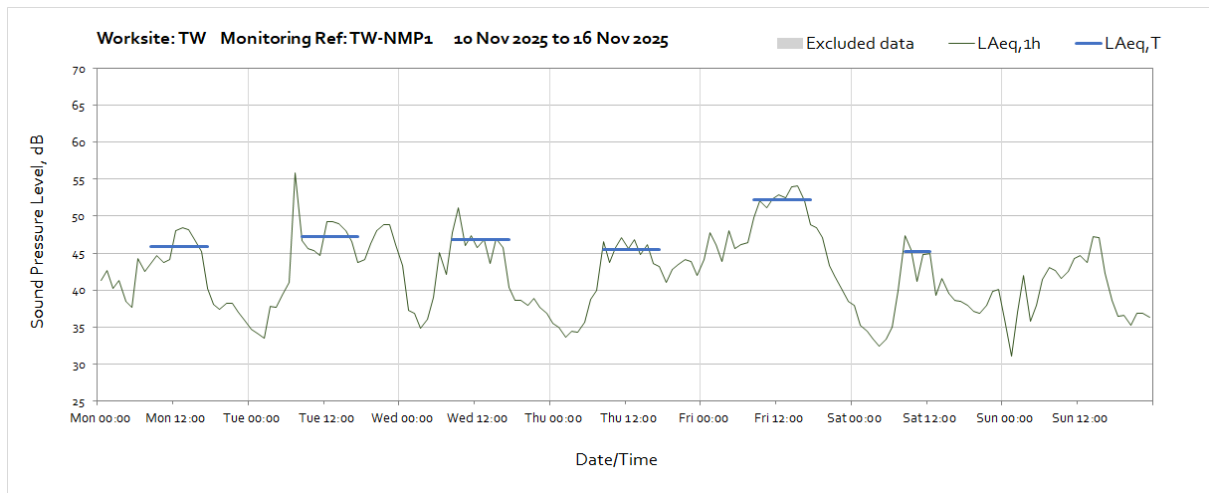


OFFICIAL

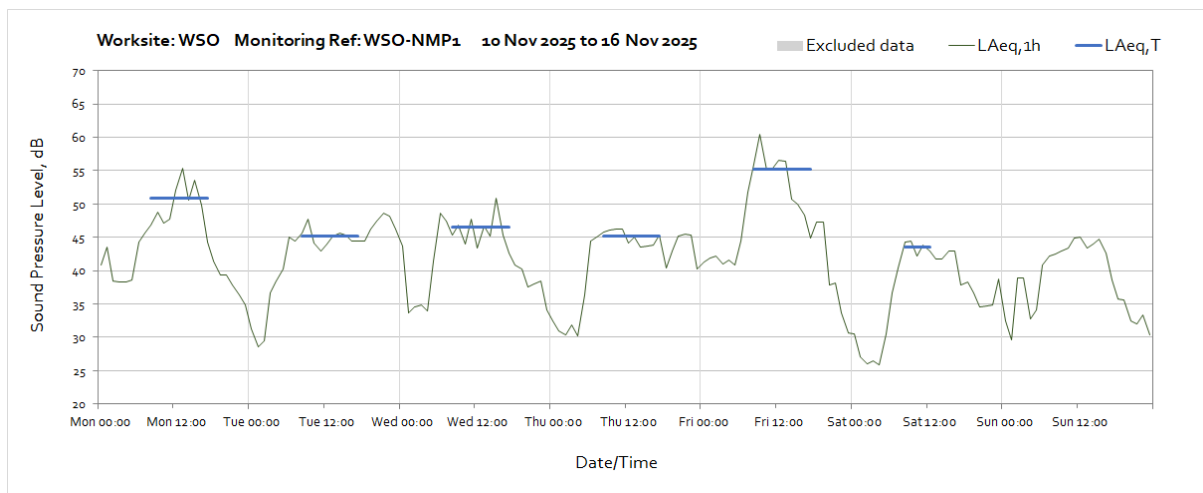
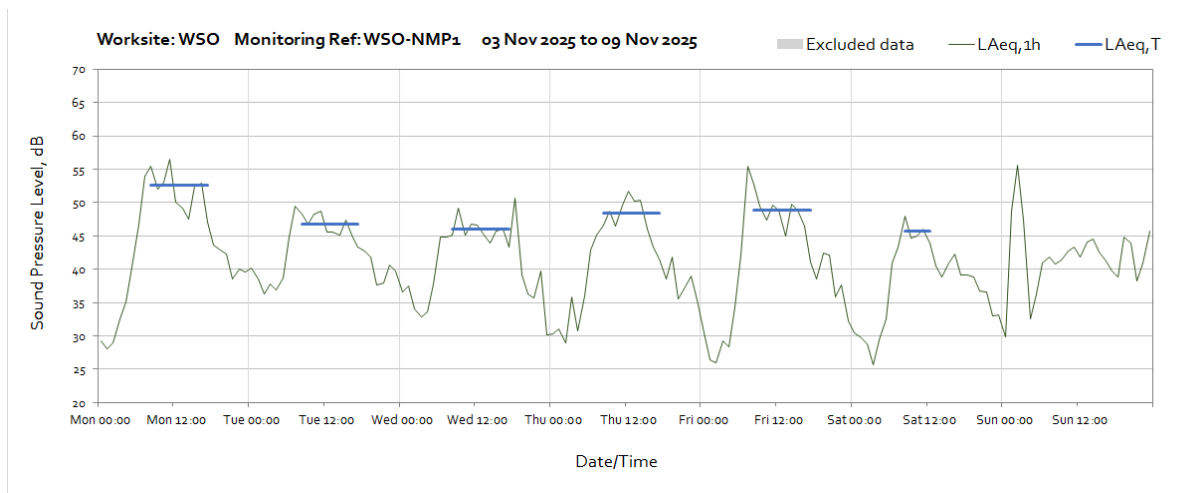
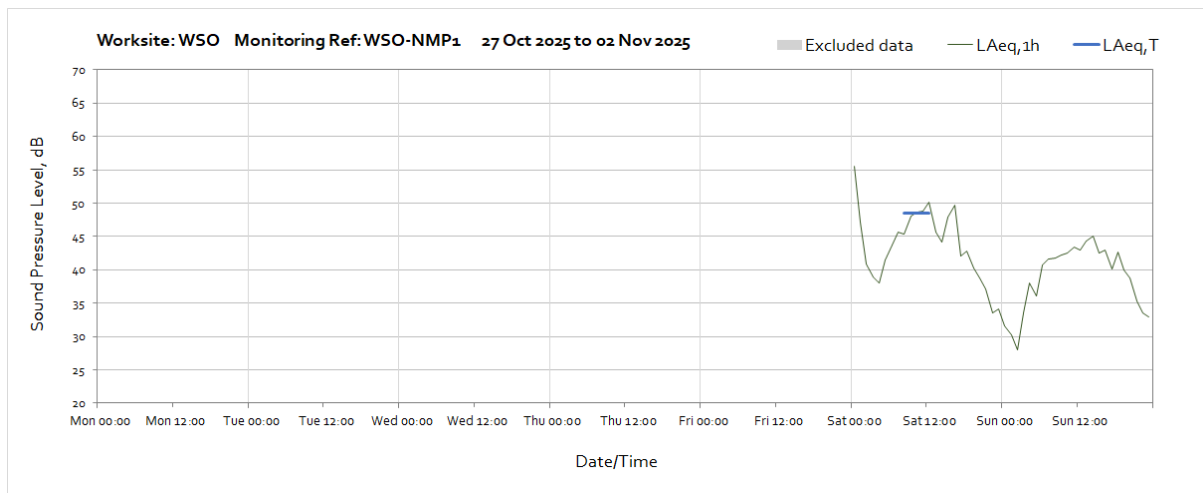


Worksite: TW – Monitoring Ref: TW-NMP1

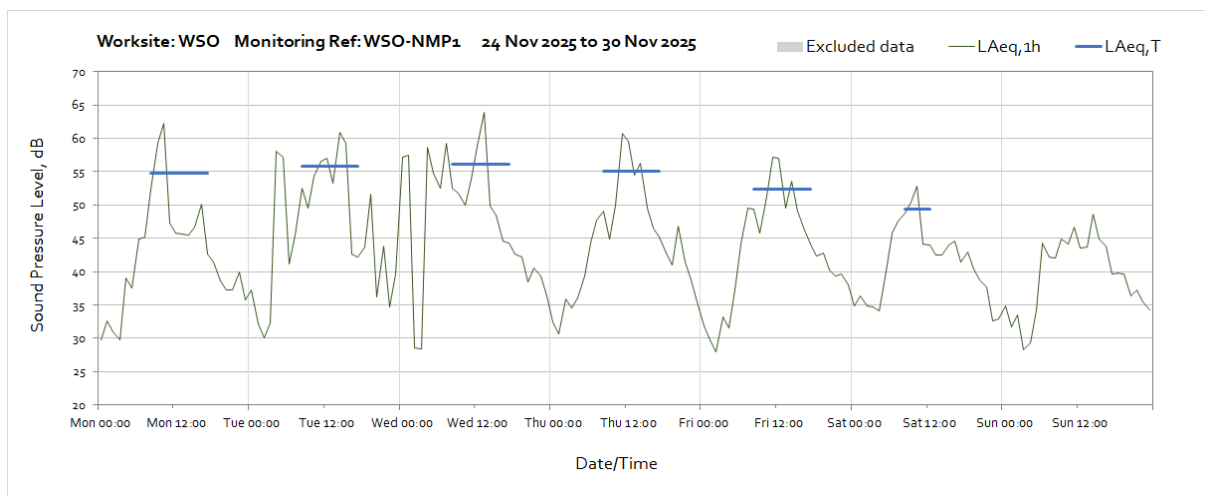
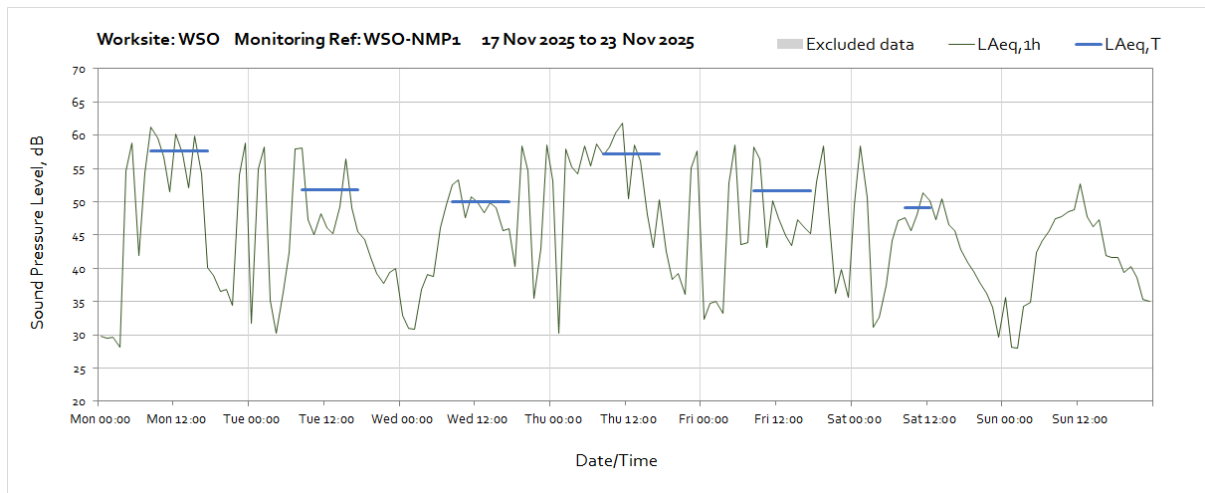




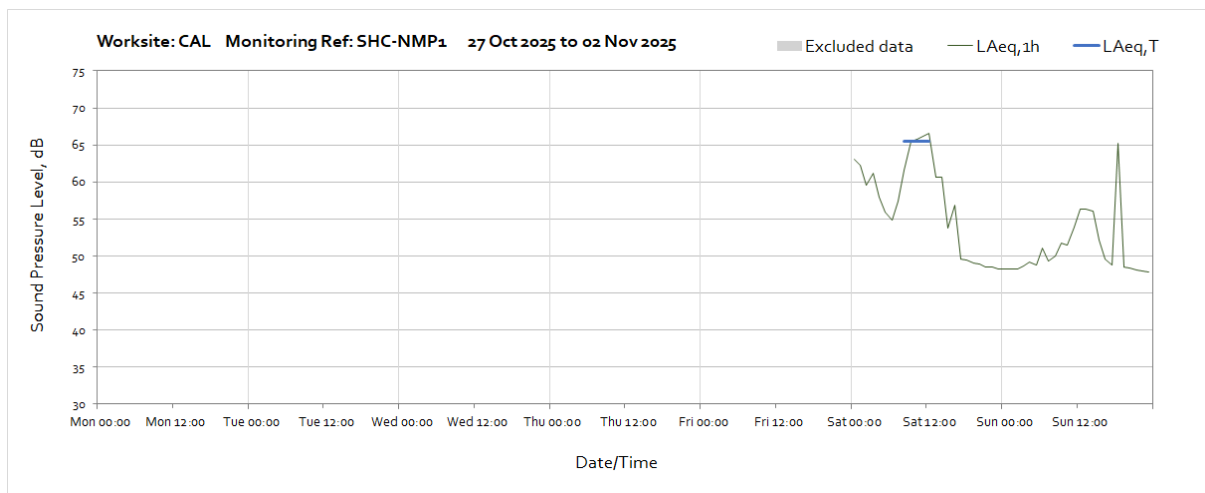
Worksite: WSO – Monitoring Ref: WSO-NMP1

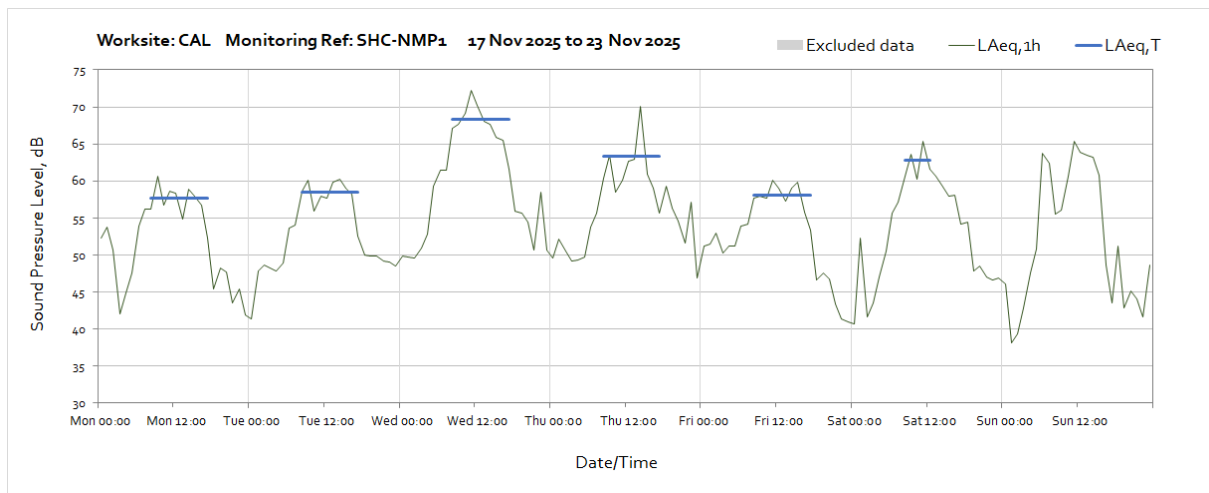
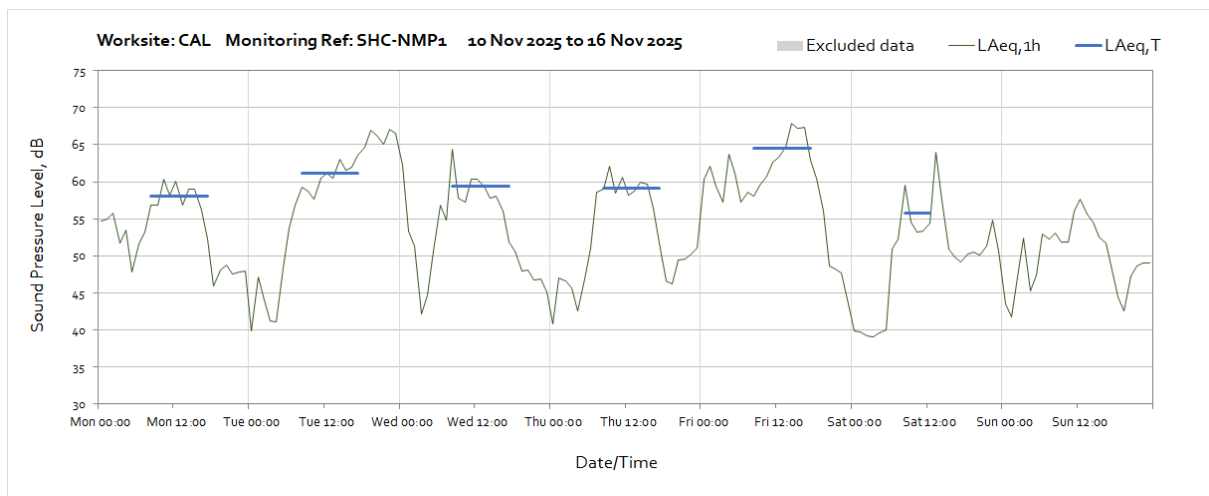
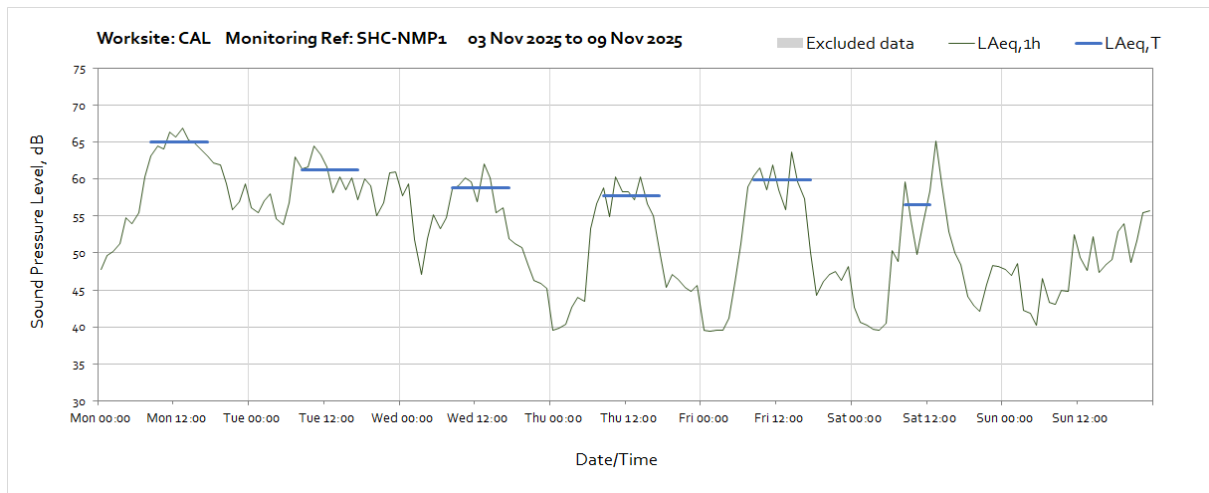


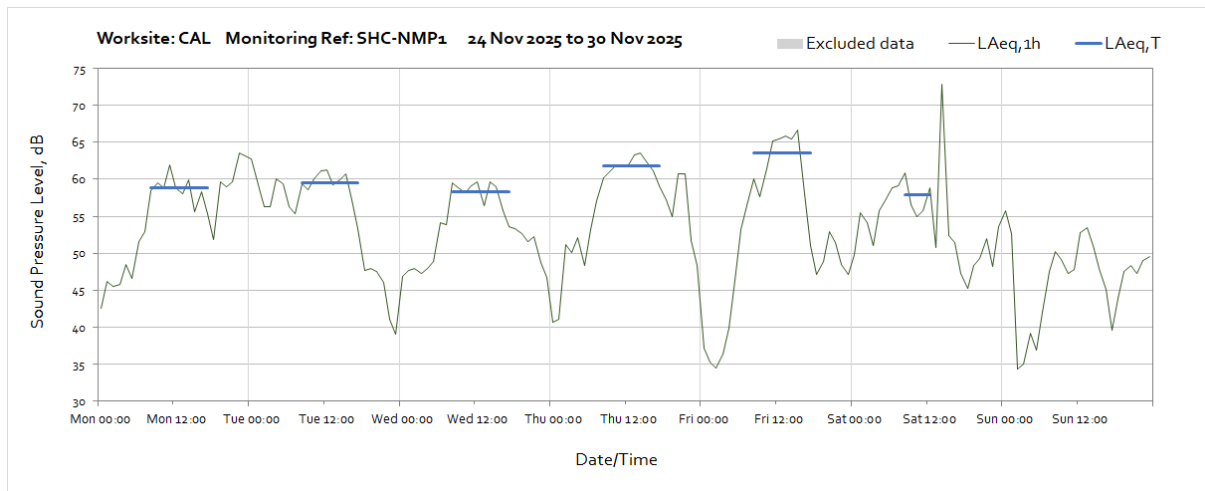
OFFICIAL



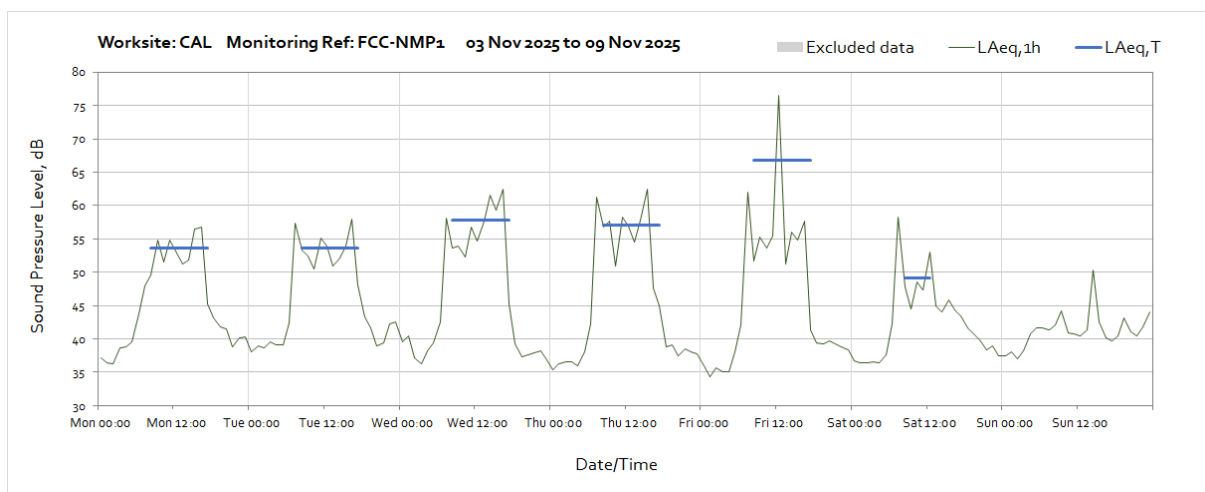
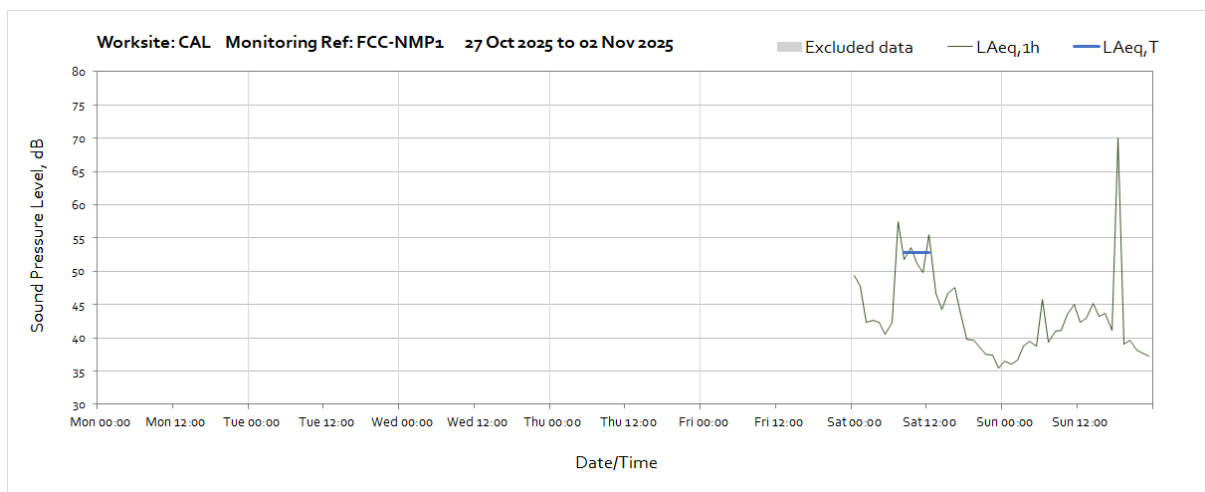
Worksite: CAL – Monitoring Ref: SHC-NMP1

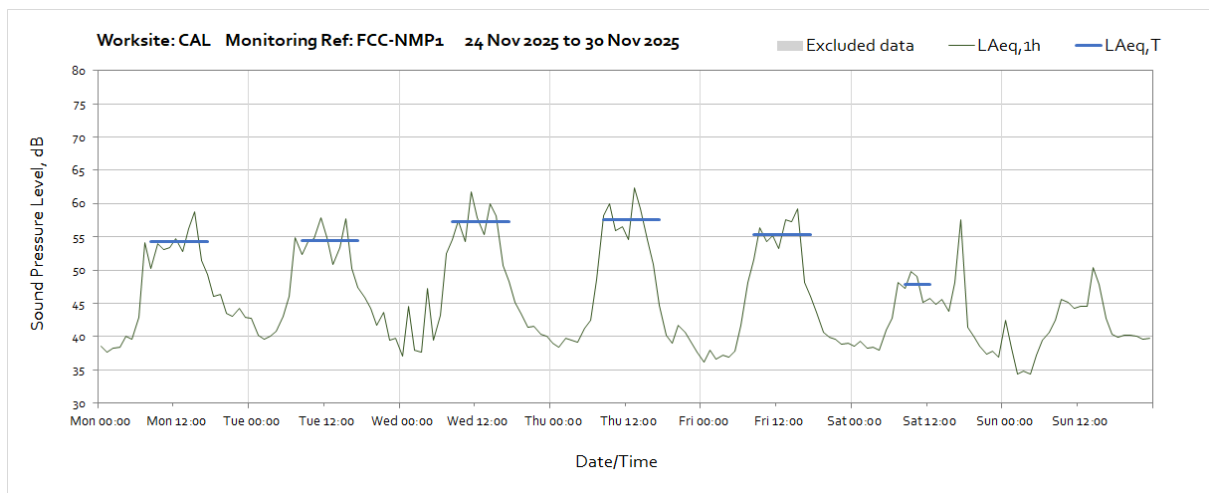
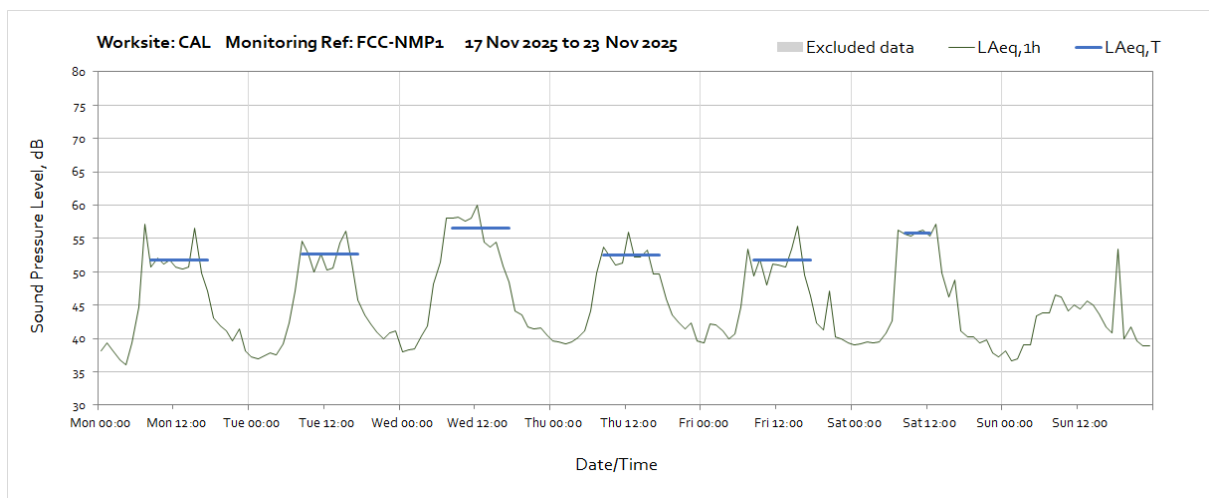
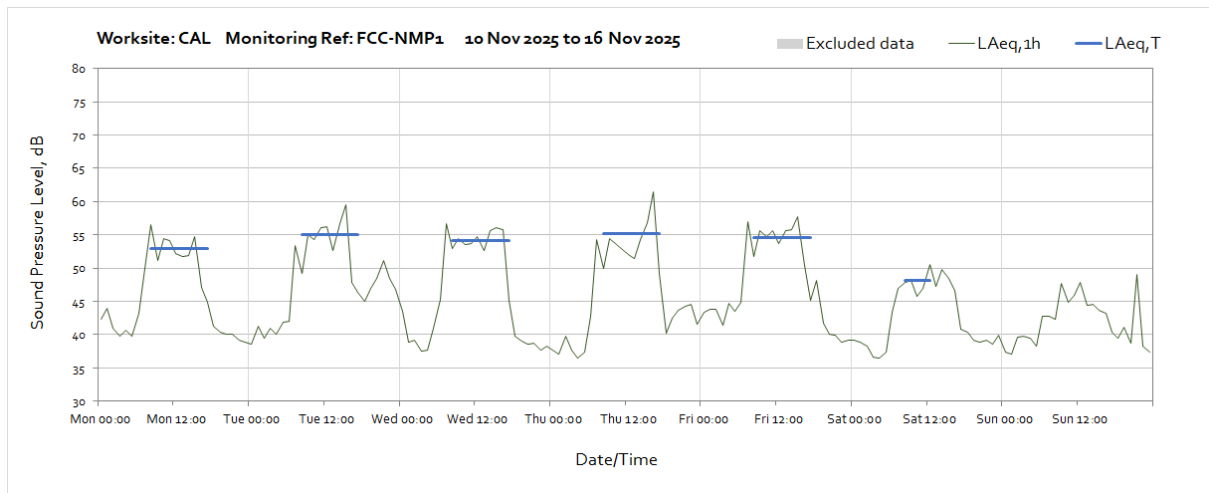




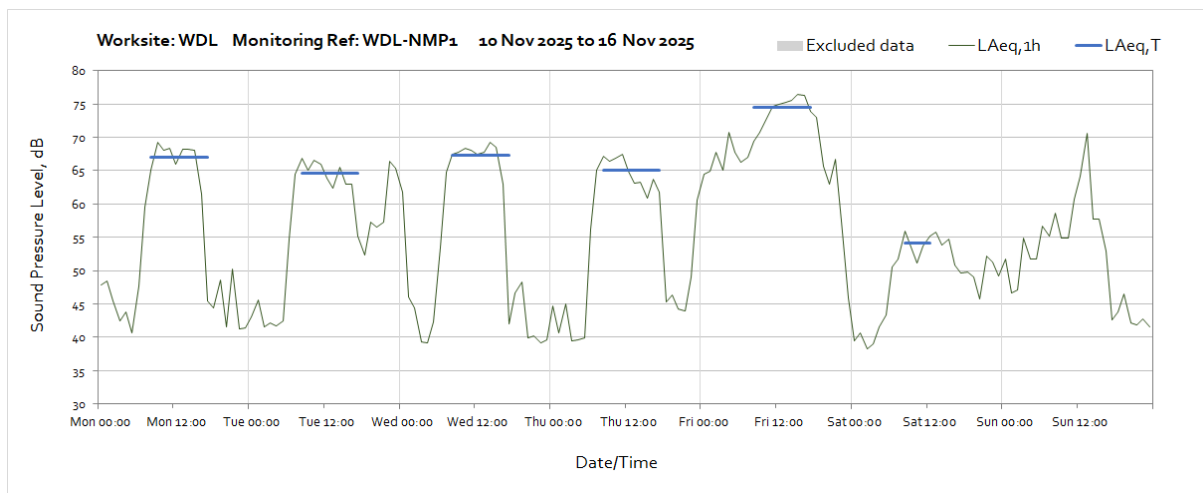
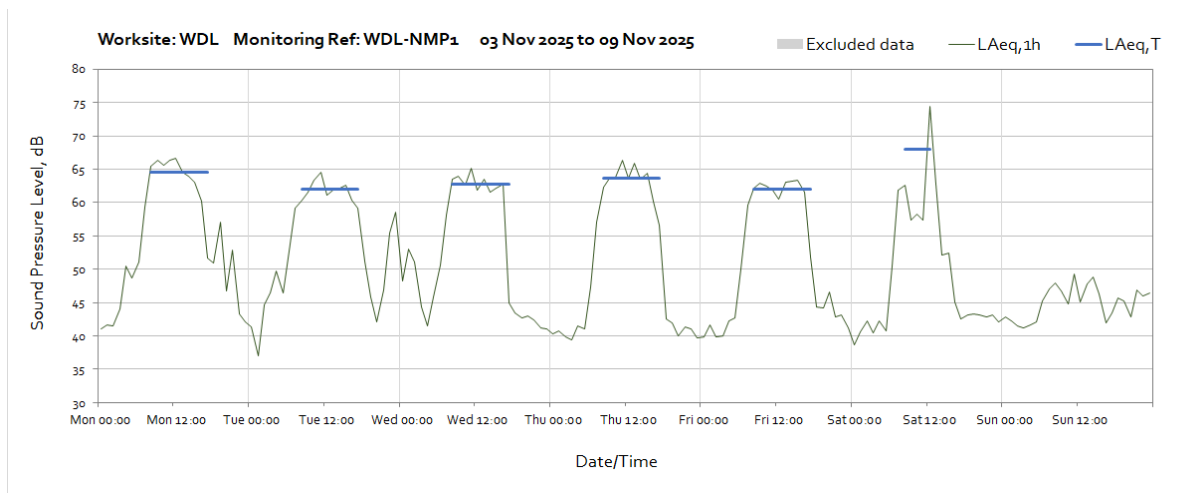
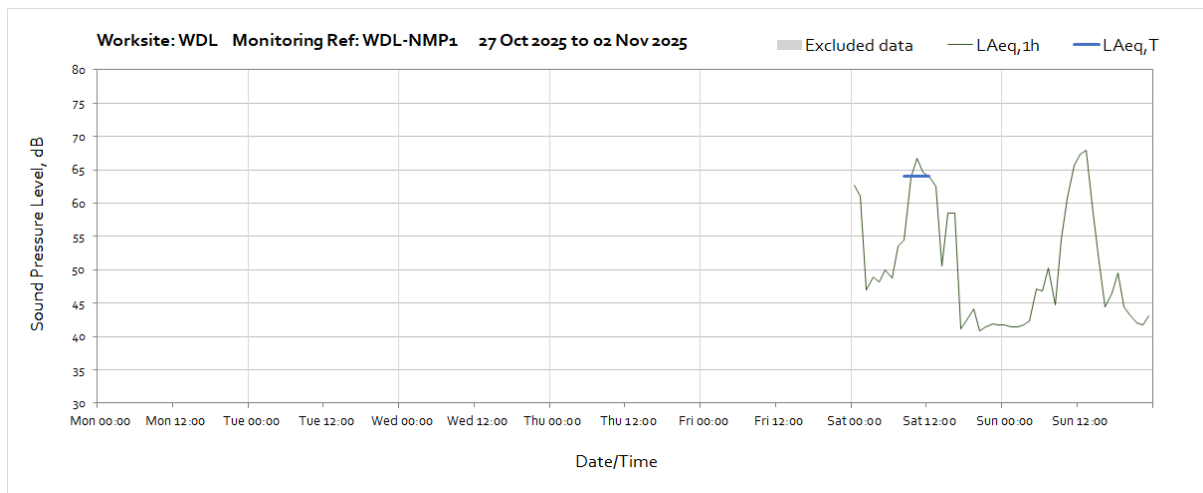


Worksite: CAL – Monitoring Re: FCC-NMP1

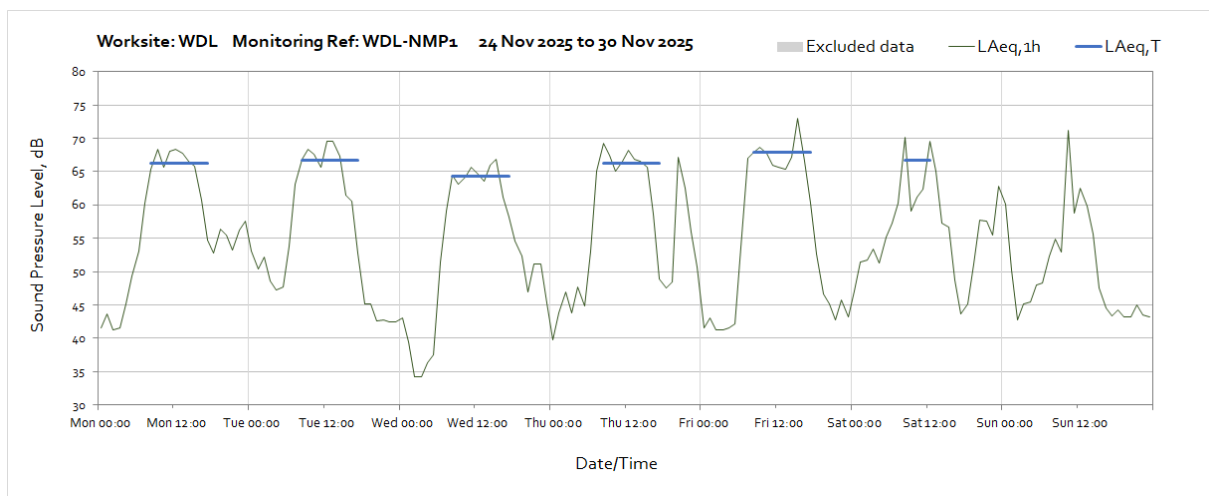
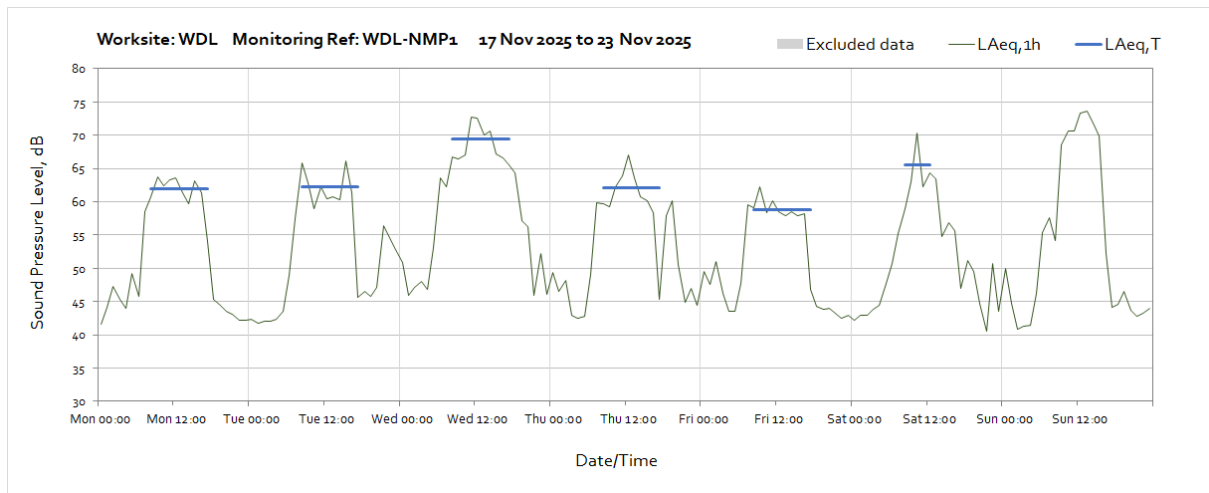




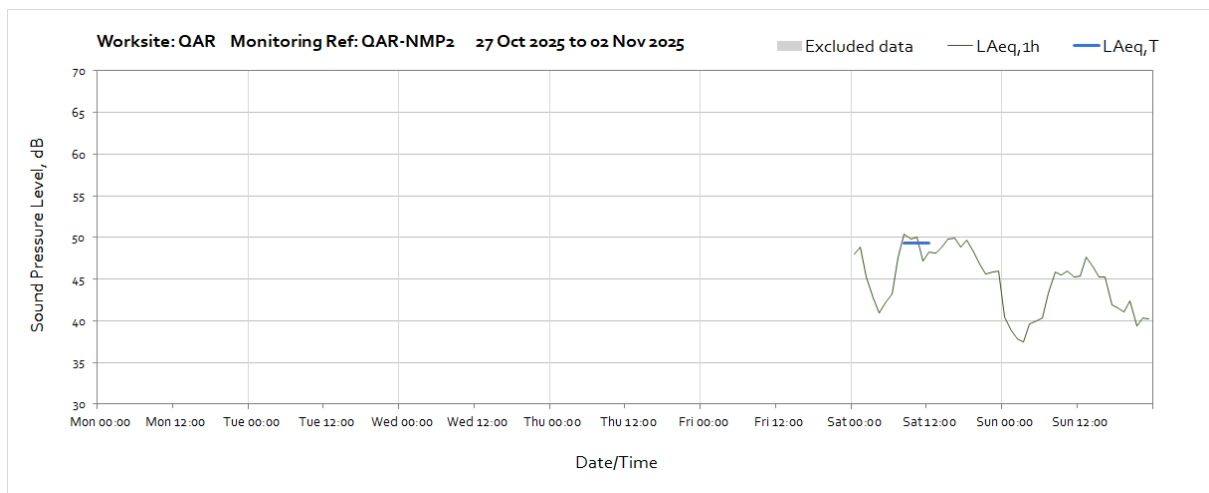
Worksite: WDL – Monitoring Ref: WDL-NMP1

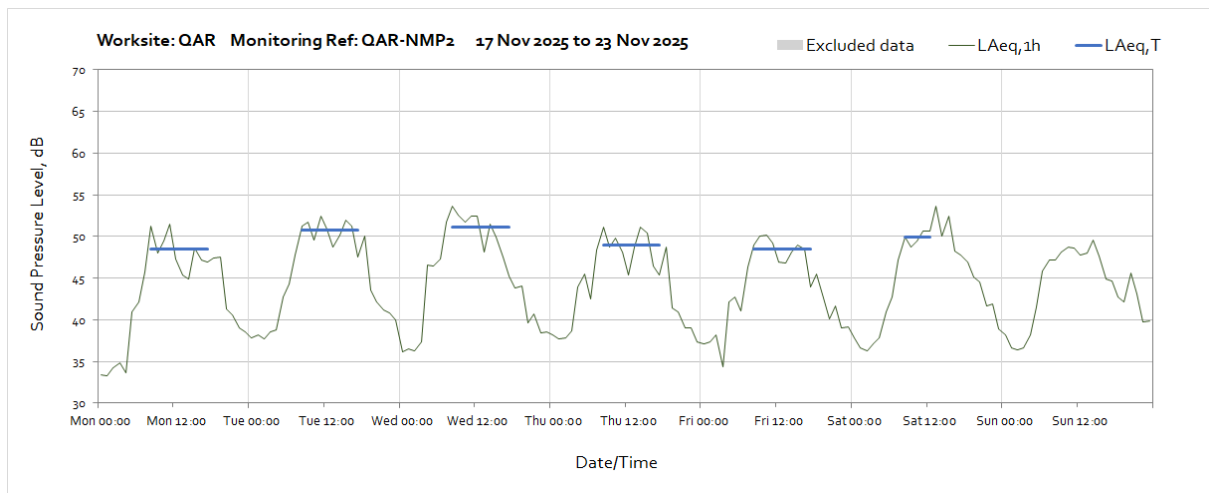
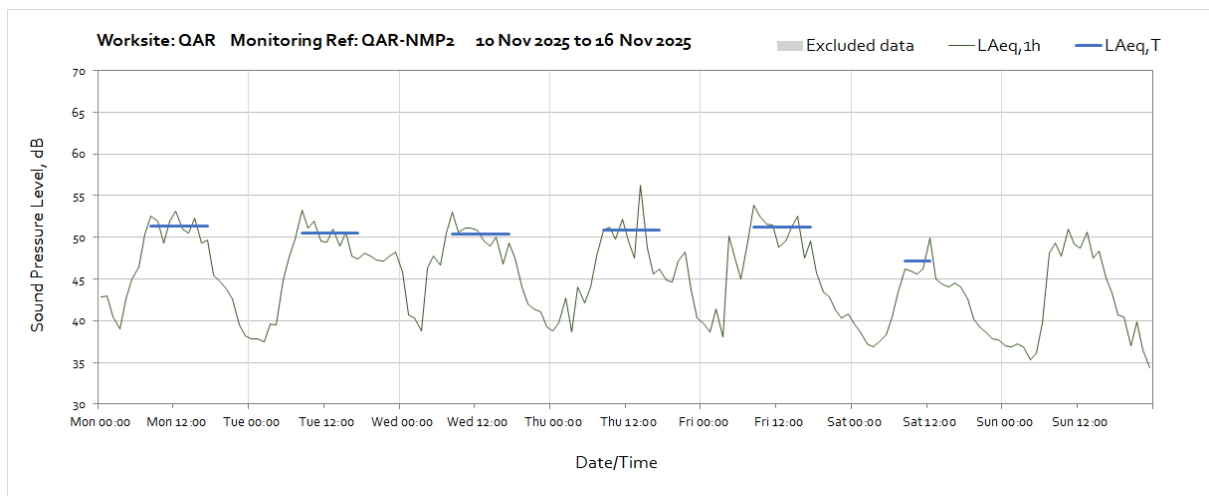
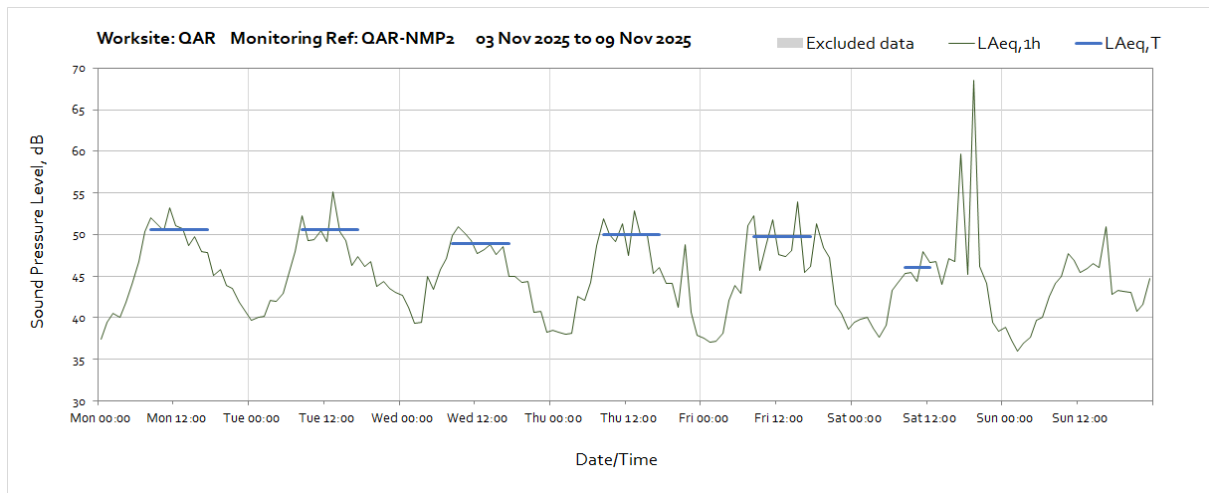


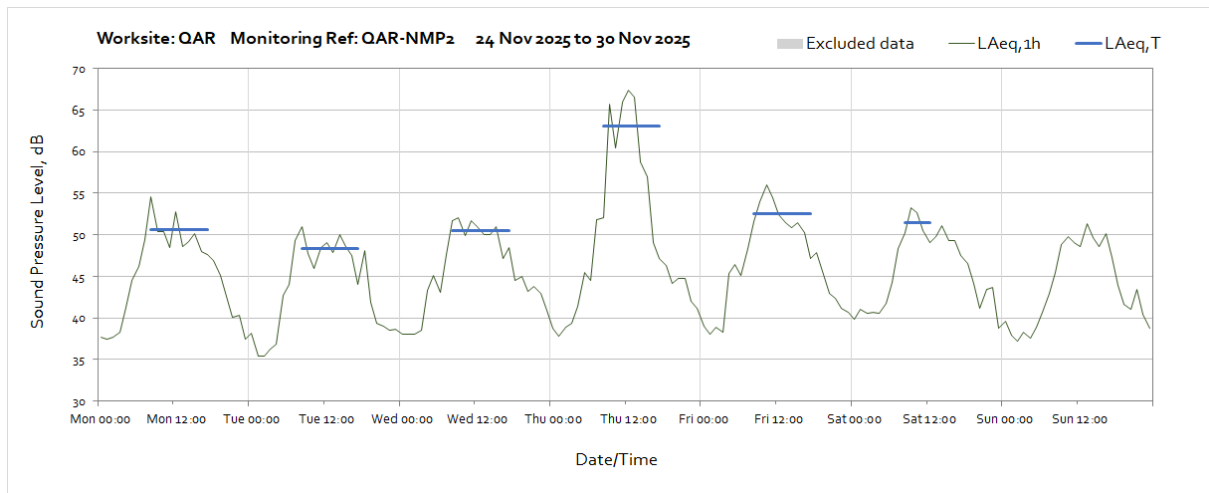
OFFICIAL



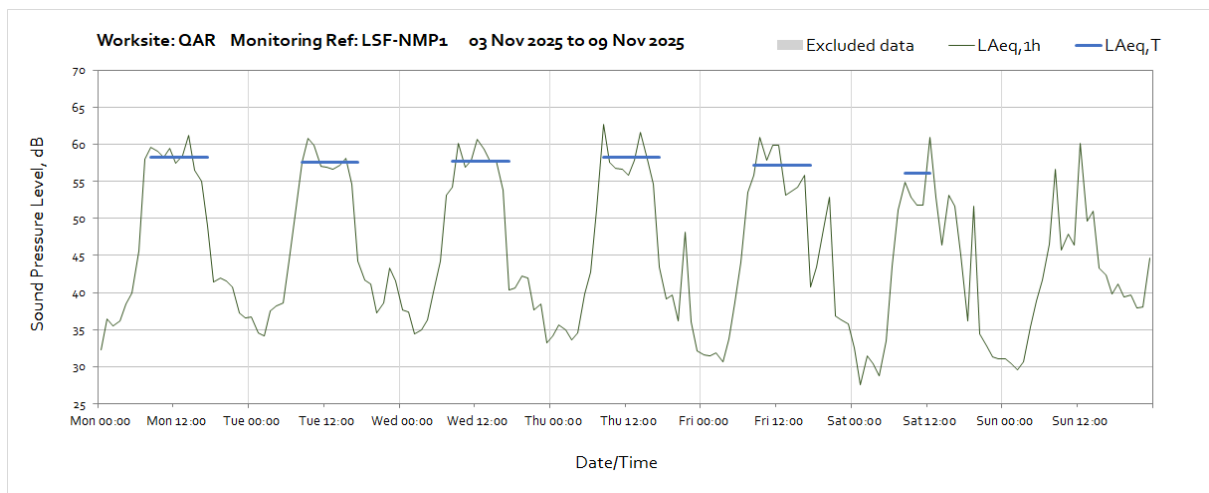
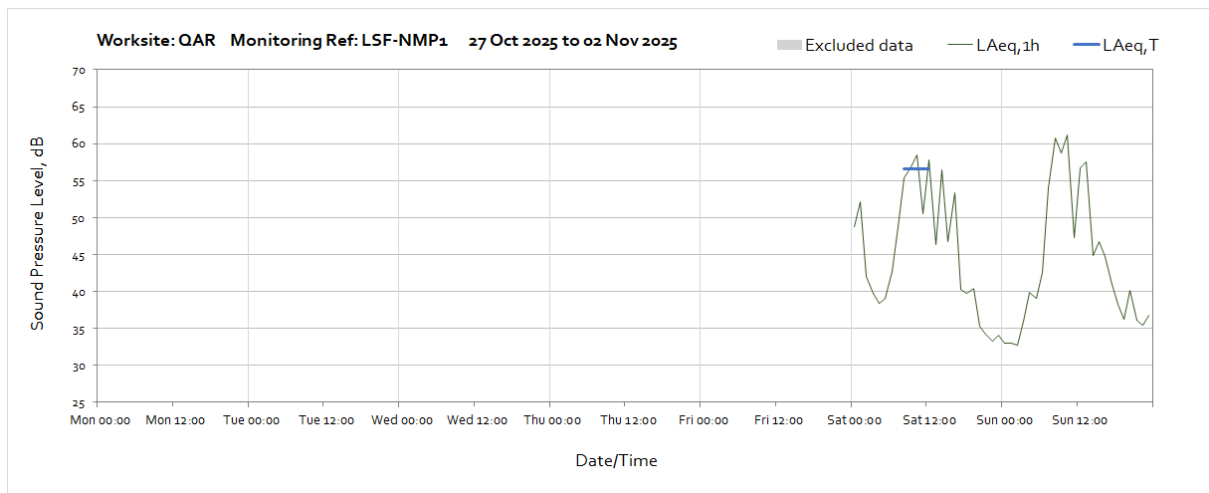
Worksite: QAR – Monitoring Ref: QAR-NMP2

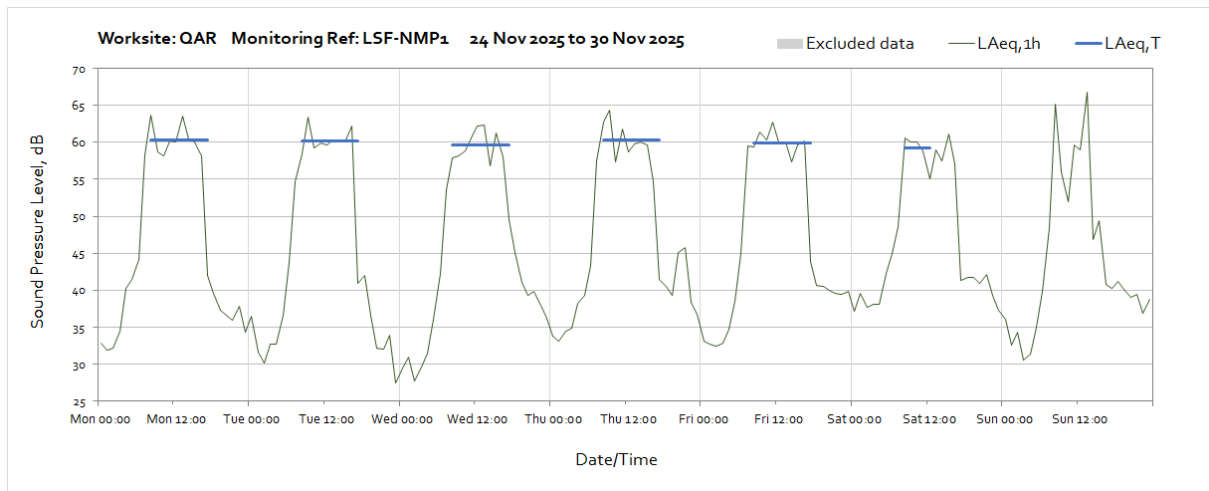
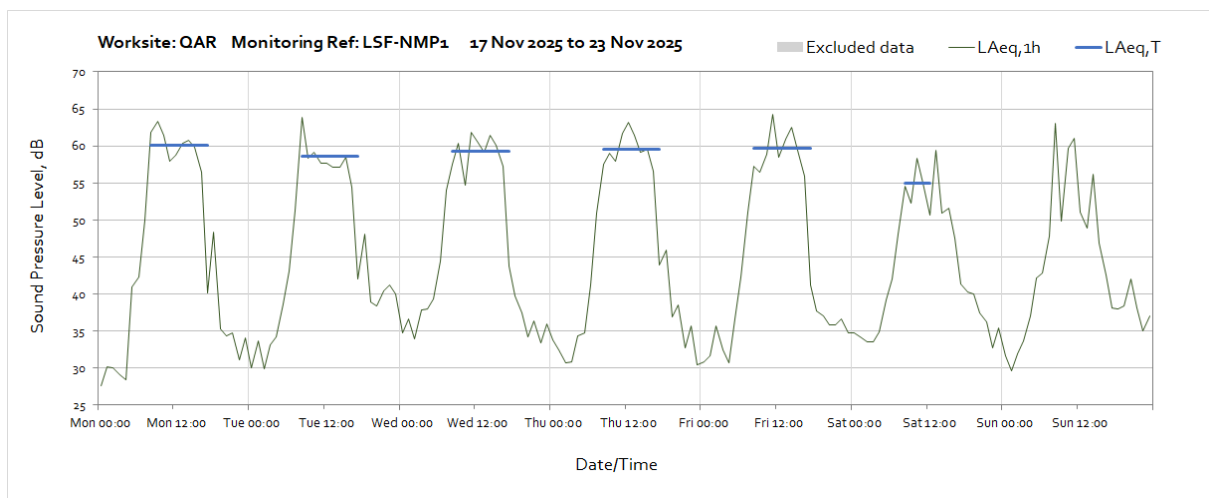
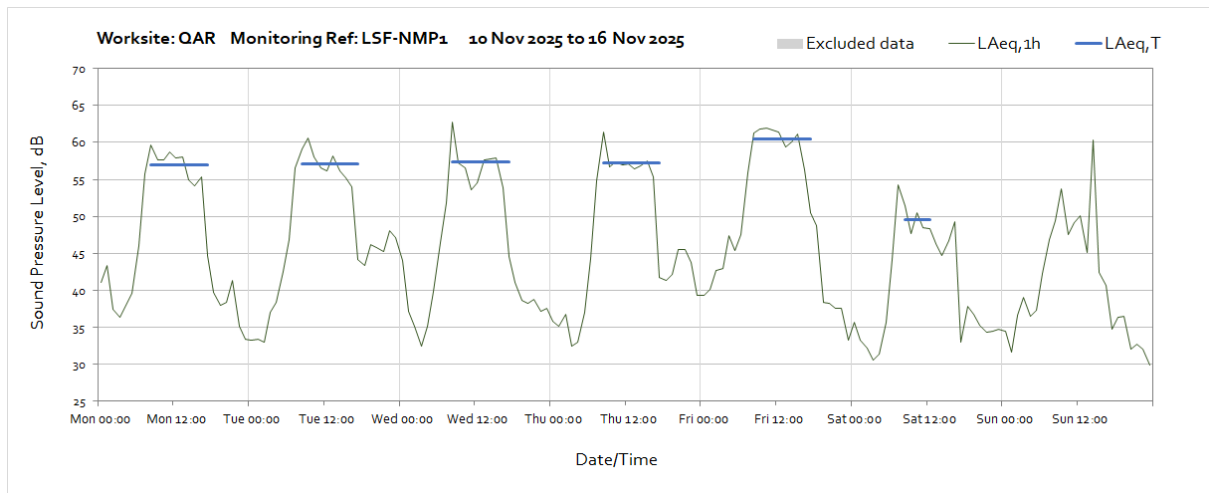




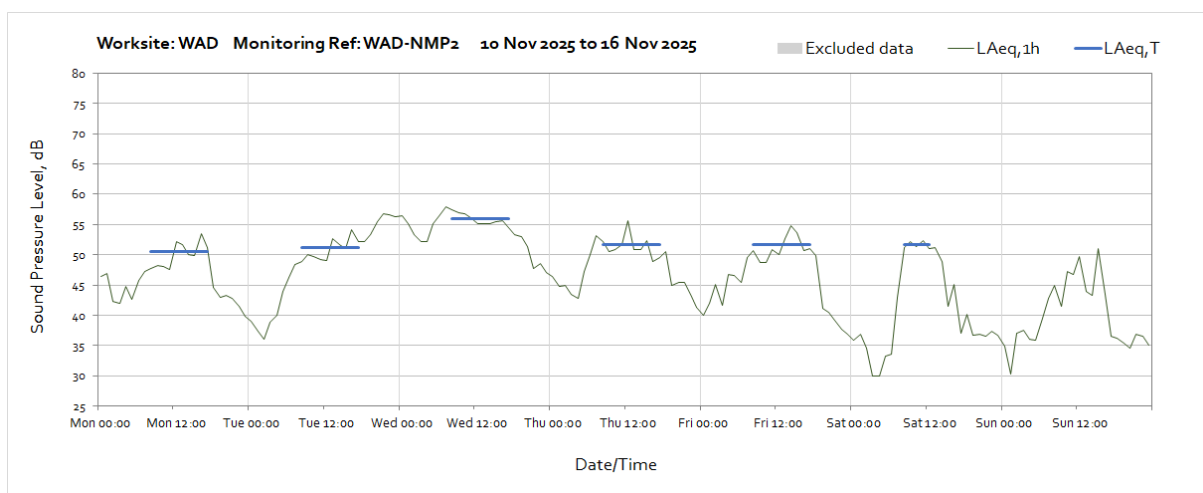
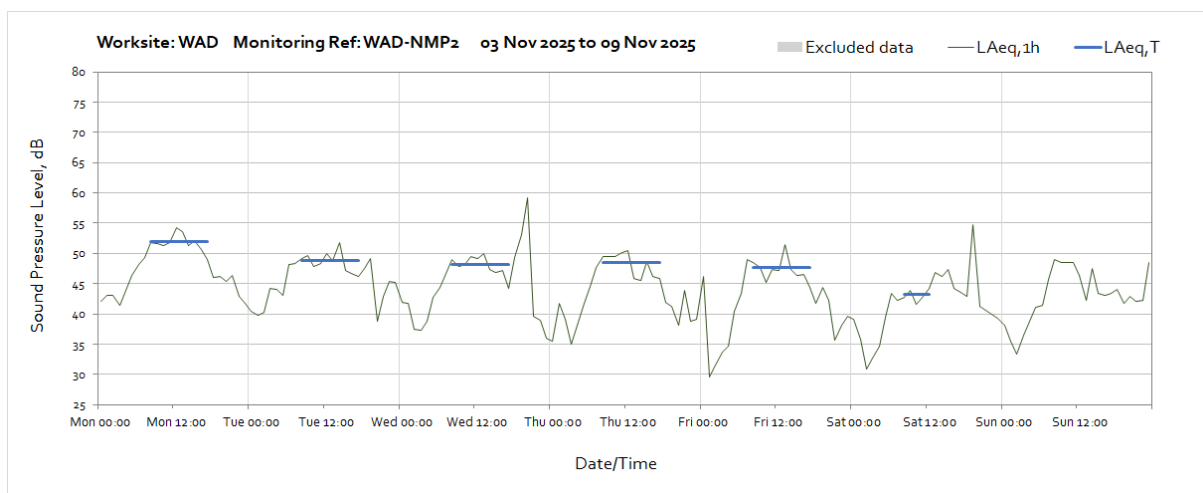
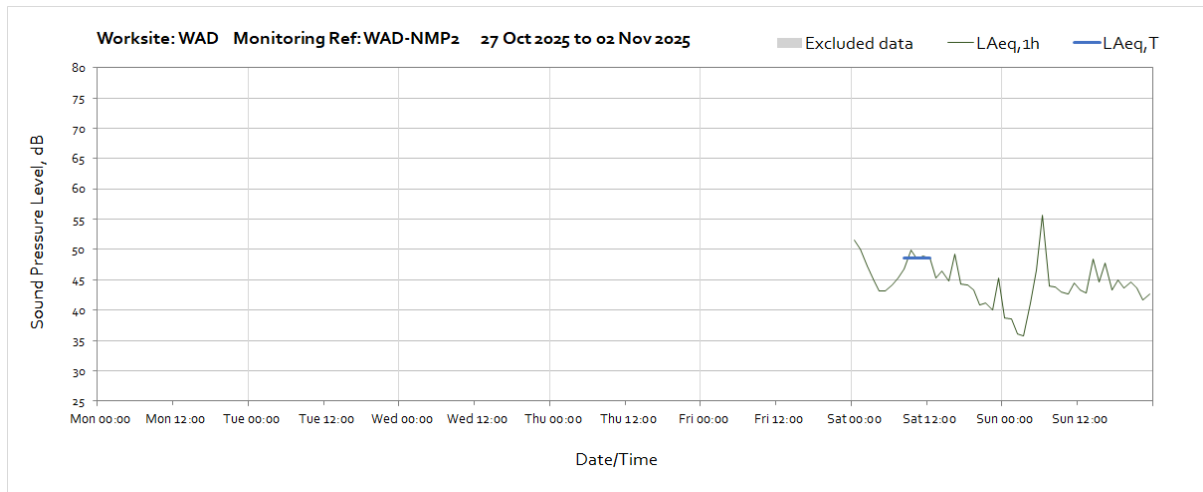


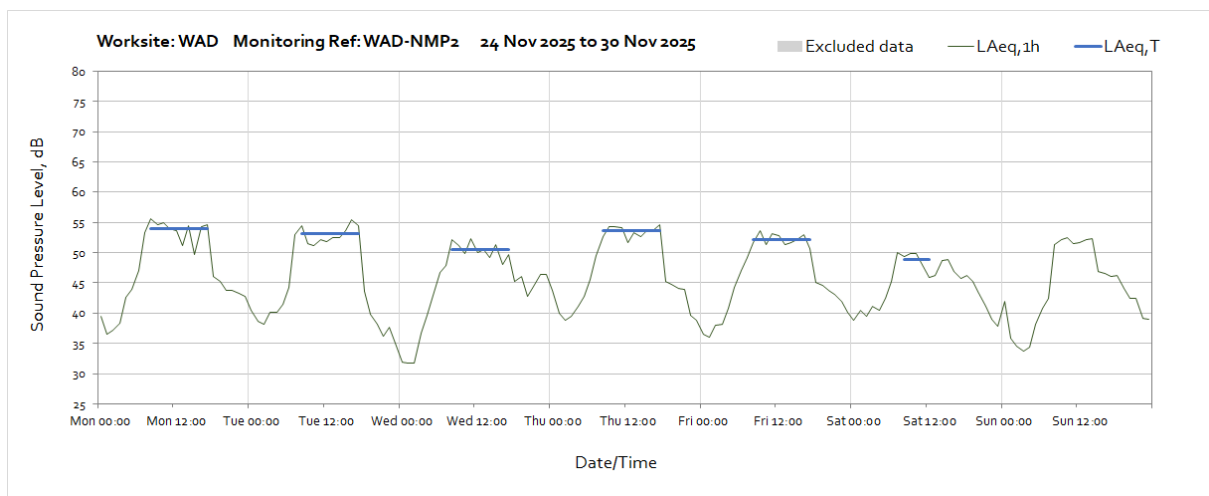
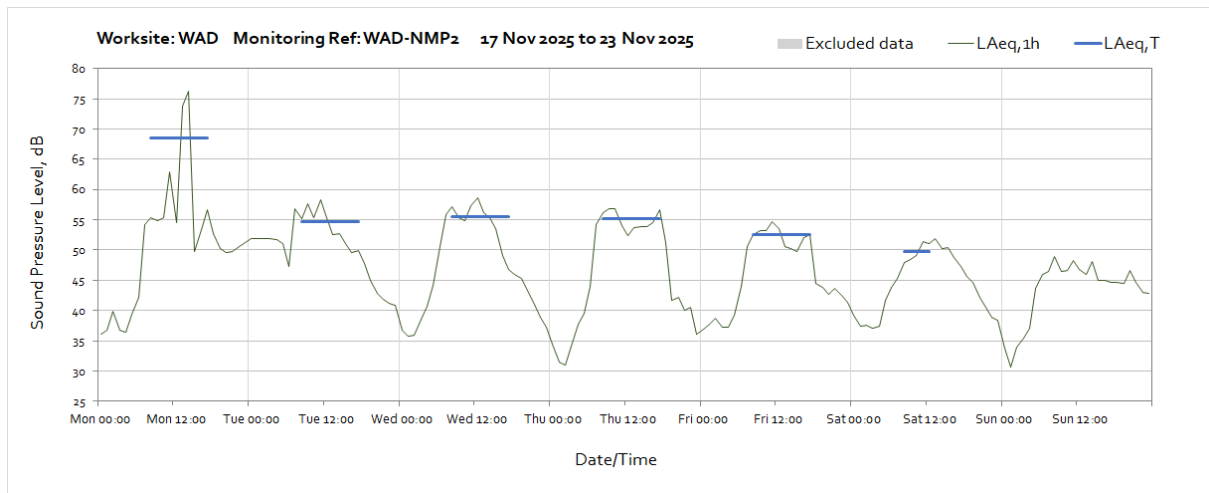
Worksite: QAR – Monitoring Ref: LSF-NMP1



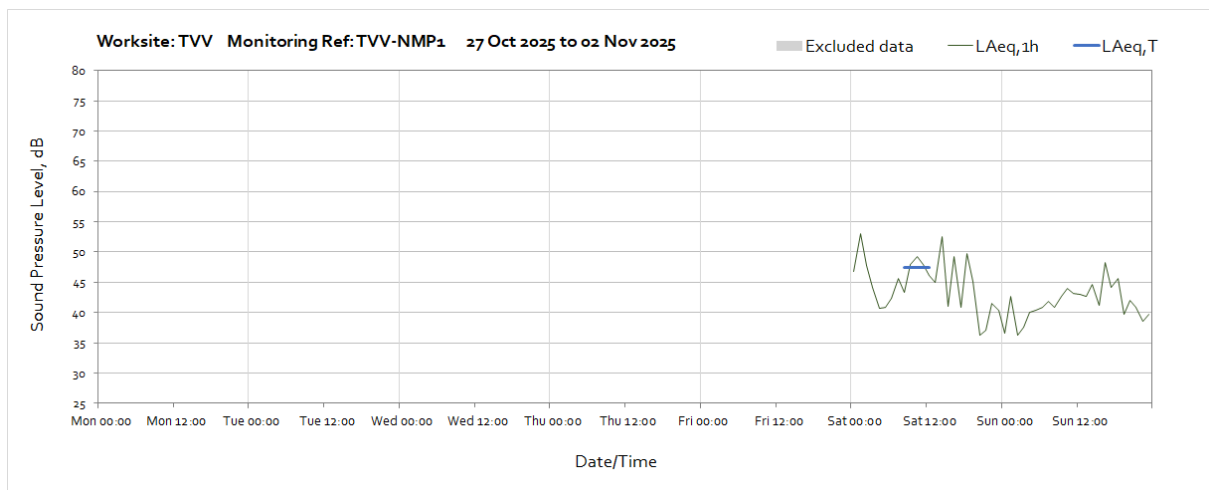


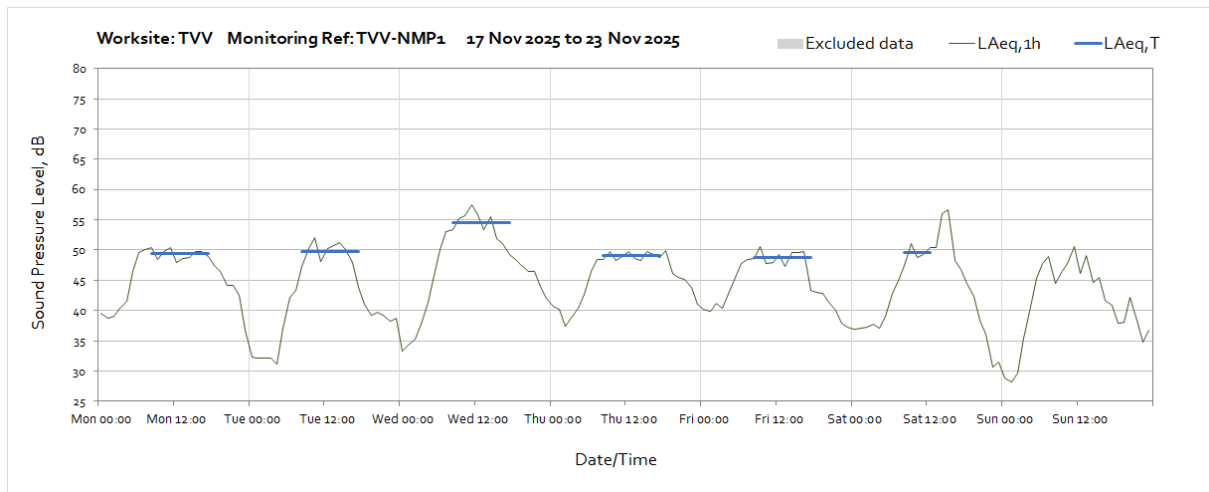
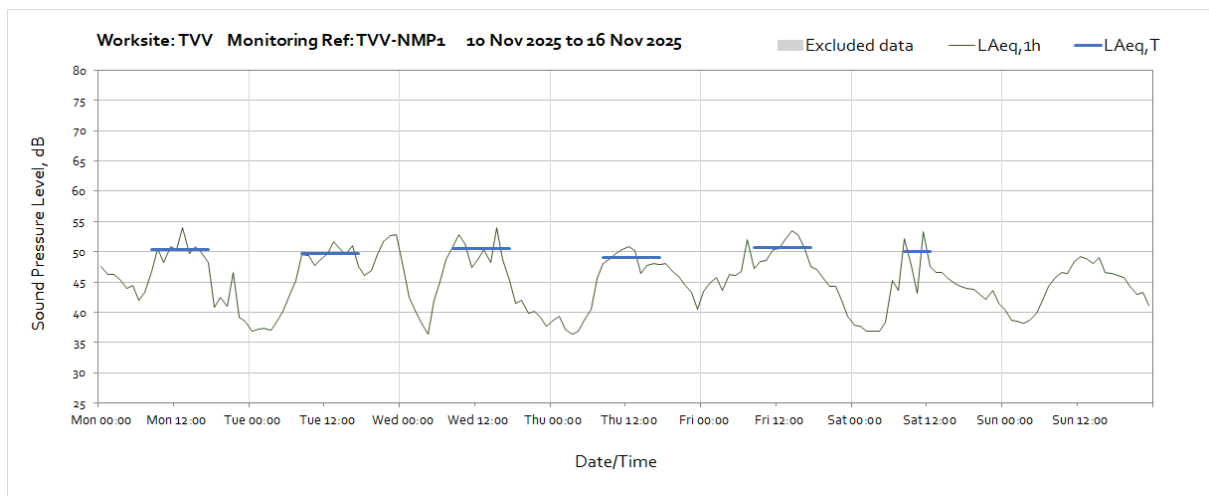
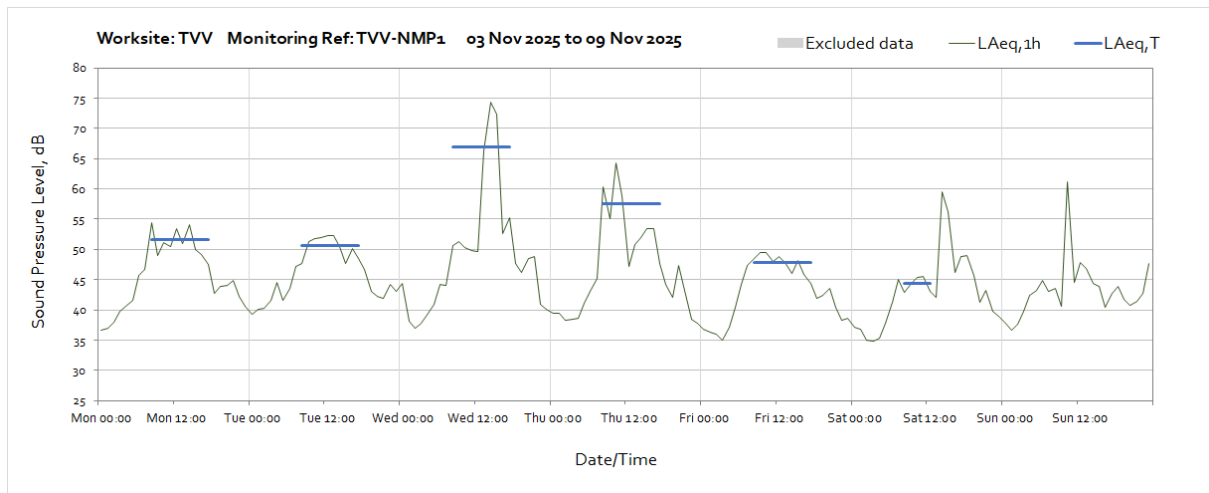
Worksite: WAD – Monitoring Ref: WAD-NMP2

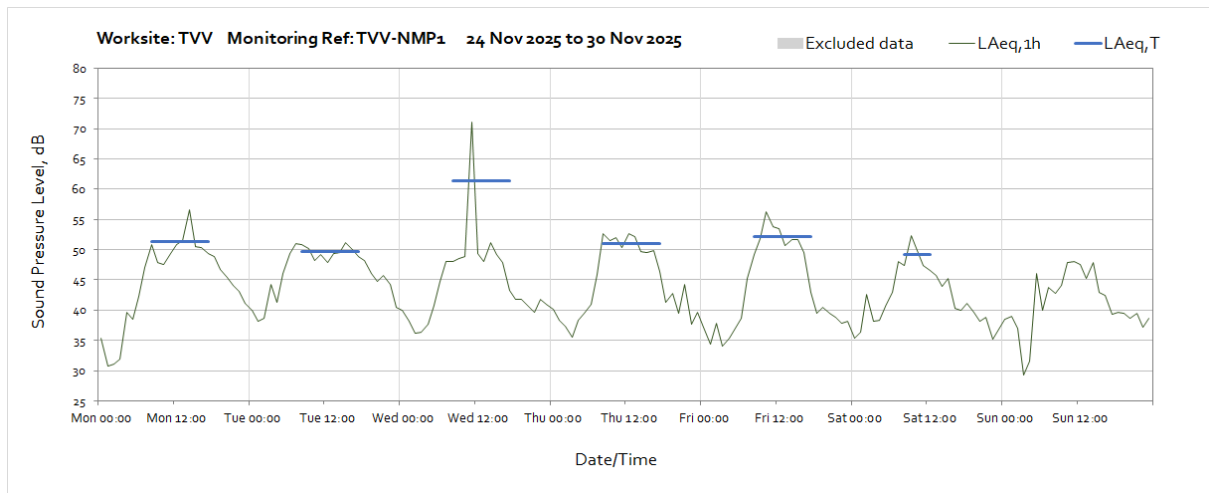




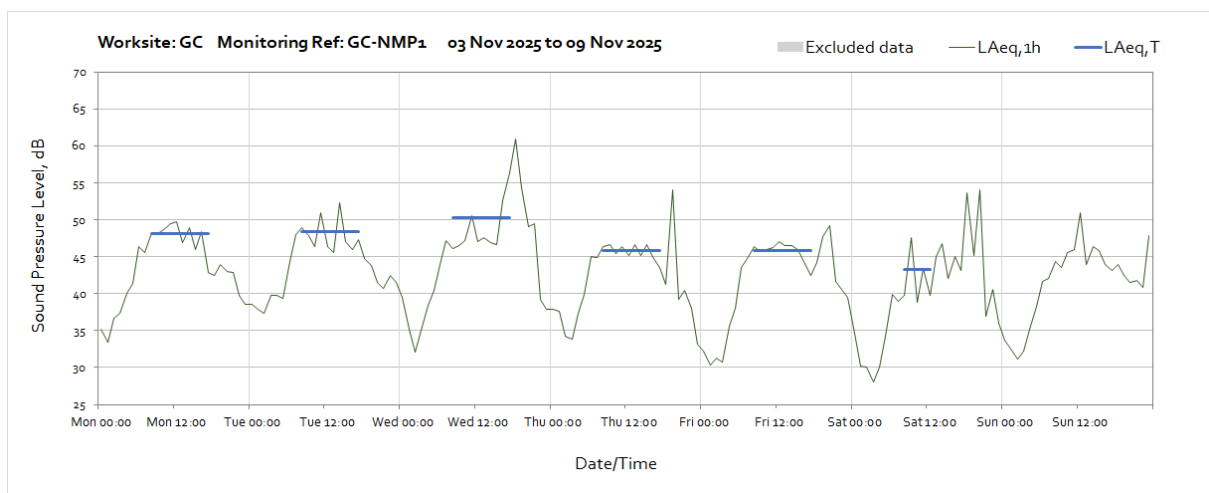
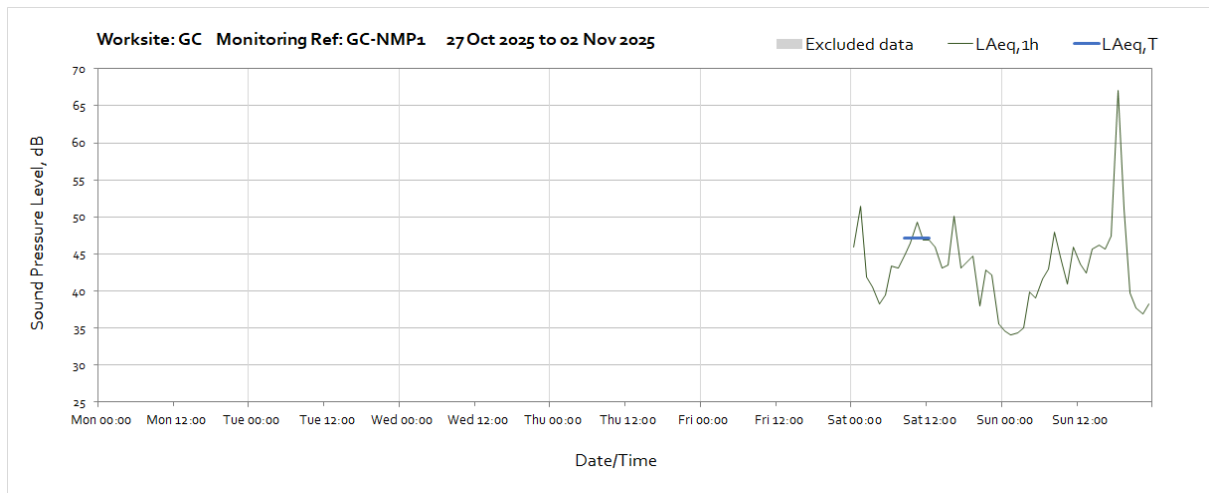
Worksite: TVV – Monitoring Ref: TVV-NMP1

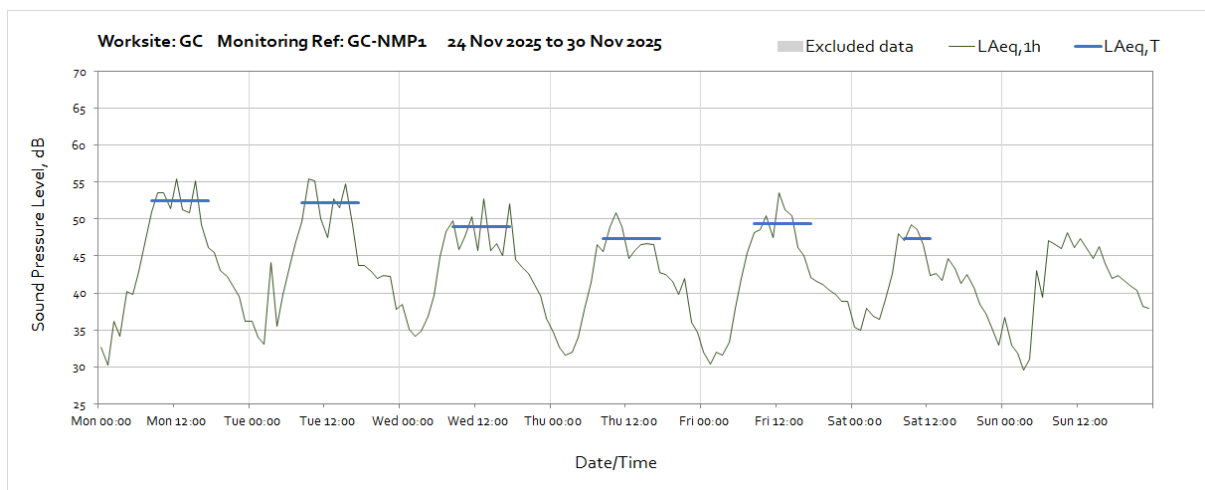
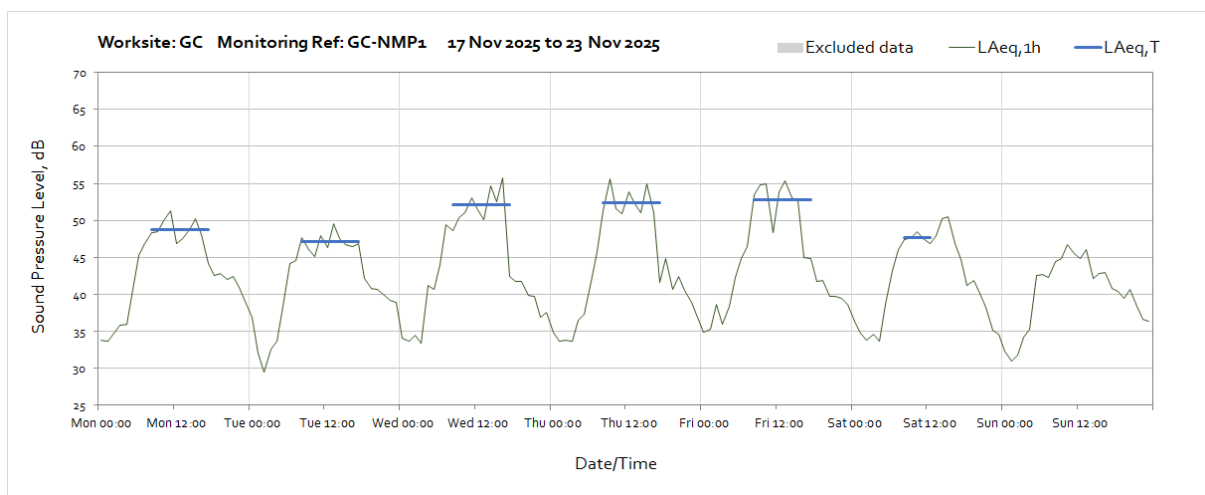
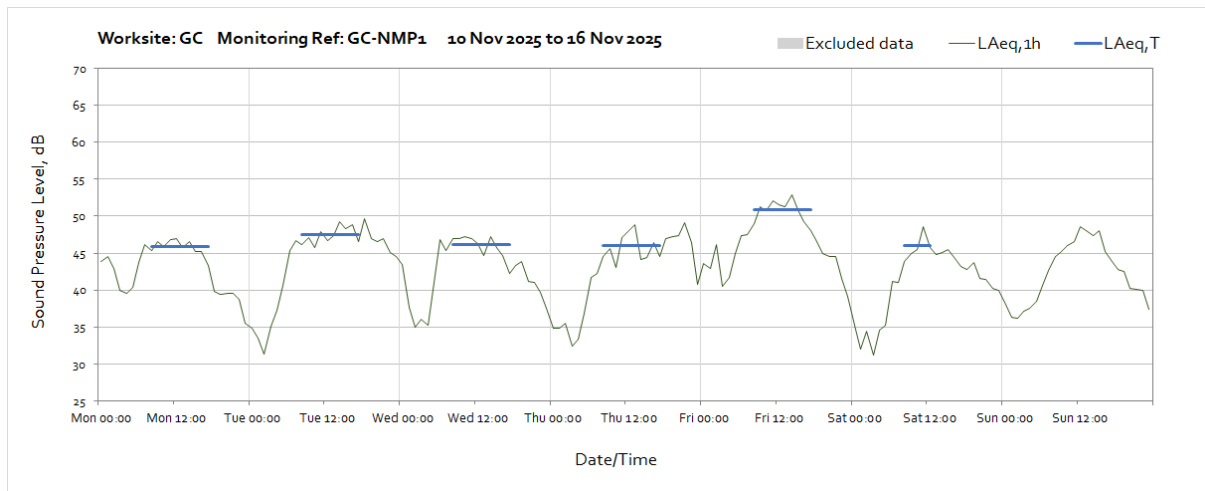




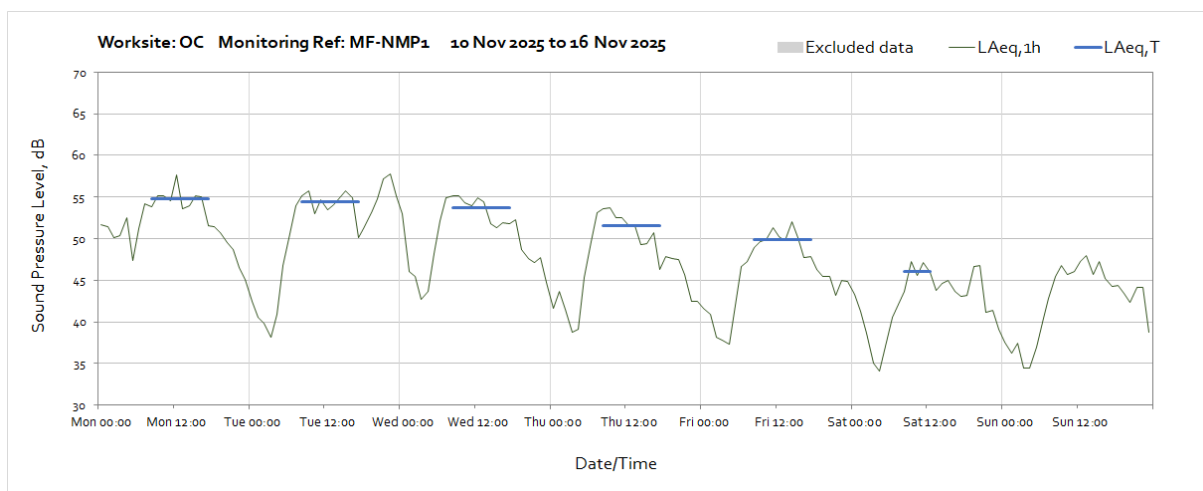
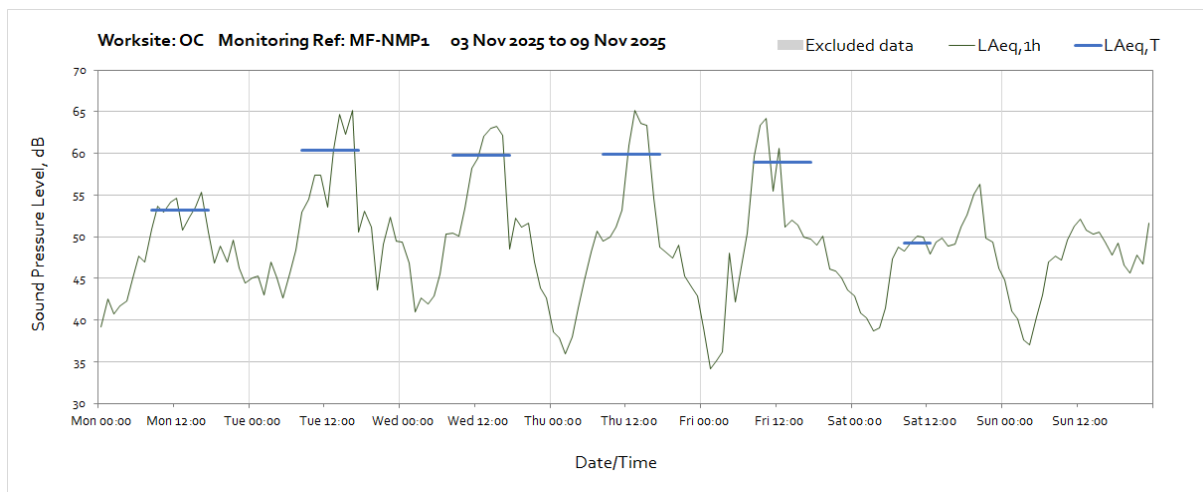
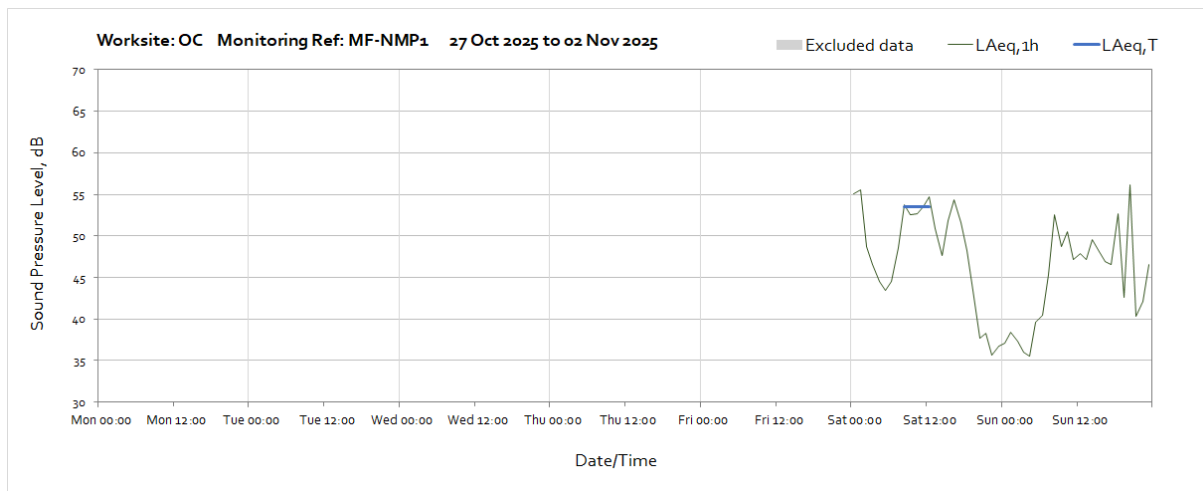


Worksite: GC – Monitoring Ref: GC-NMP1

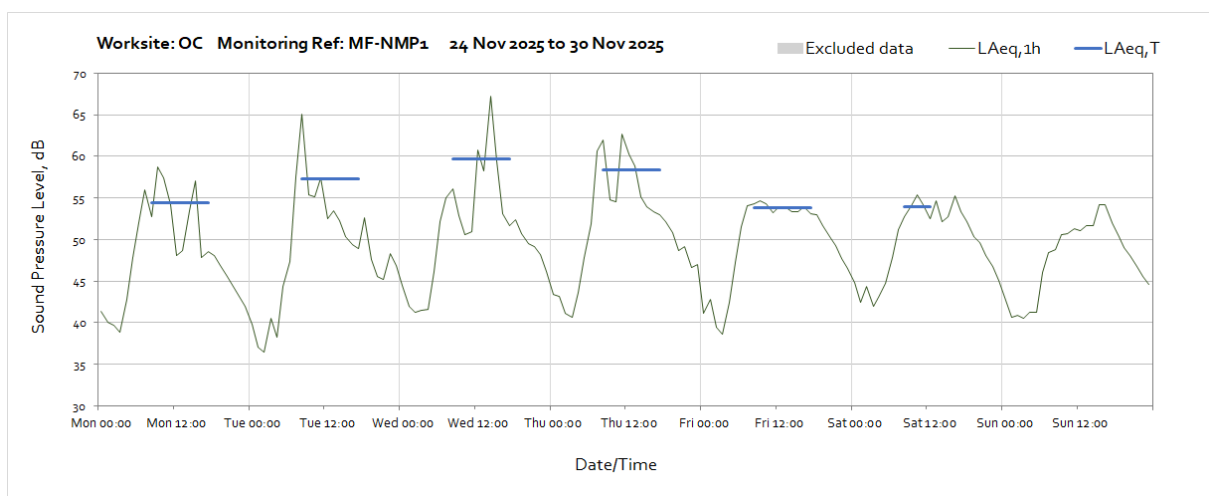
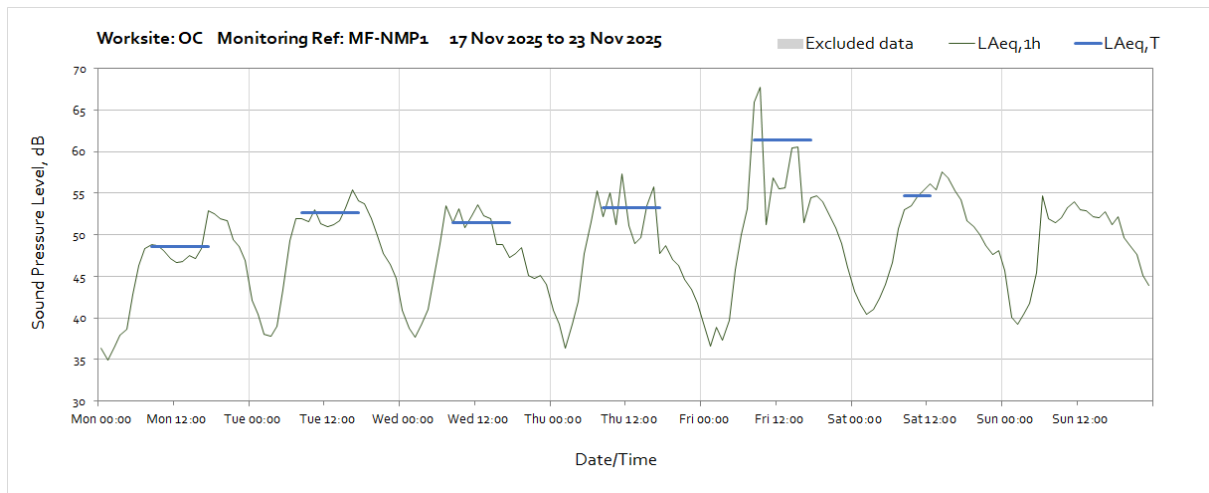




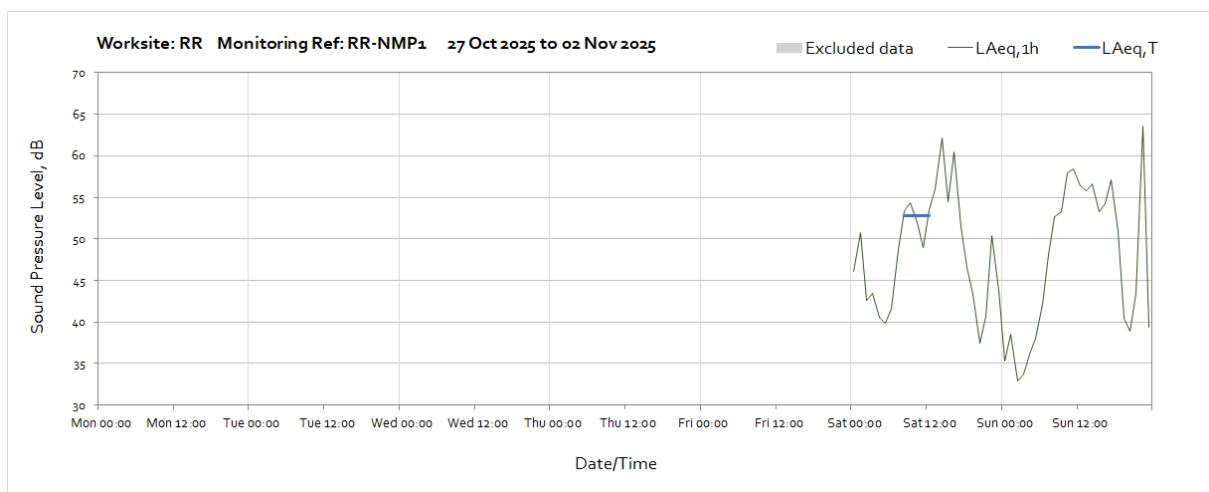
Worksite: OC – Monitoring Ref: MF-NMP1

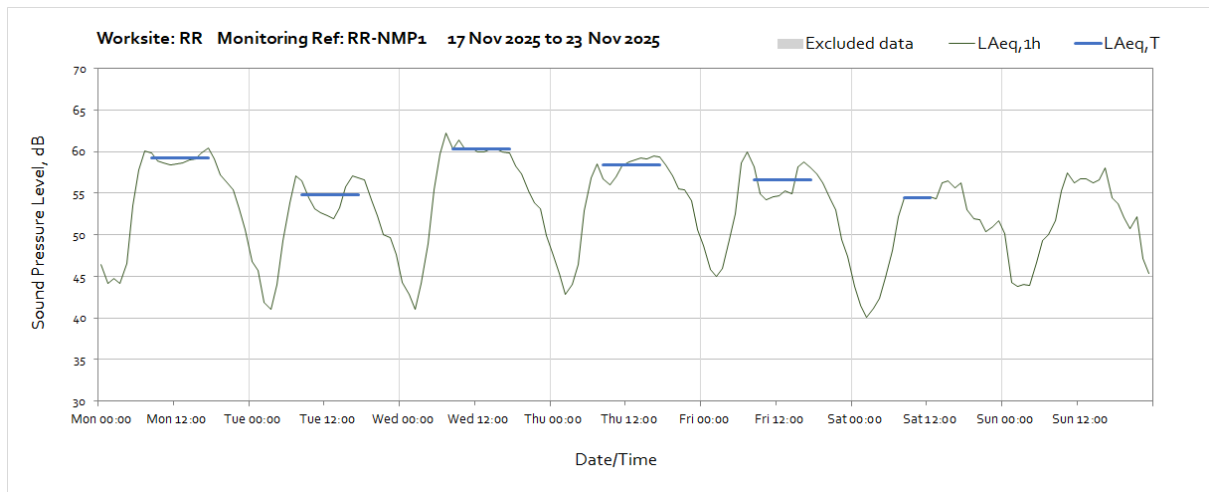
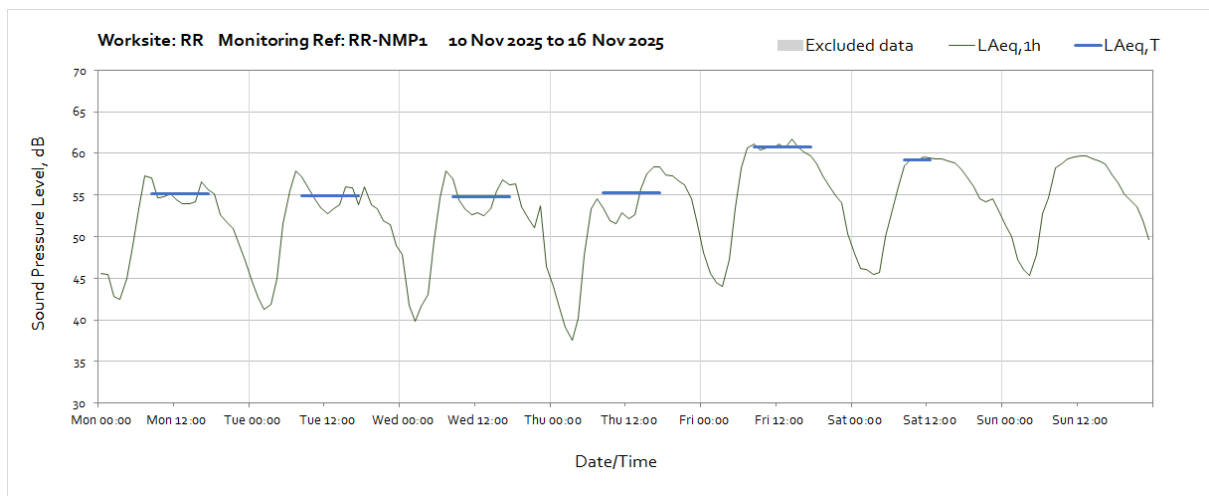
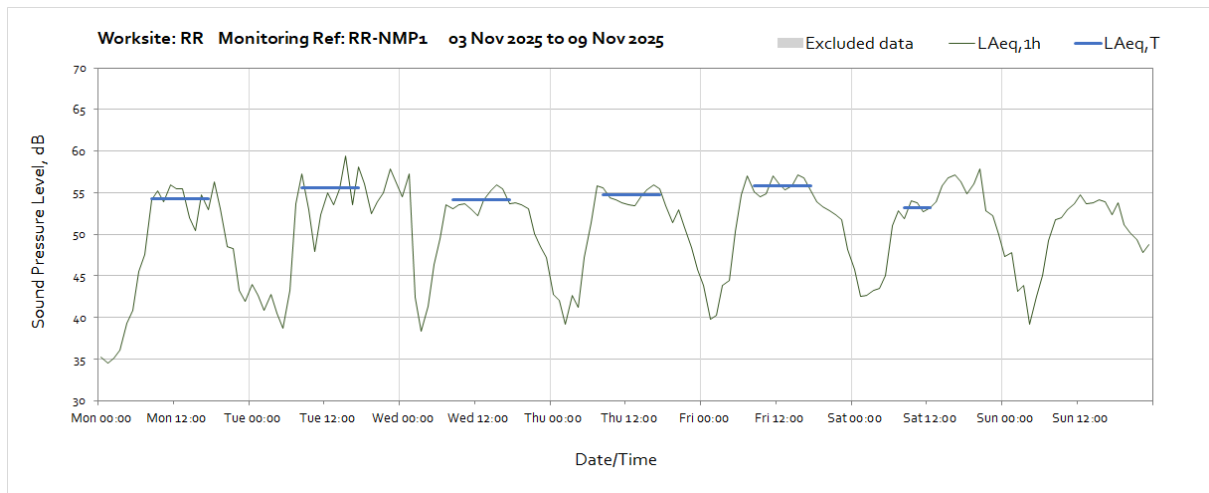


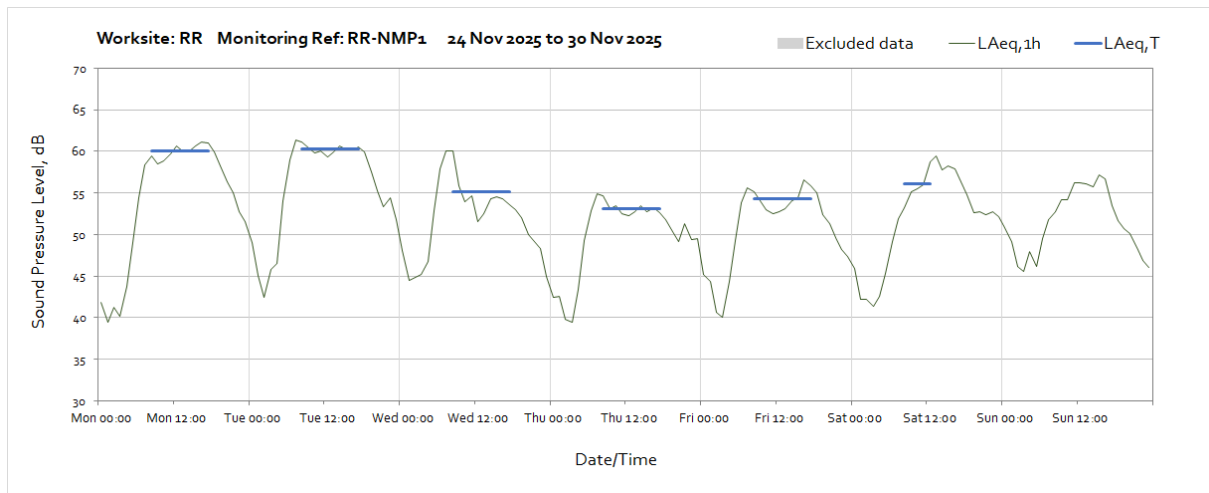
OFFICIAL



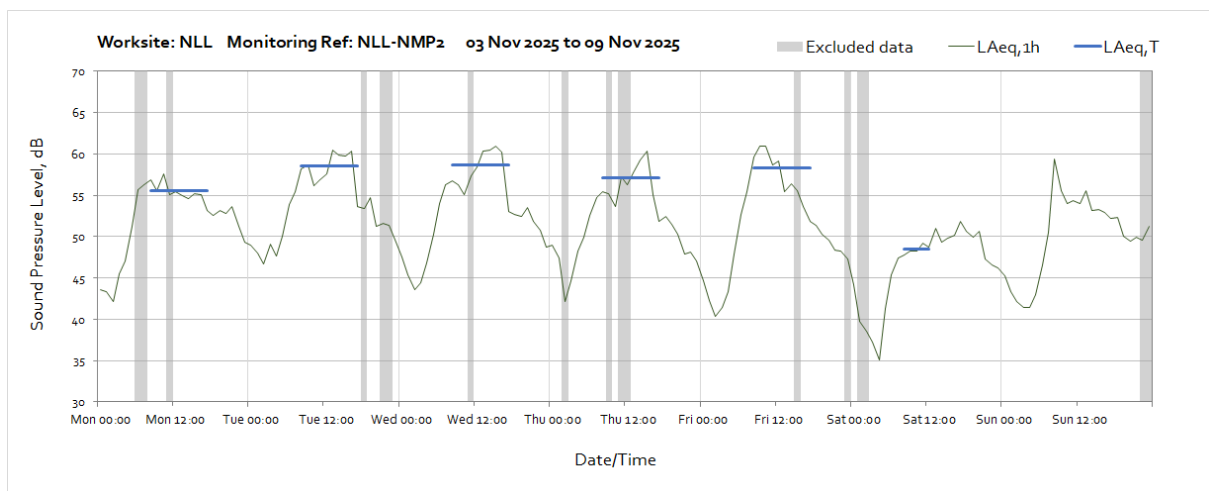
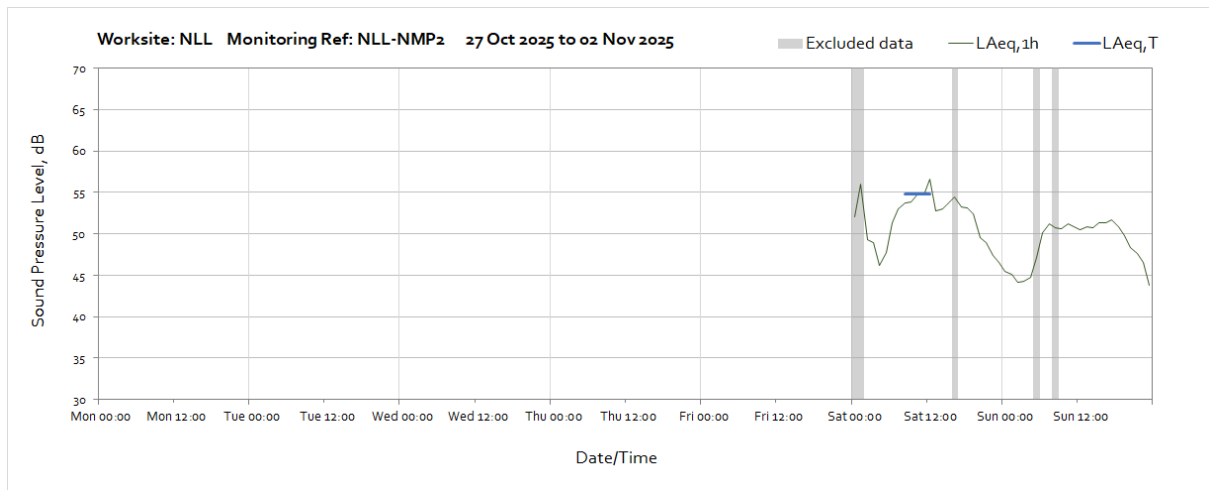
Worksite: RR – Monitoring Ref: RR-NMP1

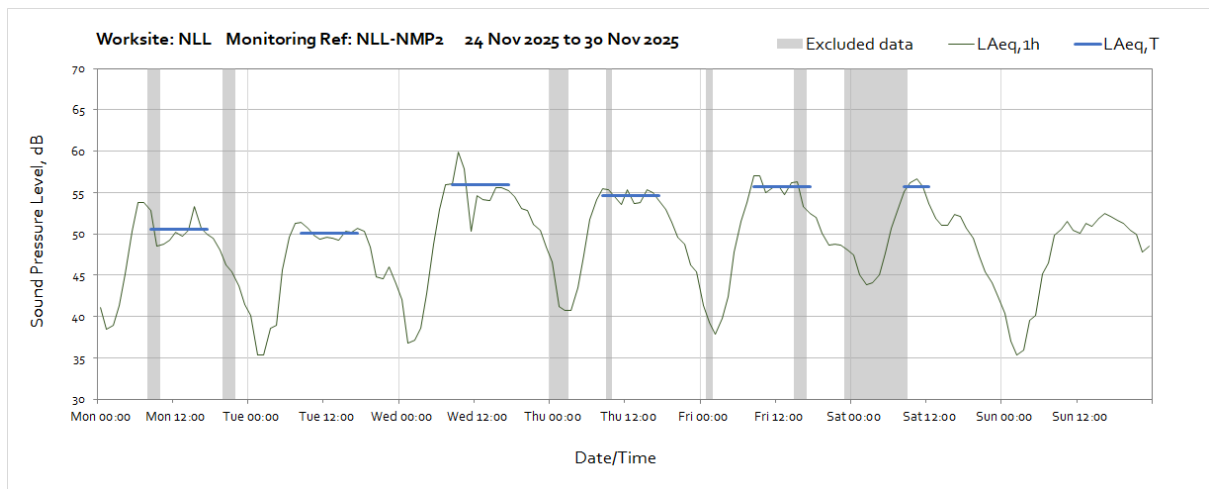
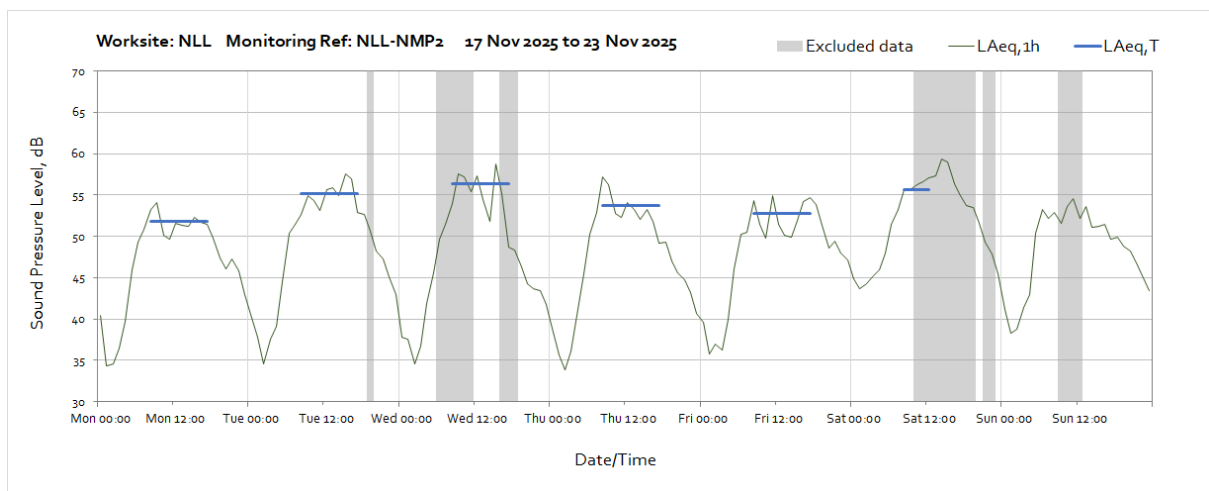
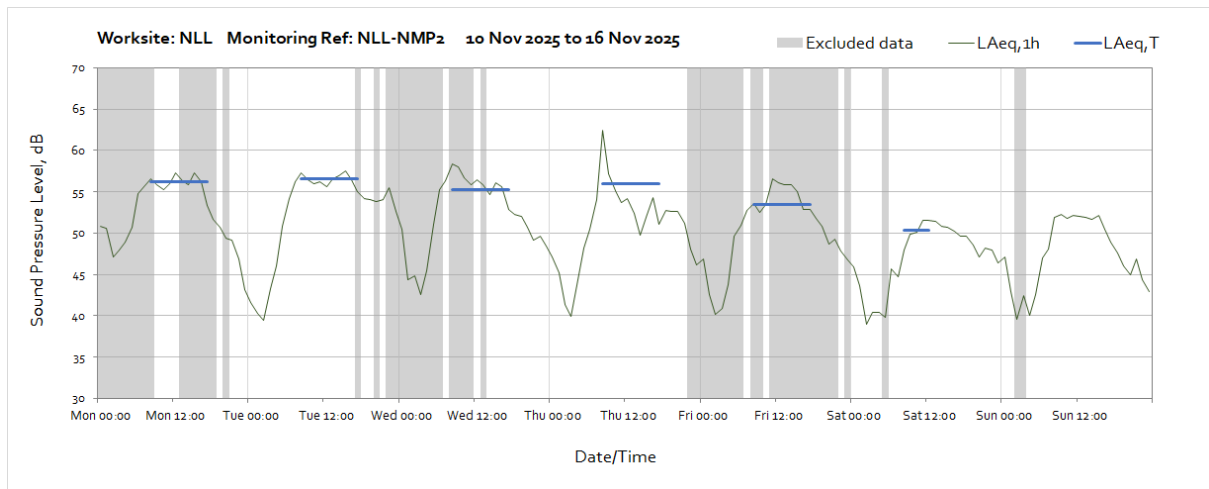




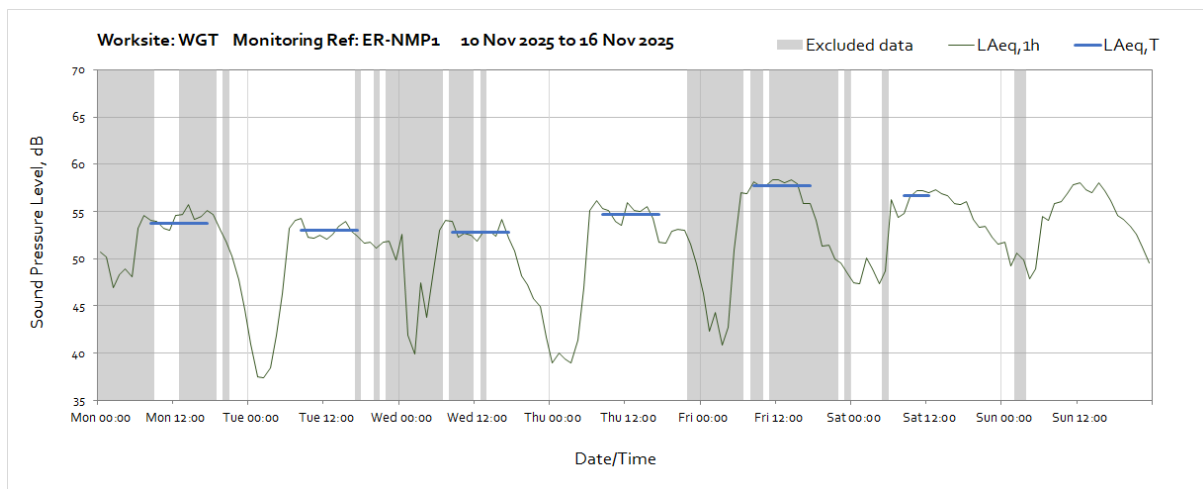
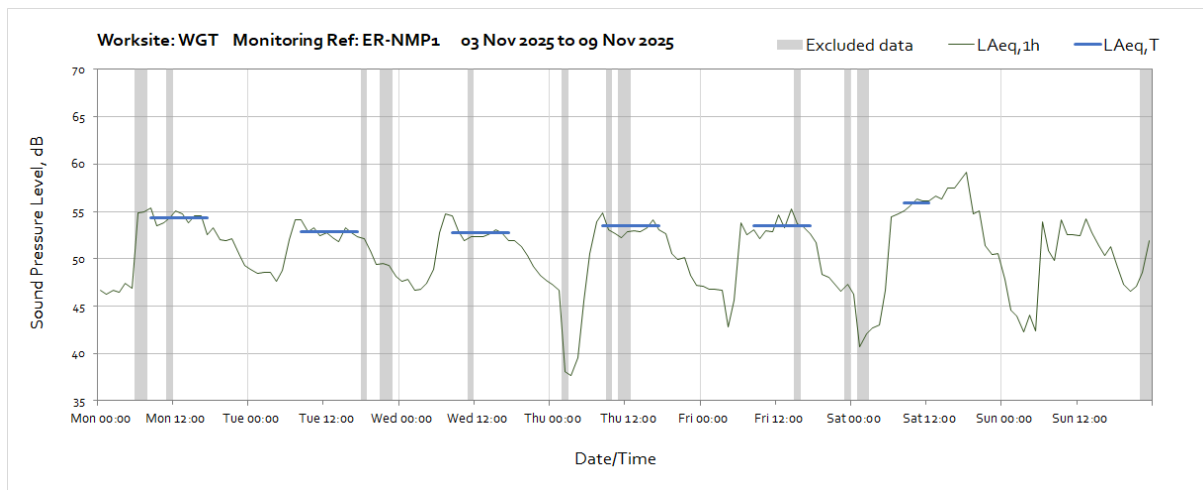
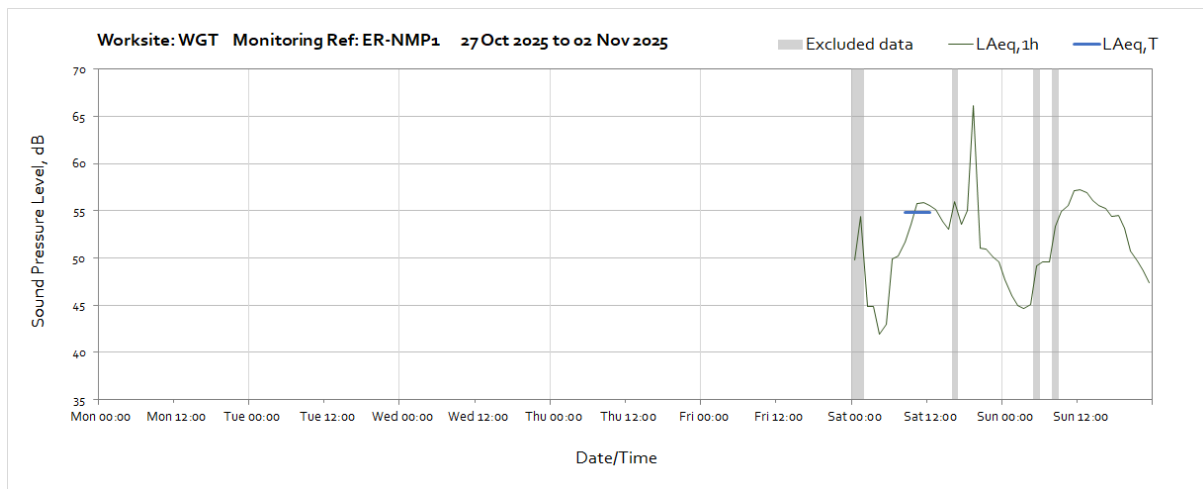


Worksite: NLL – Monitoring Ref: NLL-NMP2

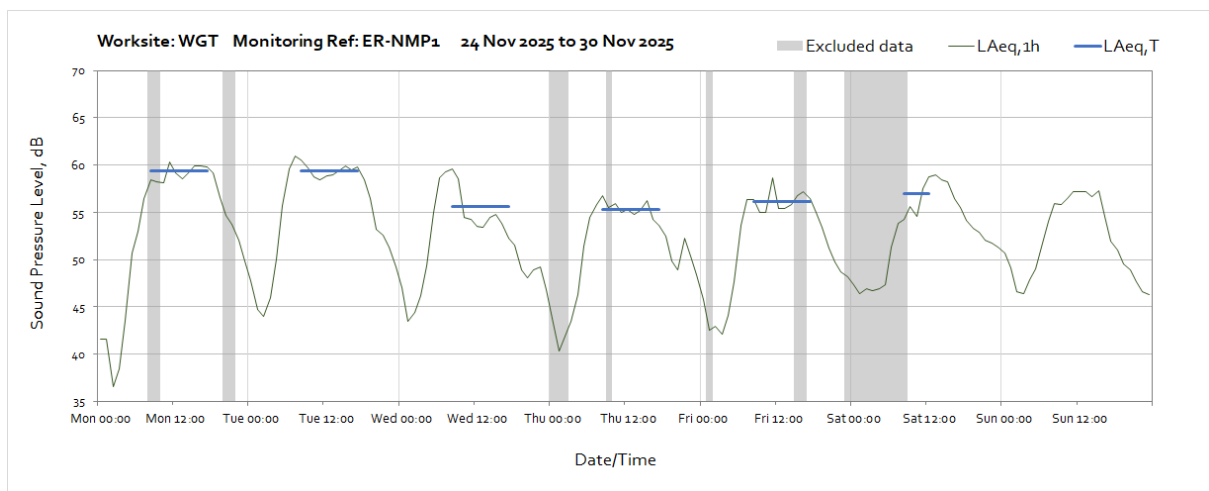
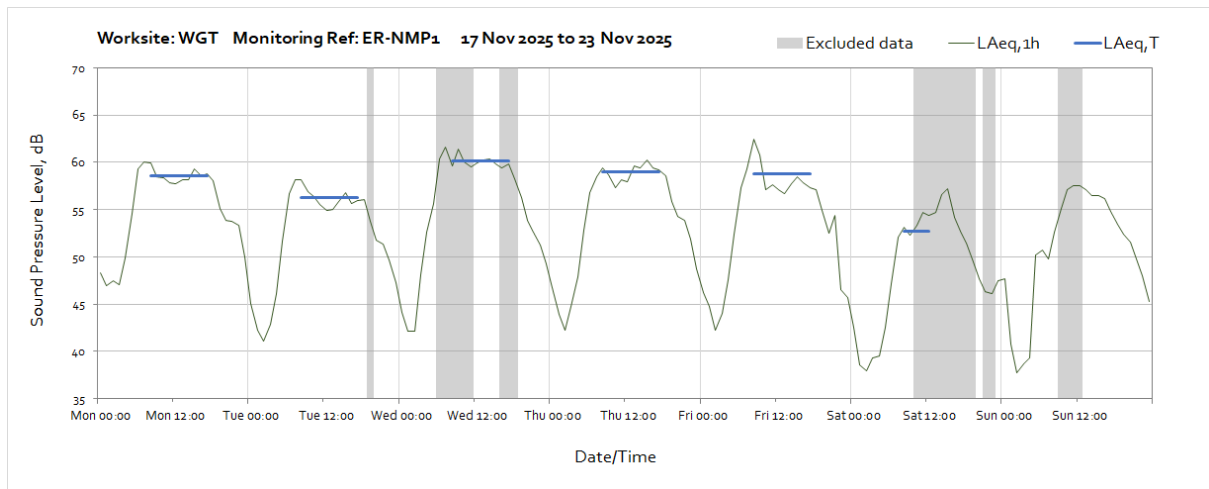




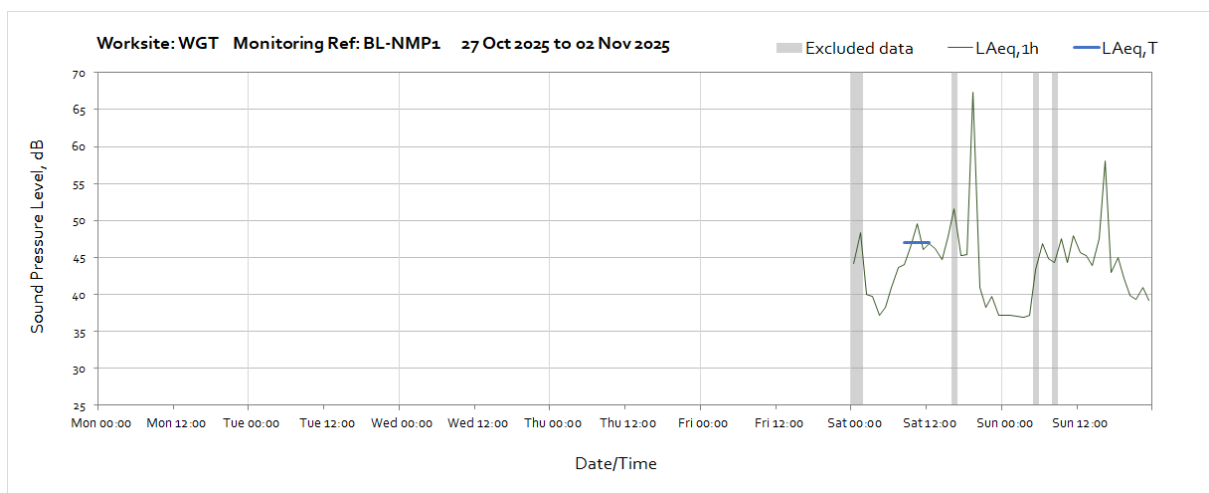
Worksite: WGT – Monitoring Ref: ER-NMP1

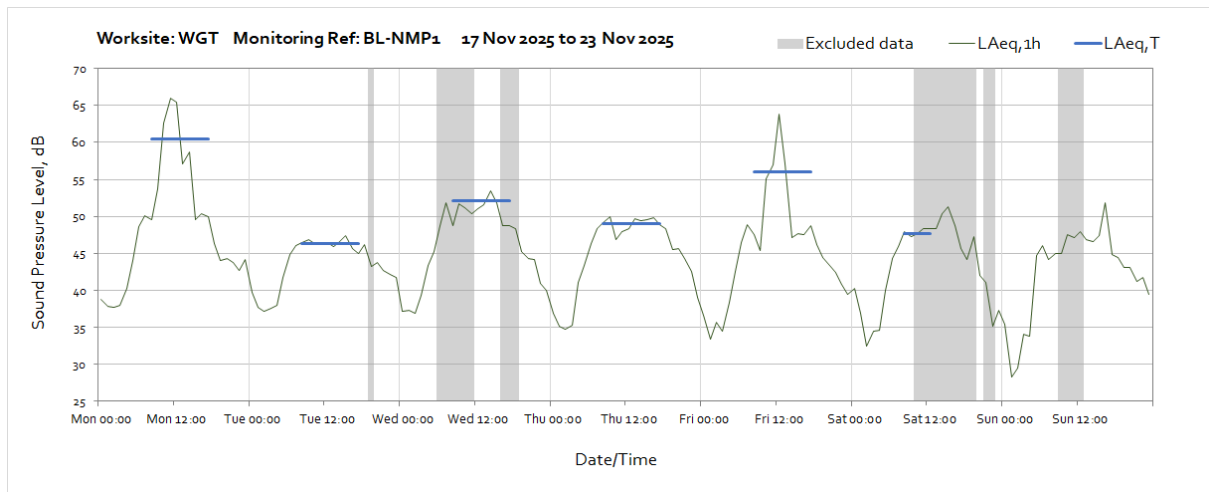
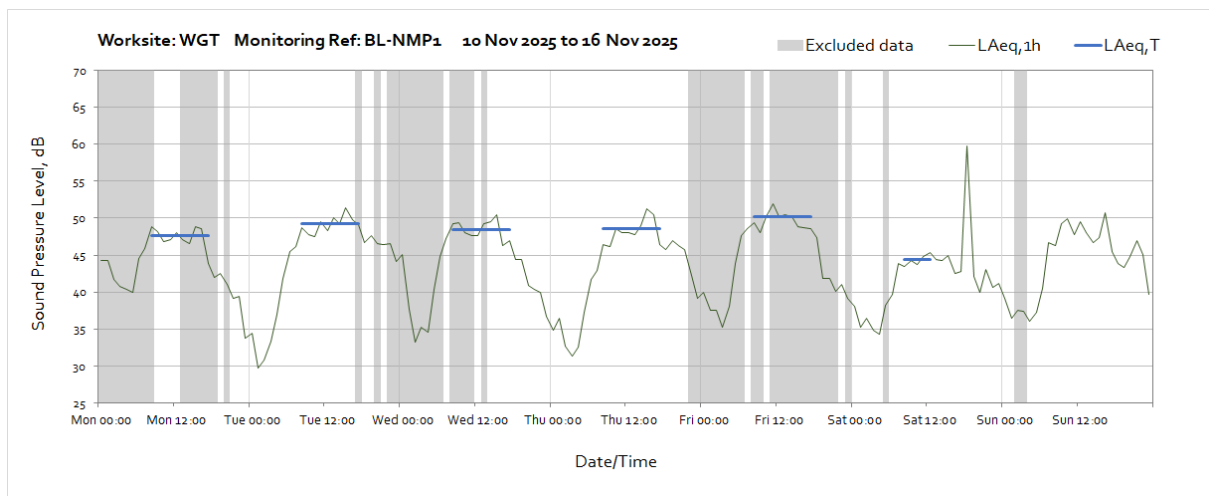
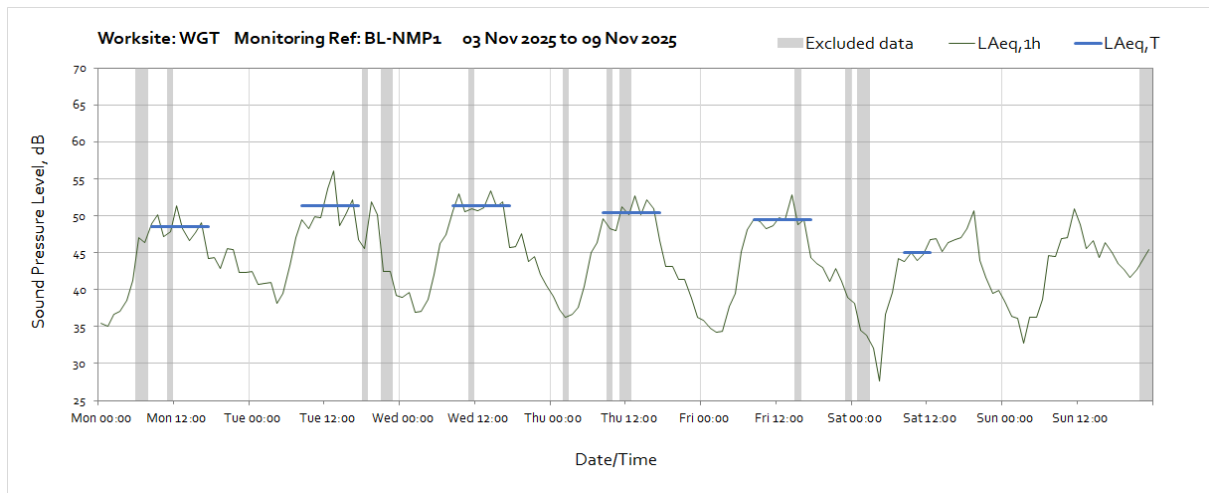


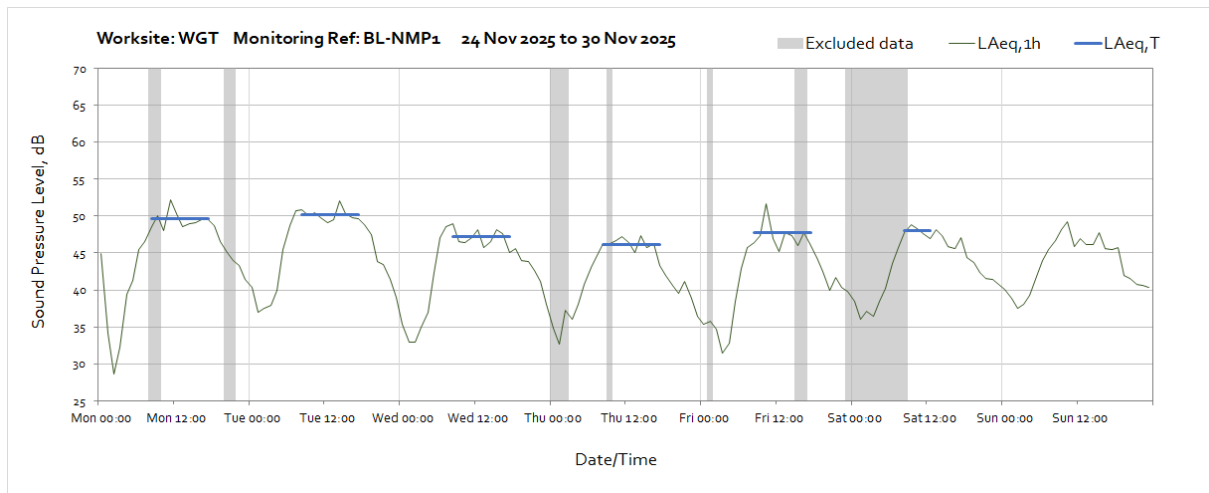
OFFICIAL



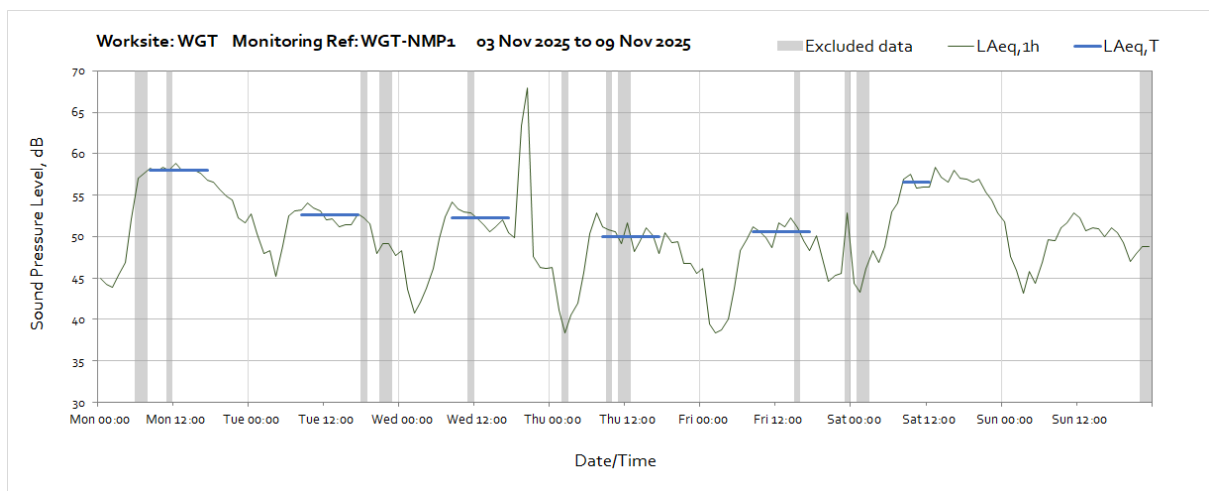
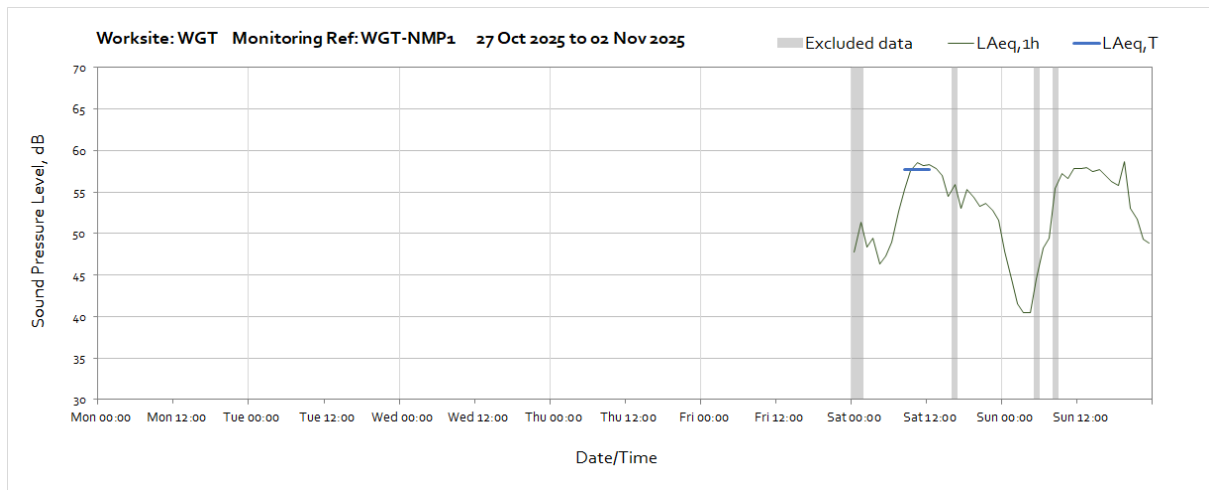
Worksite: WGT – Monitoring Ref: BL-NMP1

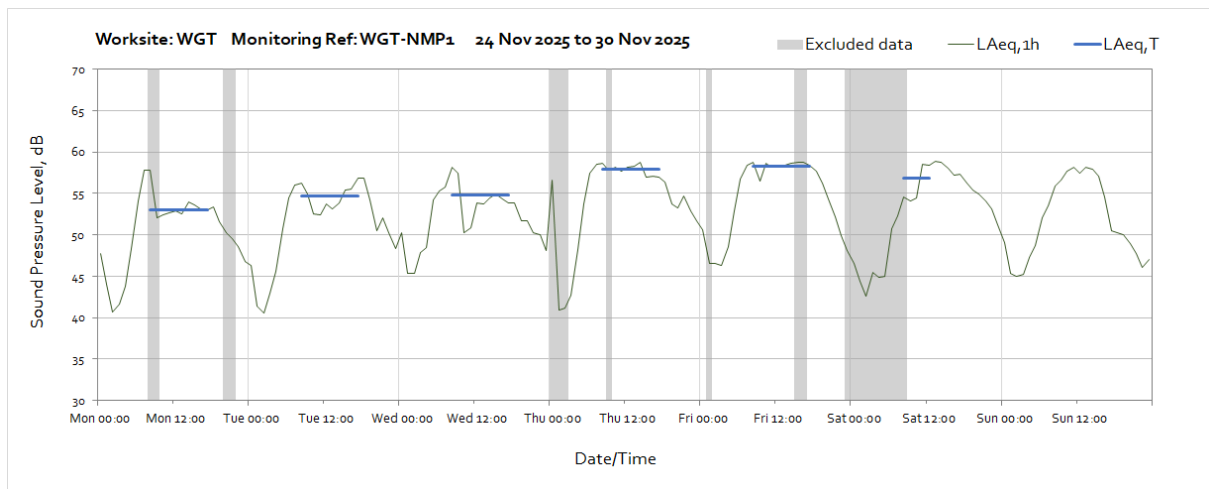
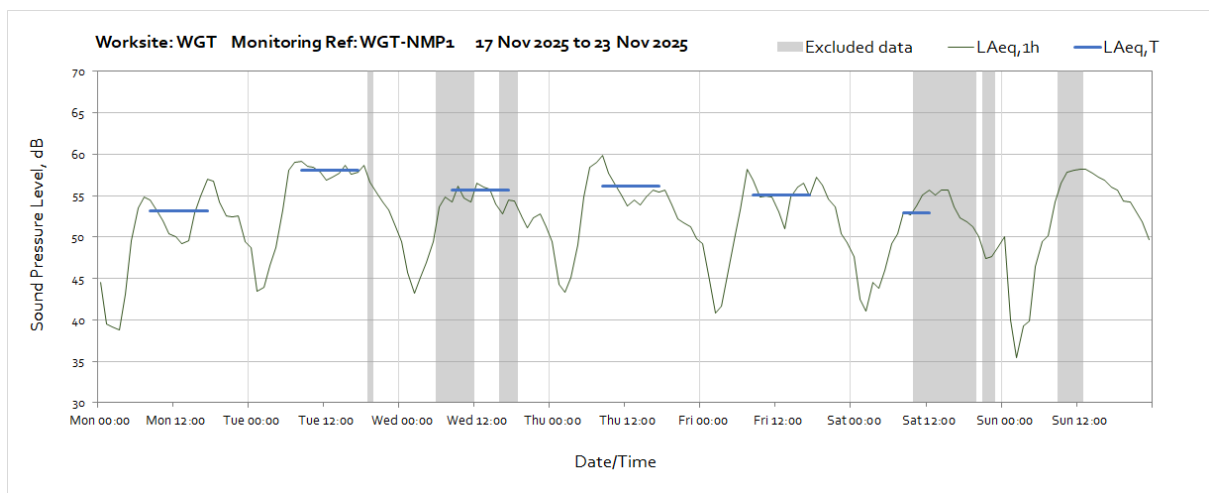
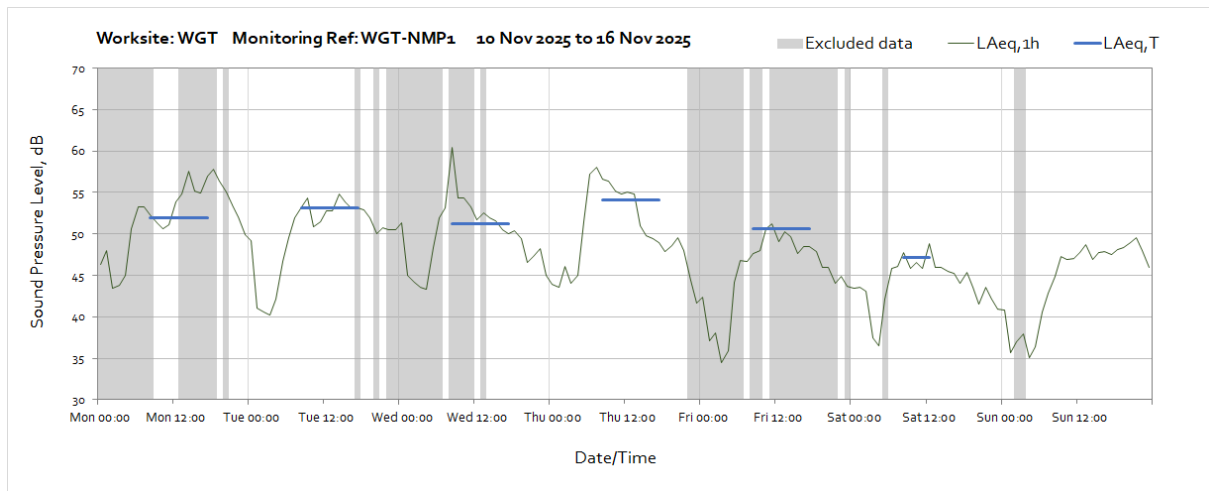




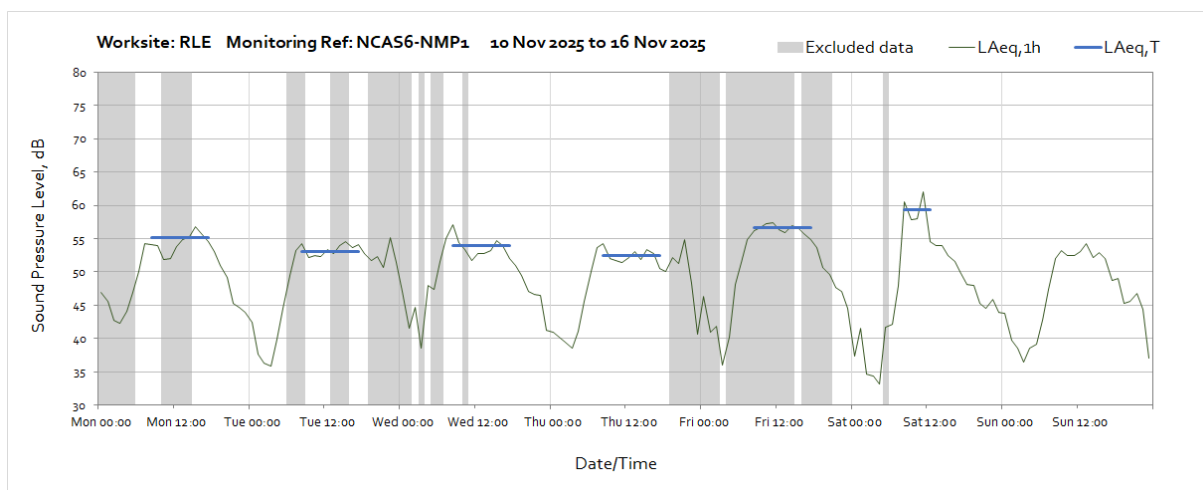
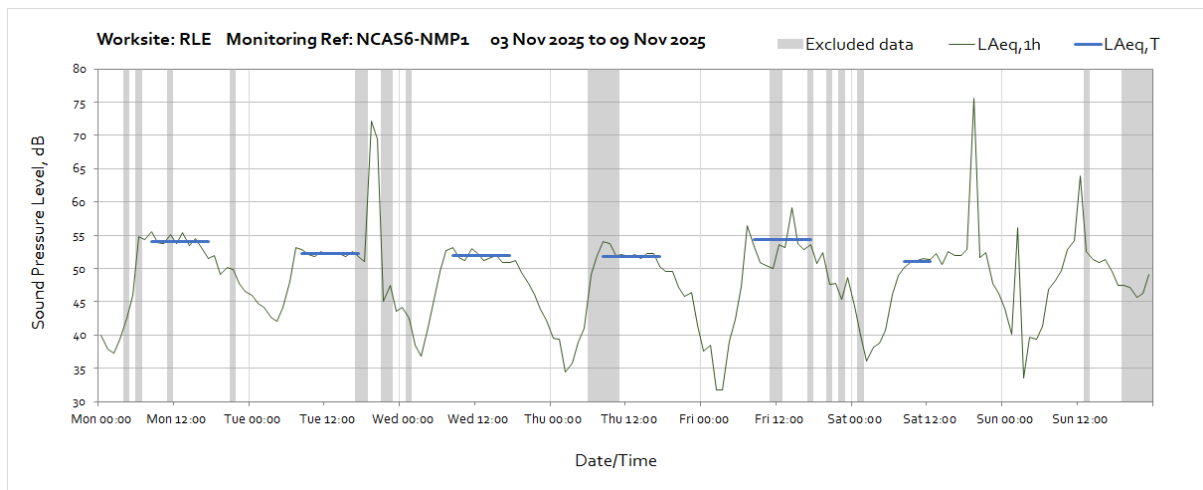
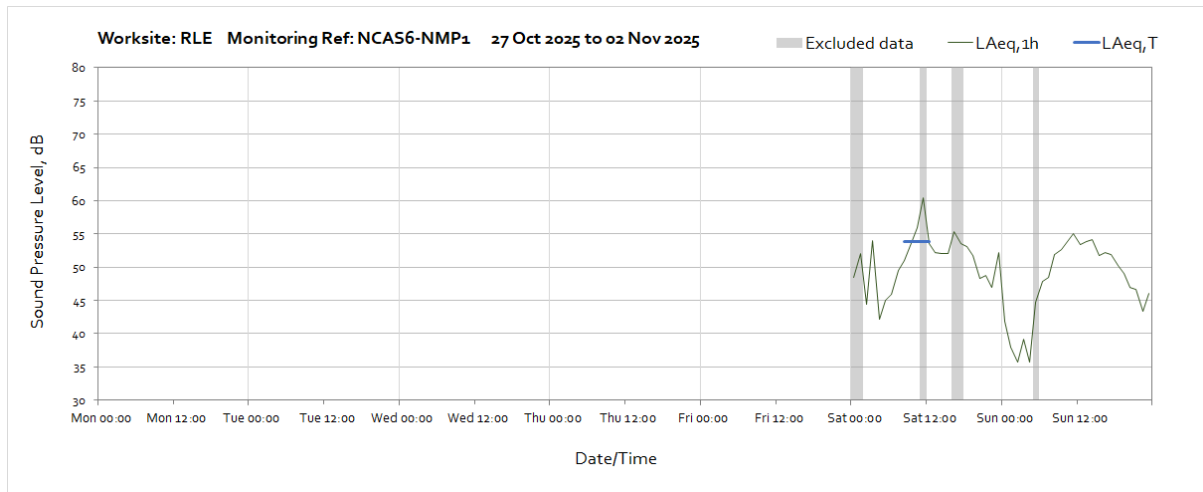


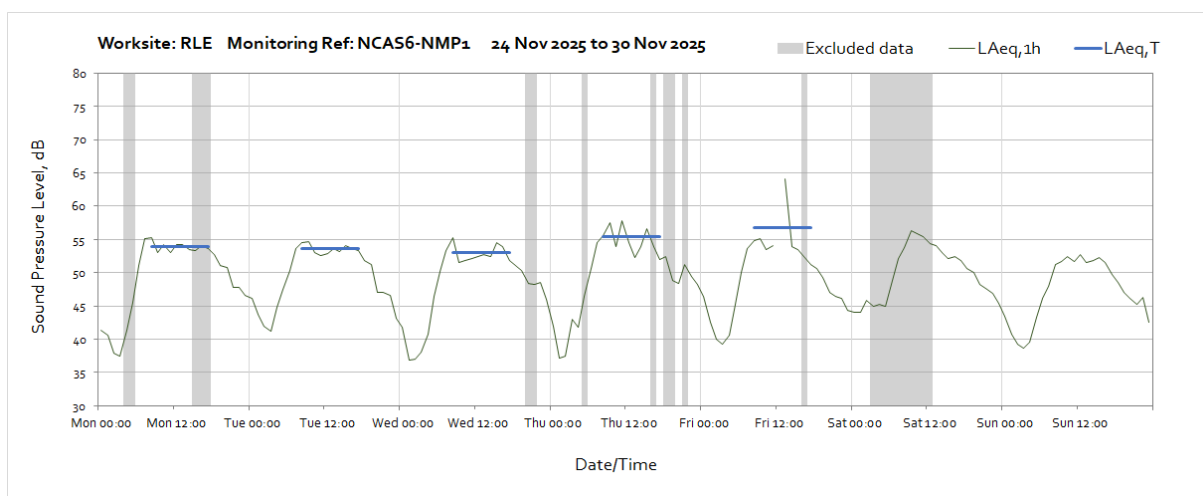
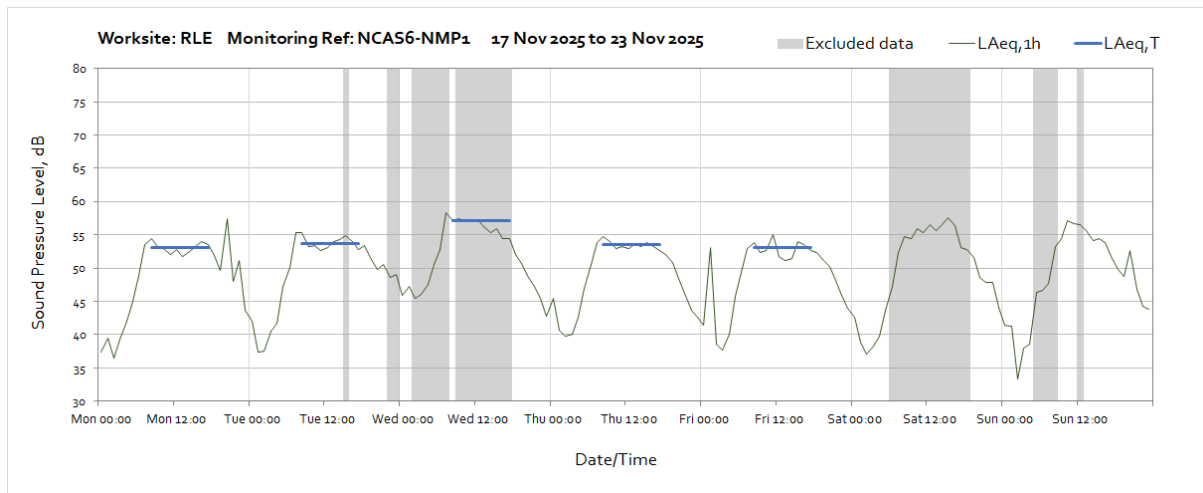
Worksite: WGT – Monitoring Ref: WGT-NMP1





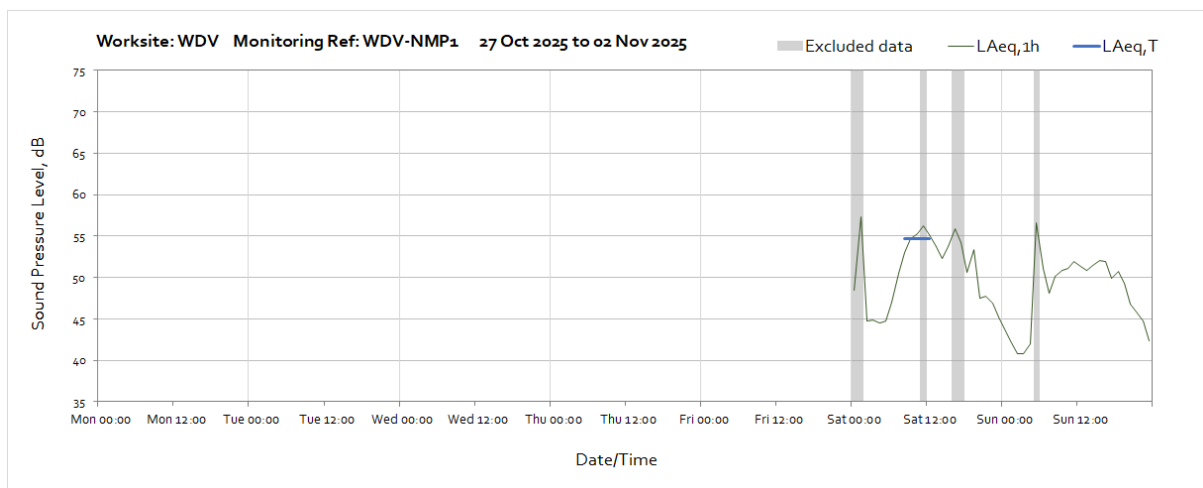
Worksite: RLE – Monitoring Ref: NCAS6-NMP1

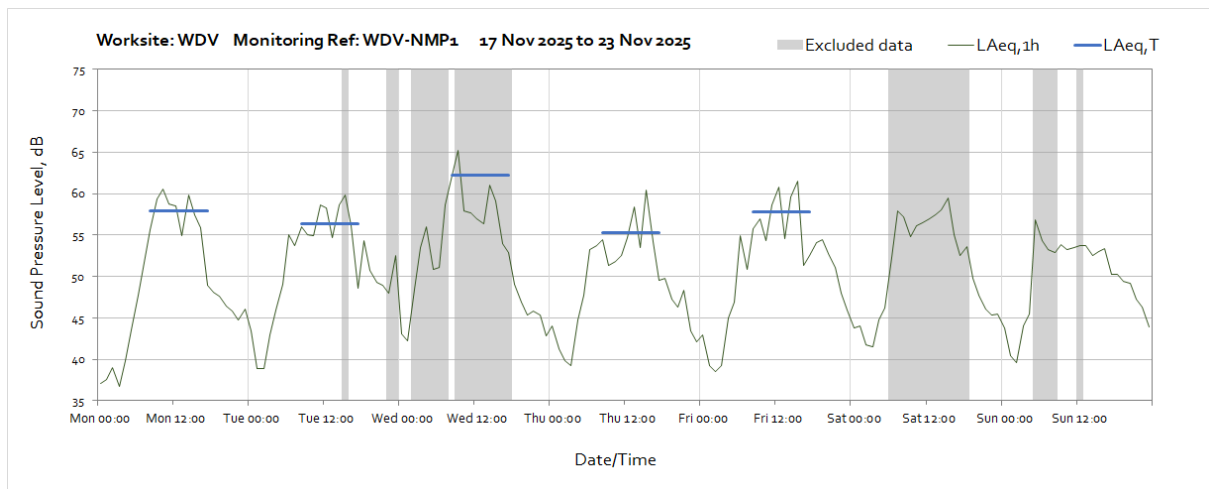
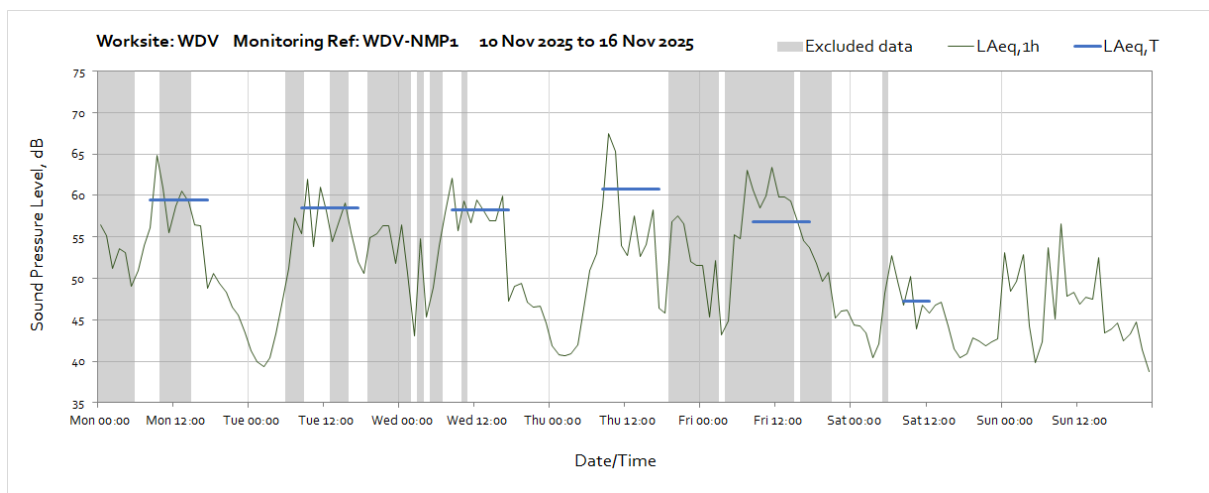
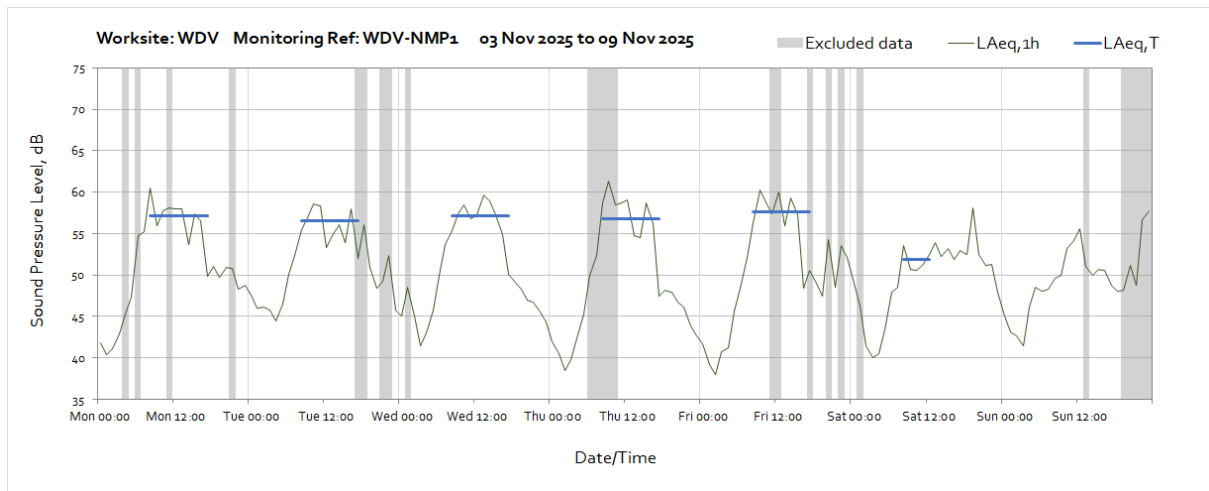


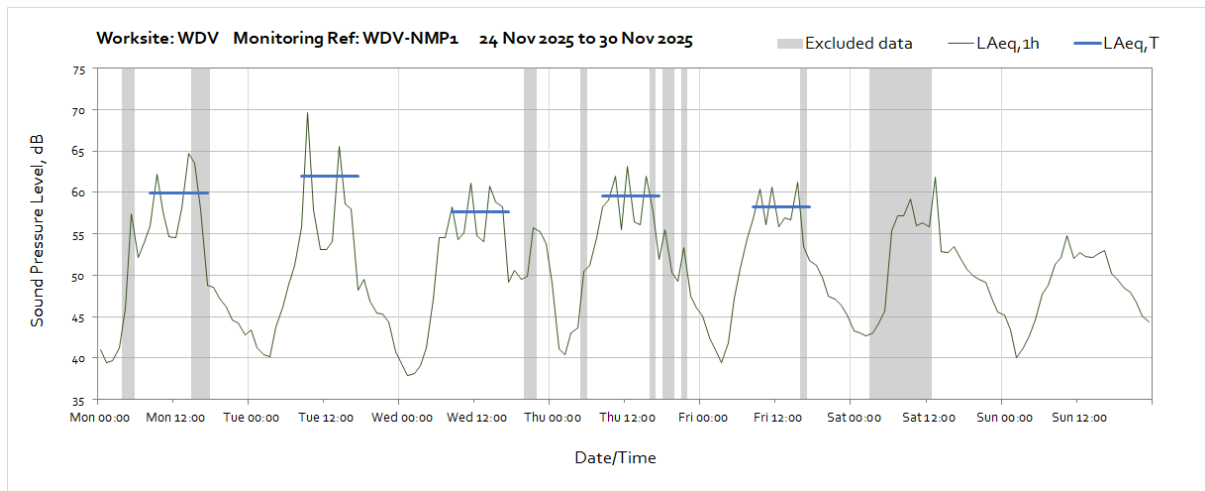


Note: Missing data between 12:00 and 13:00 on Friday 28th November was due to monitor maintenance.

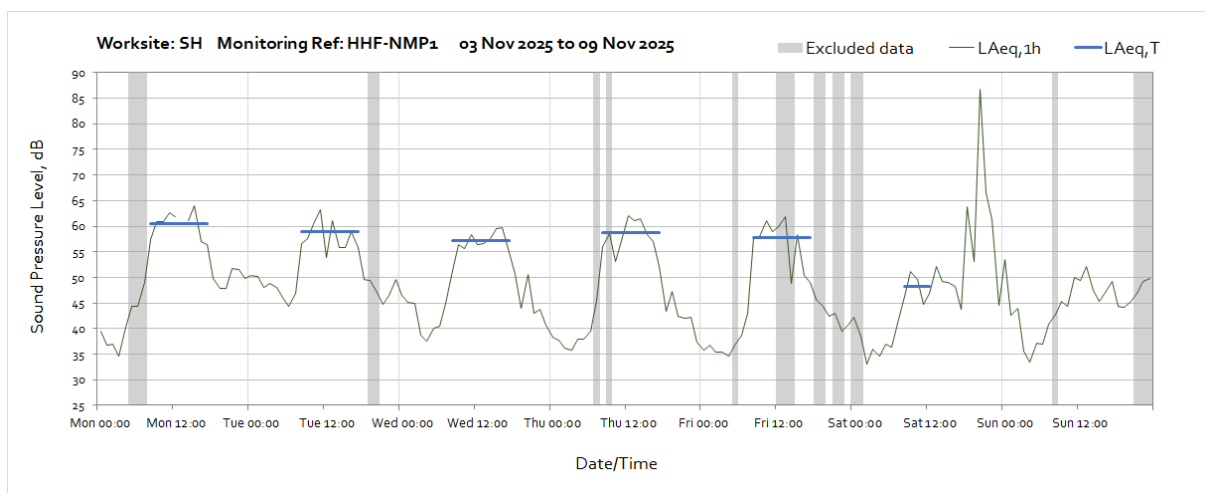
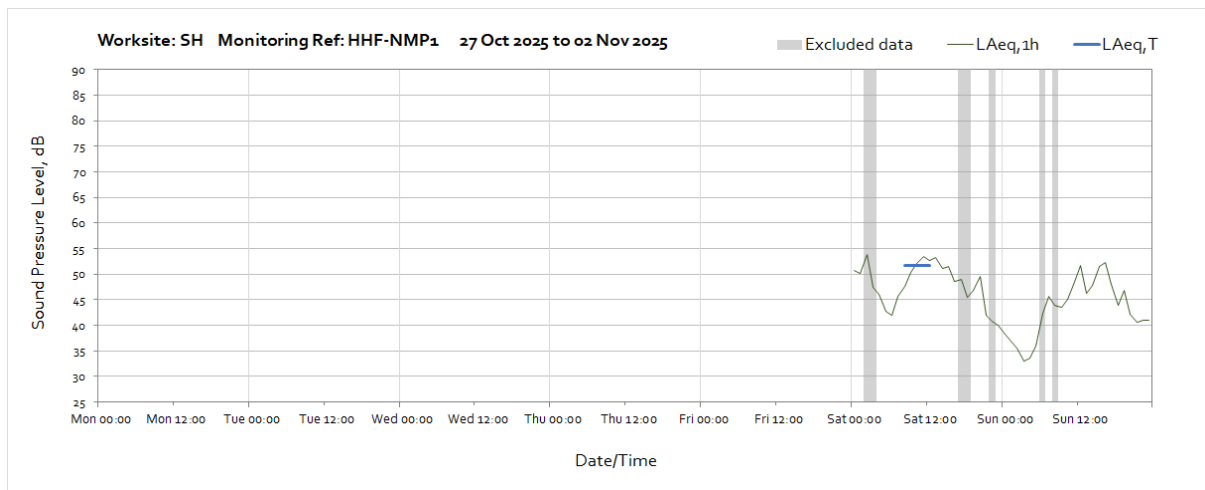
Worksite: WDV – Monitoring Ref: WDV-NMP1





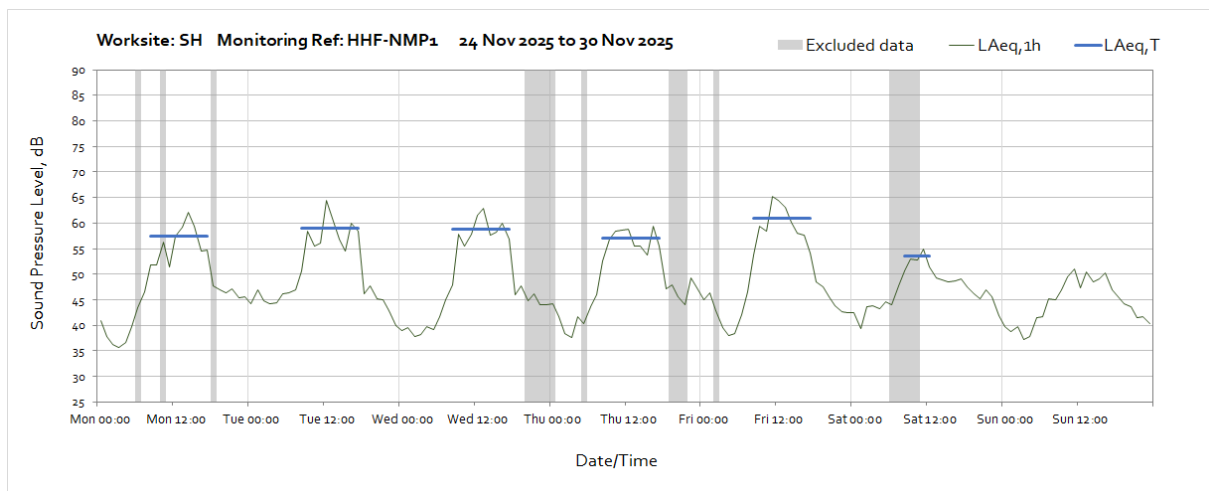
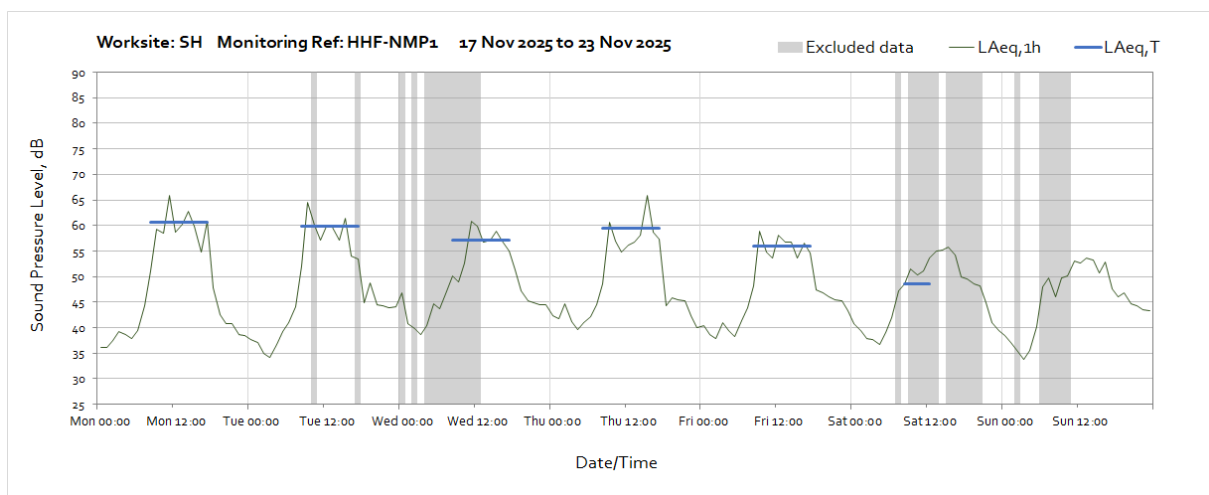
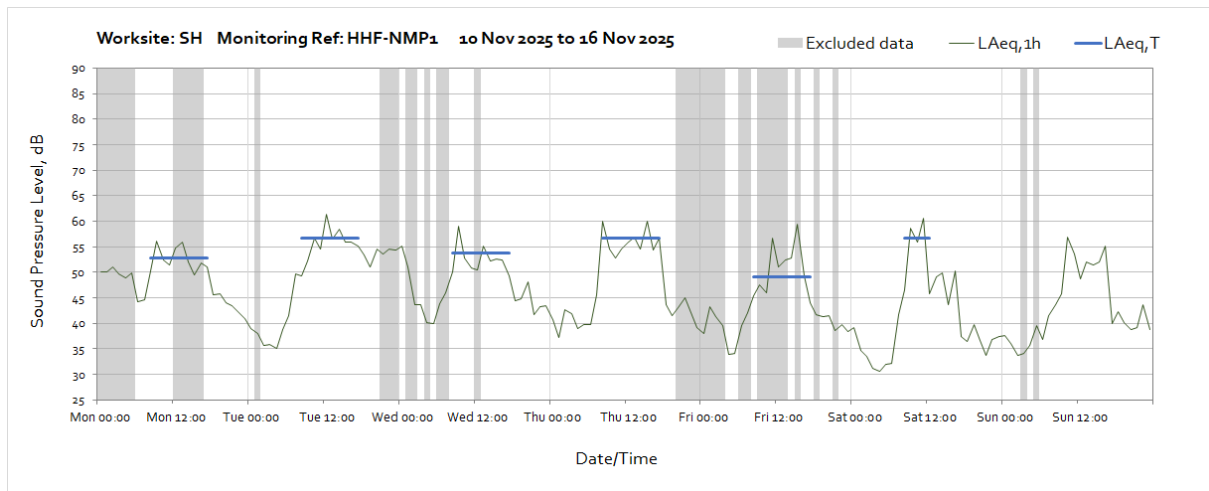


Worksite: SH – Monitoring Ref: HHF-NMP1

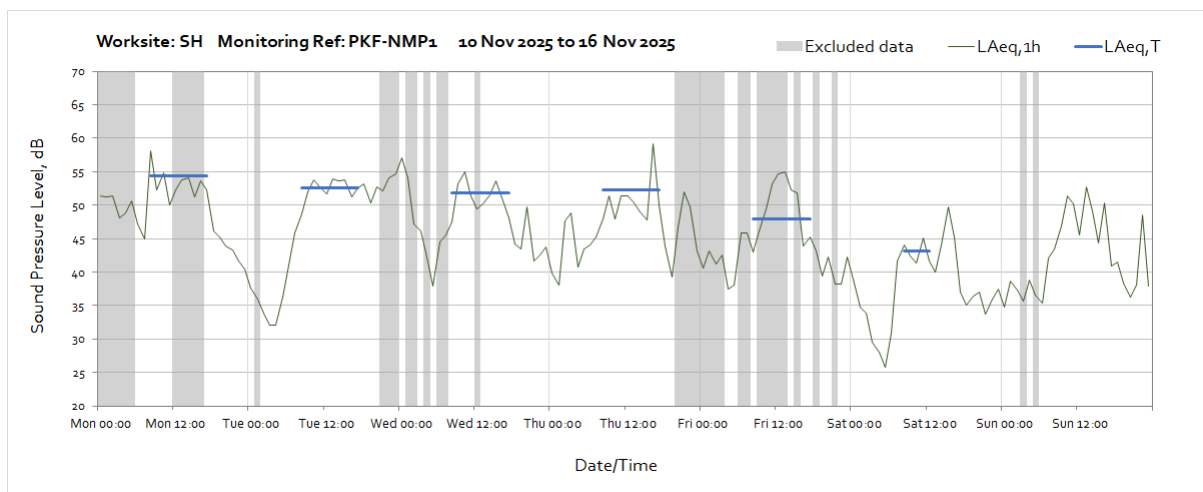
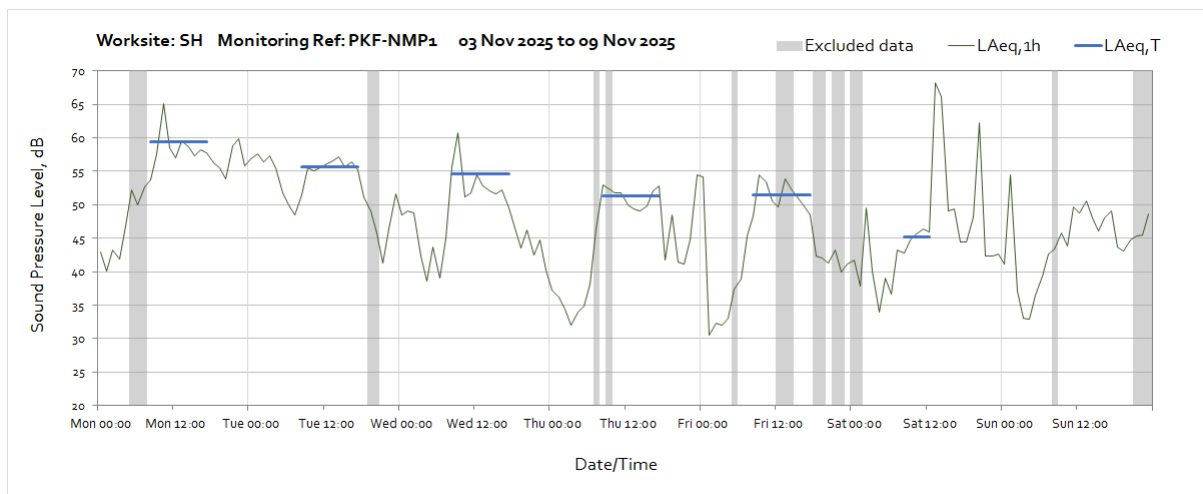
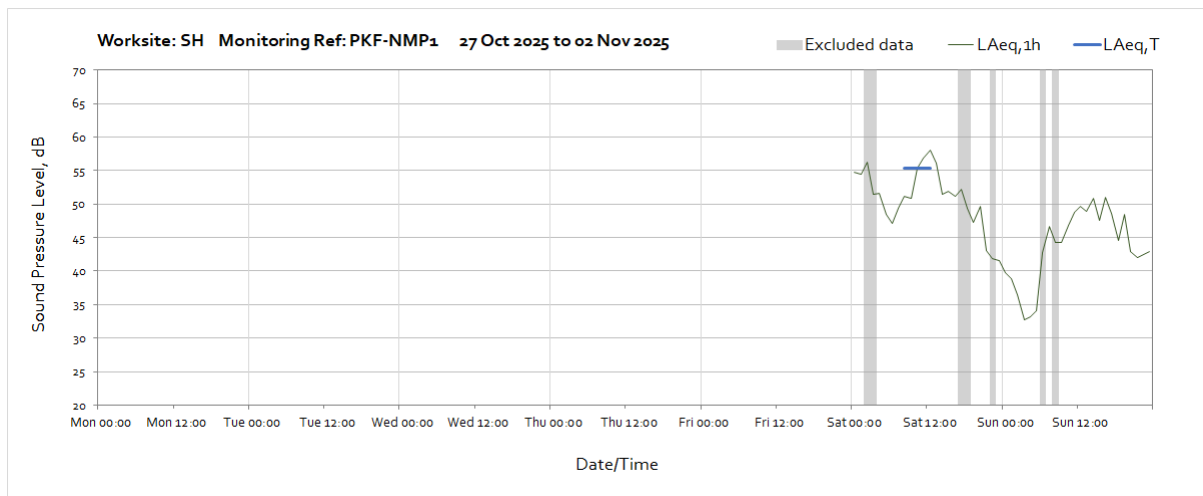


Note: Missing data between 13:00 and 14:00 on Monday 3rd November was due to monitor field calibration.

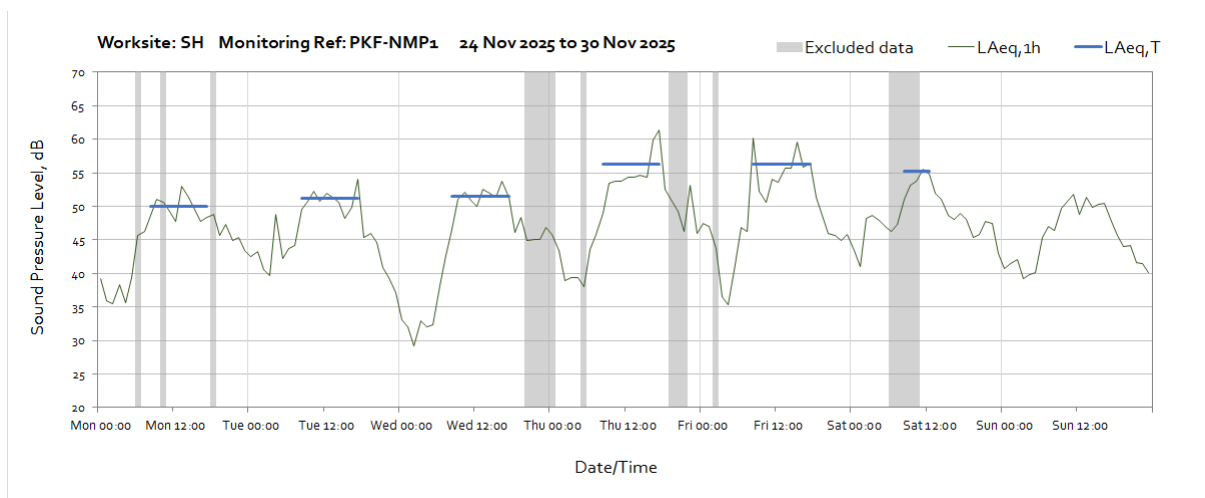
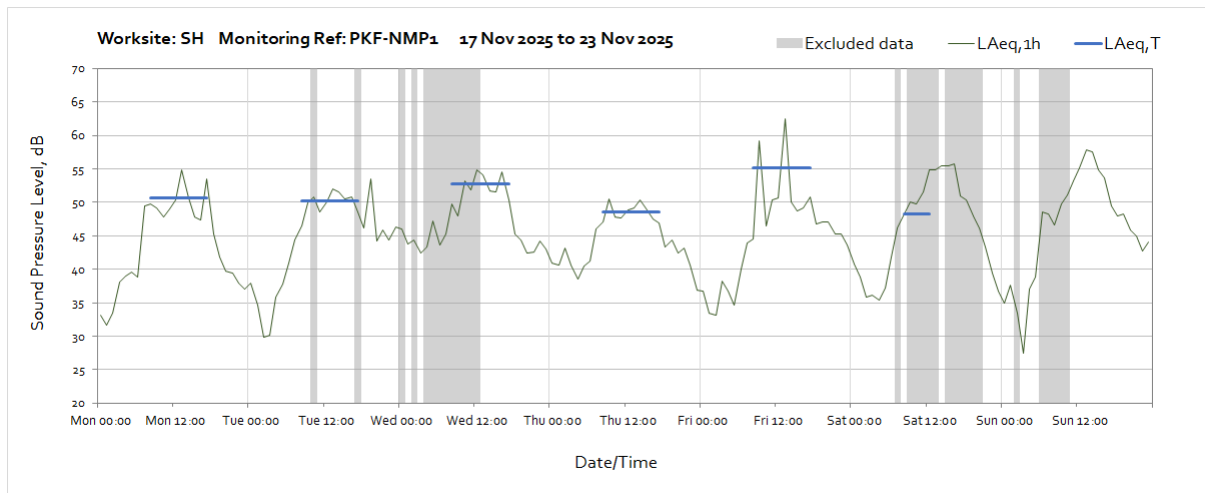
OFFICIAL



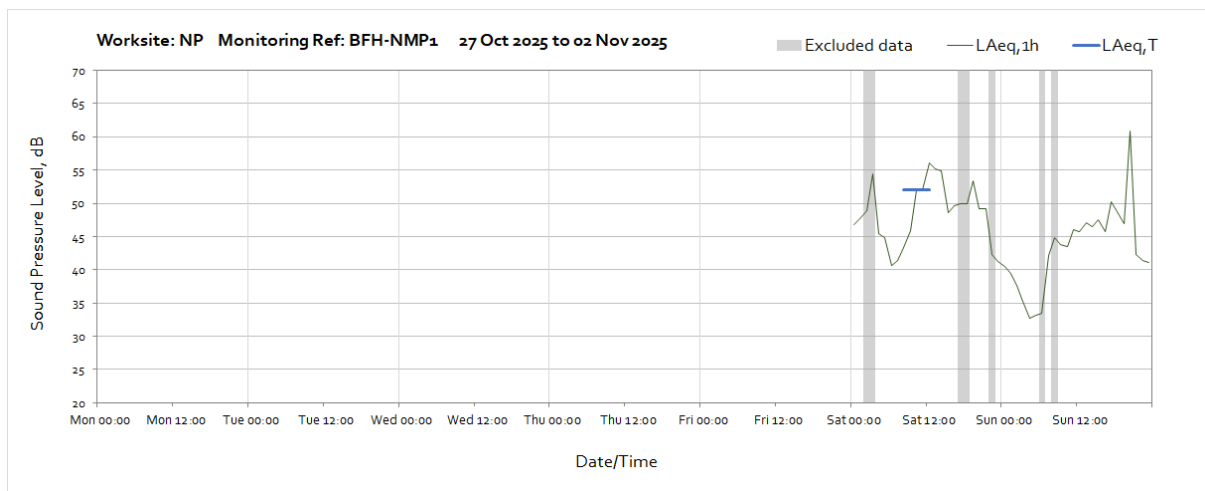
Worksite: SH – Monitoring Ref: PKF-NMP1

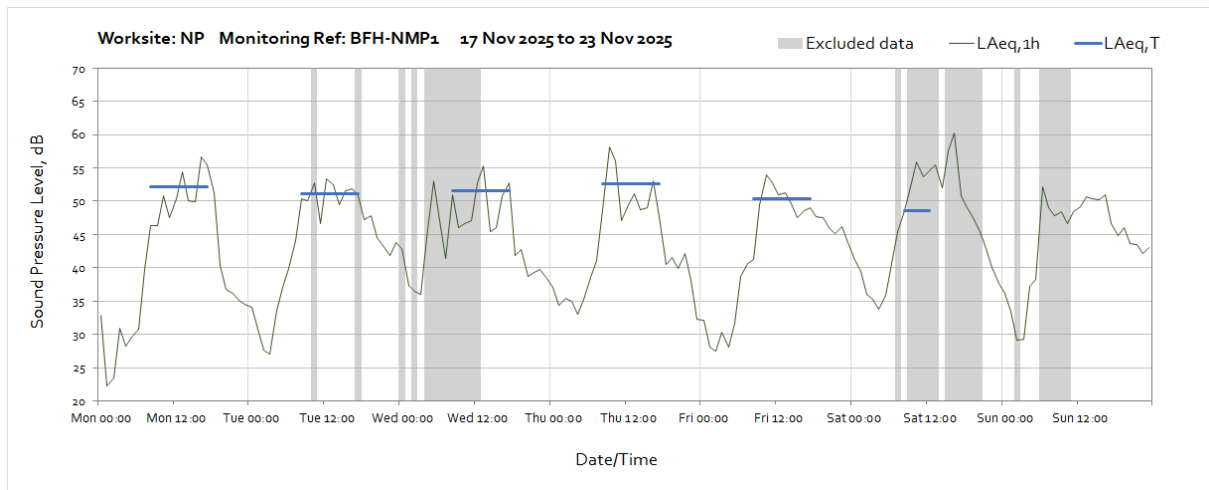
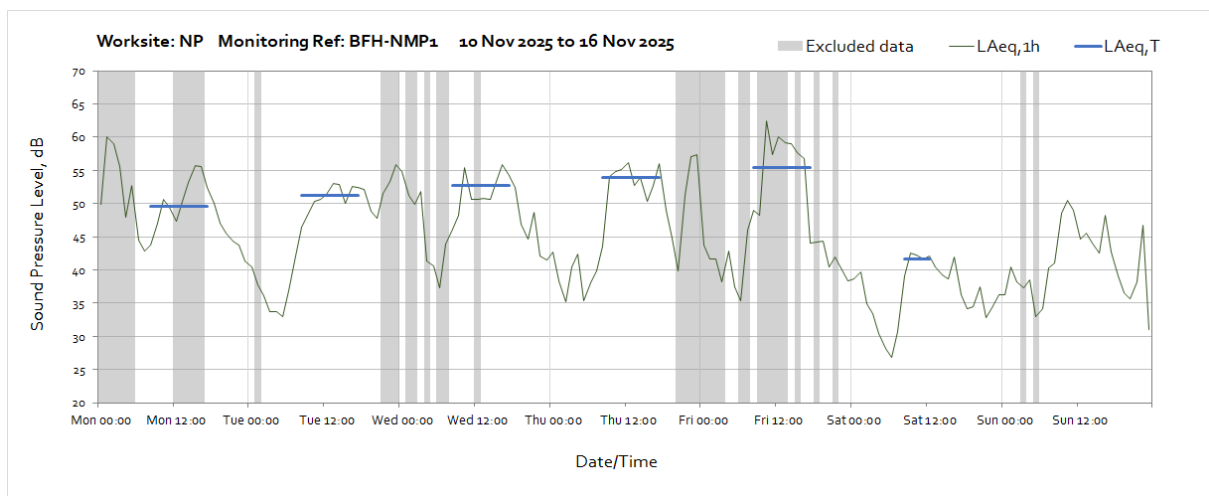
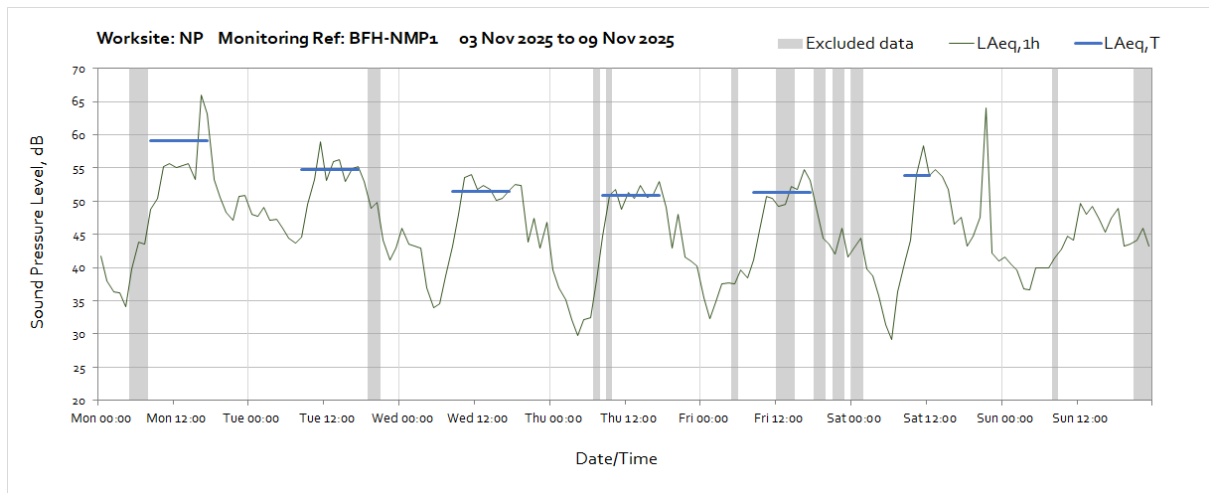


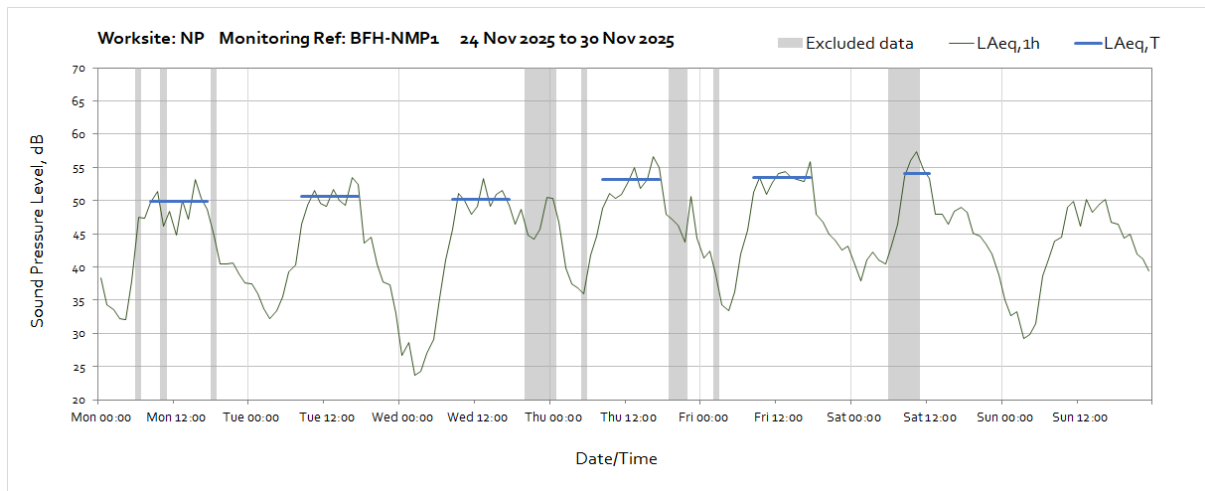
OFFICIAL



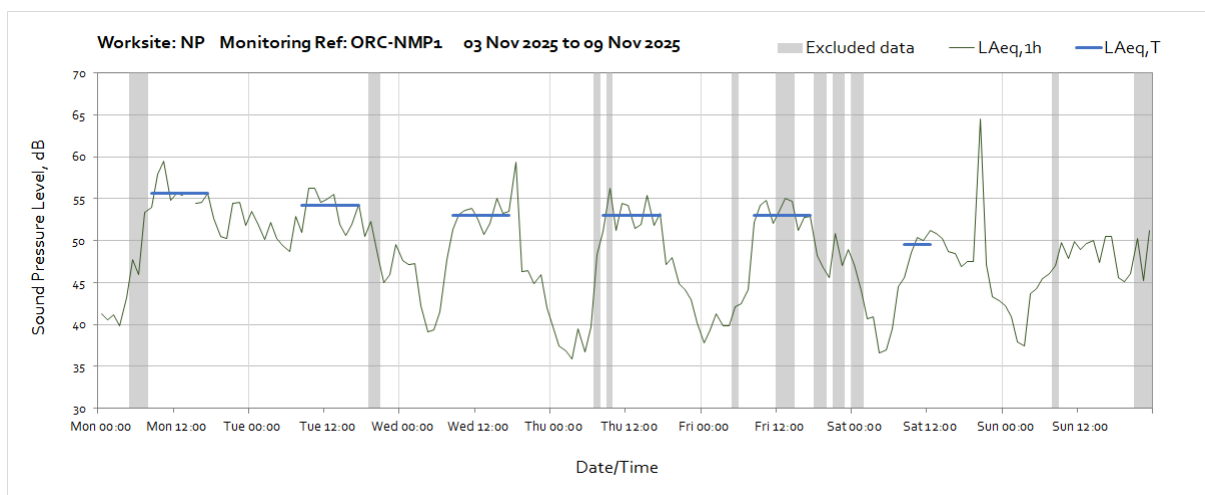
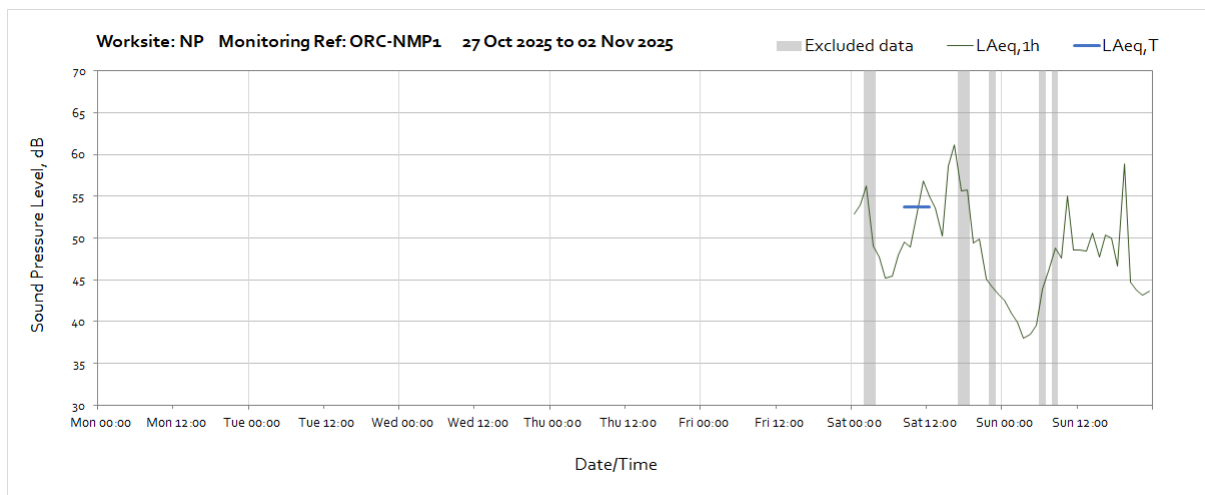
Worksite: NP – Monitoring Ref: BFH-NMP1





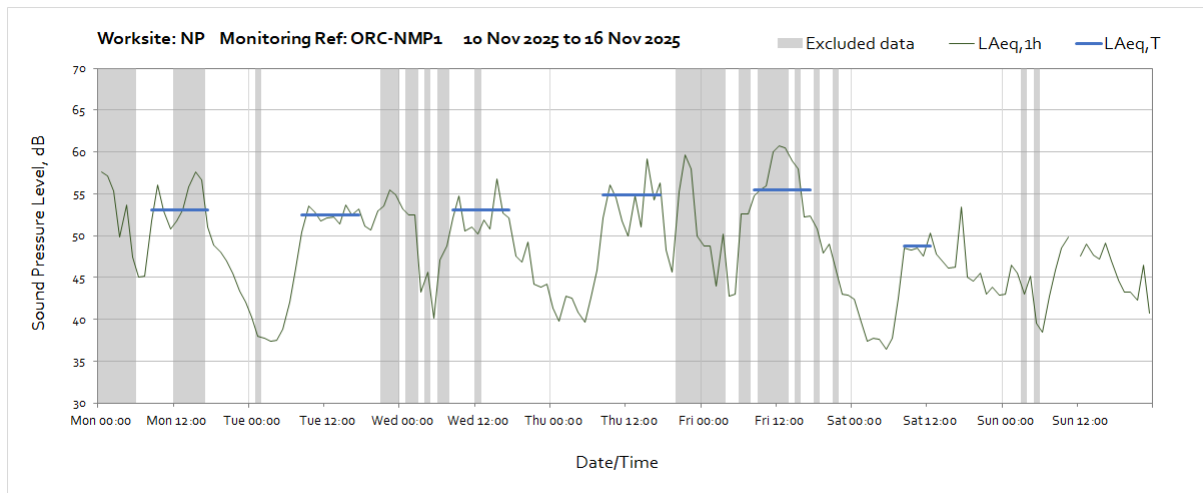


Worksite: NP – Monitoring Ref: ORC-NMP1

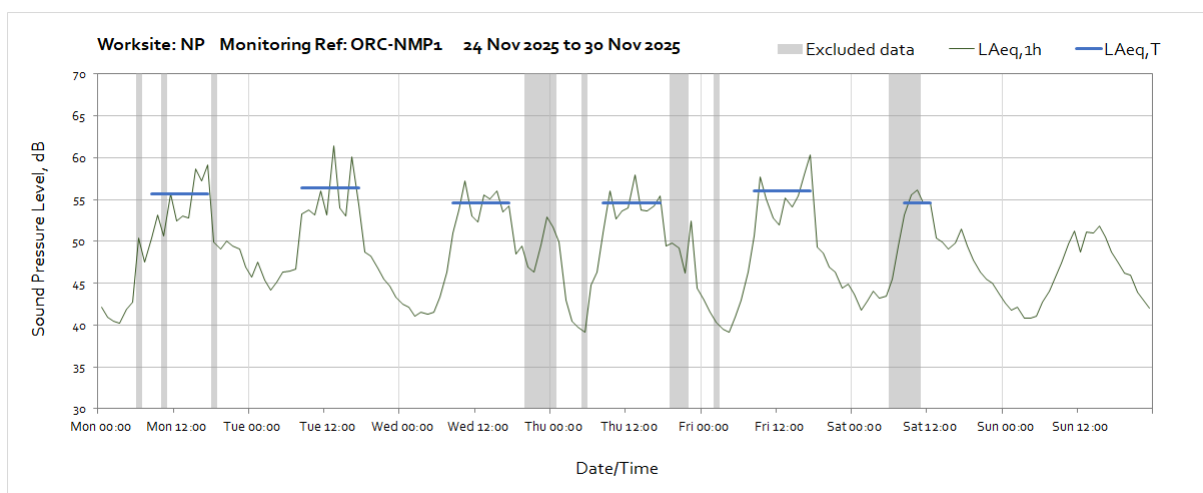
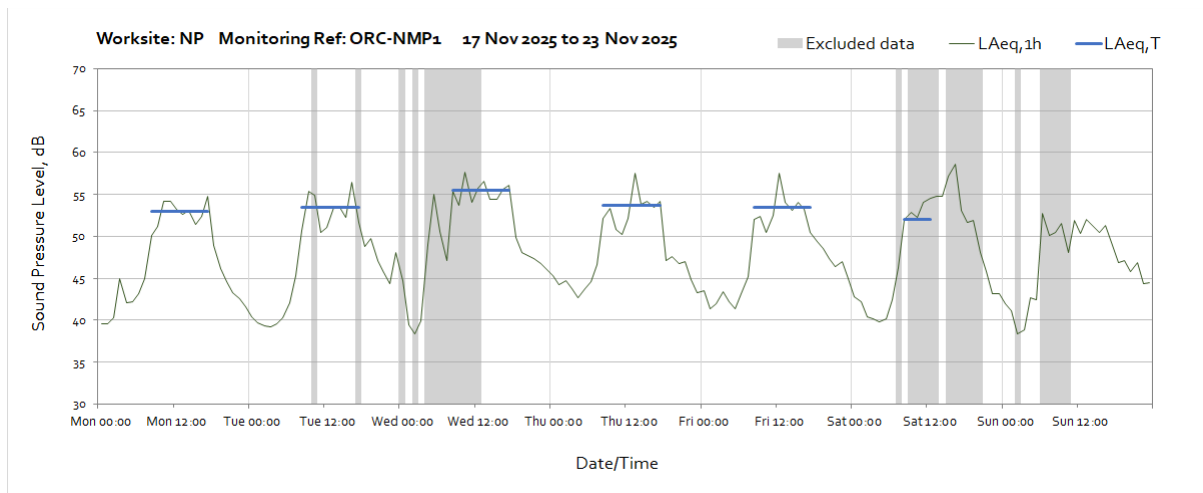


Note: Missing data between 14:00 and 15:00 on Monday 3rd November was due to monitor field calibration.

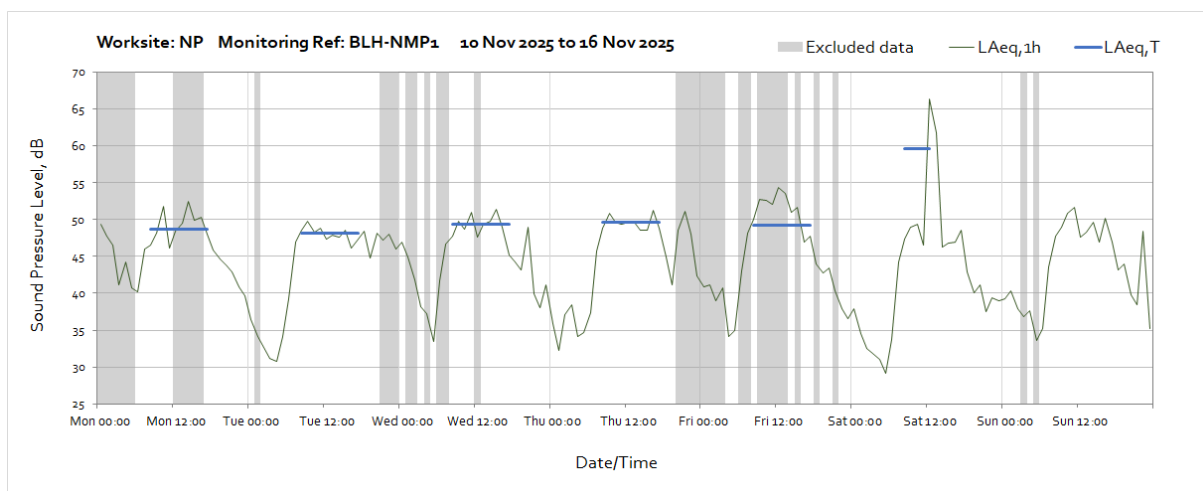
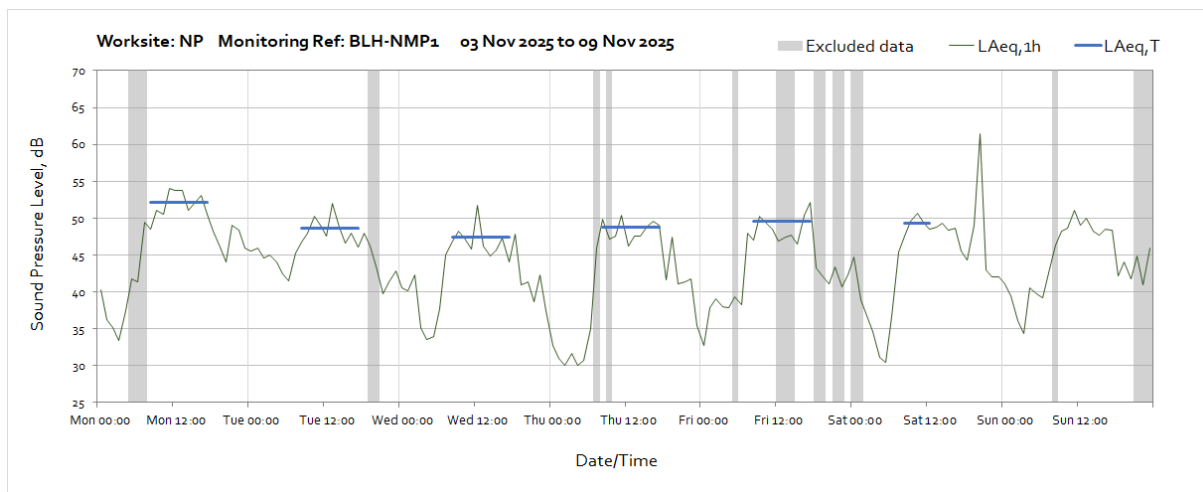
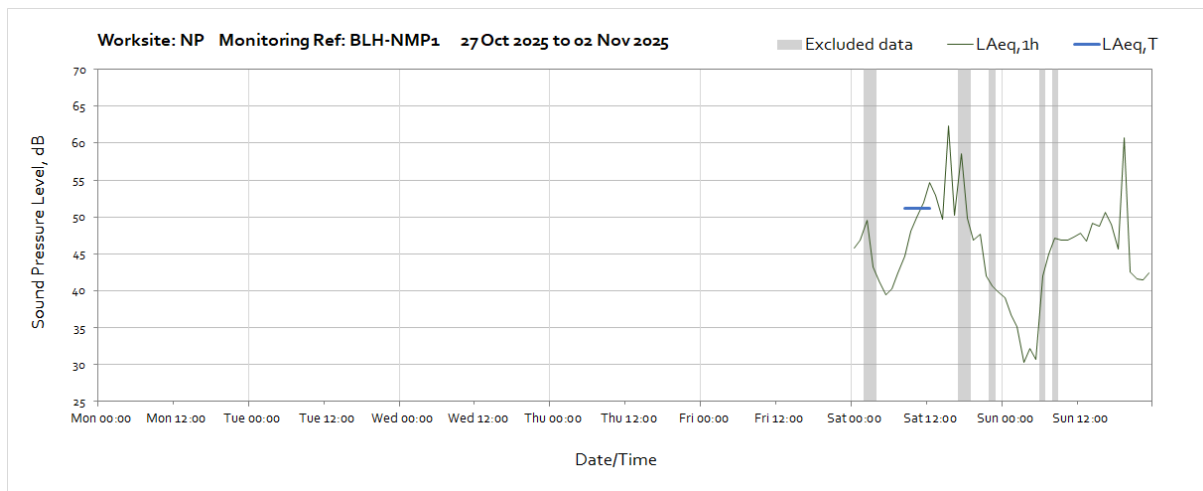
OFFICIAL



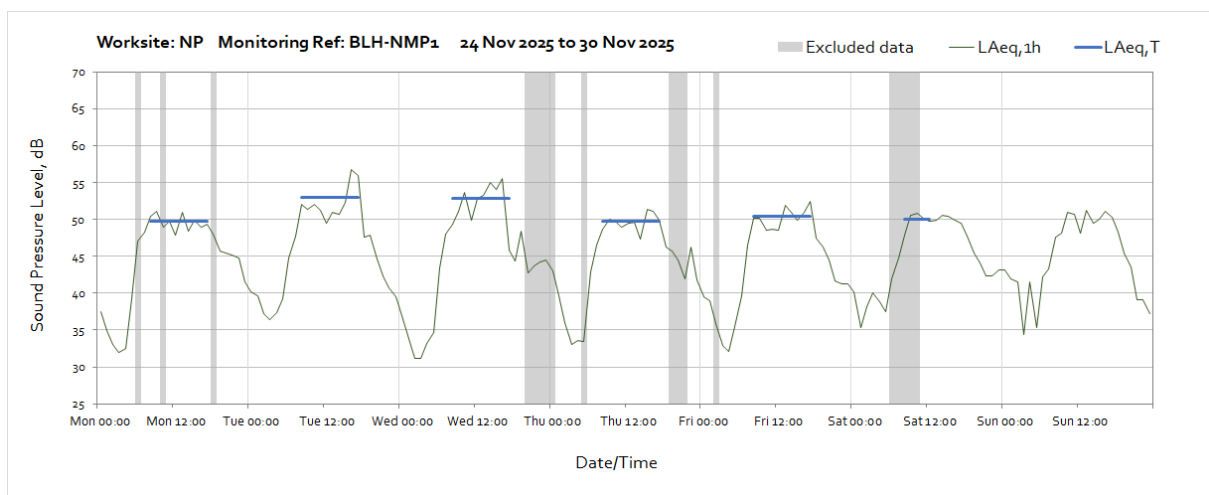
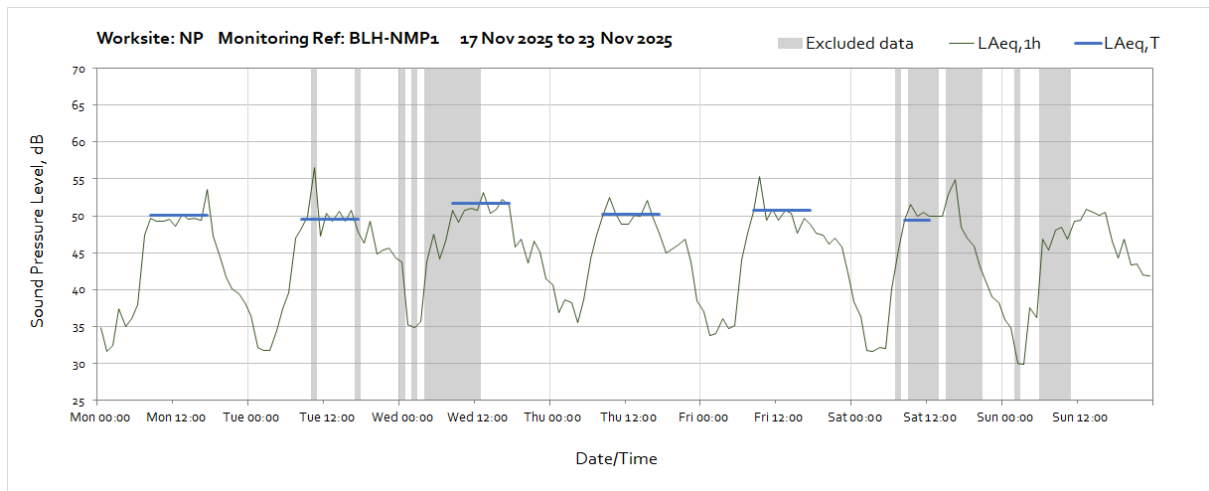
Note: Missing data between 11:00 and 12:00 on Sunday 16th November was due to a communication error between the monitoring station and server.



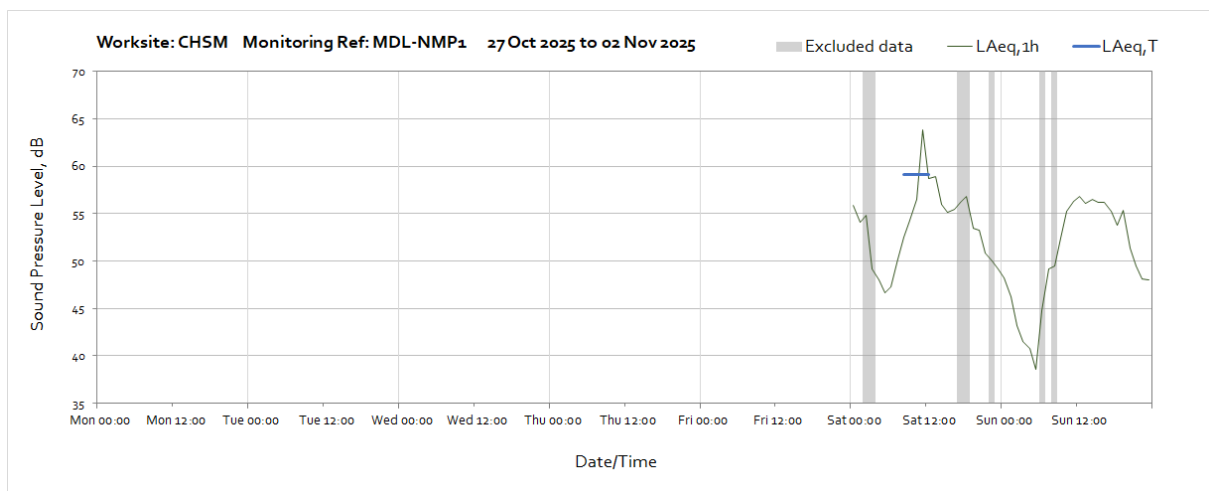
Worksite: NP – Monitoring Ref: BLH-NMP1

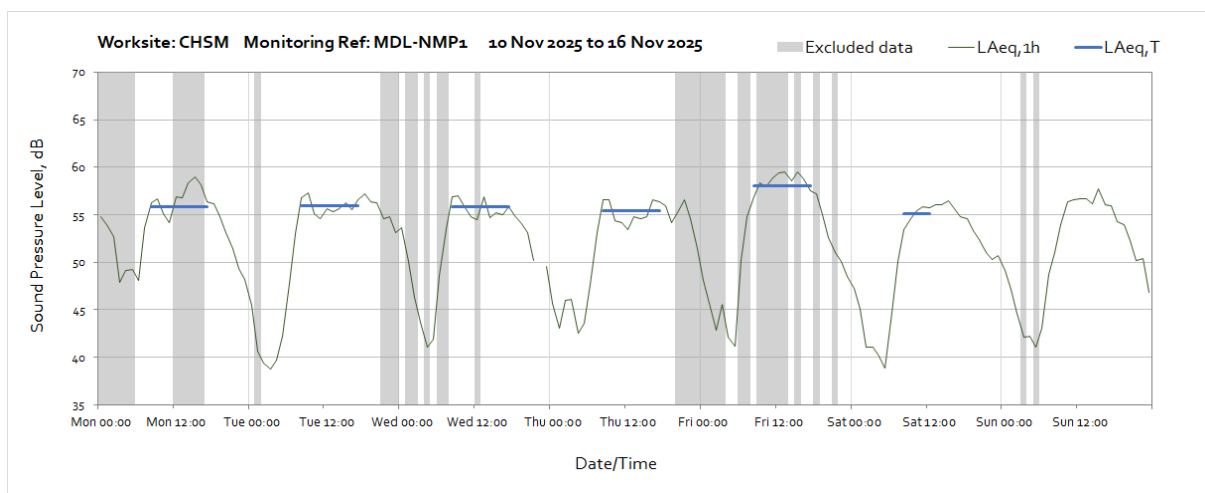
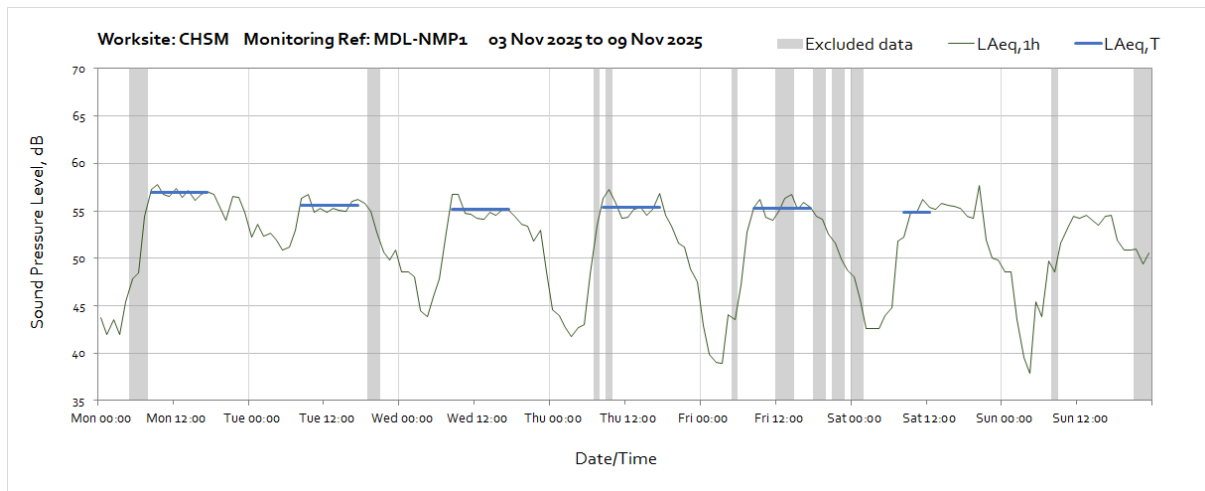


OFFICIAL

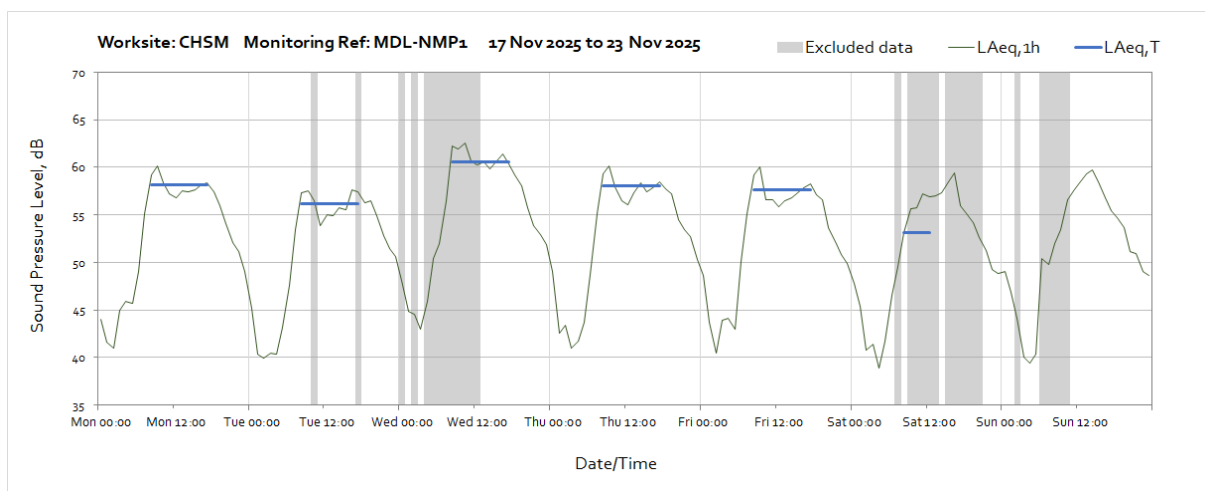


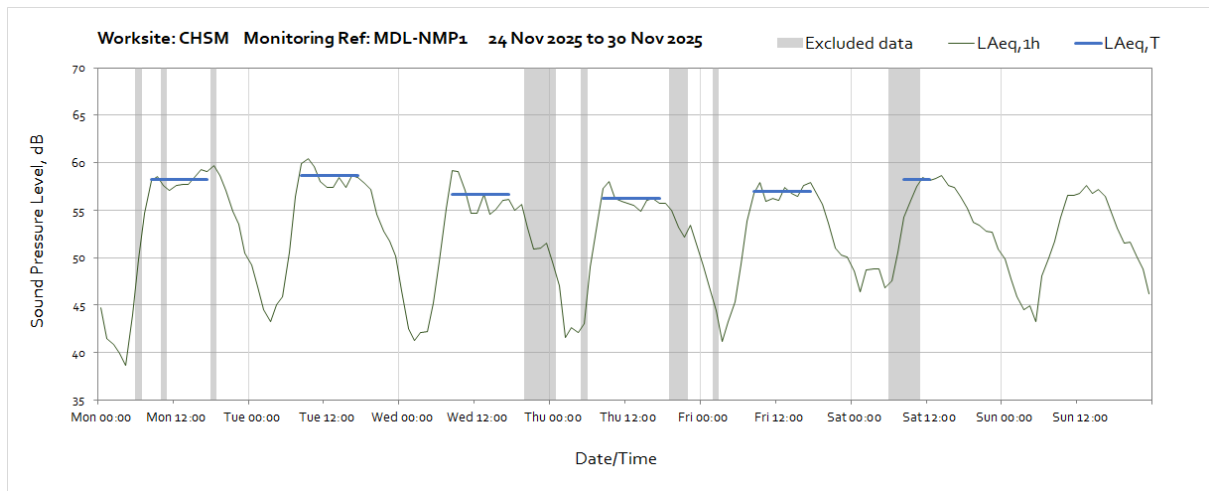
Worksite: CHSM – Monitoring Ref: MDL-NMP1



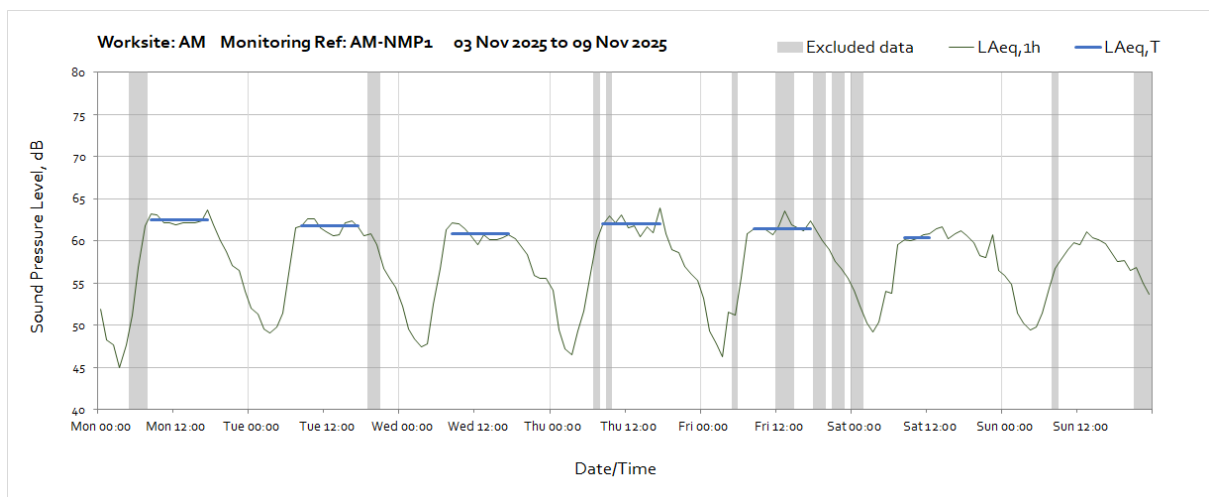
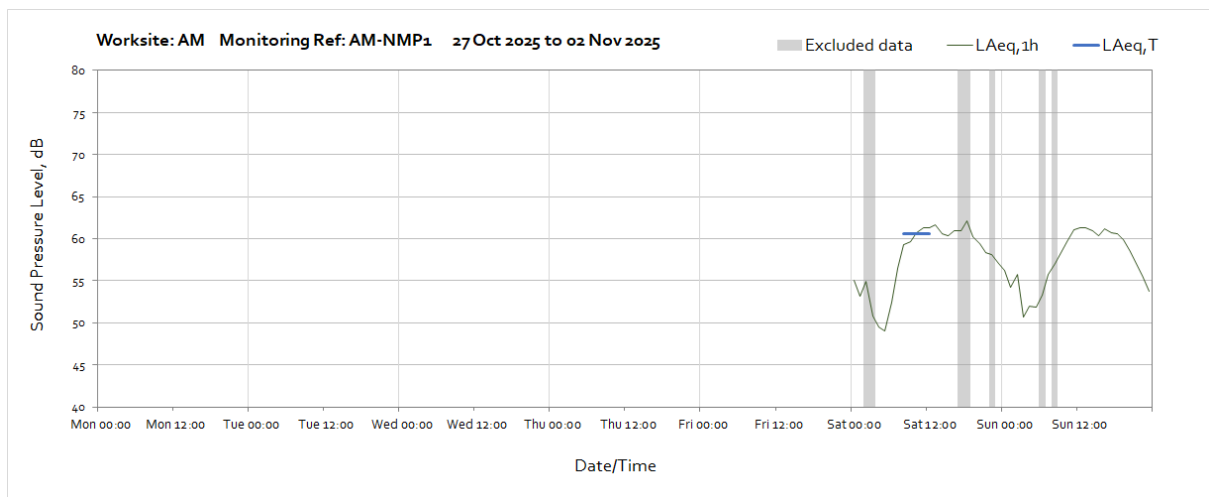


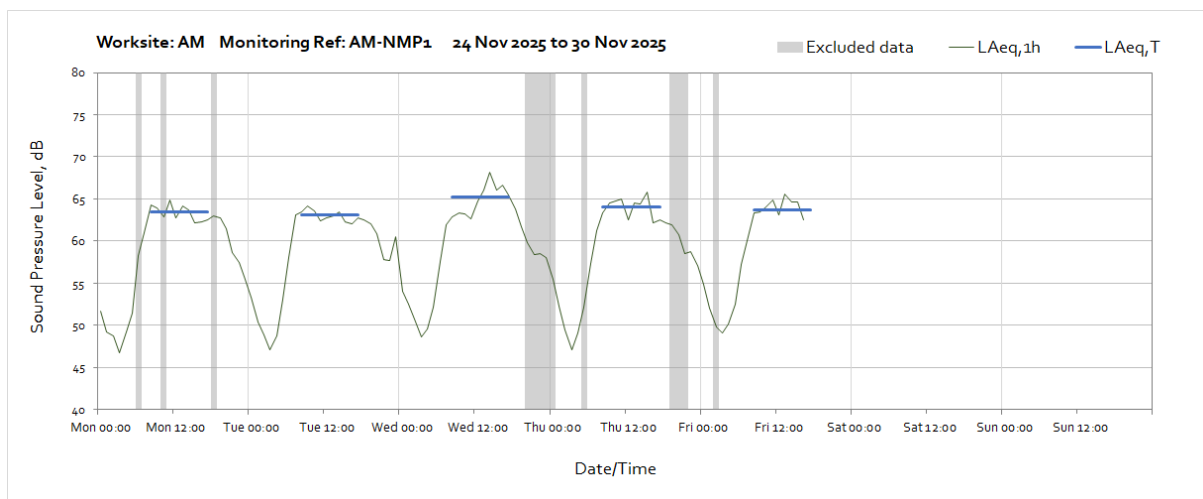
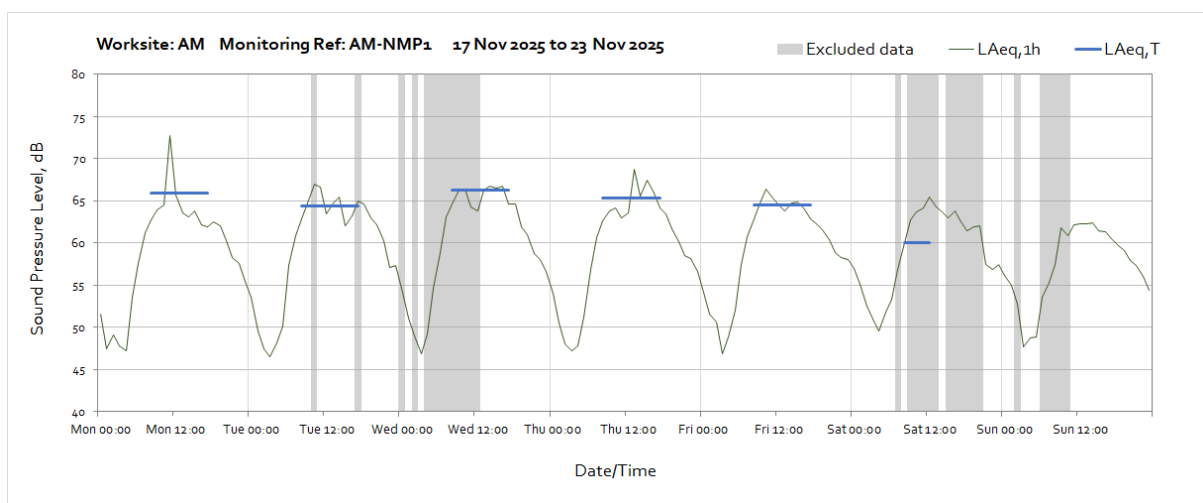
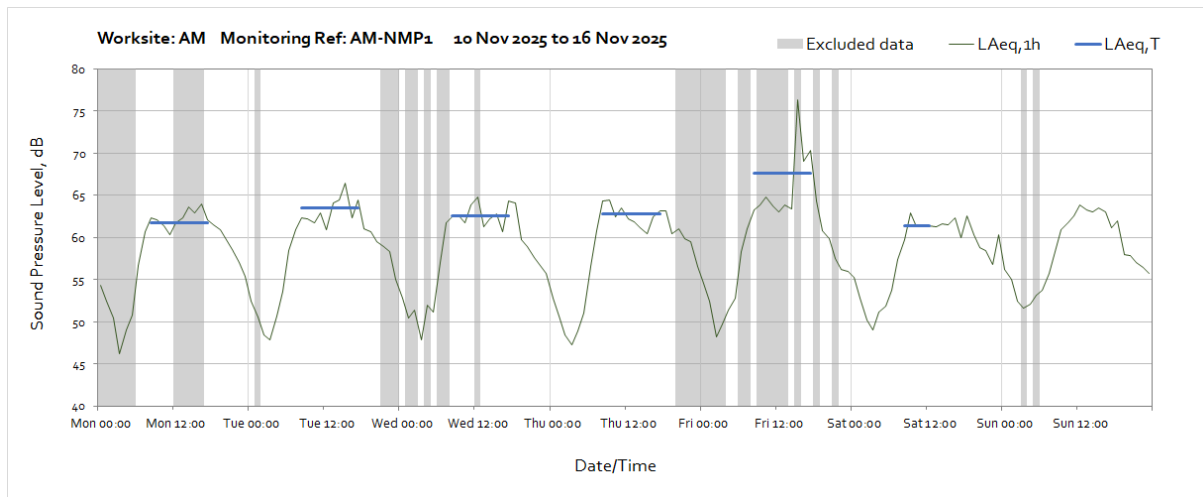
Note: Missing data between 22:00 and 23:00 on Wednesday 12th December was due to a communication error between the monitoring station and server.





Worksite: AM – Monitoring Ref: AM-NMP1

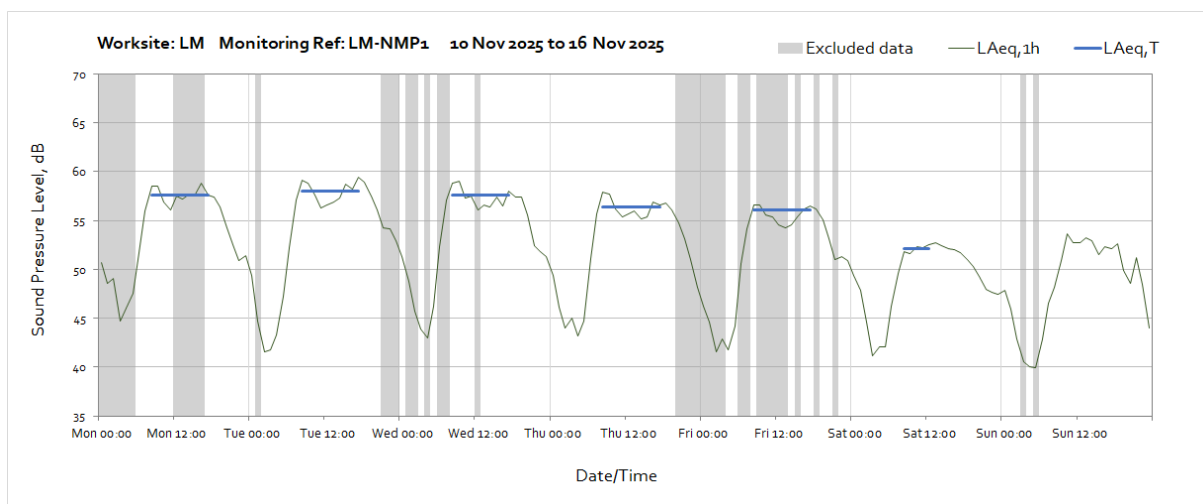
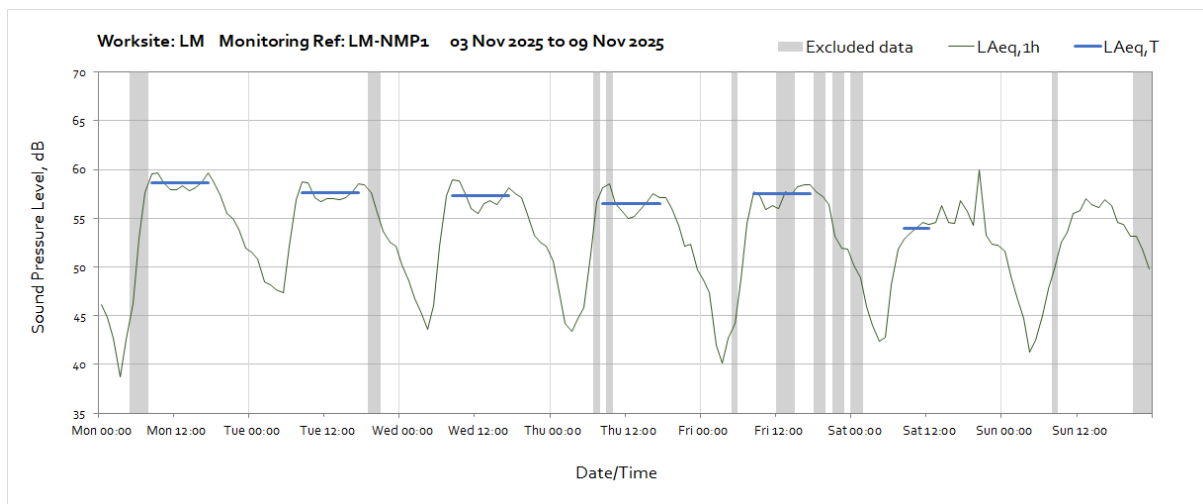
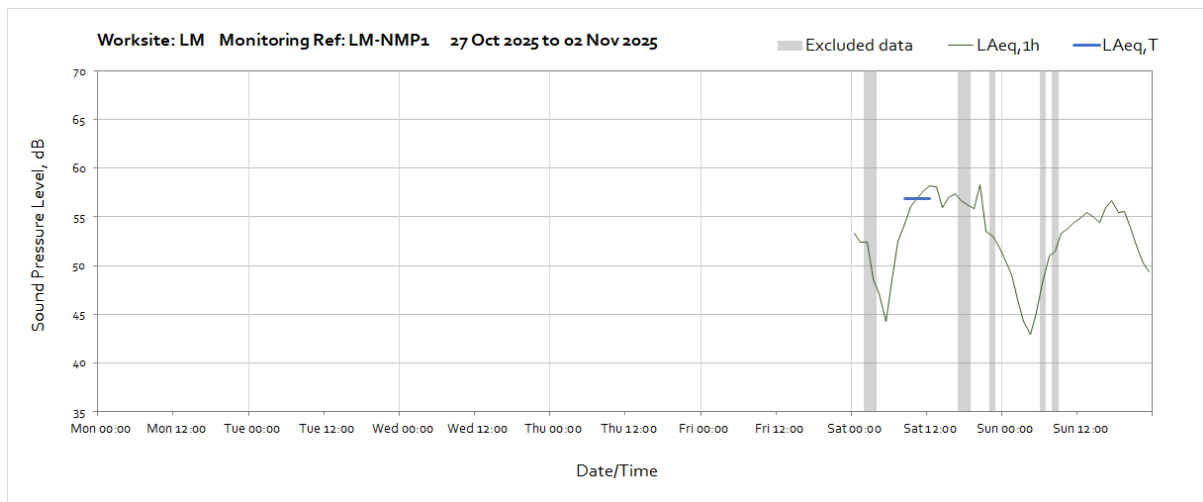




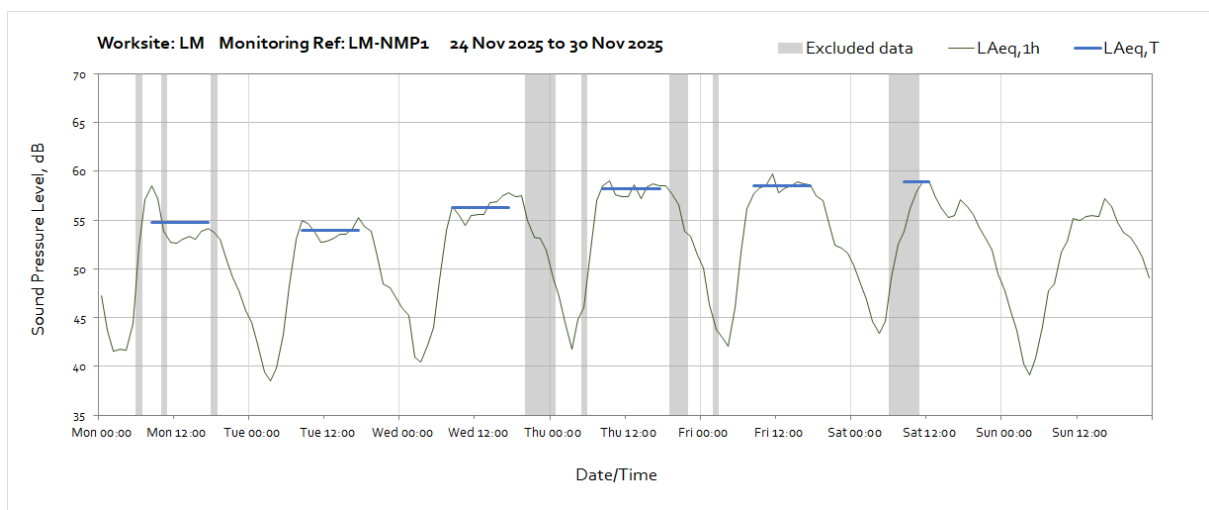
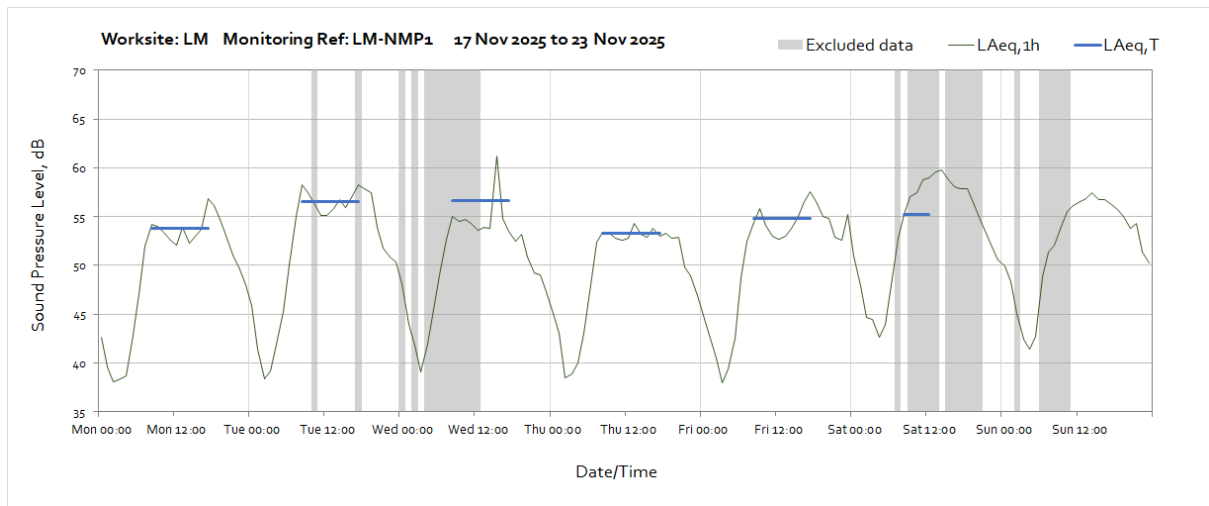
Note: Missing data from 17:00 on Friday 28th November until month end was due to loss of power to the monitoring station.

OFFICIAL

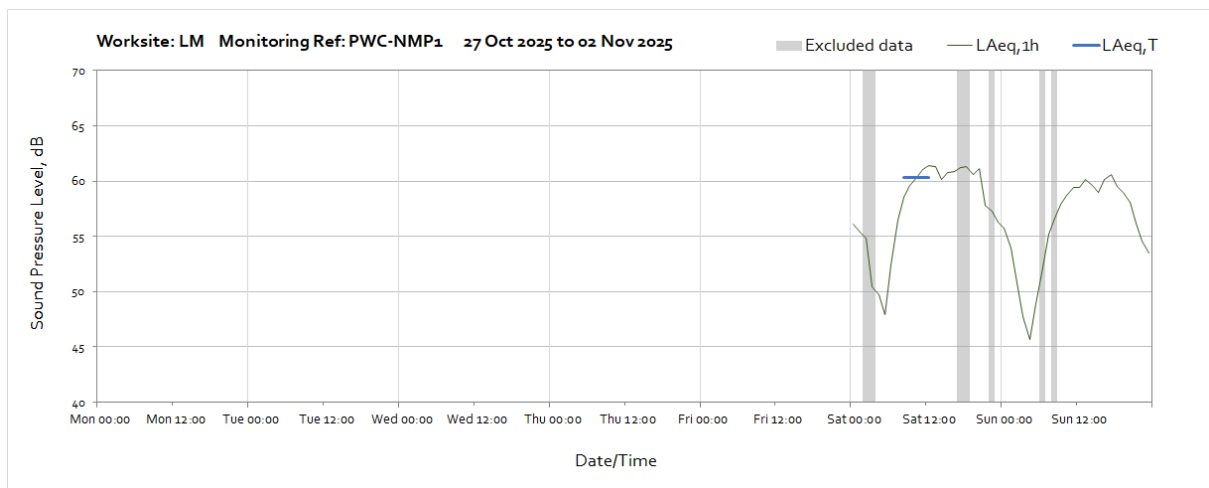
Worksite: LM – Monitoring Ref: LM-NMP1

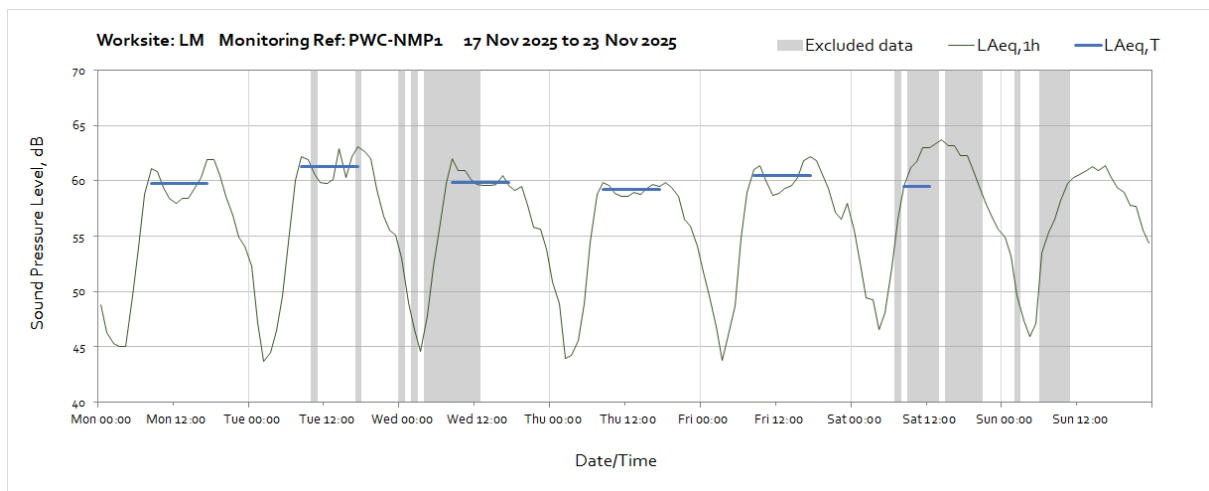
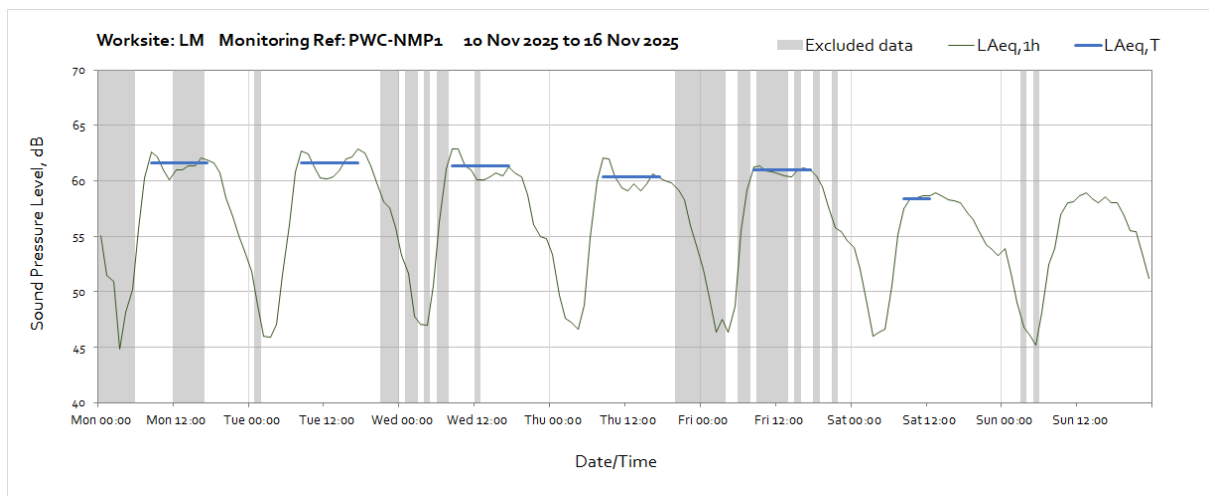
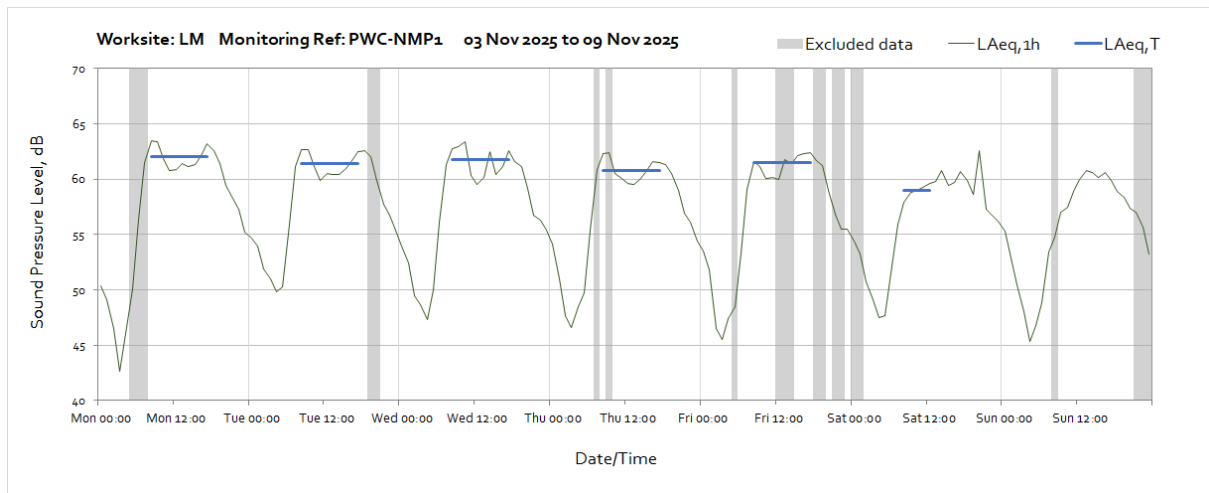


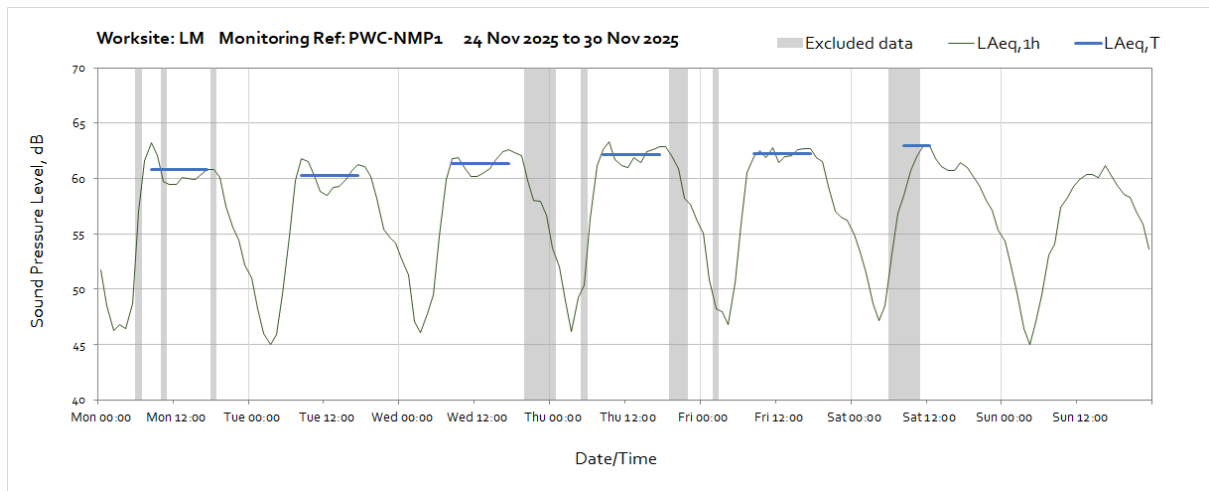
OFFICIAL



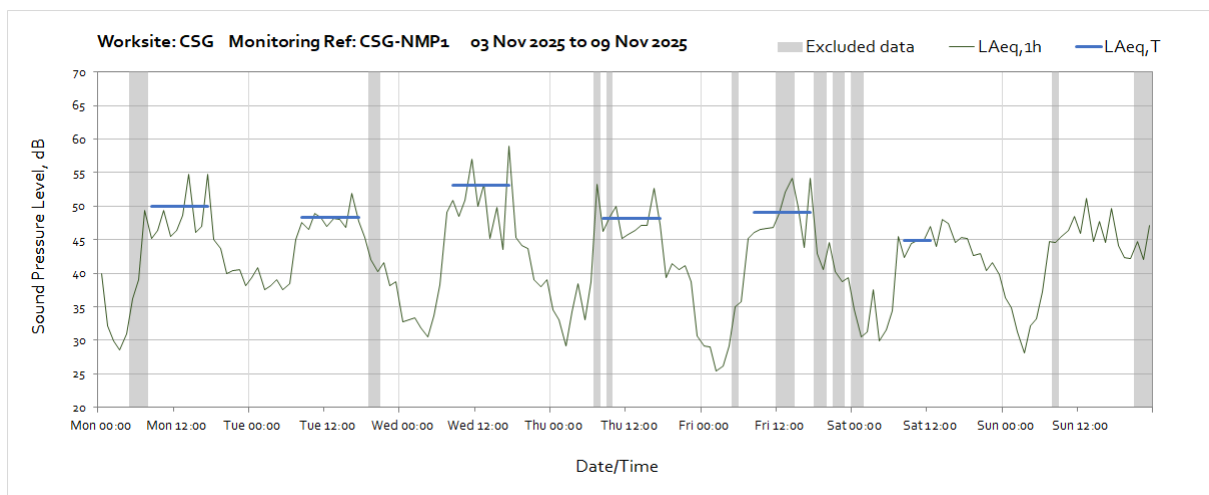
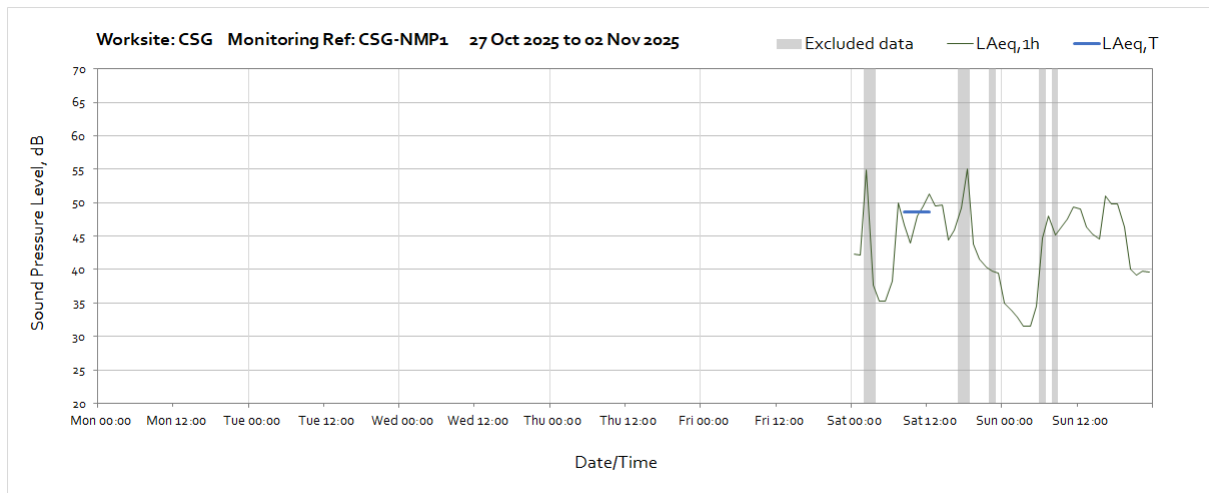
Worksite: LM – Monitoring Ref: PWC-NMP1

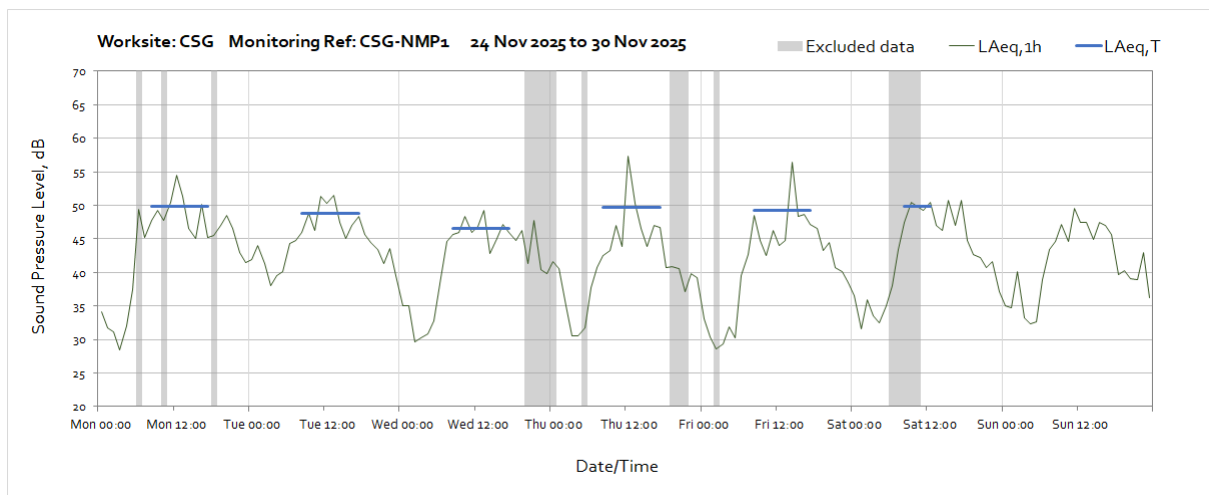
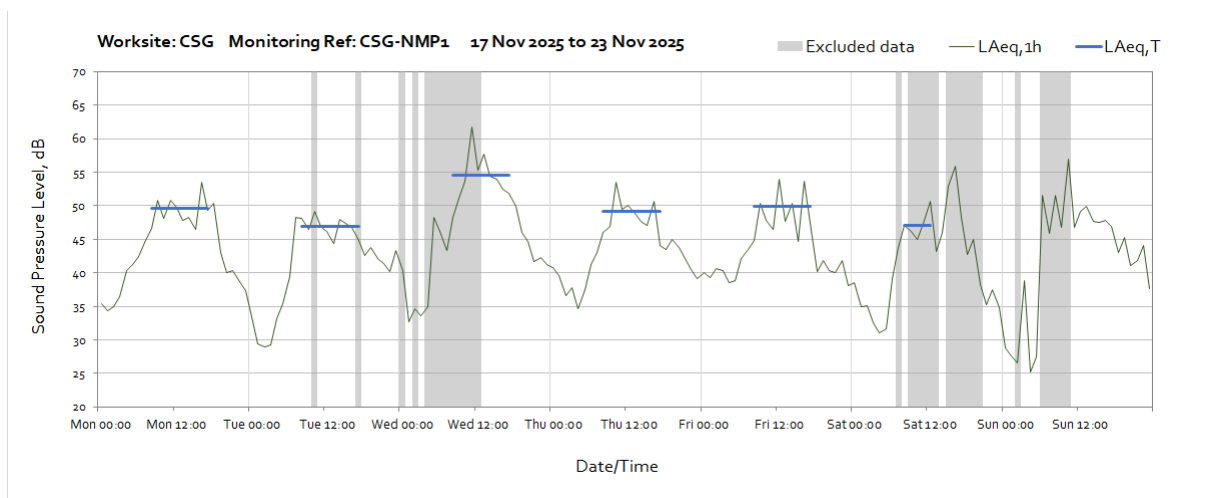
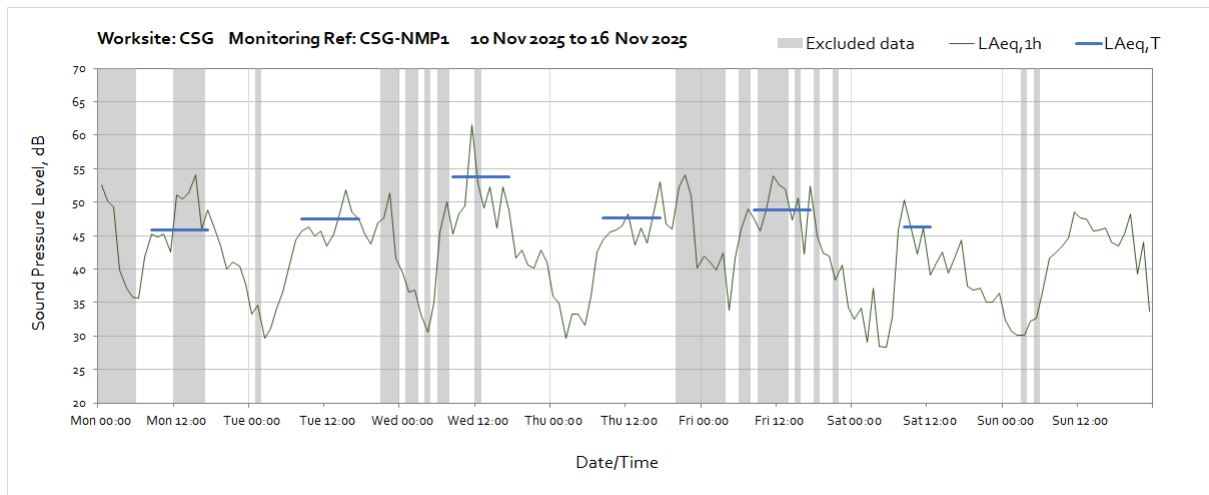




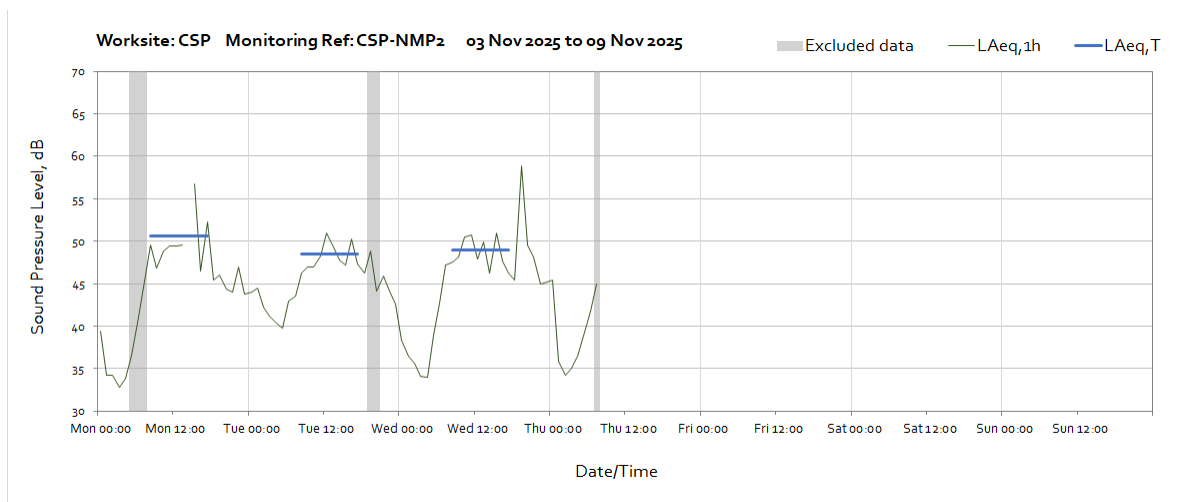
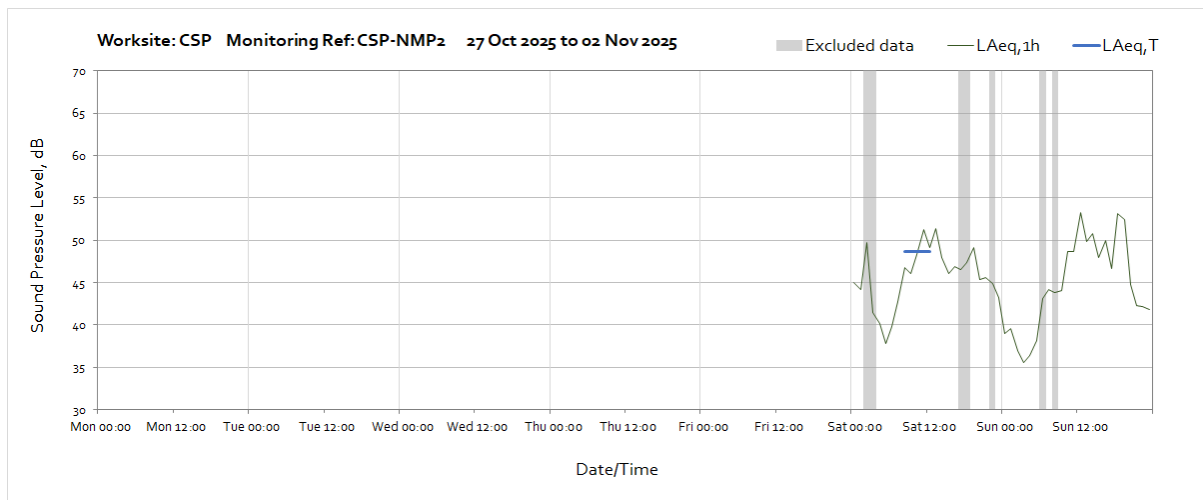


Worksite: CSG – Monitoring Ref: CSG-NMP1





Worksite: CSP – Monitoring Ref: CSP-NMP2

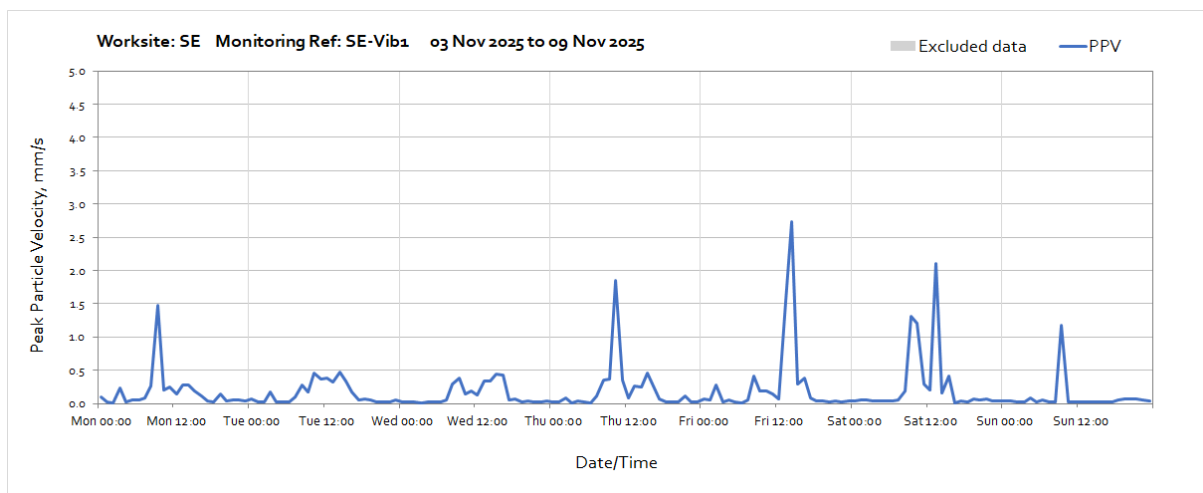
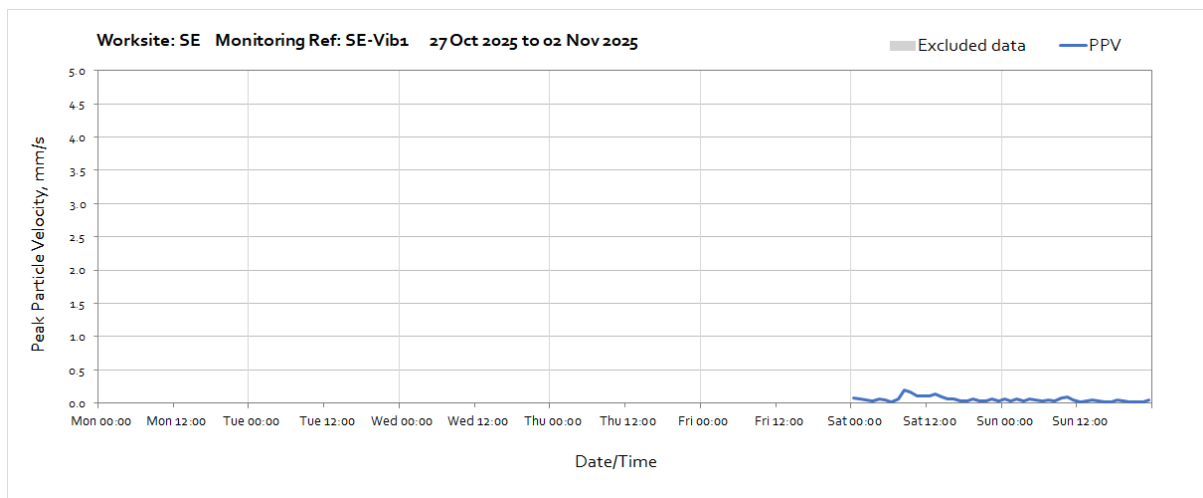


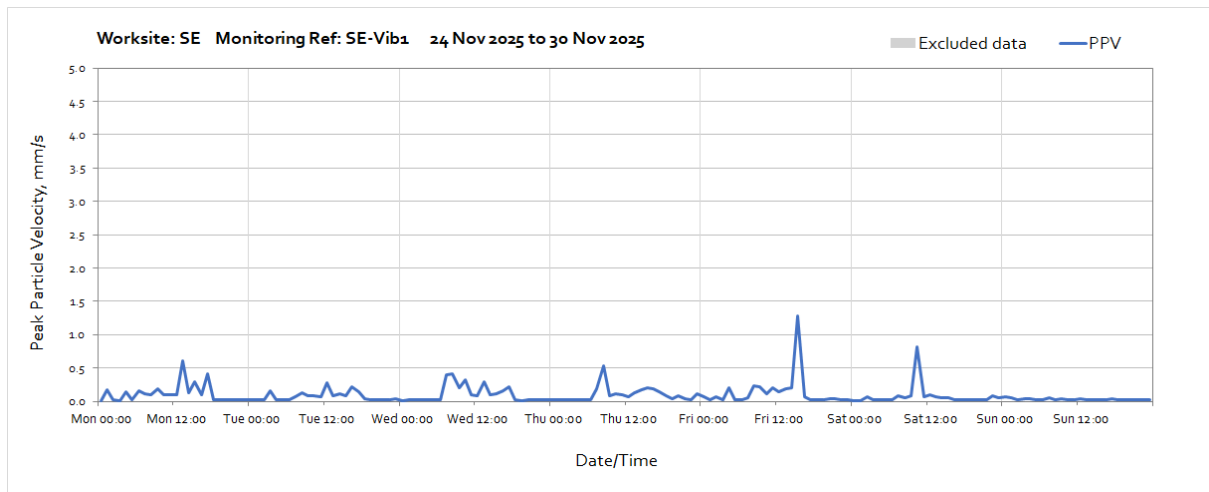
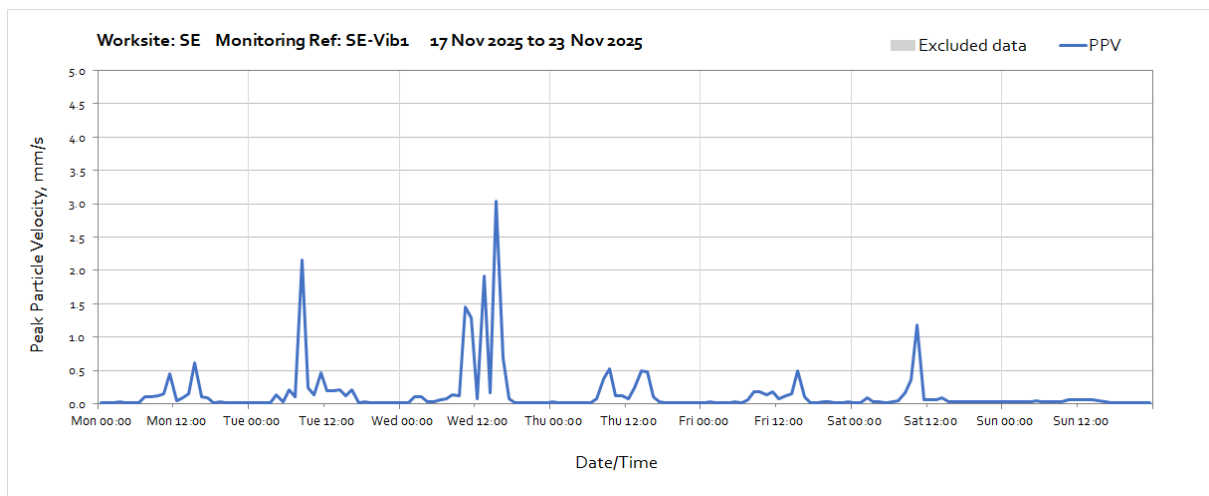
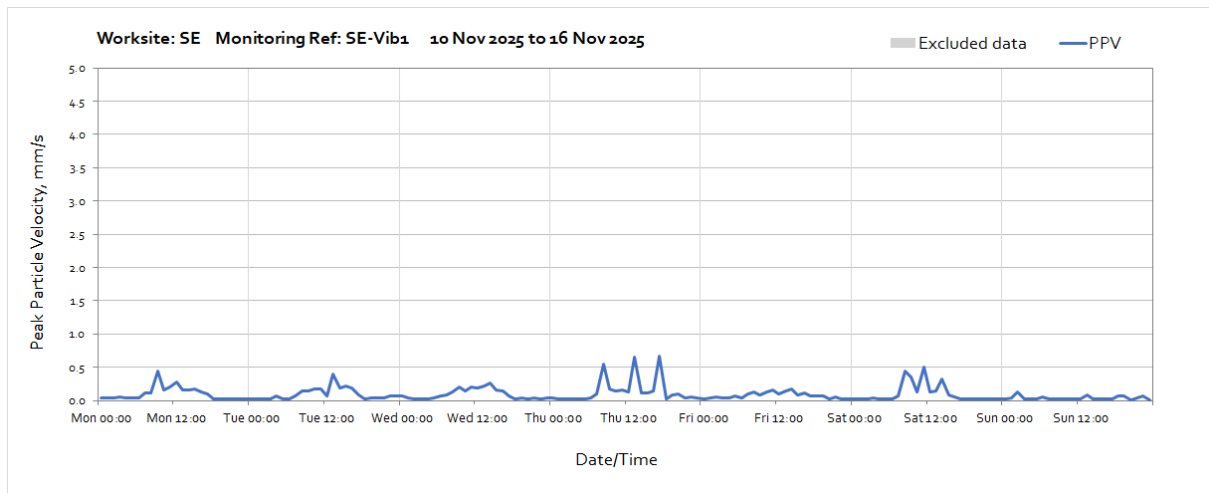
Note: Missing data between 14:00 and 15:00 on Monday 3rd November was due to monitor field calibration. Missing data from 08:00 on Thursday 6th November until month end was due to loss of power to the monitoring station.

Vibration

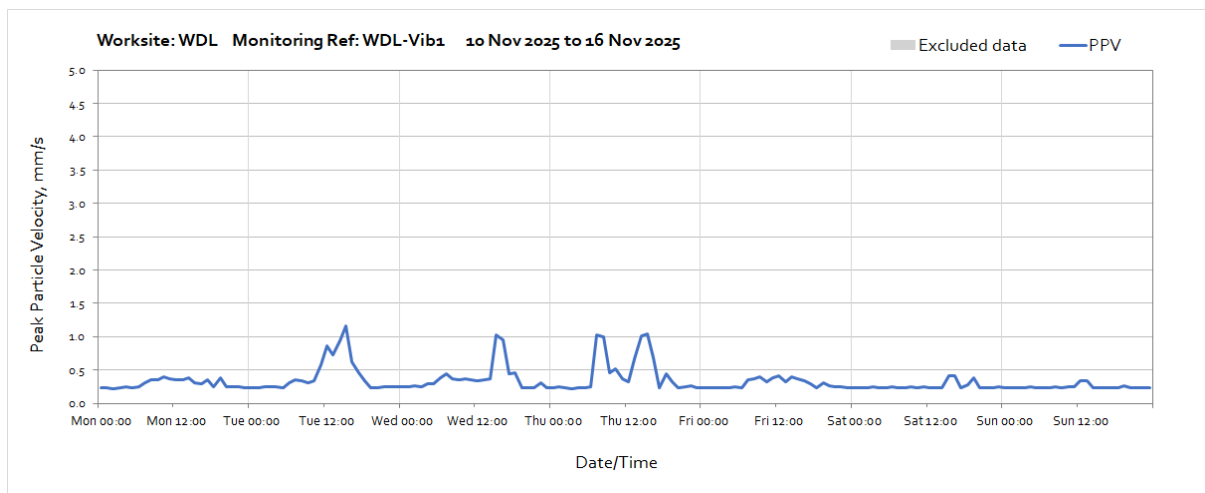
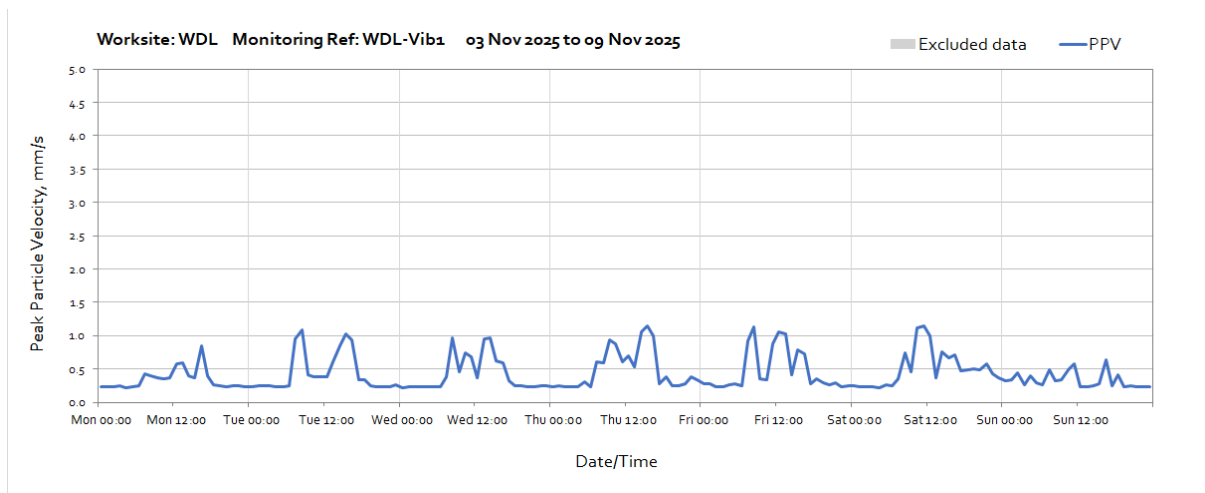
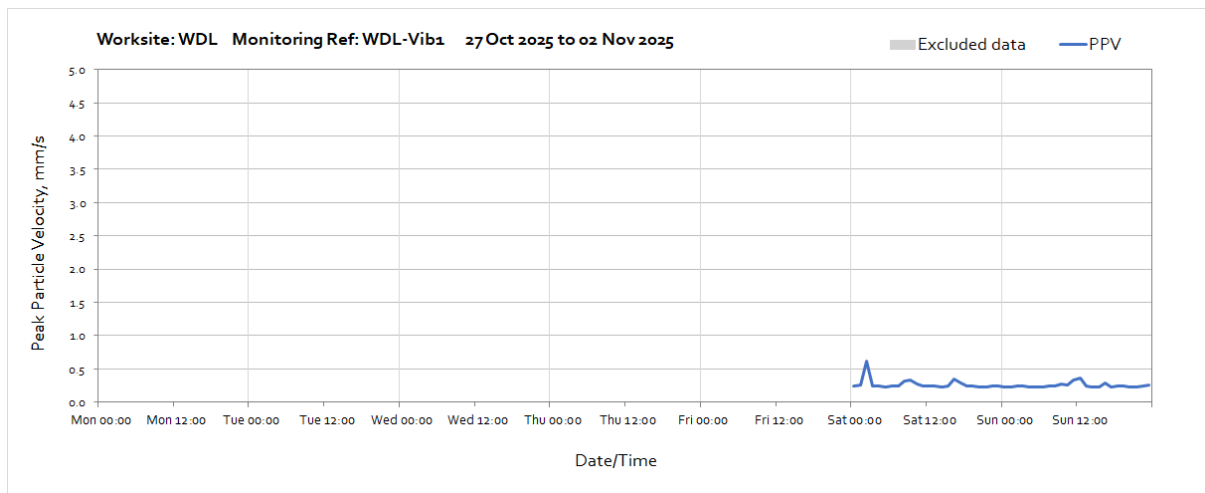
The following graphs show the hourly measured peak particle velocity PPV recorded during the monitoring period. The graphs show the highest PPV of the three orthogonal axes x, y and z. Periods where PPV values have been affected by local interference with the vibration monitor or only measured for part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

Worksite: SE – Monitoring Ref: SE-Vib1

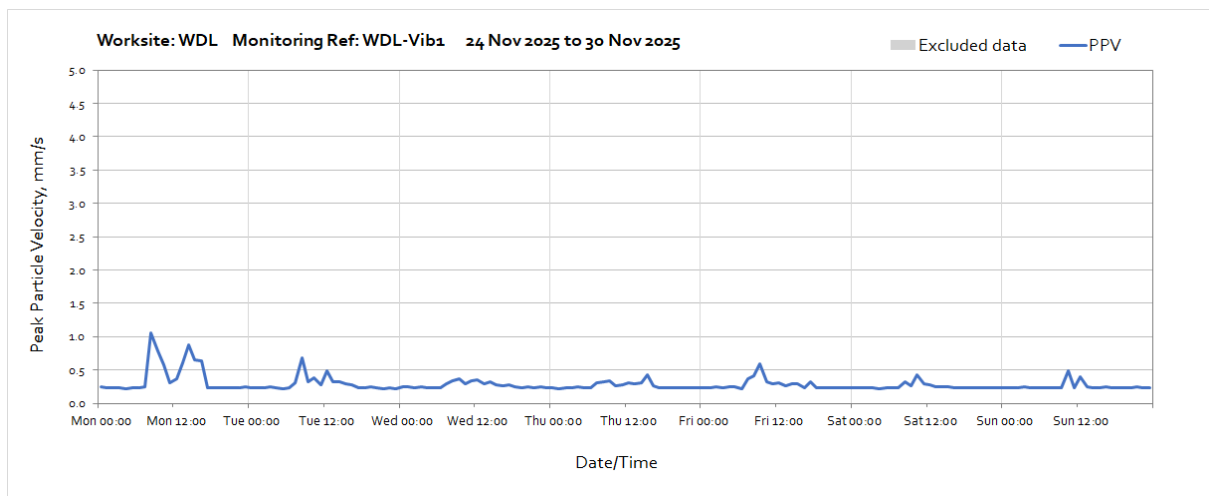
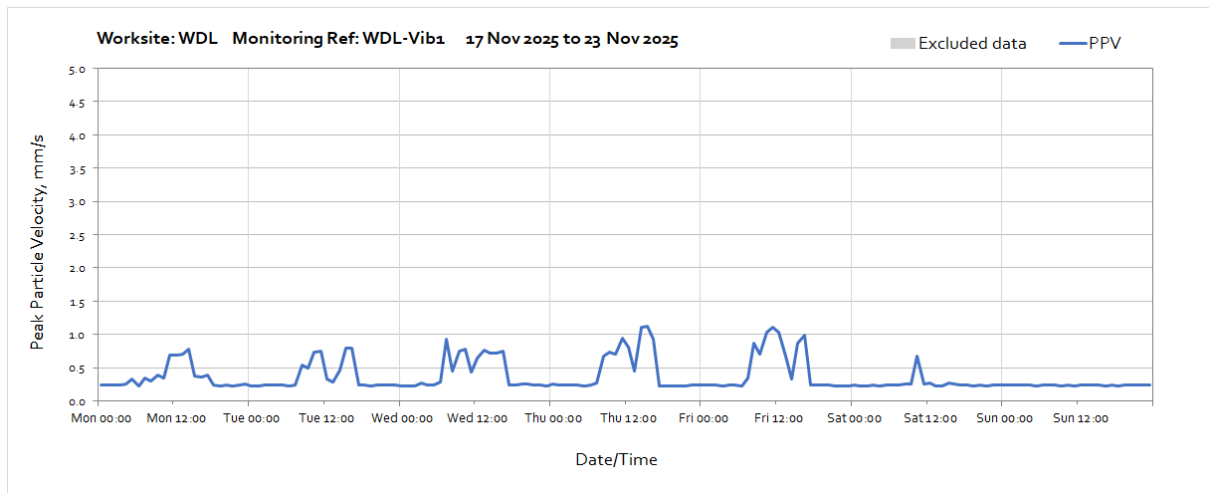




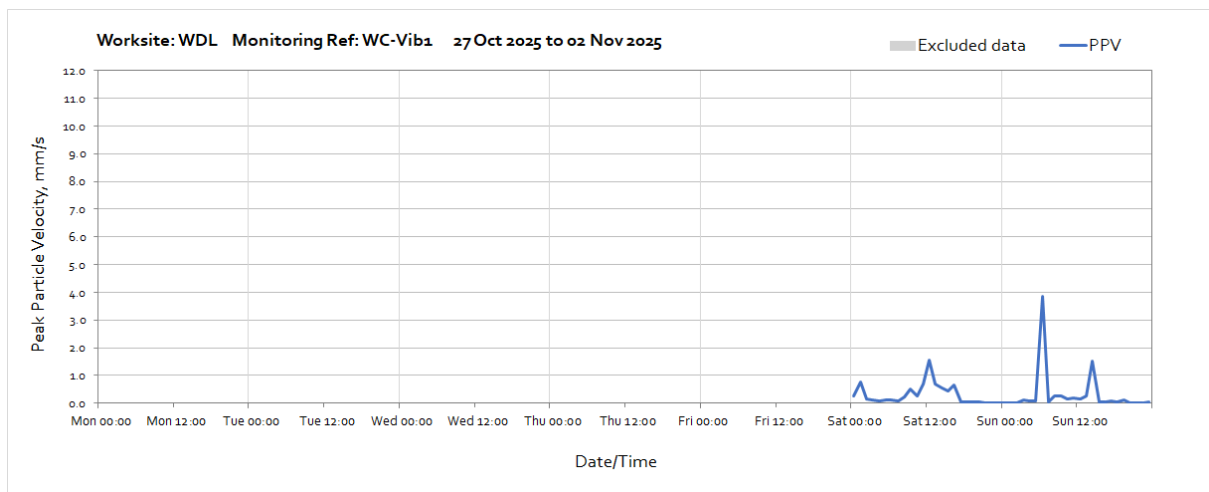
Worksite: WDL – Monitoring Ref: WDL-Vib1

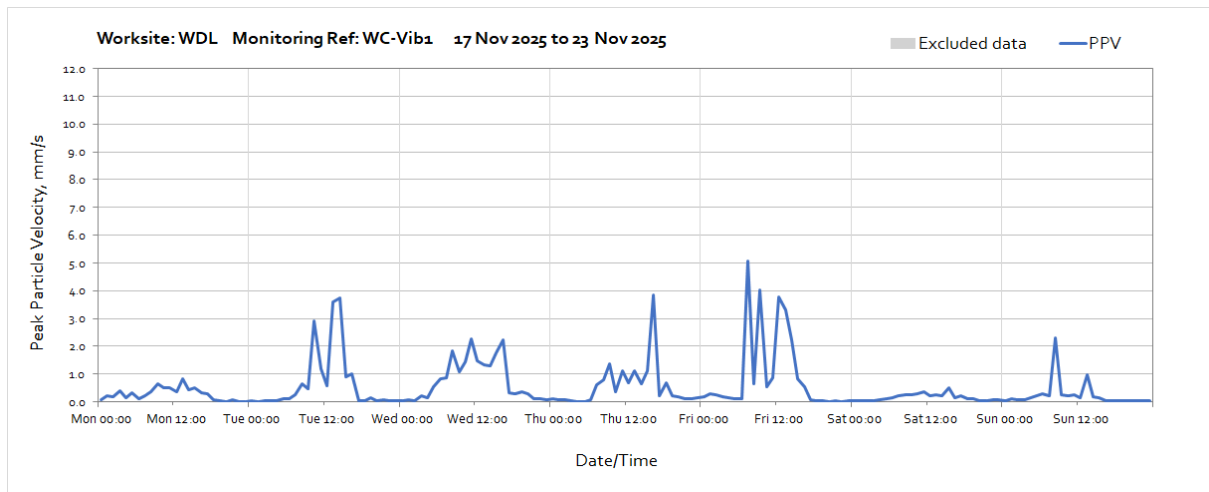
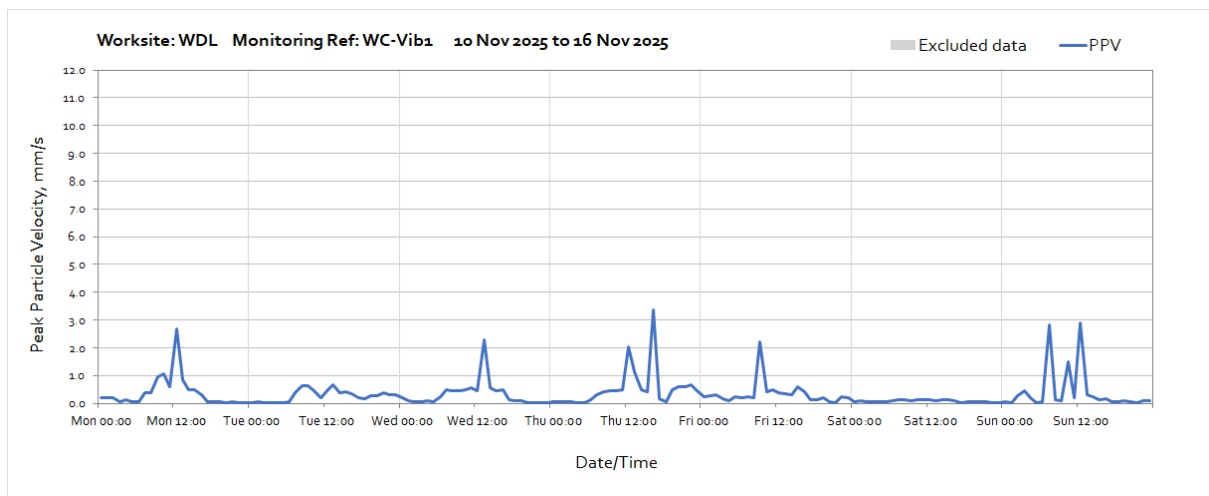
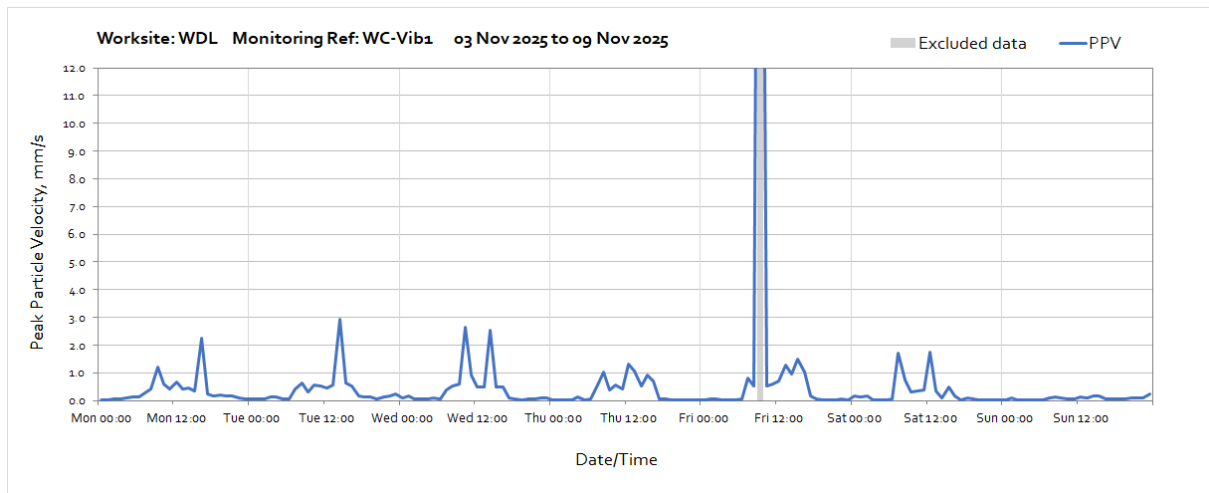


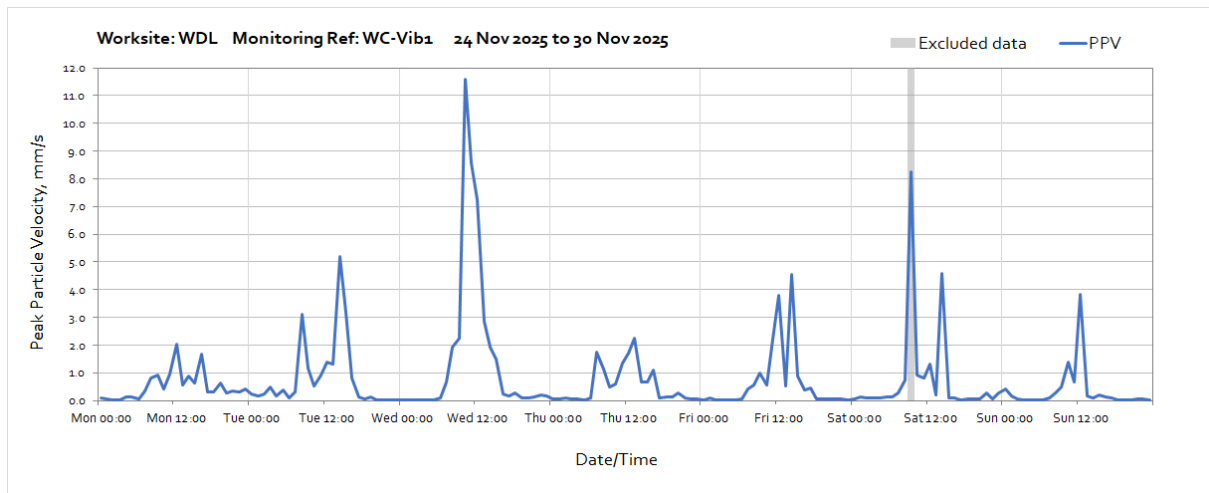
OFFICIAL



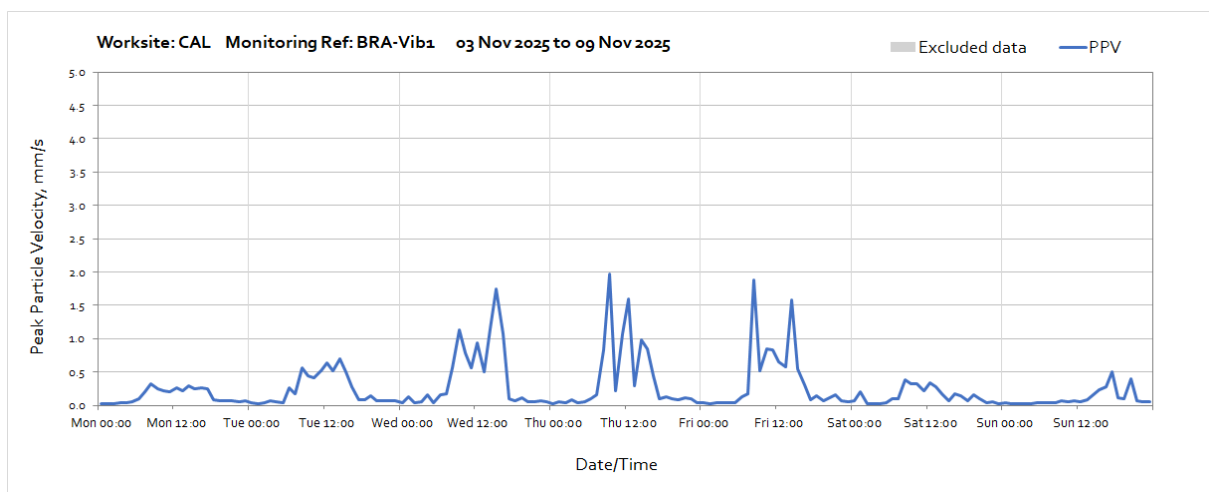
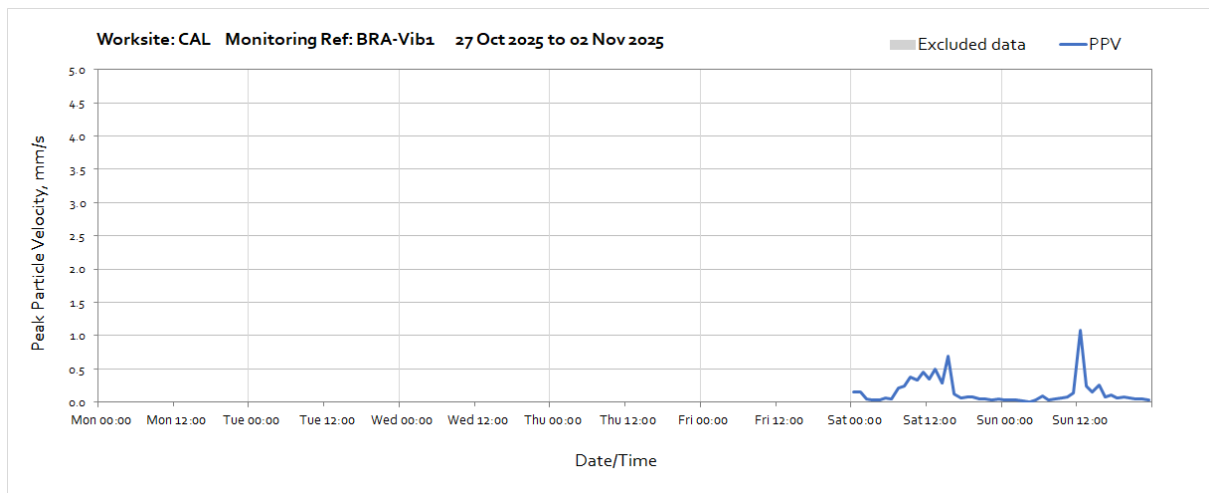
Worksite: WDL – Monitoring Ref: WC-Vib1

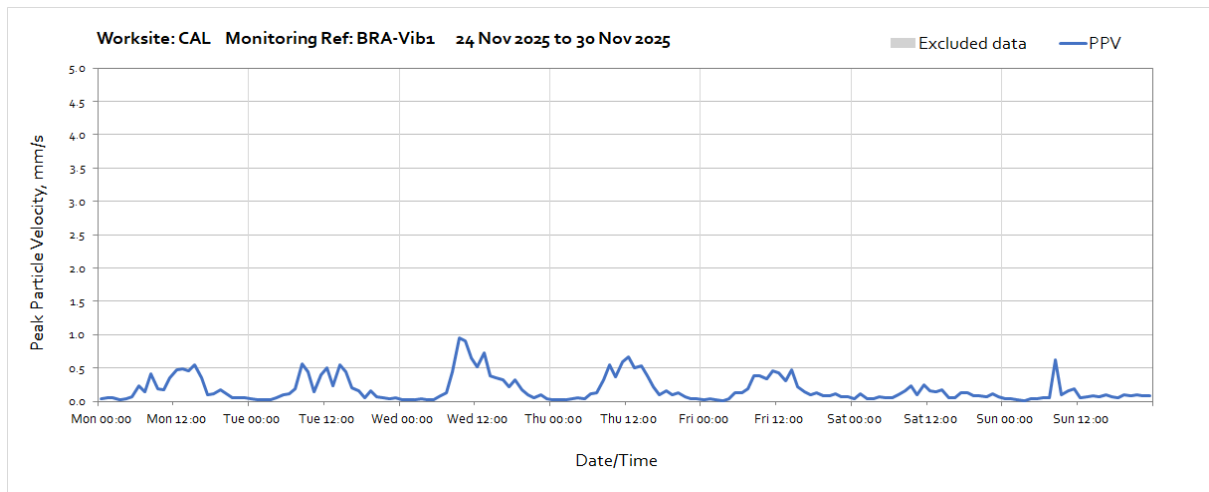
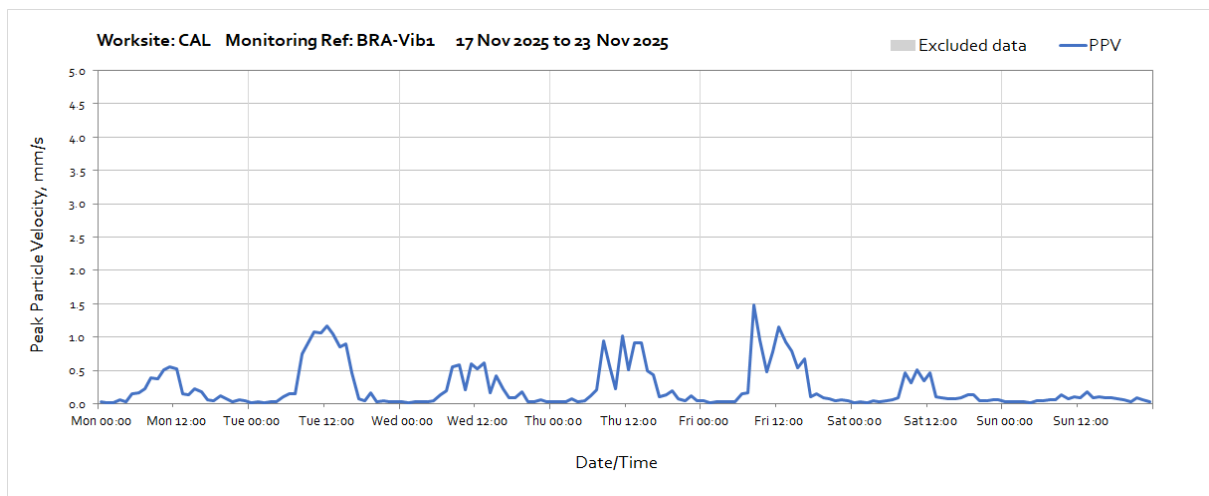
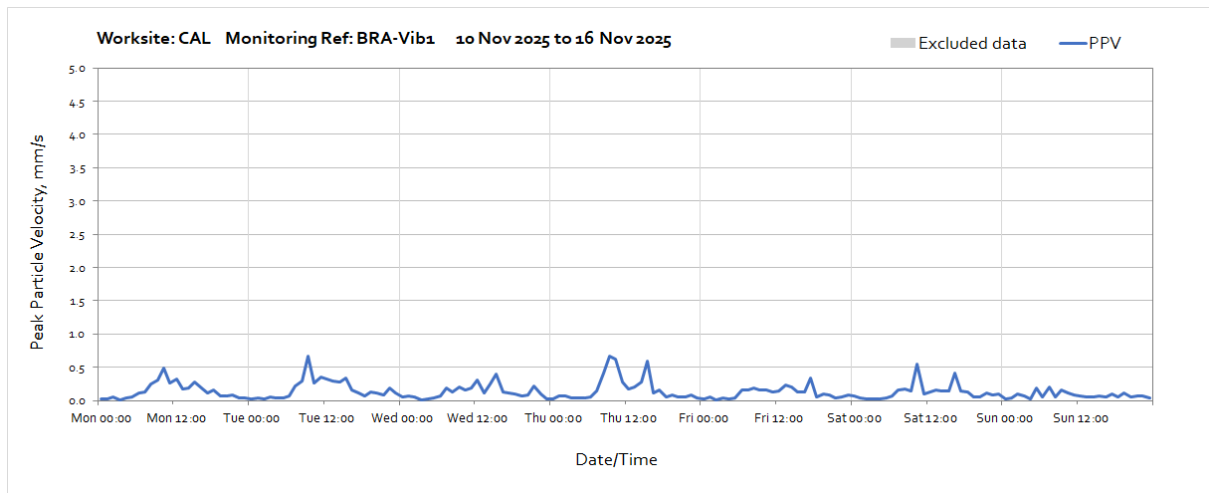




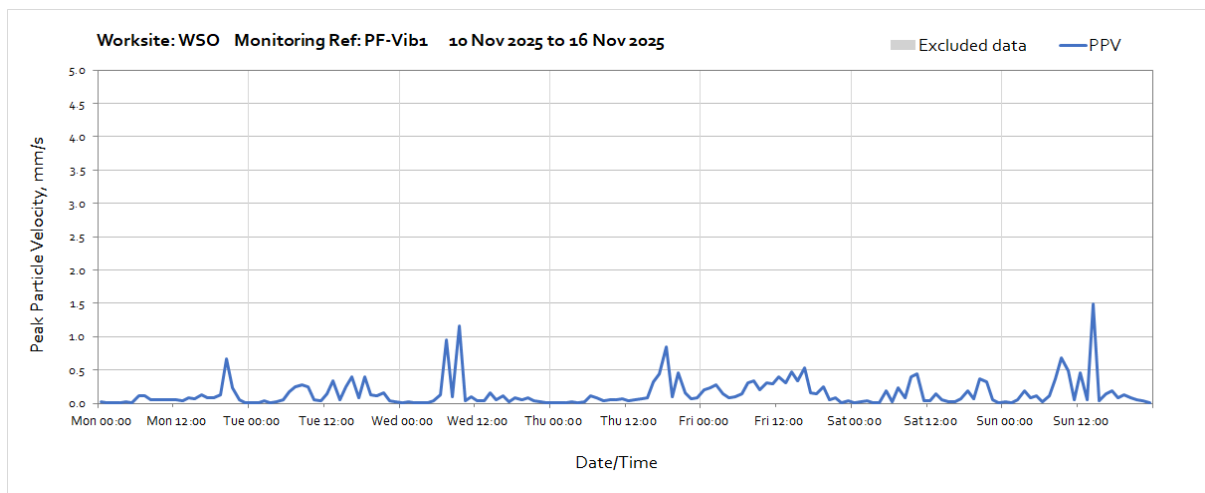
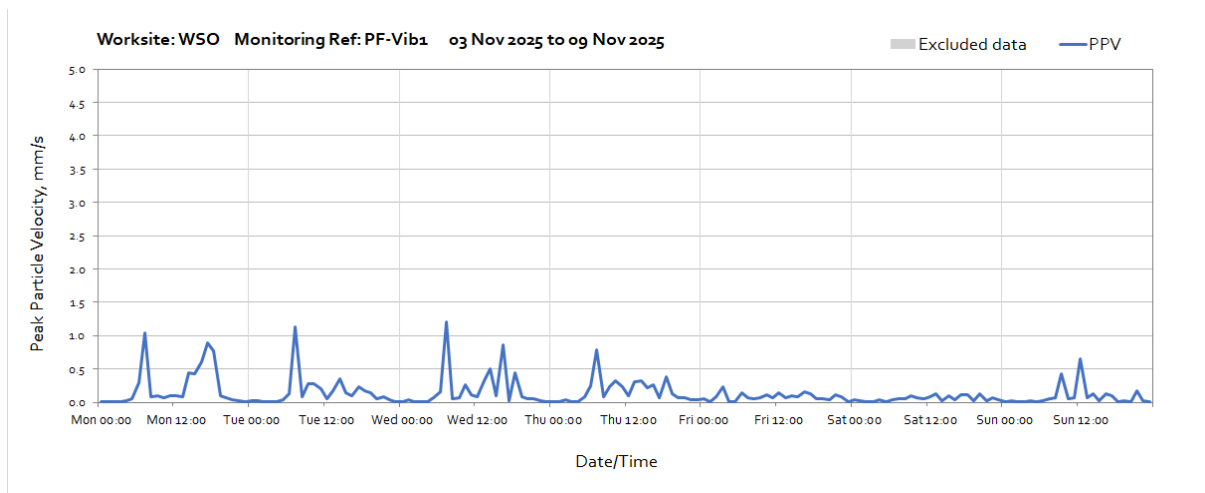
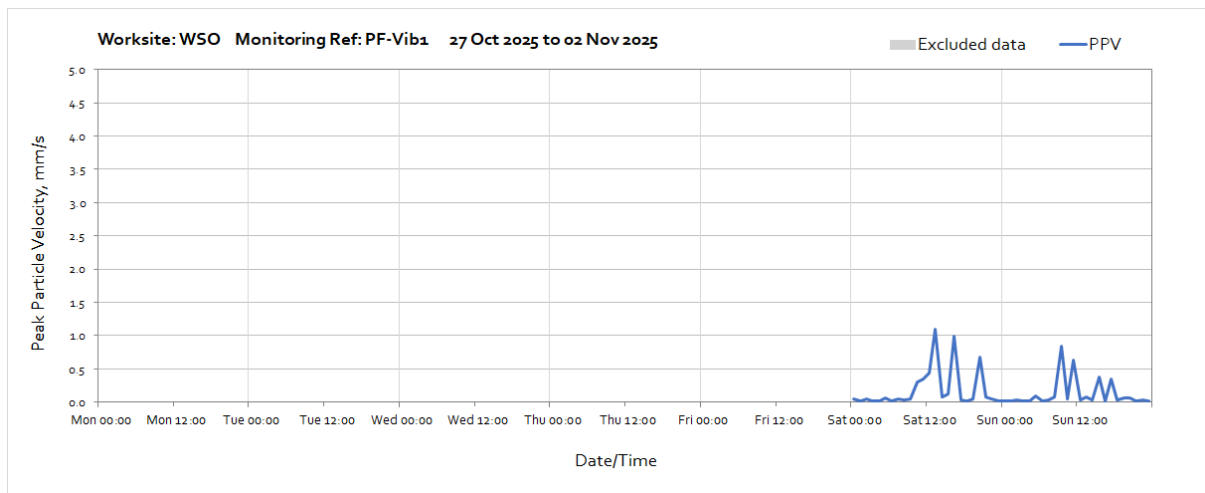


Worksite: CAL – Monitoring Ref: BRA-Vib1

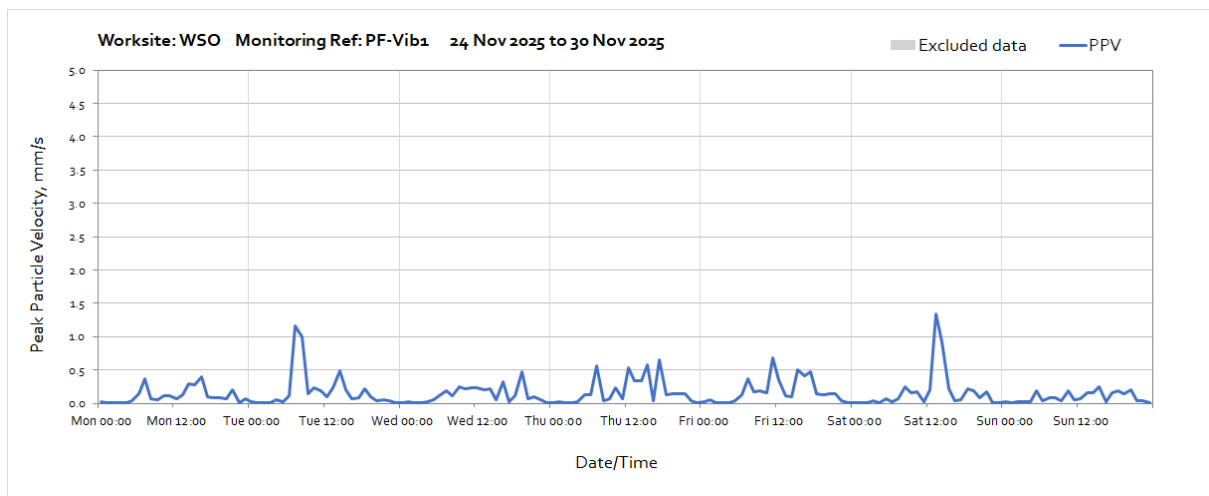
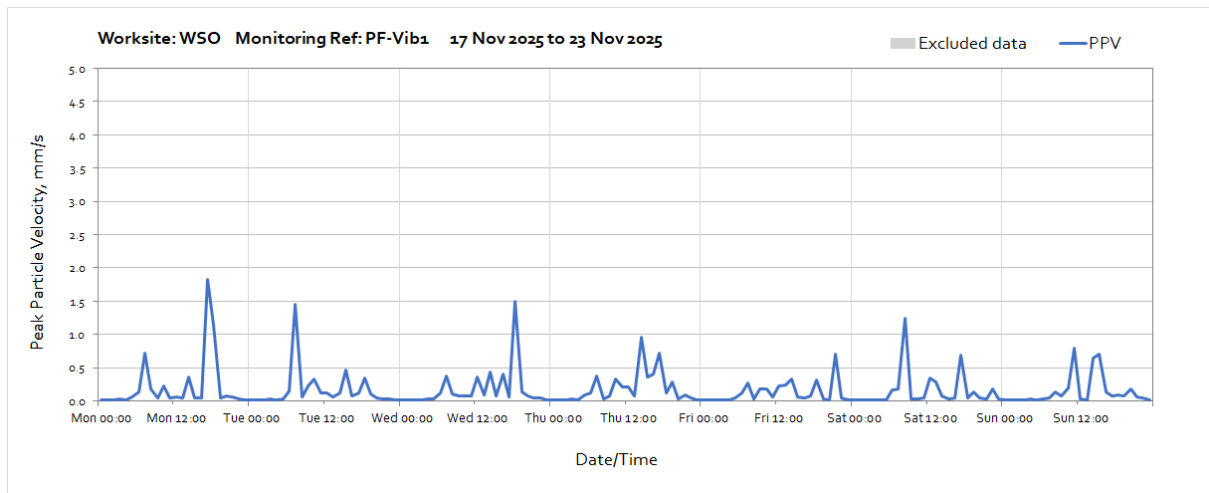




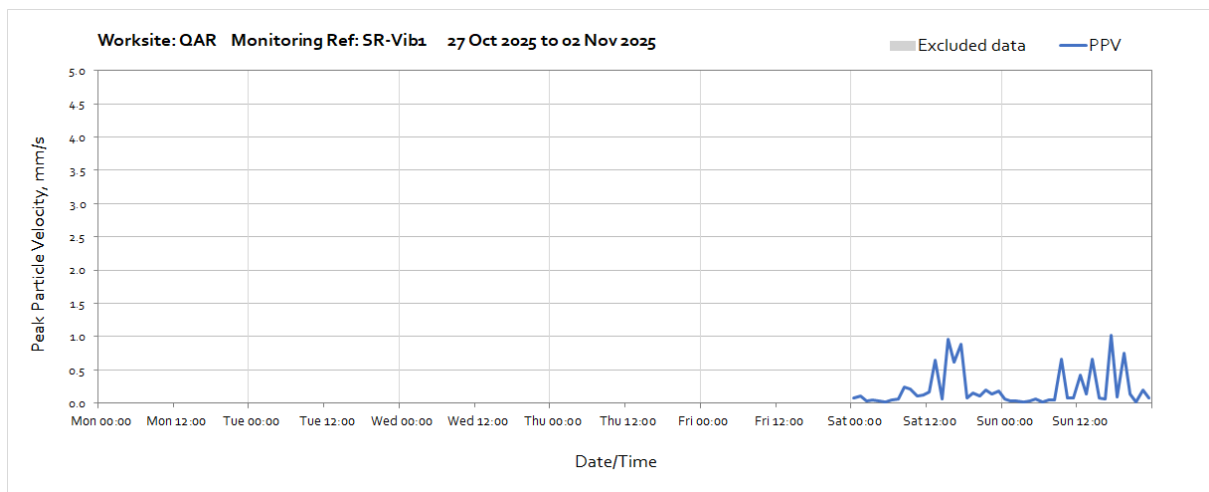
Worksite: WSO – Monitoring Ref: PF-Vib1

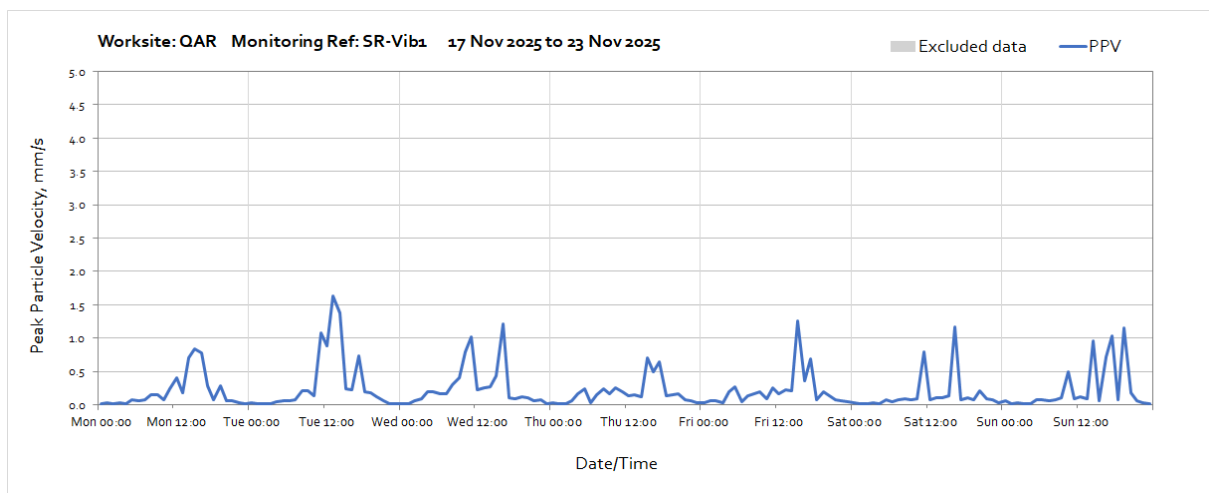
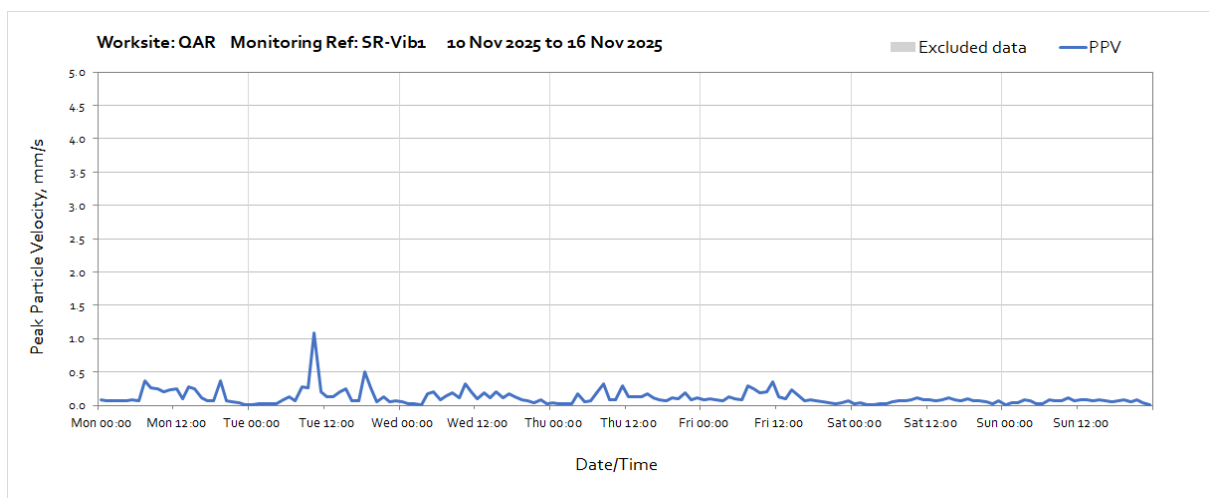
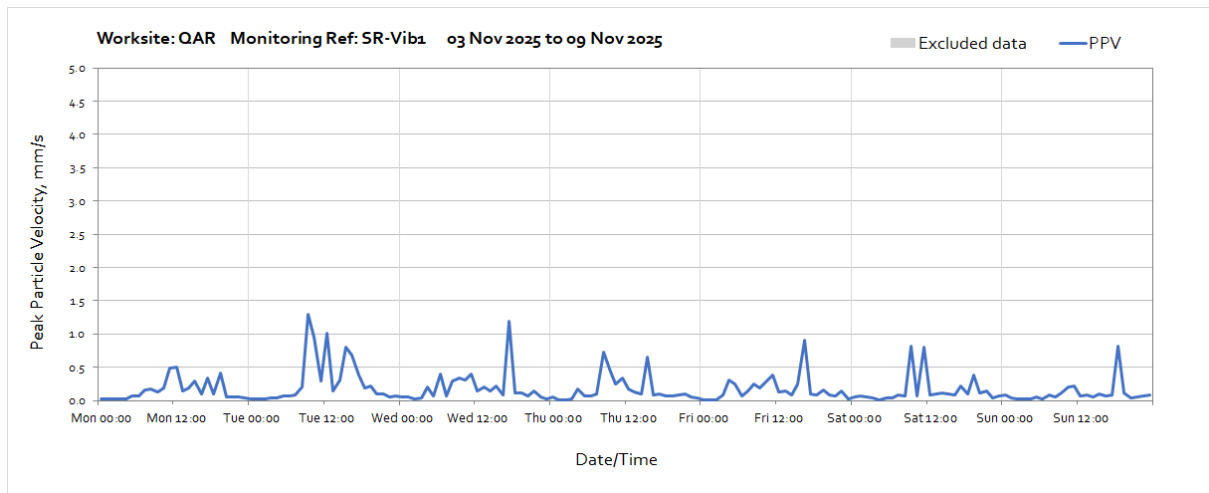


OFFICIAL

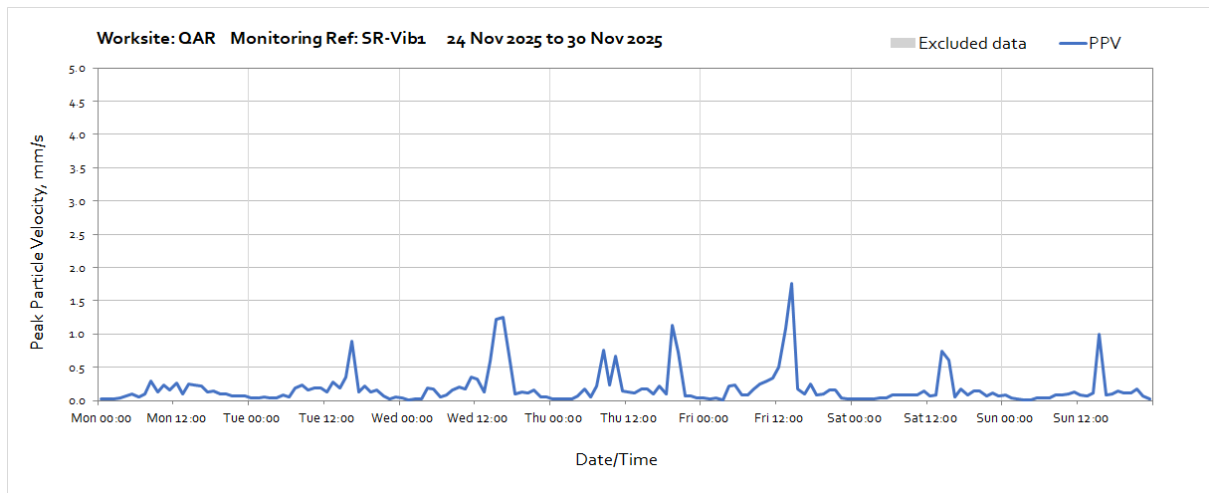


Worksite: QAR – Monitoring Ref: SR-Vib

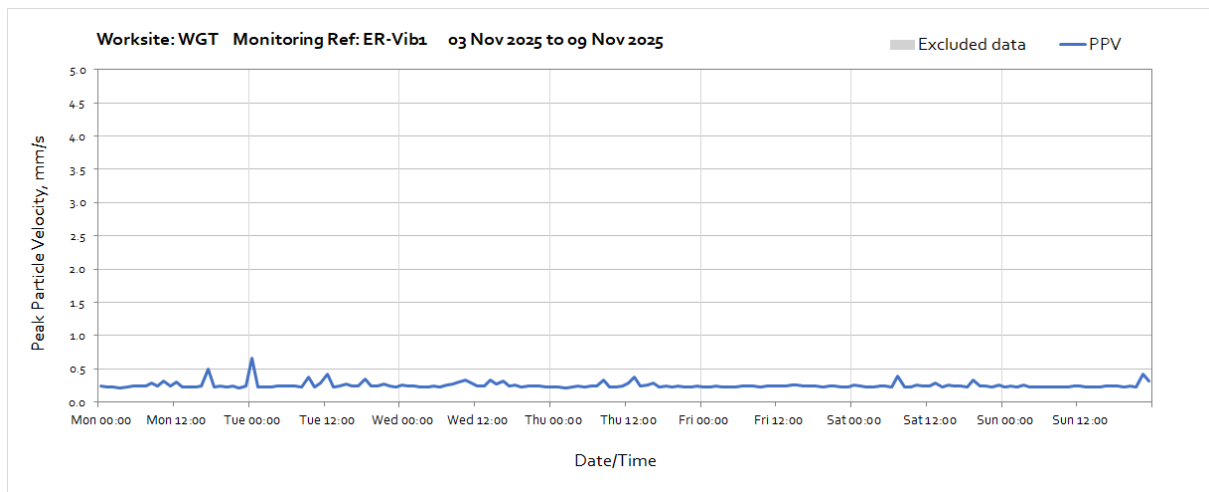
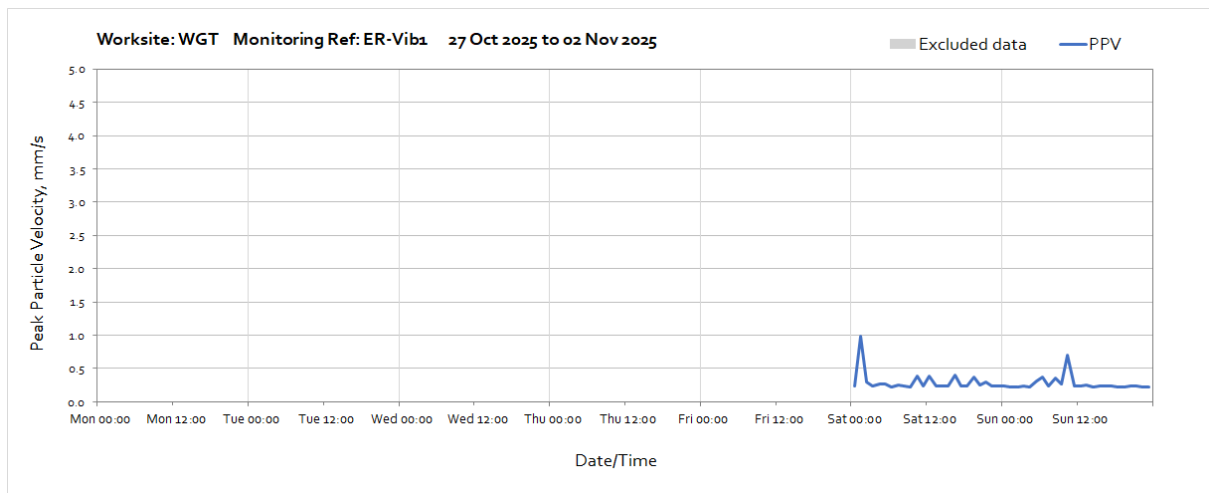


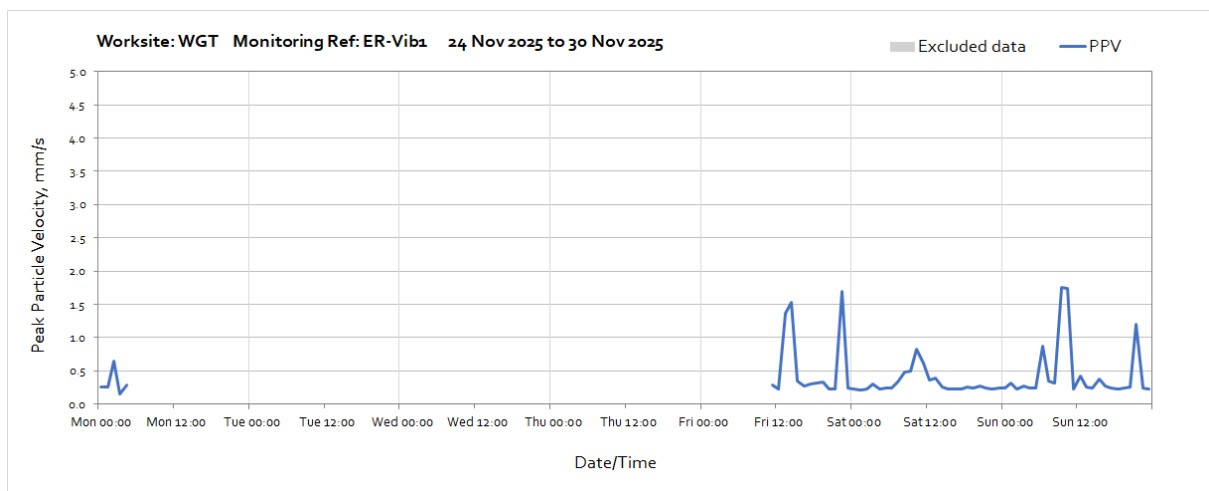
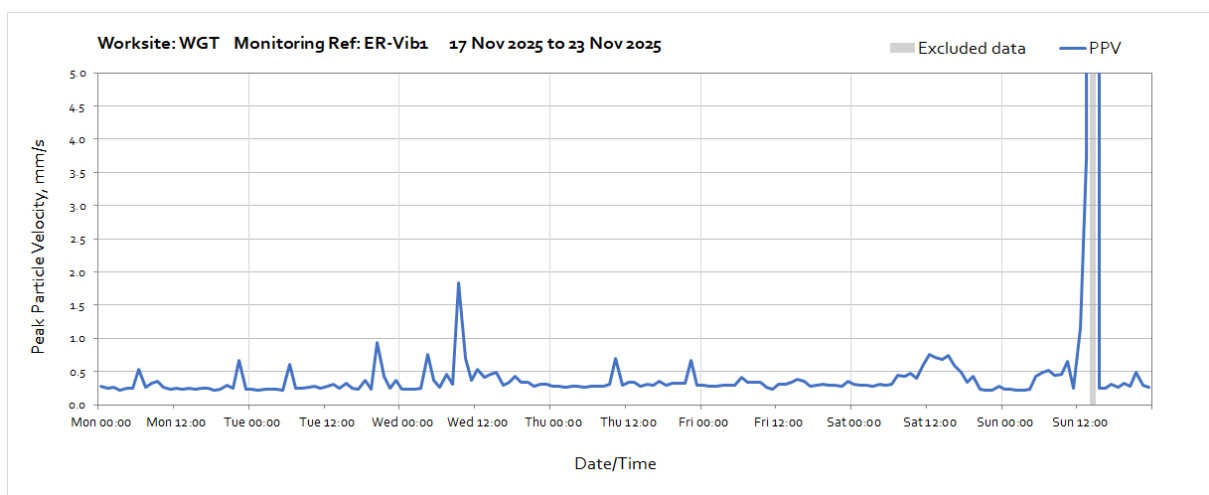
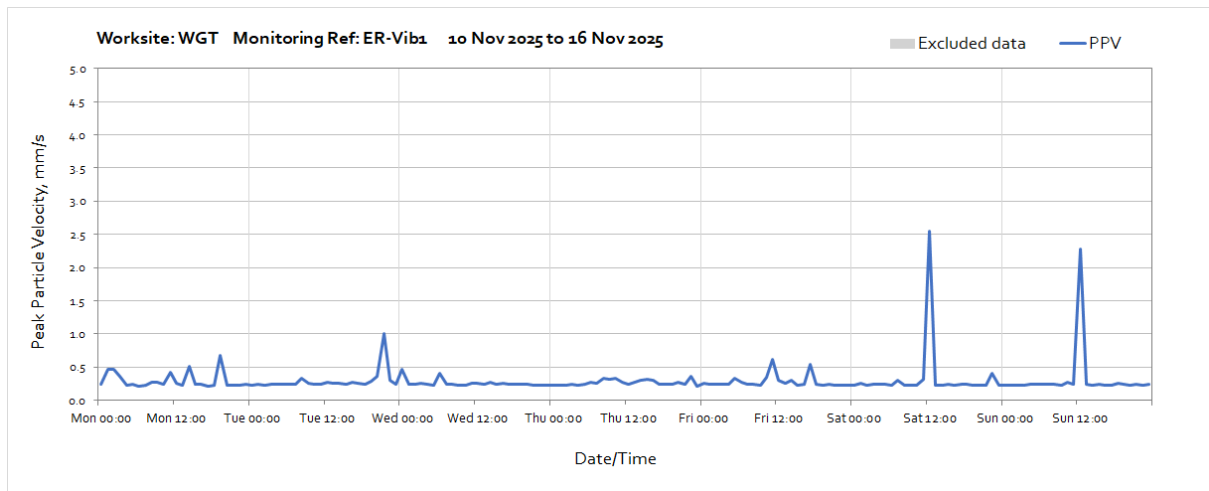


OFFICIAL



Worksite: WGT – Monitoring Ref: ER-Vib1





Note: Missing data between 05:00 on Monday 24th November until 11:00 on Friday 28th November was due to a depleted monitor battery.

OFFICIAL