

Construction Noise and Vibration Monthly Report – August 2025

Buckinghamshire

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Non-Technical Summary

This Noise and Vibration Monitoring Report fulfils HS2 Limited's commitment detailed in the Environmental Minimum Requirements (EMRs), Annex 1, Code of Construction Practice, to present the results of noise monitoring carried out within Buckinghamshire (BS) during the month of August 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 construction, drainage works, general site maintenance, site access and haul road operation and maintenance, compound development and A422 temporary bridge and road diversion were underway.
- Noise and vibration were undertaken in the vicinity of School End (ref.: SE) and Hermitage Chetwode (ref.: HC), worksites where overbridge works, highway realignment, general site maintenance, site access and haul road operation and maintenance and cutting works were underway.
- Noise and vibration were undertaken in the vicinity of Twyford worksite (ref.: TW), where embankment works, viaduct works general site maintenance, site access and haul road operation and maintenance were underway.
- Noise and vibration were undertaken in the vicinity of West Street Overbridge worksite (ref.: WSO), where soil filling and retention, formwork reinforced concrete works, parapet installation, drainage works, backfilling, surfacing works, utility diversion and installation of protection slabs were underway.
- Noise and vibration were undertaken in the vicinity of Calvert worksite (ref.: CAL), where formwork reinforced concrete works, beam installation, diversion works, batching plant operation, material movements and drainage works were underway.
- Noise and vibration were undertaken in the vicinity of Woodlands worksite (ref.: WDL), where technical backfill, stabilisation works and material movements were underway.
- Noise and vibration were undertaken in the vicinity of Quainton worksite (ref.: QAR), where earthworks, embankment filling and utility 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 relief road construction, utility diversions and underpass construction were underway.
- Noise and vibration were undertaken in the vicinity of Nash Lee Lane worksite (ref.: NLL), where shutter installation, pouring of protection slabs, civilising works, pouring of walls, repairing of overbridge plinths, ring installation, headwall base works and steel assembly were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Green Tunnel worksite (ref.: WGT), where diversion reinstatement works, construction of platforms, wall installation, demobilisation, capping, material movements, construction of site access road, batching plant operation, installation of pre-cast segments, laying of tarmac, dewatering and discharge, waterproofing, tunnel bore machine drive, installation of rail and excavation were underway.
- Noise and vibration were undertaken in the vicinity of Rocky Lane Embankment worksite (ref.: RLE), where underbridge construction, installation of road furniture, maintenance of attenuation pond, road surfacing and finishing works were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Dean Viaduct worksite (ref.: WDV), where striking, propping installation and deck pours were underway.
- Noise and vibration were undertaken in the vicinity of Leather Lane worksite (ref.: LL), where stockpile movements and shutter installation 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.
- East West Rail Culvert where piling was underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks and drainage installation were underway.
- MCJ where backfilling was underway.
- Bat Mitigation Structure where formwork reinforced concrete works and technical backfill were underway.

- Greatmoor Culverts where formwork reinforced concrete works, drainage and backfilling were underway.
- CAG 2 Underbridge where formwork reinforced concrete works, drainage and backfilling were underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where technical backfilling was underway.
- QUA36 Overbridge where embankment works, formwork reinforced concrete works and drainage works were underway.
- QUA26 and QUA28 where formwork reinforced concrete works, approach works and technical backfilling were underway.
- Doddershall Culverts where landscape bunding was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Edgcott Road Overbridge where road realignment works, installation of panels and plinth repair works were underway.
- SLC/13 Overbridge where formwork reinforced concrete works, arch installation and technical backfilling were underway.
- Station Road Overbridge where formwork reinforced concrete was underway.
- Culvert No7 where dig and replace and installation of culvert units were underway.
- Culvert No3 where working platform construction was 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 pouring of the robust, backfilling, concrete pouring, drainage, scaffold installation and removal, steel installation, lifting operations, rebar removal and installation, black jacking were underway.
- Nash Lee Road Diversion where material movements including earthworks were underway.

The HS2 threshold levels for significant noise impacts, which are defined in Information Paper E23 (<https://www.gov.uk/government/publications/hs2-information-papers-environment>), were exceeded due to HS2 works on nine (9) occasions during August 2025.

There was one (1) exceedance of trigger levels as defined in section 61 consents during the reporting period.

One (1) complaint regarding noise and vibration was received by HS2 during the monitoring 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 31st August 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 concrete pours, backfilling, waterproofing, utility diversion, finishing works and wingwall construction.
 - Drainage works including bulk excavation, crushing, material deliveries, excavation and landscape bund filling.
 - General site maintenance.
 - Site access and haul road operation and maintenance.
 - 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:

- Overbridge works including digging, construction of steps, installation of drainage blanket, waterproofing and construction of crane platform.
- Highway realignment works including utility works and vegetation clearance.
- General site maintenance.
- Site access and haul road operation and maintenance.
- Cutting works including abutment placement.
- Twyford worksite, ref.: TW (see Plan 2 in Appendix A), where works activities included:
 - Embankment works including construction of landscape bund, reprofiling prism installations, construction of v-ditches and silt fencing installation.
 - Viaduct works including backfilling and blinding.
 - General site maintenance.
 - Site access and haul road operation and maintenance.
- West Street Overbridge worksite, ref.: WSO (see Plan 2 in Appendix A), where works activities included:
 - Soil filling and retention.
 - Formwork reinforced concrete works.
 - Parapet installation.
 - Drainage works.
 - Backfilling.
 - Surfacing works.
 - Utility diversion.
 - Installation of protection slabs.
- Calvert worksite, ref.: CAL (see Plan 3 in Appendix A) where works activities included:
 - Formwork reinforced concrete works.
 - Beam installation.
 - Diversion works.
 - Batching plant operation including production of concrete and cement.
 - Material movements.

- Drainage works.
- Woodlands worksite, ref.: WDL (see Plan 4 in Appendix A) where works activities included:
 - Technical backfill.
 - Stabilisation works.
 - Material movements.
- Quainton worksite, ref.: QAR (see Plan 4 in Appendix A) where works activities included:
 - Earthworks.
 - Embankment filling.
 - Utility 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 repairs.

- Earthworks.
- Risborough Road worksite, ref.: RR (see Plan 6 in Appendix A), where works activities included:
 - Relief road construction.
 - Utility diversions.
 - Underpass construction.
- Nash Lee Lane worksite, ref.: NLL (see Plan 6 in Appendix A), where works activities included:
 - Shutter installation.
 - Pouring of protection slabs.
 - Civilising works.
 - Pouring of walls.
 - Repairing of overbridge plinths.
 - Ring installation.
 - Headwall base works including excavation, stoning and concrete pours.
 - Steel assembly.
- Wendover Green Tunnel worksite, ref.: WGT (see Plan 7 in Appendix A), where works activities included:
 - Diversion reinstatement works including installation of drainage, protection slabs, backfilling, tarmacking, white lining and signage.
 - Construction of platforms.
 - Wall installation.
 - Demobilisation works.
 - Capping.
 - Material movements.
 - Construction of site access road.
 - Batching plant operation.
 - Installation of pre-cast segments.
 - Laying of tarmac.

- Dewatering and discharge.
- Waterproofing.
- Tunnel bore machine drive.
- Installation of rail.
- Excavation.
- Rocky Lane Embankment worksite, ref.: RLE (see Plan 7 in Appendix A), where works activities included:
 - Underbridge construction.
 - Installation of road furniture.
 - Maintenance of attenuation pond.
 - Road surfacing and finishing works.
- Wendover Dean Viaduct worksite, ref.: WDV (see Plan 7 in Appendix A), where works activities included:
 - Striking.
 - Propping installation.
 - Deck pours including reinforcement and 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.
- East West Rail Culvert where piling was underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks and drainage installation were underway.
- MCJ where backfilling was underway.
- Bat Mitigation Structure where formwork reinforced concrete works and technical backfill were underway.
- Greatmoor Culverts where formwork reinforced concrete works, drainage and backfilling were underway.
- CAG 2 Underbridge where formwork reinforced concrete works, drainage and backfilling were underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where technical backfilling was underway.
- QUA36 Overbridge where embankment works, formwork reinforced concrete works and drainage works were underway.
- QUA26 and QUA28 where formwork reinforced concrete works, approach works and technical backfilling were underway.
- Doddershall Culverts where landscape bunding was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Edgcott Road Overbridge where road realignment works, installation of panels and plinth repair works were underway.
- SLC/13 Overbridge where formwork reinforced concrete works, arch installation and technical backfilling were underway.
- Station Road Overbridge where formwork reinforced concrete was underway.
- Culvert No7 where dig and replace and installation of culvert units were underway.
- Culvert No3 where working platform construction was 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 pouring of the robust, backfilling, concrete pouring, drainage, scaffold installation and removal, steel installation, lifting operations, rebar removal and installation, black jacking were underway.
- Nash Lee Road Diversion where material movements including earthworks 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-four (34) noise and seven (7) vibration monitoring installations were active in August in the BS area. Table 2 summarises the location of noise and vibration monitoring installations within the BS area in August 2025.

1.2.2 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
	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	Woodlands Cottages, Quainton

Worksite Reference	Measurement Reference	Address
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
	WT-NMP1	A413, 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
	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
CVV*	CVV-NMP1	Northern boundary, Load Test Pile 1 Worksite, Denham Water Ski Club

* This worksite is within the London Borough of Hillingdon, for more details on the works taking place please refer to the London Borough of Hillingdon Noise and Vibration Report available at: <https://www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2>

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	55.3 (59.2)	53.9 (56.5)	50.3 (54.4)	47.3 (48.8)	46.3 (50.6)	49.2 (51.5)	51.8 (54.5)	52.1 (55.2)	49.8 (57.1)	45.1 (49.6)	48.2 (52.1)	46.4 (48.4)
SE	SE-NMP1	School End, Chetwode	Free-field	53.0 (56.4)	55.8 (60.6)	44.6 (50.8)	39.1 (47.0)	36.2 (45.0)	48.7 (53.3)	50.4 (54.7)	53.6 (65.7)	45.5 (57.3)	34.9 (44.2)	44.3 (52.1)	35.1 (41.9)
HC	HC-NMP1	Hermitage, Chetwode	Free-field	52.5 (59.8)	57.2 (59.8)	46.8 (52.9)	41.2 (49.1)	38.2 (50.1)	49.7 (50.9)	52.4 (58.0)	54.1 (57.3)	48.0 (59.8)	37.1 (46.3)	47.4 (61.3)	38.5 (44.9)
TW	TW-NMP1	Twyford	Free-field	43.7 (47.4)	51.3 (65.0)	43.2 (47.2)	42.6 (54.3)	39.6 (45.9)	42.5 (45.5)	47.2 (49.9)	43.5 (44.8)	42.8 (45.4)	39.0 (41.9)	43.3 (49.4)	39.3 (44.7)
WSO	WSO-NMP1	West Street, Twyford	Free-field	46.8 (58.1)	48.4 (55.3)	41.9 (46.8)	39.3 (48.0)	38.1 (56.0)	43.2 (47.7)	43.9 (46.9)	43.6 (49.9)	42.7 (52.2)	39.8 (55.3)	43.2 (53.0)	35.3 (43.3)
CAL	SHC-NMP1	School Hill Compound, Calvert	Free-field	52.1 (56.9)	57.5 (63.6)	50.5 (59.2)	48.1 (61.4)	44.6 (58.7)	45.9 (49.3)	57.0 (61.3)	56.0 (66.3)	52.3 (64.2)	39.1 (50.4)	50.3 (63.3)	43.4 (55.0)
	FCC-NMP1	Calvert South	Free-field	48.1 (51.9)	50.8 (64.7)	41.1 (46.5)	39.1 (46.0)	36.9 (45.5)	45.5 (53.1)	46.6 (47.8)	46.3 (49.8)	43.5 (50.0)	35.7 (39.8)	43.1 (50.4)	36.5 (41.8)
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Free-field	63.6 (69.6)	68.1 (75.5)	47.5 (60.3)	42.1 (54.2)	43.2 (54.0)	50.6 (56.5)	58.3 (72.4)	56.6 (77.0)	57.5 (83.6)	43.0 (59.8)	50.8 (63.0)	42.4 (50.0)

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	44.7 (57.2)	60.7 (74.0)	45.9 (58.9)	41.4 (56.2)	37.8 (59.1)	39.8 (41.2)	56.4 (62.6)	58.3 (67.5)	53.1 (64.8)	37.4 (59.5)	53.8 (69.5)	36.0 (43.7)
	LSF-NMP1	Upper South Farm	Free-field	54.2 (61.4)	57.9 (66.2)	43.5 (54.1)	39.3 (48.0)	36.4 (52.6)	43.6 (44.5)	51.2 (59.8)	50.6 (62.4)	49.0 (66.1)	36.3 (46.9)	48.8 (63.2)	37.0 (44.6)
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Free-field	48.7 (55.3)	55.3 (67.4)	43.7 (57.1)	40.4 (45.0)	39.1 (60.6)	42.4 (45.1)	48.6 (54.3)	43.7 (47.4)	44.9 (55.9)	37.4 (43.9)	44.0 (52.3)	38.4 (46.7)
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	Free-field	43.8 (51.3)	50.2 (72.9)	42.1 (50.4)	41.9 (50.5)	38.0 (47.3)	41.7 (45.8)	44.0 (45.8)	43.3 (46.1)	43.8 (51.5)	38.5 (48.1)	42.4 (47.9)	38.4 (47.2)
GC	GC-NMP1	Aylesbury, Buckinghamshire	Free-field	45.1 (54.6)	56.9 (65.4)	43.4 (49.6)	41.3 (57.0)	37.6 (49.1)	42.7 (45.8)	47.9 (52.0)	48.2 (51.4)	44.3 (51.3)	37.8 (49.3)	45.8 (51.1)	37.6 (45.7)
OC	MF-NMP1	Aylesbury, Buckinghamshire	Free-field	55.1 (61.4)	58.9 (64.8)	46.7 (54.2)	40.0 (50.4)	36.7 (50.8)	46.5 (50.3)	48.7 (54.1)	45.5 (48.8)	48.5 (71.0)	36.8 (46.5)	43.7 (50.7)	36.3 (43.1)
RR	RR-NMP1	Stoke Mandeville, Aylesbury	Free-field	48.8 (54.7)	52.1 (55.7)	49.3 (54.8)	45.0 (54.6)	41.5 (52.0)	46.6 (49.0)	51.0 (54.3)	48.7 (51.3)	47.9 (54.1)	41.2 (49.1)	48.4 (55.7)	41.3 (51.8)

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	50.9 (63.7)	55.6 (70.0)	50.1 (53.8)	45.6 (56.3)	42.2 (54.1)	44.6 (47.5)	46.2 (48.8)	46.8 (49.9)	46.3 (52.2)	41.9 (48.2)	47.1 (51.4)	44.4 (53.1)
WGT	ER-NMP1	Ellesborough Rd, Wendover	Free-field	55.0 (59.4)	54.5 (58.1)	54.4 (57.1)	52.1 (56.2)	49.5 (57.1)	52.1 (52.9)	53.6 (56.3)	53.8 (56.1)	52.6 (55.8)	48.5 (57.4)	51.8 (54.8)	48.2 (53.8)
	BL-NMP1	Bacombe Lane, Wendover	Free-field	45.8 (49.2)	48.2 (50.4)	44.2 (46.6)	42.5 (51.3)	39.4 (48.0)	42.9 (43.6)	47.0 (47.9)	46.3 (48.6)	43.7 (48.7)	38.6 (45.2)	45.4 (50.2)	39.4 (46.4)
	WT-NMP1	A413, Wendover	Free-field	66.9 (76.4)	65.3 (66.9)	65.4 (66.6)	62.9 (69.0)	59.3 (67.1)	62.3 (63.9)	64.3 (64.8)	64.9 (65.9)	62.9 (64.5)	57.5 (61.2)	63.0 (69.2)	58.8 (66.0)
	WGT-NMP1	Wendover, Aylesbury	Free-field	50.7 (57.5)	51.7 (62.2)	51.6 (66.8)	49.0 (59.5)	45.6 (56.5)	48.7 (52.4)	49.7 (53.9)	51.8 (56.2)	48.0 (54.8)	44.0 (50.6)	47.3 (54.0)	43.7 (52.2)
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Free-field	52.9 (69.7)	58.4 (69.2)	49.2 (58.2)	45.7 (52.5)	43.2 (51.9)	45.9 (49.3)	57.2 (63.8)	53.3 (63.7)	51.7 (67.0)	42.1 (46.2)	47.9 (59.1)	42.7 (48.5)
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover	Free-field	53.0 (58.4)	55.8 (62.0)	47.6 (56.7)	44.8 (55.3)	43.0 (55.3)	45.4 (46.7)	48.5 (49.6)	48.2 (51.5)	47.2 (52.9)	41.0 (46.1)	46.4 (52.5)	42.5 (51.6)
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath	Free-field	43.3 (45.8)	58.5 (61.7)	53.5 (61.5)	42.9 (48.0)	36.6 (42.8)	41.9 (42.9)	52.9 (59.5)	54.7 (63.4)	51.7 (61.7)	36.2 (41.7)	45.7 (55.0)	38.3 (47.4)

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
	PKF-NMP1	Park Farm, South Heath	Free-field	45.1 (50.9)	51.1 (57.2)	49.6 (57.1)	45.6 (55.4)	39.7 (50.7)	44.2 (46.3)	48.1 (53.4)	50.9 (59.1)	48.6 (57.8)	39.2 (47.3)	47.5 (59.2)	39.8 (48.4)
NP	BFH-NMP1	Bury Farm, Great Missenden	Free-field	43.2 (65.0)	51.6 (60.2)	45.2 (53.5)	41.5 (54.2)	35.6 (44.8)	40.0 (43.2)	42.9 (45.9)	46.3 (50.3)	44.2 (49.4)	35.5 (41.6)	43.7 (51.8)	37.2 (46.6)
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath	Free-field	45.7 (51.2)	51.3 (54.9)	48.6 (56.9)	46.7 (57.1)	40.9 (54.9)	45.5 (51.3)	47.4 (48.6)	50.2 (54.5)	48.3 (54.4)	40.2 (44.9)	47.7 (56.6)	42.3 (52.0)
	BLH-NMP1	Bayleys Hatch, South Heath, Great Missenden	Free-field	43.9 (46.0)	49.5 63.7	46.6 (55.2)	44.1 (54.1)	37.0 (45.4)	41.4 (43.4)	45.2 (47.3)	47.0 (50.8)	45.3 (51.1)	36.7 (42.5)	45.4 (51.8)	37.9 (46.0)
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	Free-field	52.5 (54.6)	55.2 (58.6)	56.1 (64.6)	53.2 (57.9)	45.7 (52.6)	49.1 (50.0)	53.6 (54.3)	55.1 (55.8)	53.6 (57.1)	45.5 (50.0)	55.3 (73.1)	45.5 (50.1)
AM	AM-NMP1	Whielden Lane, Amersham	Free-field	59.0 (60.3)	64.0 (69.5)	62.1 (70.6)	58.7 (62.1)	52.8 (61.9)	55.5 (56.6)	61.0 (65.1)	60.0 (60.9)	58.4 (61.2)	52.8 (57.0)	58.2 (61.6)	52.6 (59.3)
LM	LM-NMP1	Little Missenden, A413, Amersham	Free-field	52.7 (54.5)	53.8 (58.2)	54.5 (58.2)	52.2 (56.4)	45.6 (55.5)	48.2 (49.8)	51.3 (53.9)	53.1 (55.8)	51.8 (54.2)	45.3 (50.3)	52.1 (56.8)	46.3 (50.5)
	PWC-NMP1	Patricia Holmes, LM Worksite, Amersham	Free-field	57.8 (58.9)	58.3 (60.1)	59.5 (62.2)	57.4 (60.7)	50.6 (56.5)	54.0 (55.2)	56.4 (57.9)	57.9 (59.5)	56.6 (58.8)	50.5 (54.6)	56.3 (59.9)	50.9 (55.6)

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
CSG	CSG-NMP1	CSG Worksite, Bottom House Farm Lane	Free-field	47.1 (58.1)	47.7 (52.9)	46.1 (54.4)	44.7 (55.3)	40.5 (60.6)	45.0 (47.0)	46.8 (47.8)	45.8 (47.1)	47.4 (60.4)	42.1 (57.4)	46.1 (52.0)	40.6 (53.0)
CSP	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite	Free-field	43.4 (46.0)	47.1 (53.8)	45.3 (50.0)	43.5 (50.8)	38.6 (46.9)	40.5 (42.7)	47.3 (49.8)	44.8 (47.9)	44.0 (48.6)	37.9 (44.2)	46.6 (52.3)	39.7 (45.9)
CVV	CVV-NMP1	Northern boundary, Load Test Pile 1 Worksite	Free-field	60.6 (62.0)	61.8 (65.8)	61.4 (66.9)	59.1 (71.2)	53.4 (61.3)	56.8 (57.4)	59.1 (59.7)	60.8 (63.8)	59.1 (62.0)	48.4 (56.1)	59.8 (69.3)	52.7 (57.8)

- 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	3.51 (Y-axis)
WDL	WDL-Vib1	Station Road, Quainton	1.45 (X-axis)
	WC-Vib1	Woodlands Cottages, Quainton	6.32 (Y-axis)
QAR	SR-Vib1	Station Road, Quainton	2.62 (X-axis)
CAL	BRA-Vib1	13 Brackley Lane, Calvert Village	1.40 (Y-axis)
WSO	PF-Vib1	Twyford, Buckinghamshire	1.71 (Y-axis)
WGT	ER-Vib1	46, Ellesborough Rd, Wendover	5.01 (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	Weekday	0800-1800	1	No exceedance
WSO	WSO-NMP1	West Street, Twyford	All days	All periods	No exceedance	No exceedance
CAL	SHC-NMP1	School Hill Compound, Calvert	All days	All periods	Not Applicable*	Not Applicable*
	FCC-NMP1	Calvert South	Weekday	0800-1800	1	No exceedance
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Weekday	0700-0800 0800-1800 1800-1900	17 20 1	1 3 No exceedance
			Saturday	0800-1300 1300-1400 1400-2200	1 2 10	No exceedance 1 5

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	8	1
			Saturday	1800-1900 1300-1400 1400-2200	1 3 9	No exceedance No exceedance 2
	LSF-NMP1	Upper South Farm	Weekday	0700-0800	1	No exceedance
			Saturday	0800-1800 1300-1400 1400-2200	2 2 5	No exceedance No exceedance 1
GC	GC-NMP1	Aylesbury, Buckinghamshire	Weekday	0800-1800	3	No exceedance
OC	MF-NMP1	Moat Farm, Marsh Lane	Weekday	0800-1800	1	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	Weekday Sunday Night	1900-2200 0700-2200 2200-0700	1 1 3	No exceedance No exceedance No exceedance
NLL	NLL-NMP2	Nash Lee Lane, Nash Lee	Weekday	0800-1800	1	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	Weekday Saturday	0800-1800 0800-1300	15 2	No exceedance No exceedance
	WGT-NMP1	Wendover, Aylesbury	All days	All periods	No exceedance	No exceedance
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Weekday Saturday	0800-1800 0800-1300	3 1	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	Weekday Saturday	1800-1900 1300-1400 1400-2200	7 3 8	No exceedance No exceedance No exceedance
	PKF-NMP1	Park Farm, South Heath	Saturday	1300-1400 1400-2200	1 4	No exceedance 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	Weekday	0800-1800	1	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	No exceedance	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

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
CVV	CVV-NMP1**	Denham Water Ski Club, North Orbital Road	All days	All periods	Not applicable*	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.

*** The LOAEL and SOAEL have not been assessed due to distance between monitoring station and nearest receptor.

2.2.6 There were exceedances of the LOAEL due to HS2 construction works at fifteen (15) monitoring locations during weekday, Saturday, Sunday and night periods.

2.2.7 There were exceedances of the SOAEL due to HS2 construction works at three (3) monitoring locations during weekday and Saturday periods.

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

Table 6: Summary of Total Exceedances of SOAEL

Worksite Reference	Measurement Reference	Monitor Address	Total of SOAEL exceedances in the month
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quanton	5
QAR	QAR-NMP2	Station Rd, Quanton	3
	LSF-NMP1	Upper South Farm	1

2.2.9 There were nine (9) 24-hour periods where the SOAEL was exceeded due to HS2 construction works during August 2025.

2.3 Exceedances of Trigger Level

- 2.3.1 Table 7 provides a summary of exceedances of the S61 trigger noise levels determined to be due to HS2 related construction noise measured during the reporting period, along with the findings of any investigation.

Table 7: Summary of Exceedances of Trigger Levels

Complaint Reference Number (if applicable)	Worksite Reference	Date and Time Period	Identified Source	Results of Investigation (including noise monitoring results)	Actions Taken
-	RLE	08/08/2025 0800-1800	Tarmacking works on Rocky Lane Permanent Diversion	69.2 dB LAeq10hr	A review of operations of tarmac machinery was conducted.

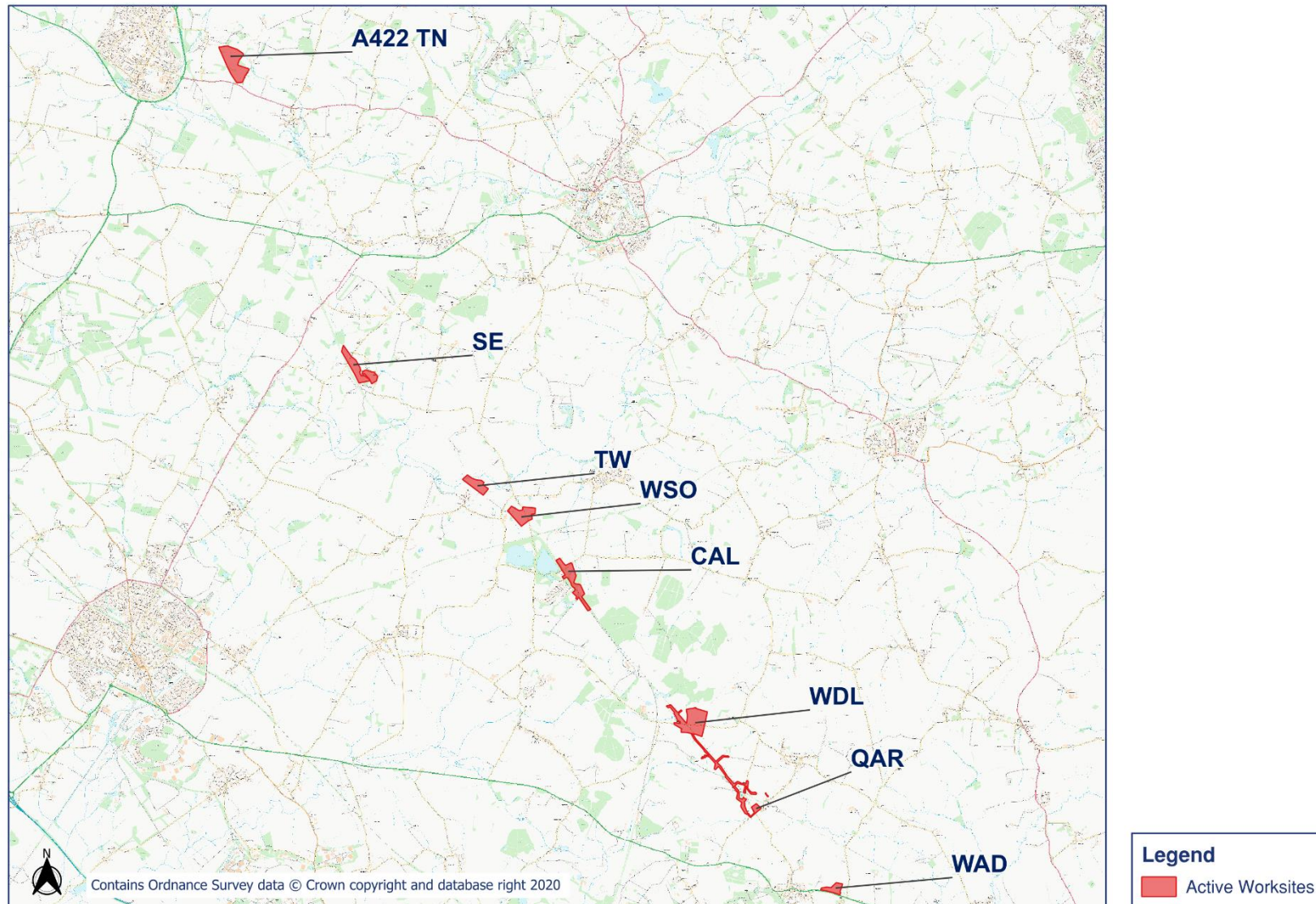
2.4 Complaints

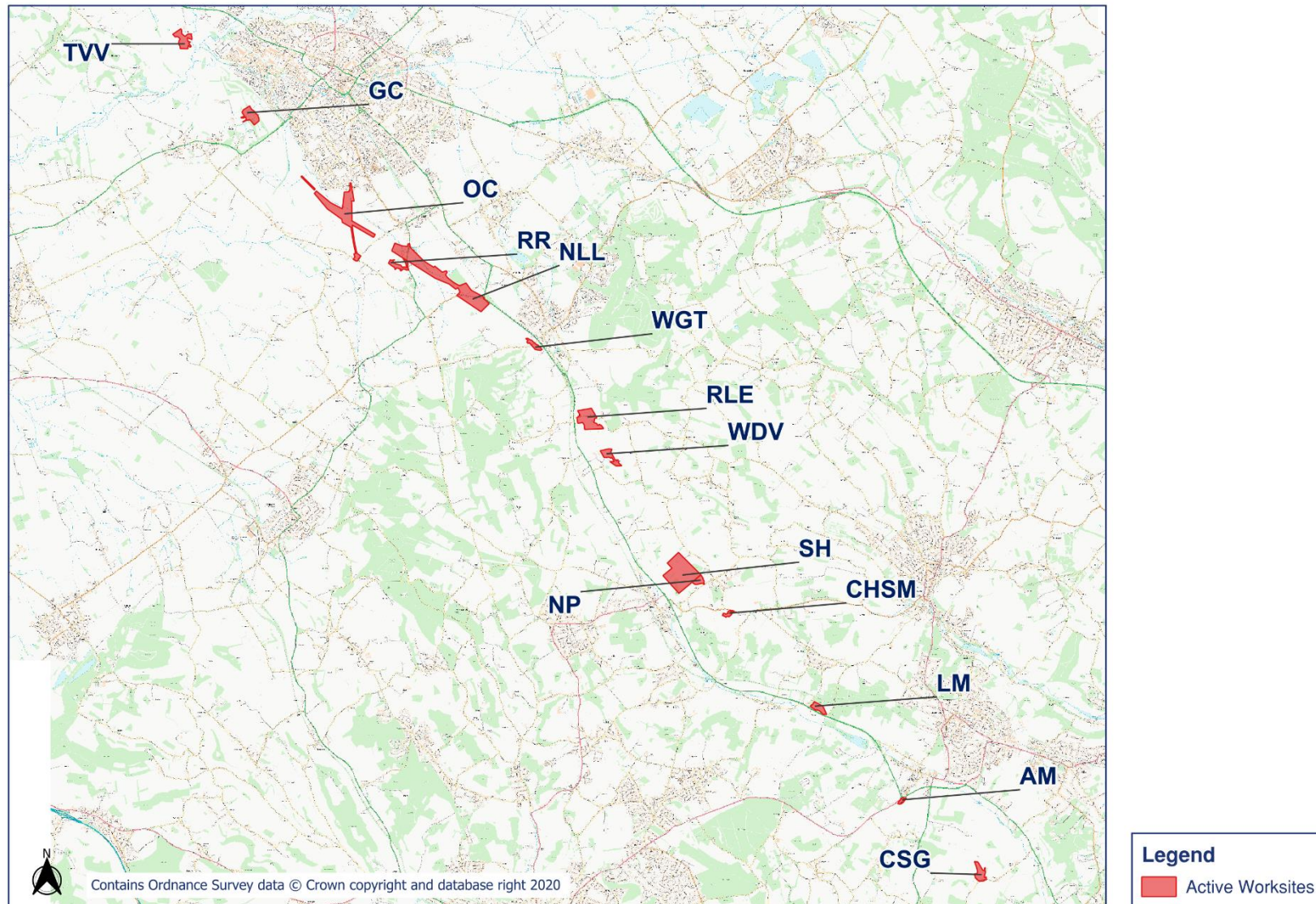
- 2.4.1 Table 8 provides a summary of complaint information related to noise and vibration received during the reporting period, along with the findings of any investigation.

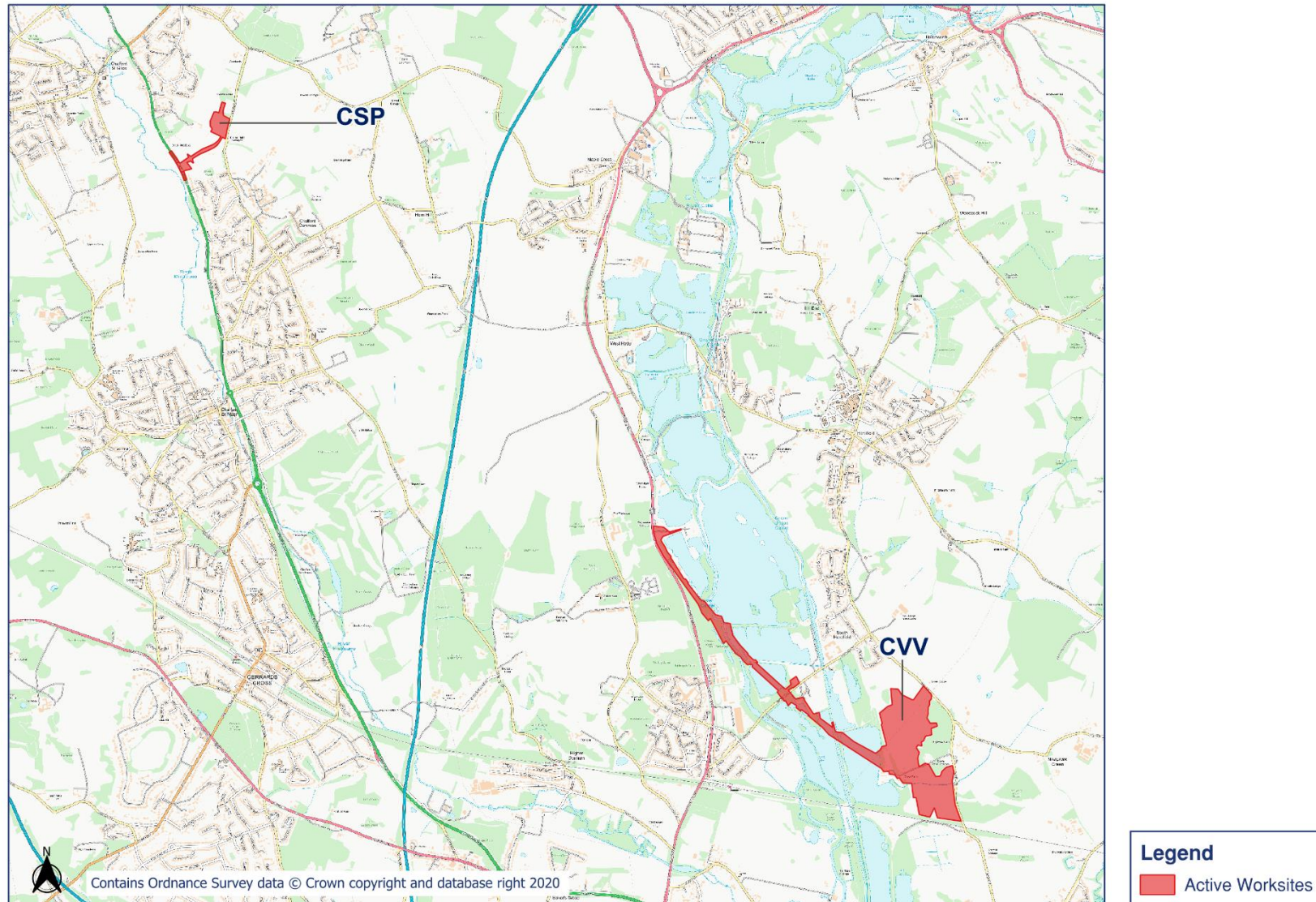
Table 8: Summary of Complaints

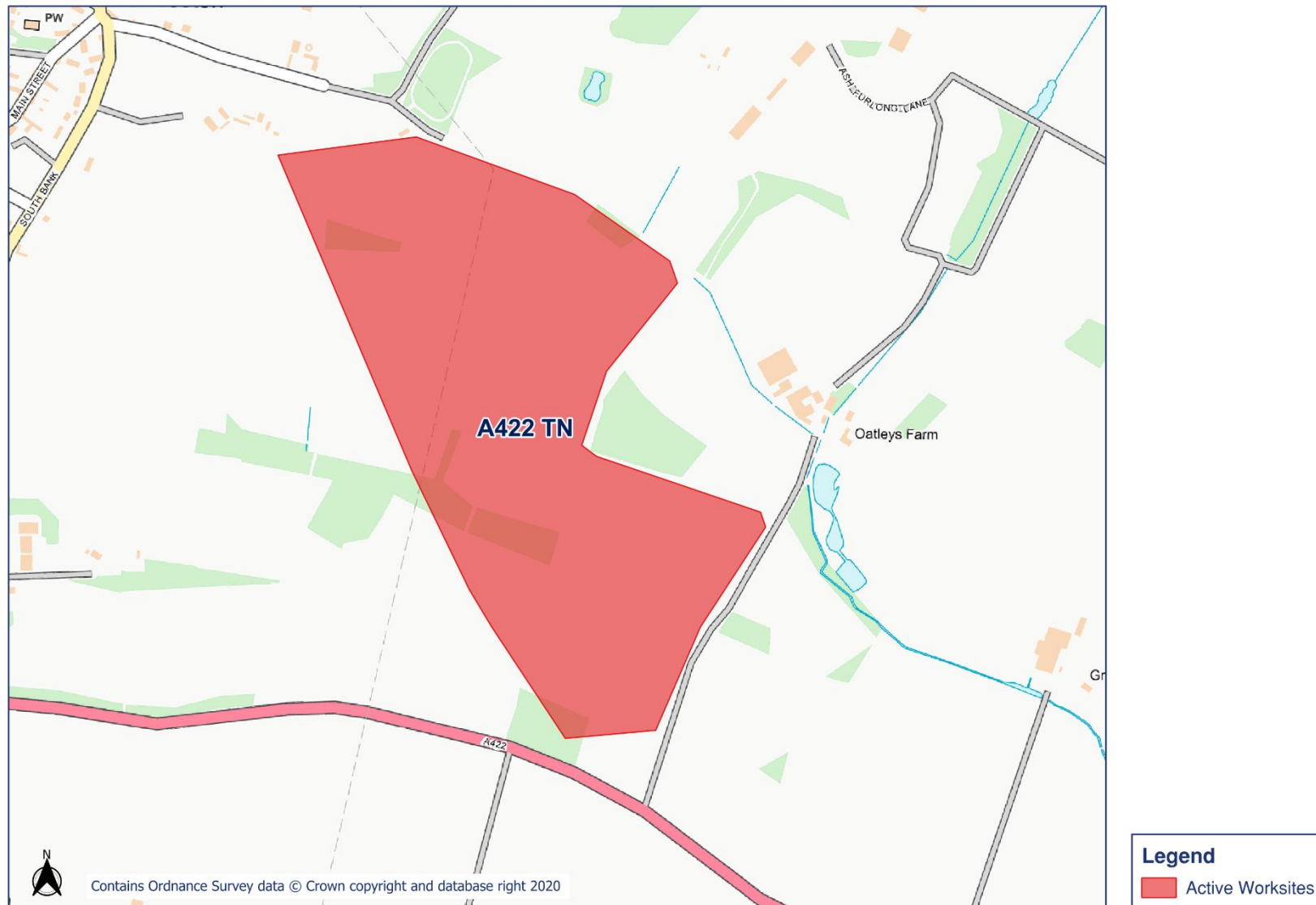
Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
HS2-25-125318-E-C	OC	Disturbance due to alarm noise.	HS2 works are a considerable distance from the resident and therefore the alarm sounding was not related to HS2 works.	Resident has been updated with the results of the investigation.

Appendix A Site Locations



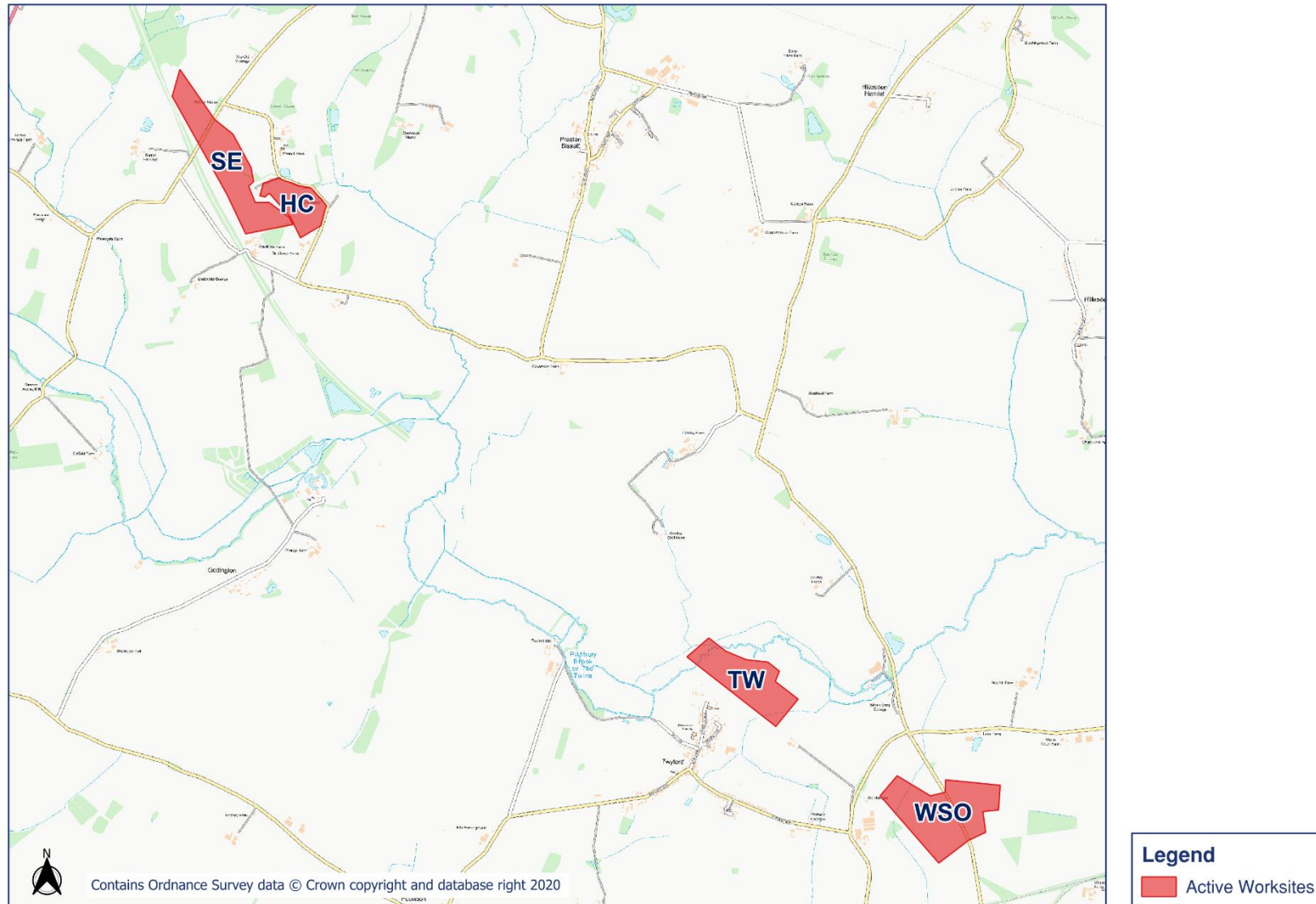


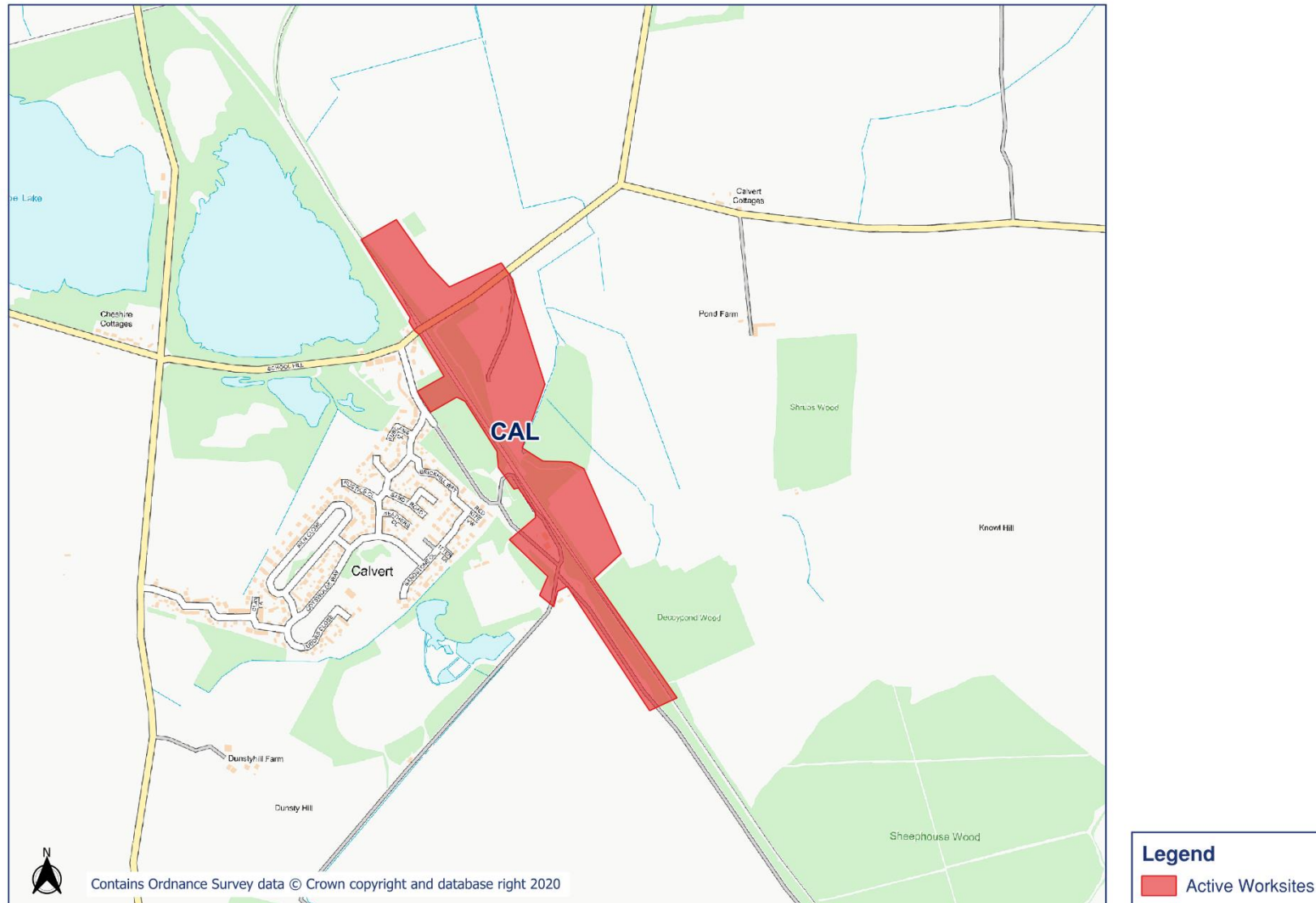




HS2

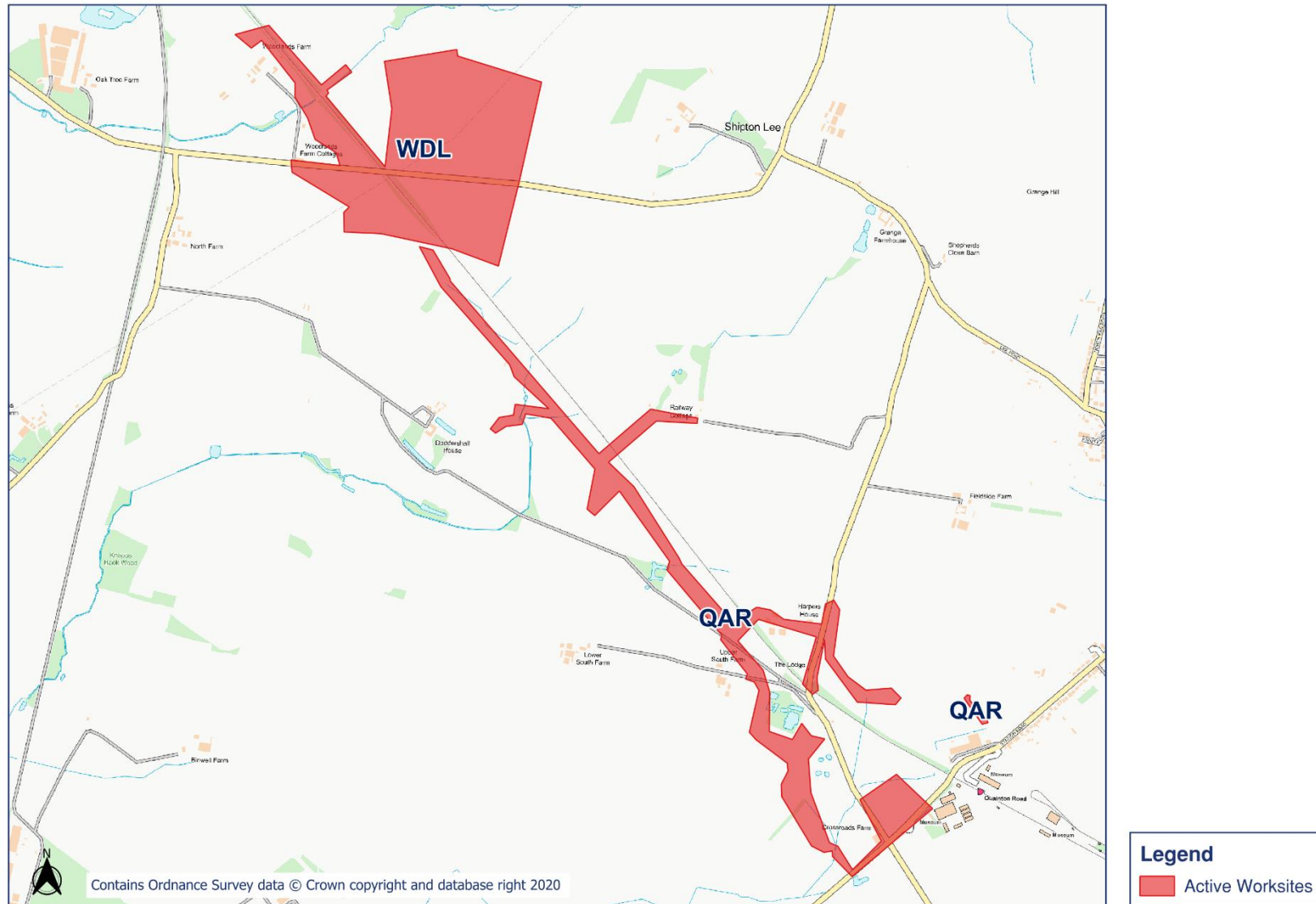
Worksite Identification Plan - 2

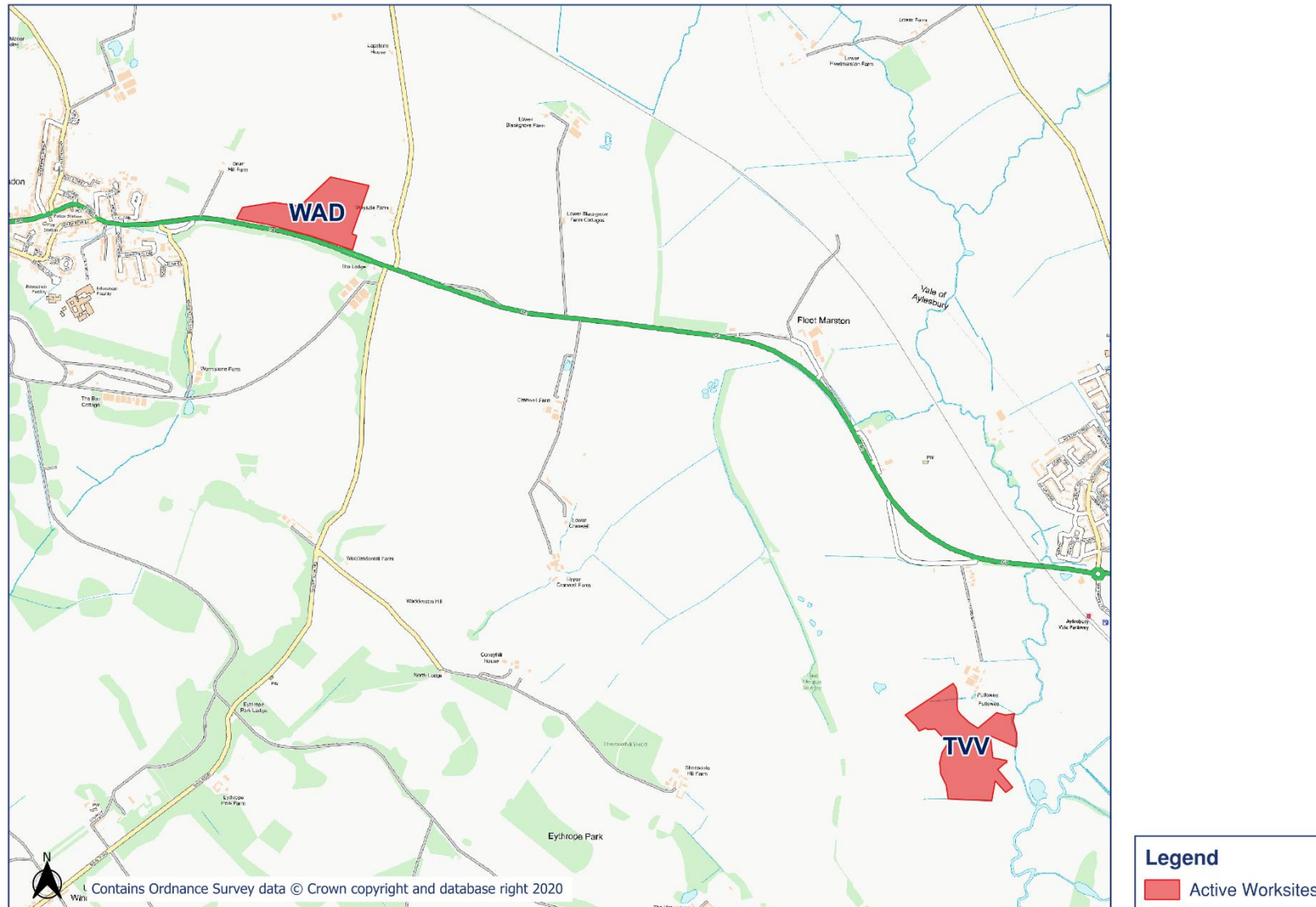




HS2

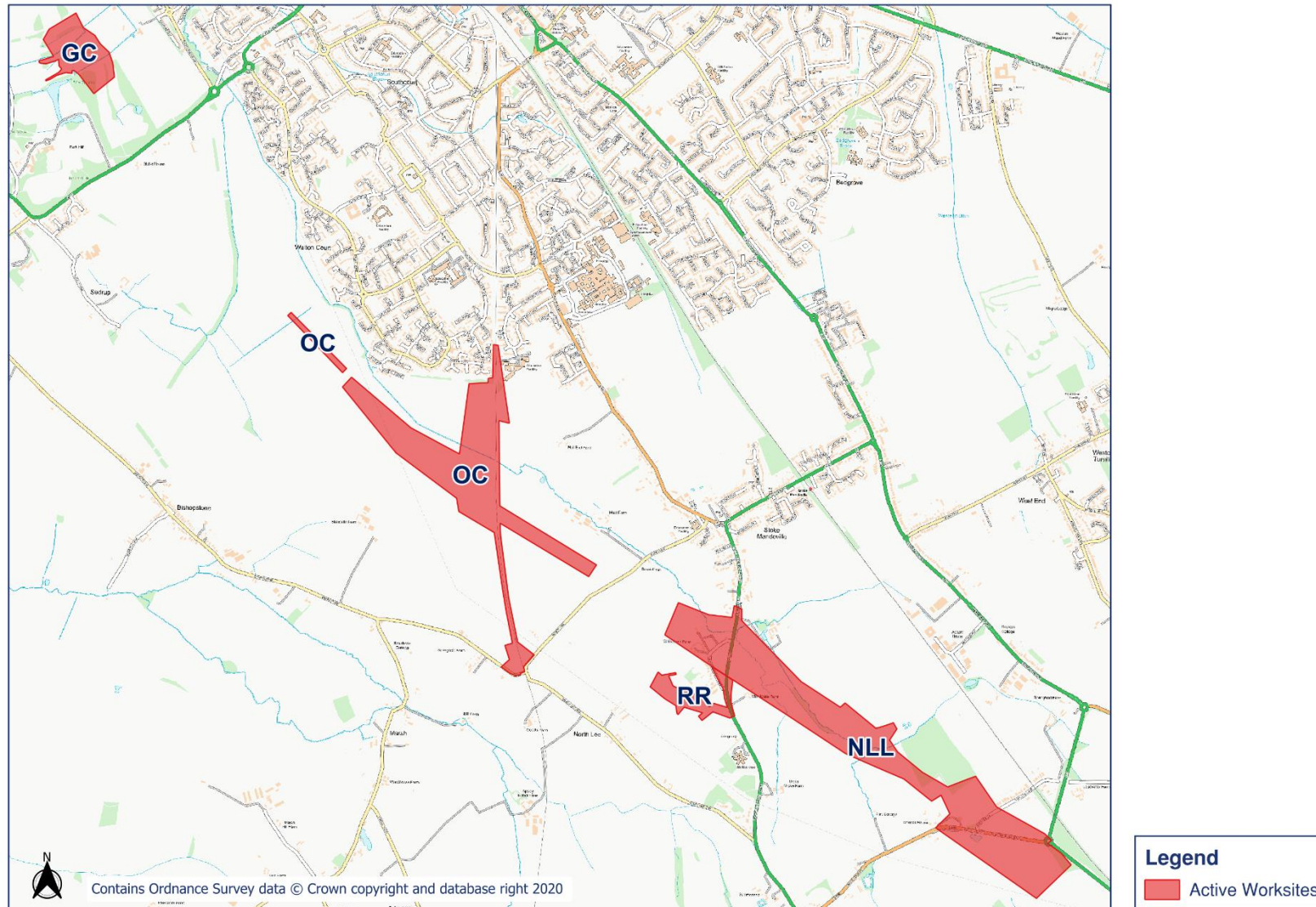
Worksite Identification Plan - 4





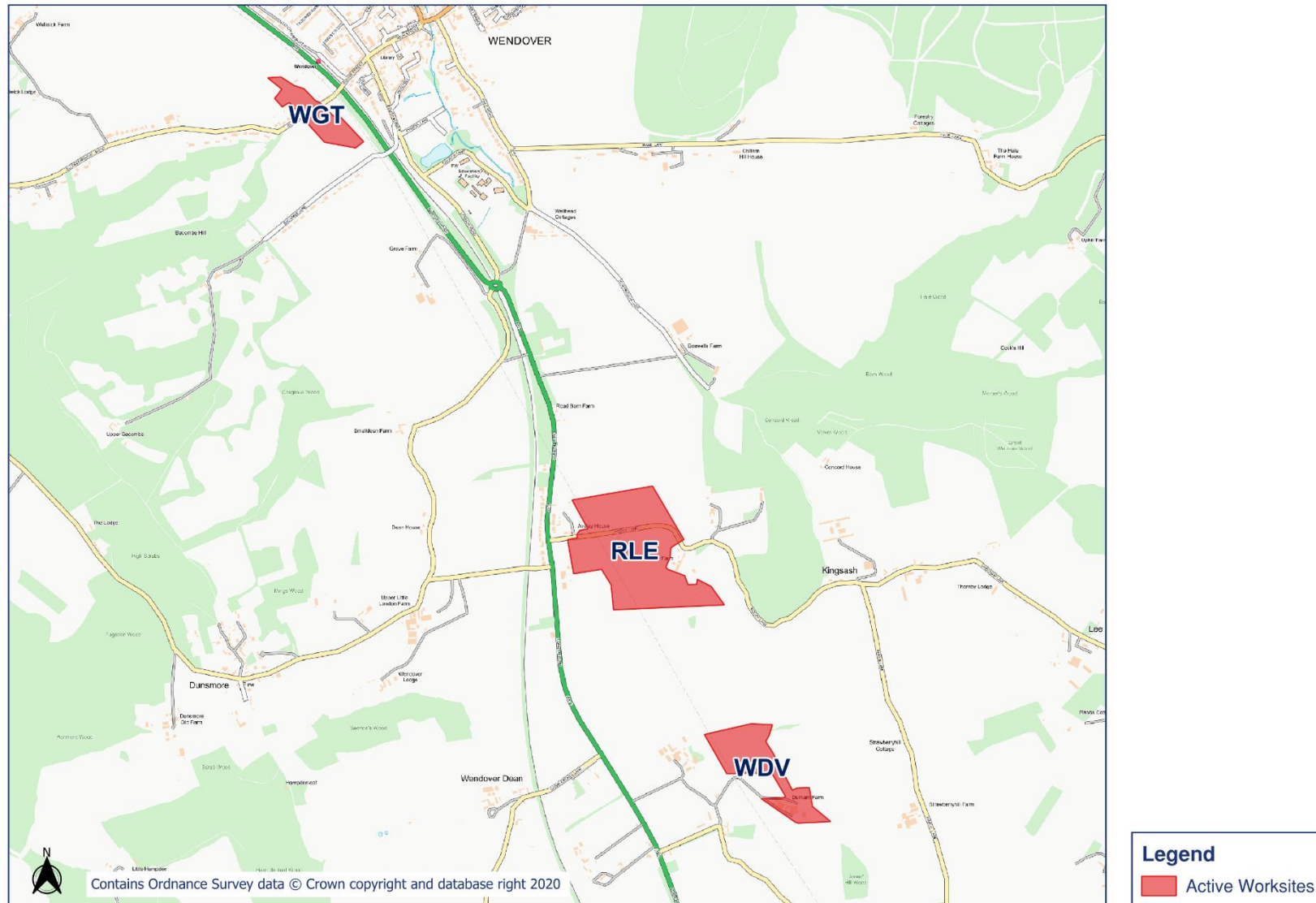
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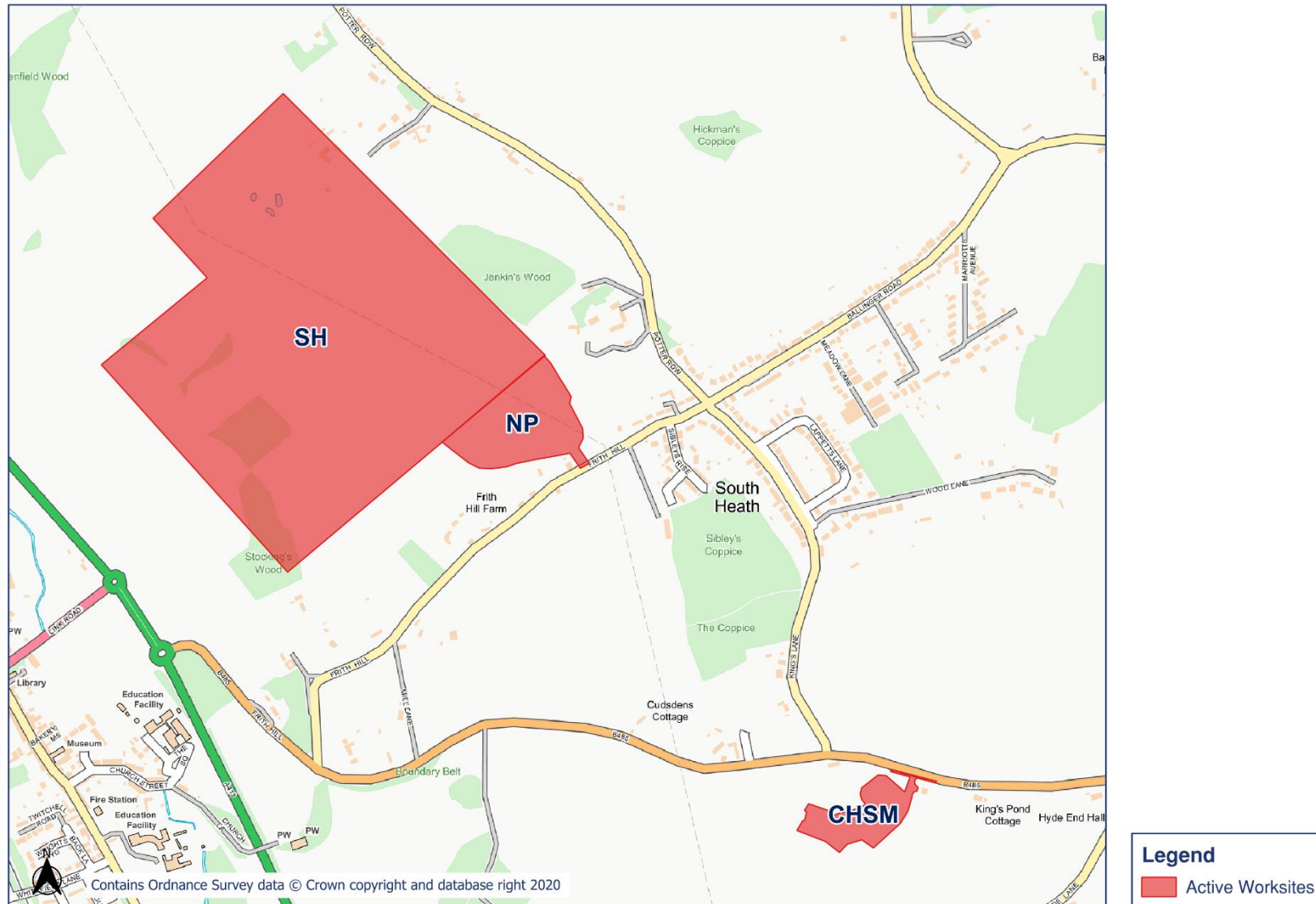
Worksite Identification Plan - 6



HS2

Worksite Identification Plan - 7

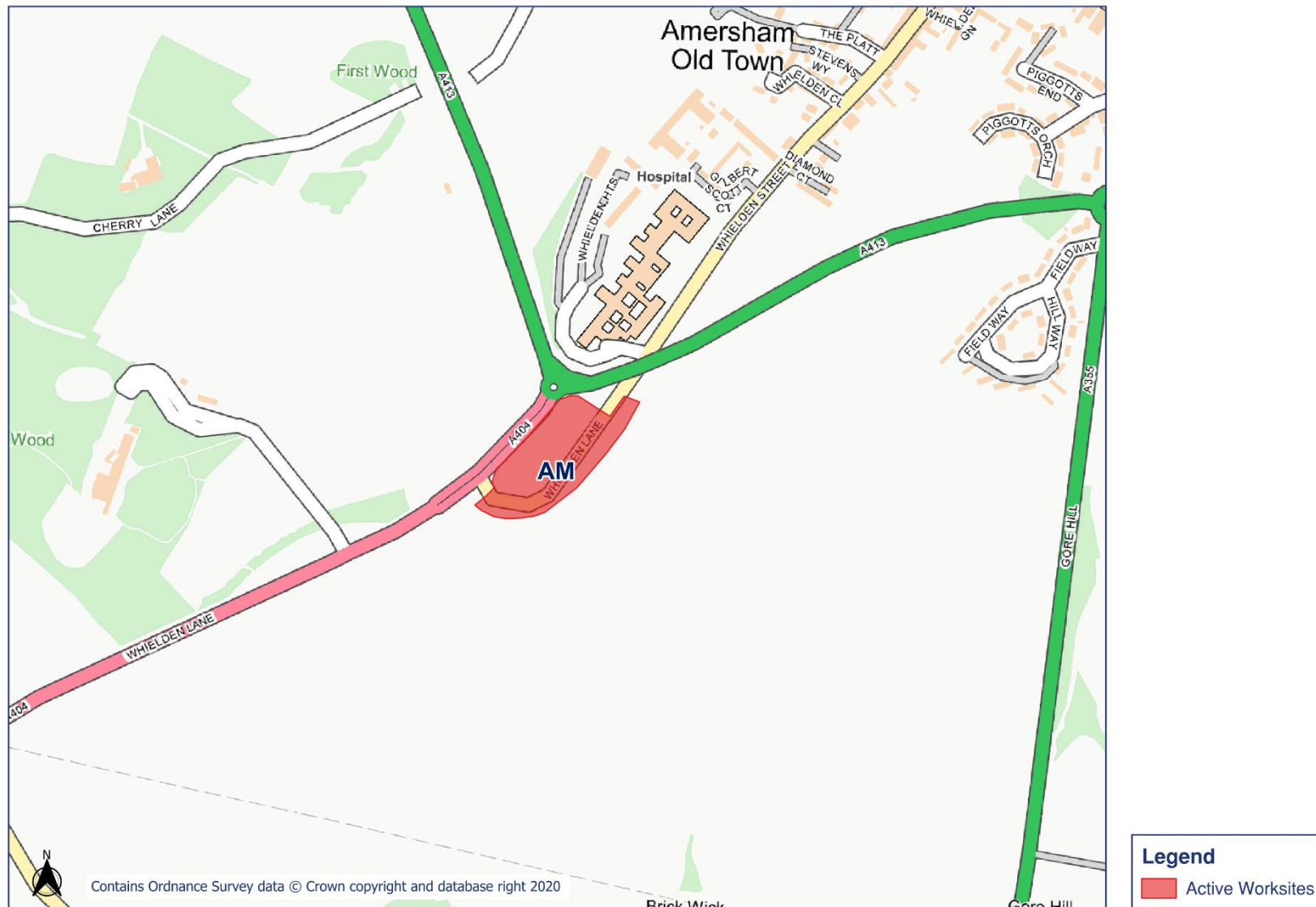






HS2

Worksite Identification Plan - 10

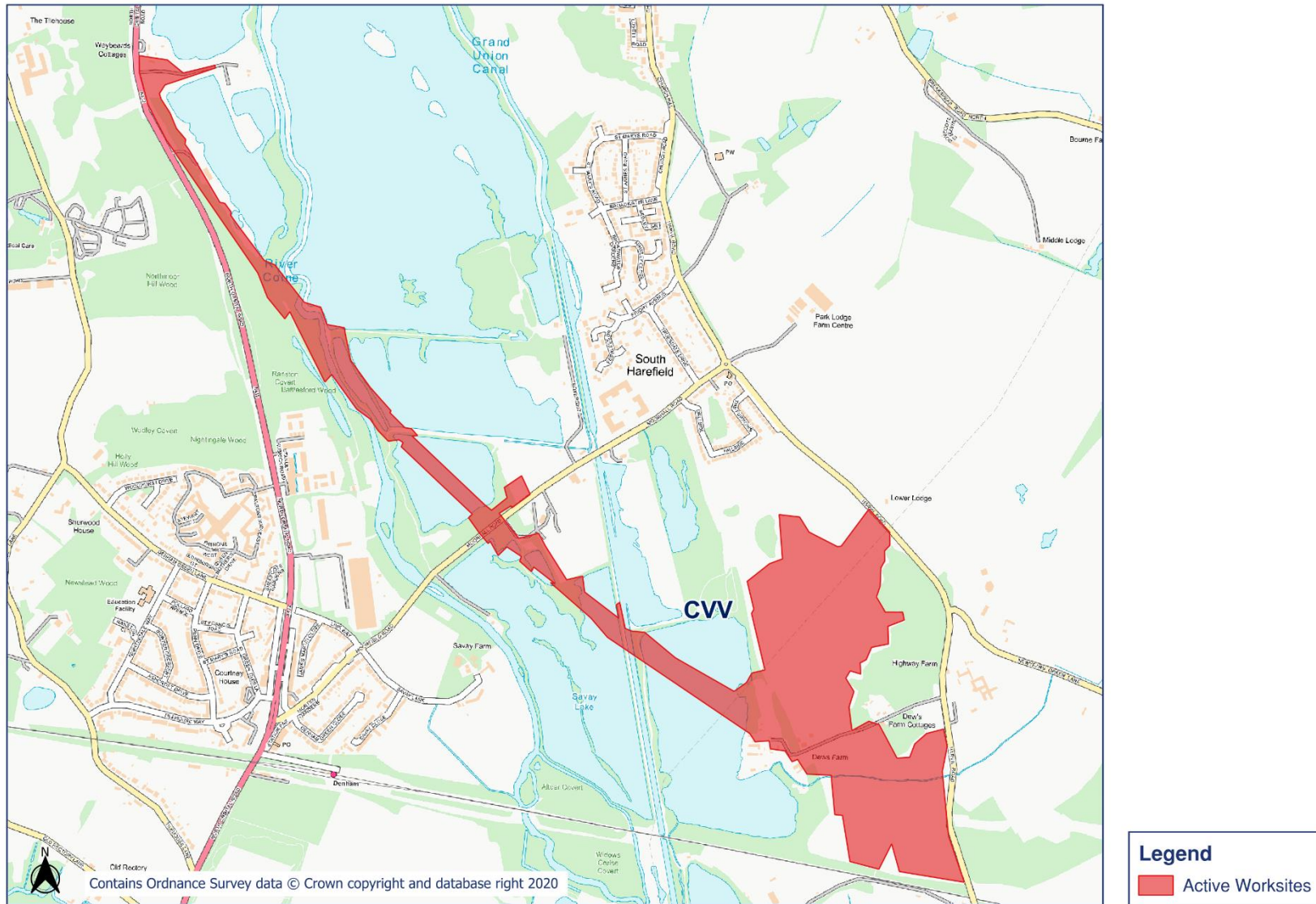




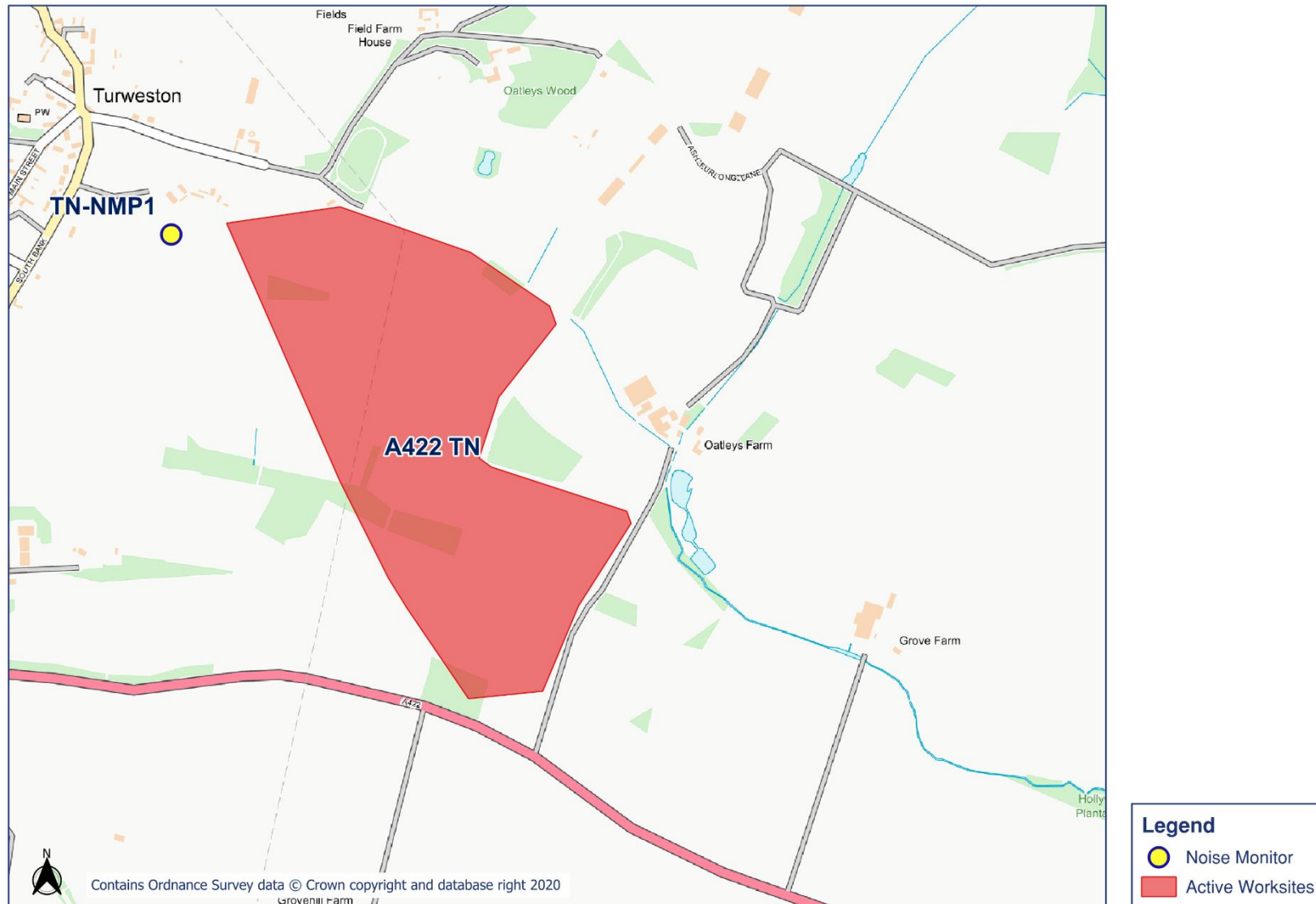


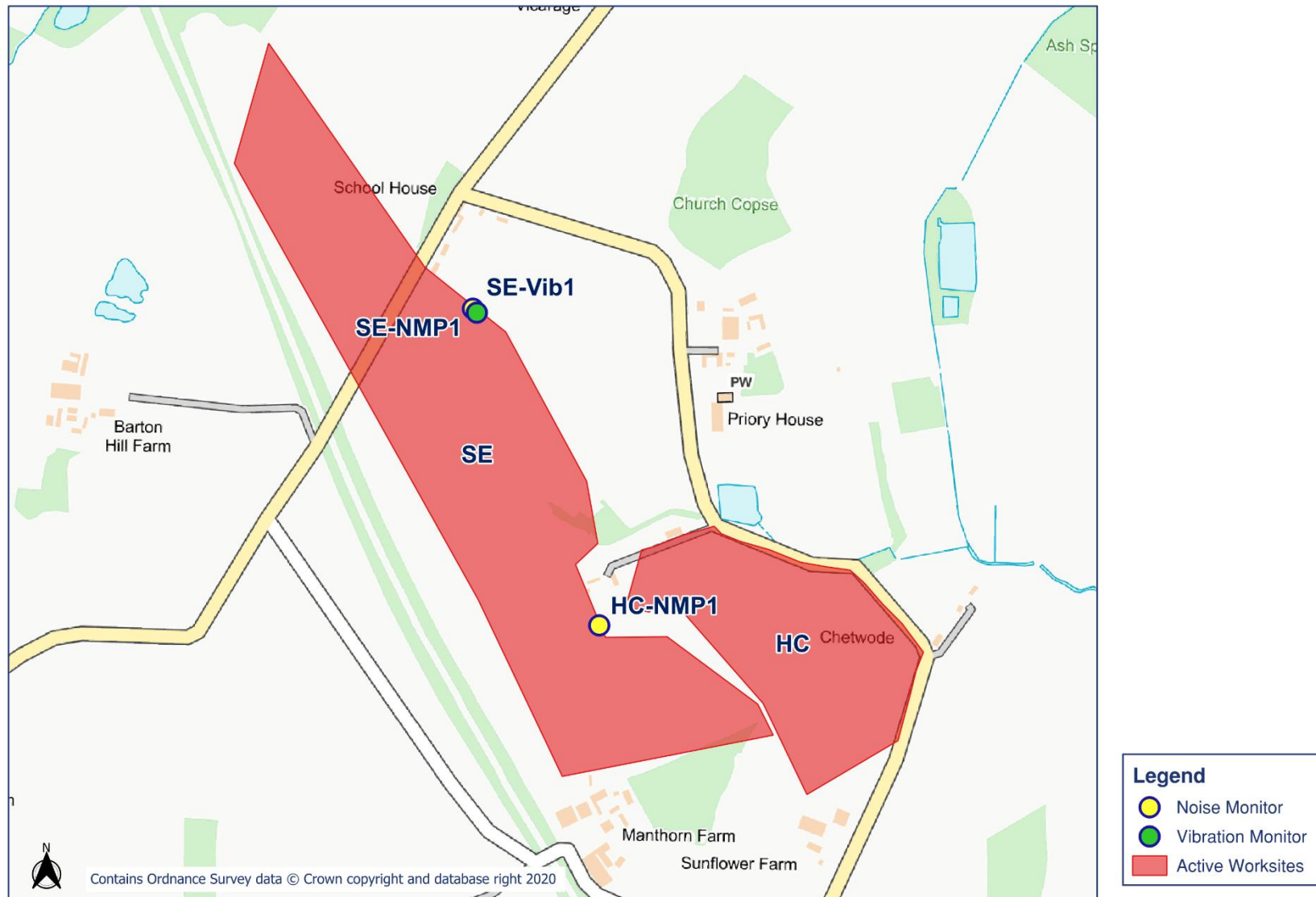
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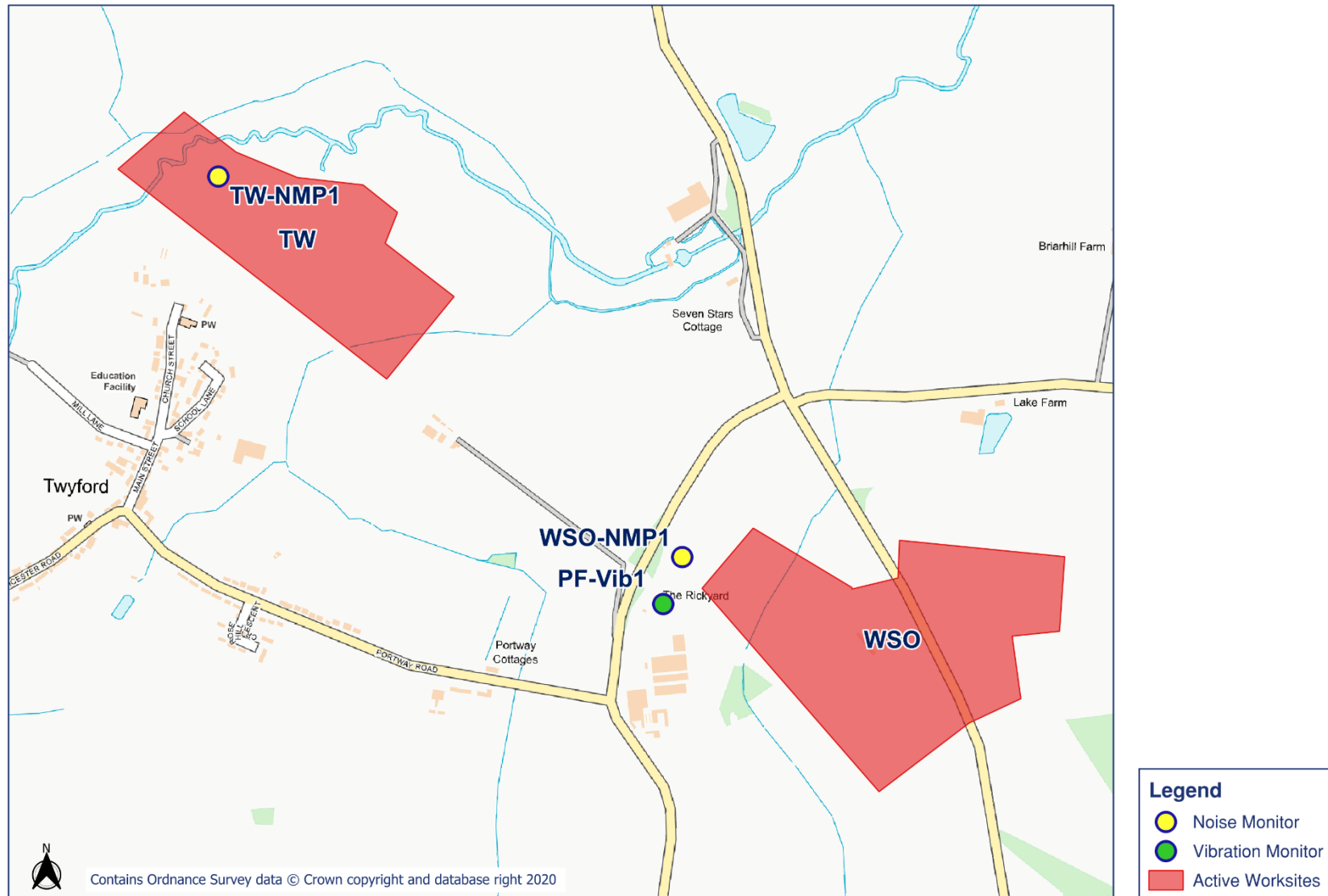
Worksite Identification Plan - 13

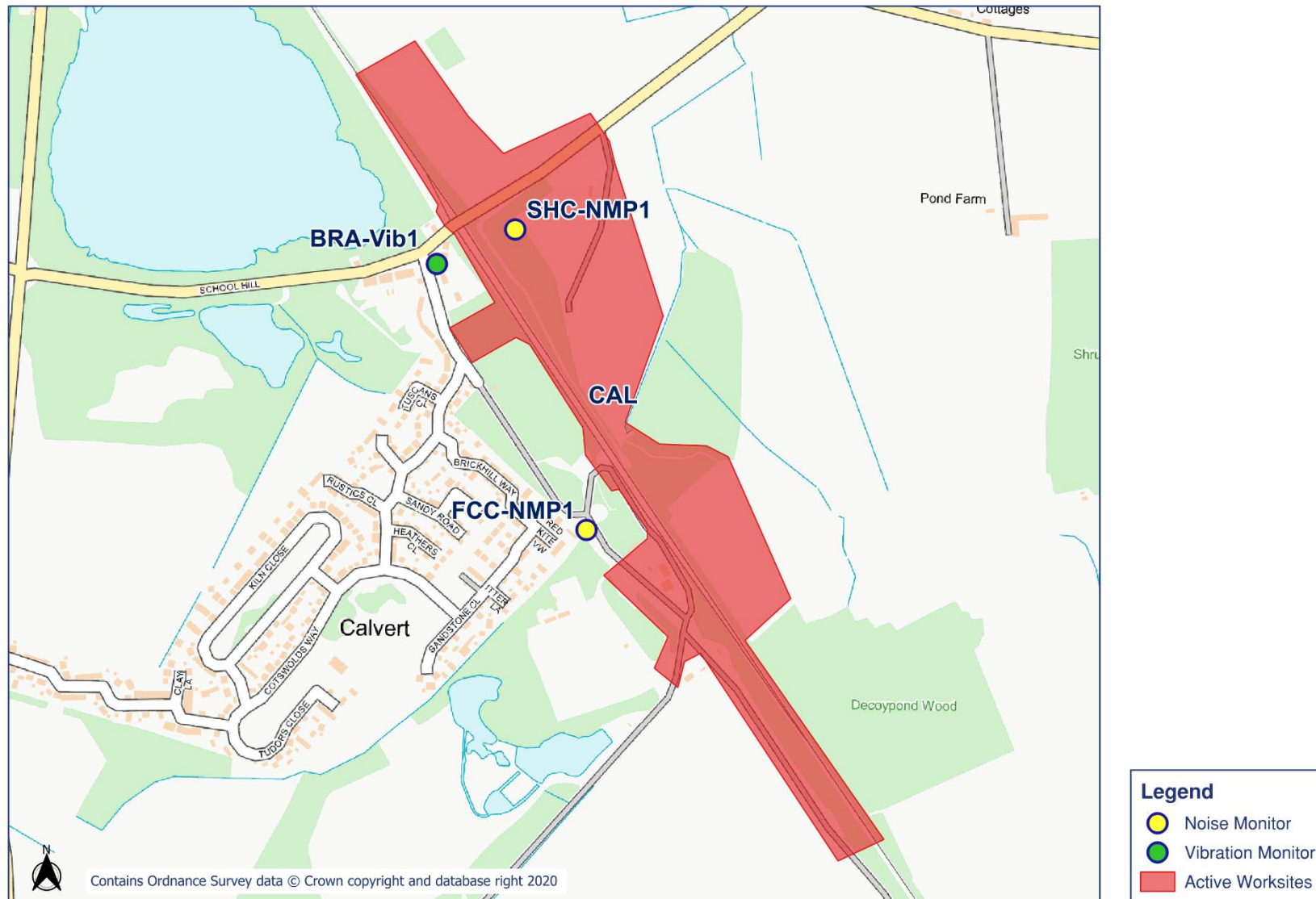


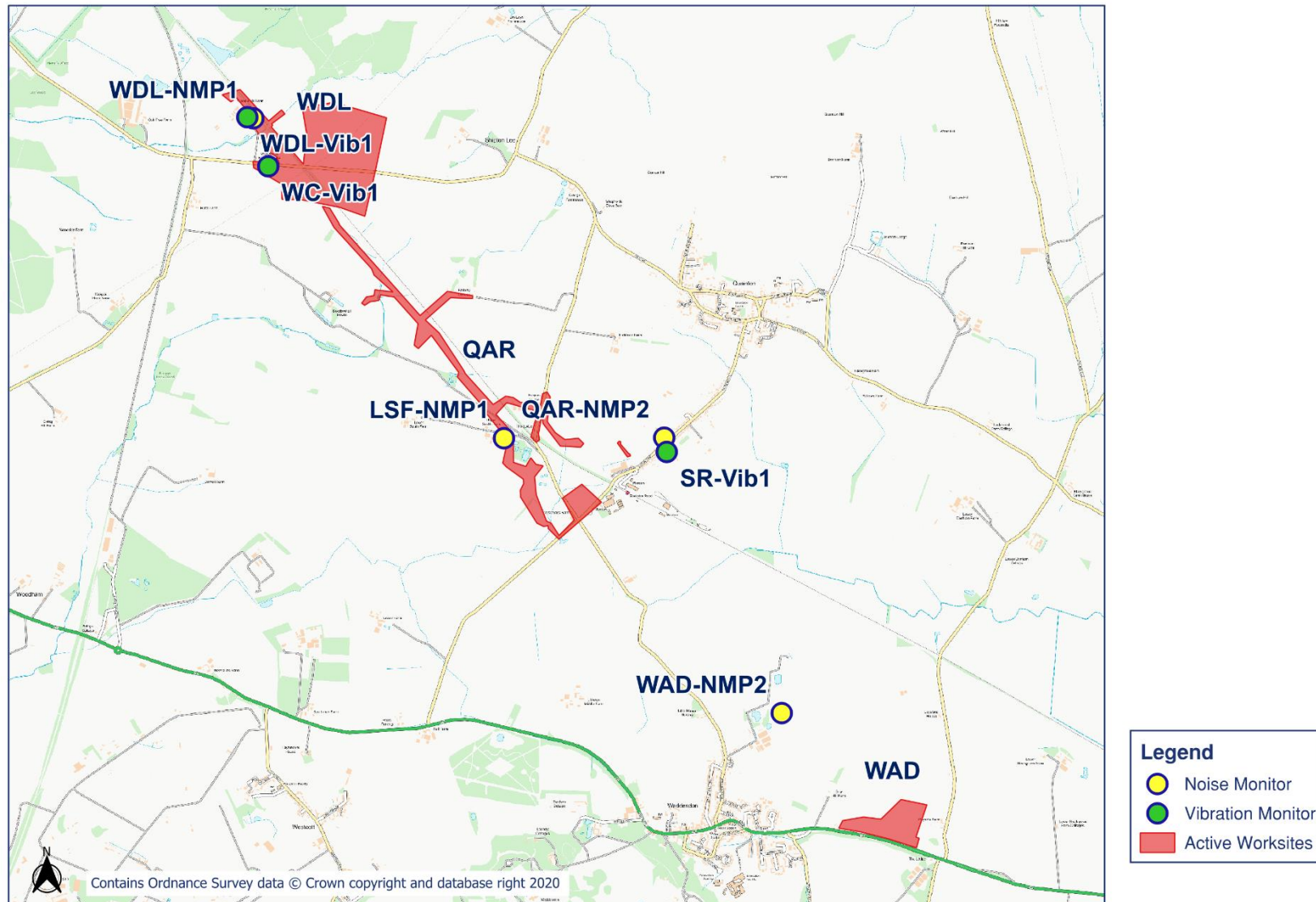
Appendix B Monitoring Locations

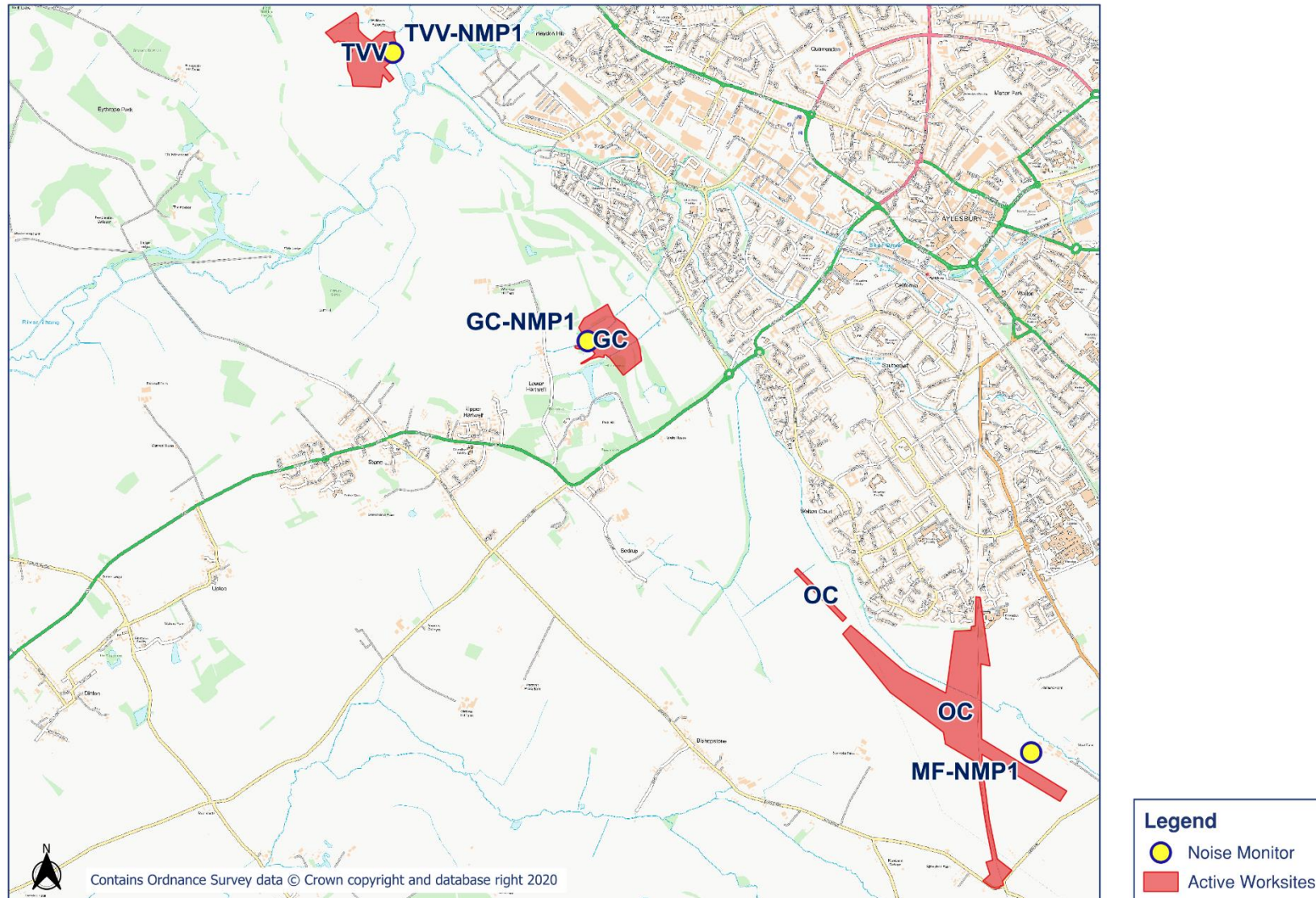






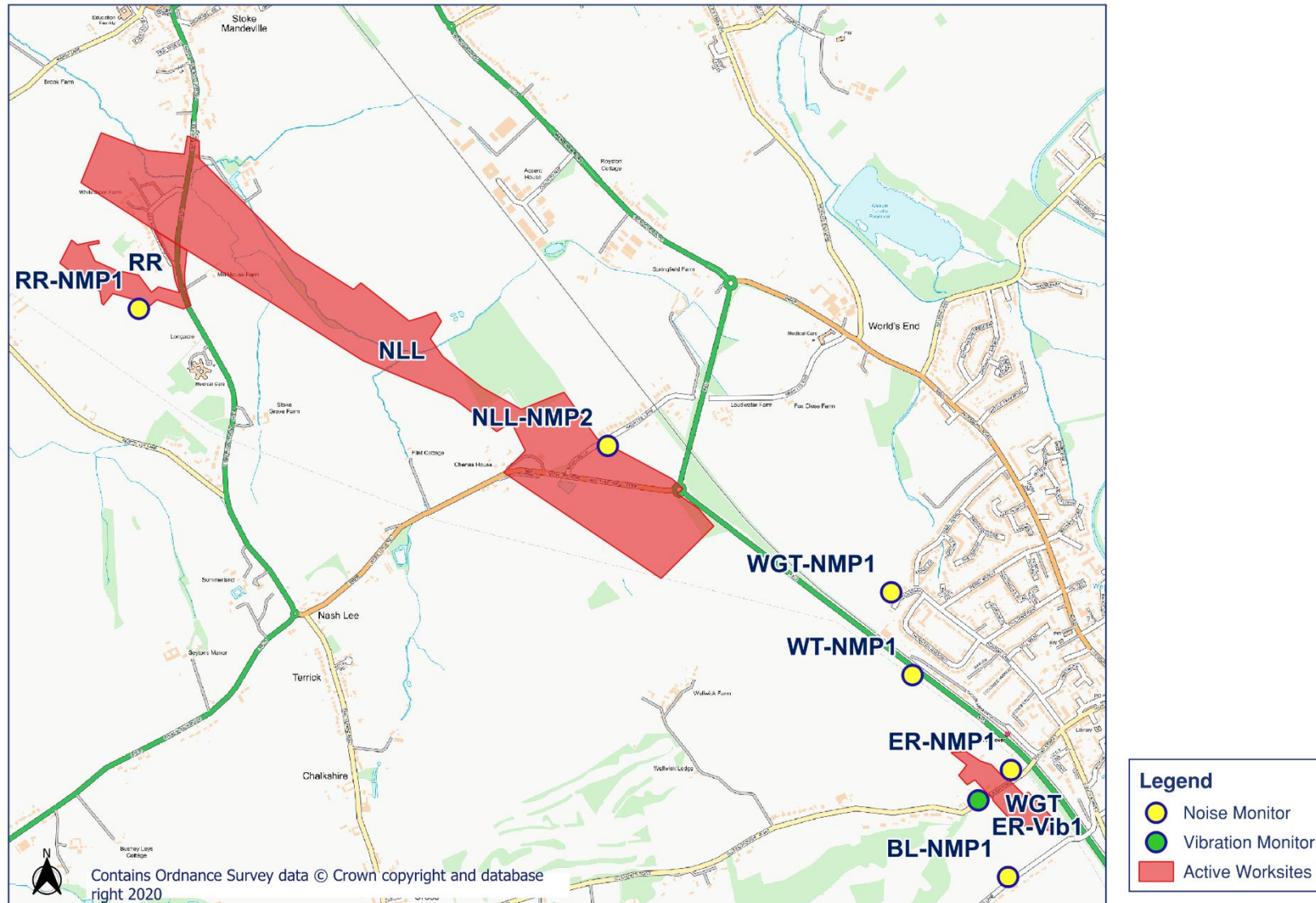


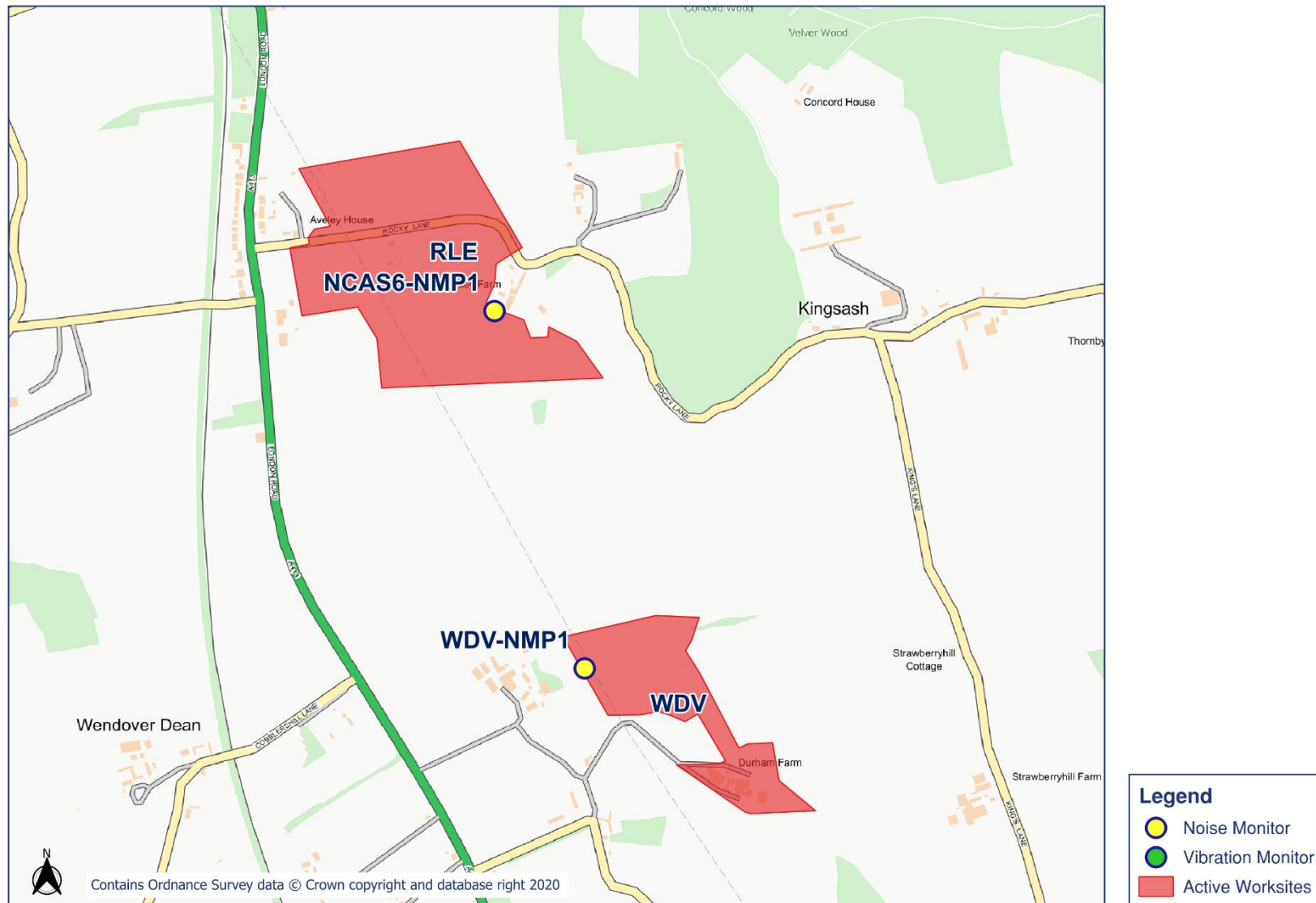




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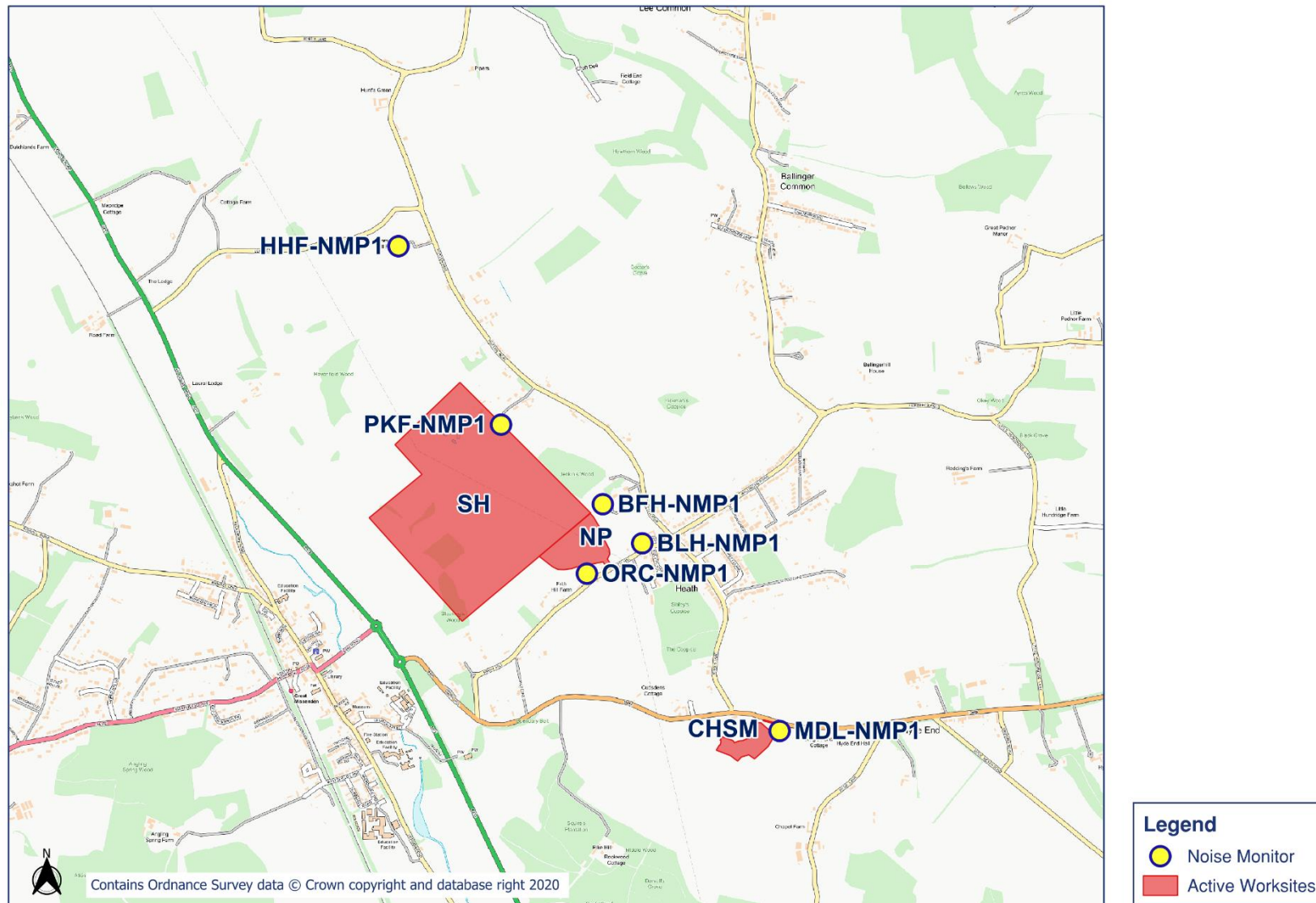
Noise and Vibration Monitoring Plan - 7





HS2

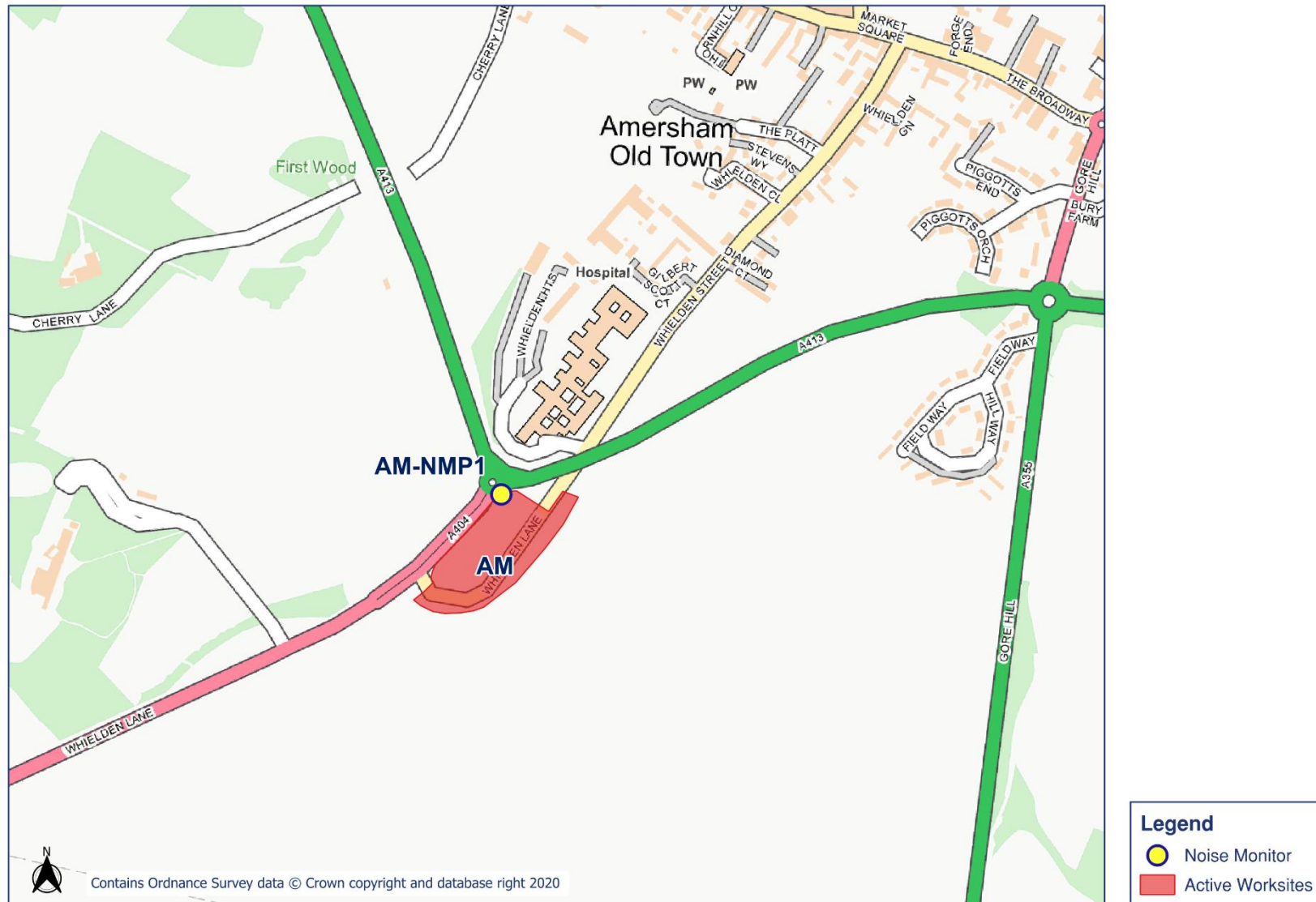
Noise and Vibration Monitoring Plan - 9

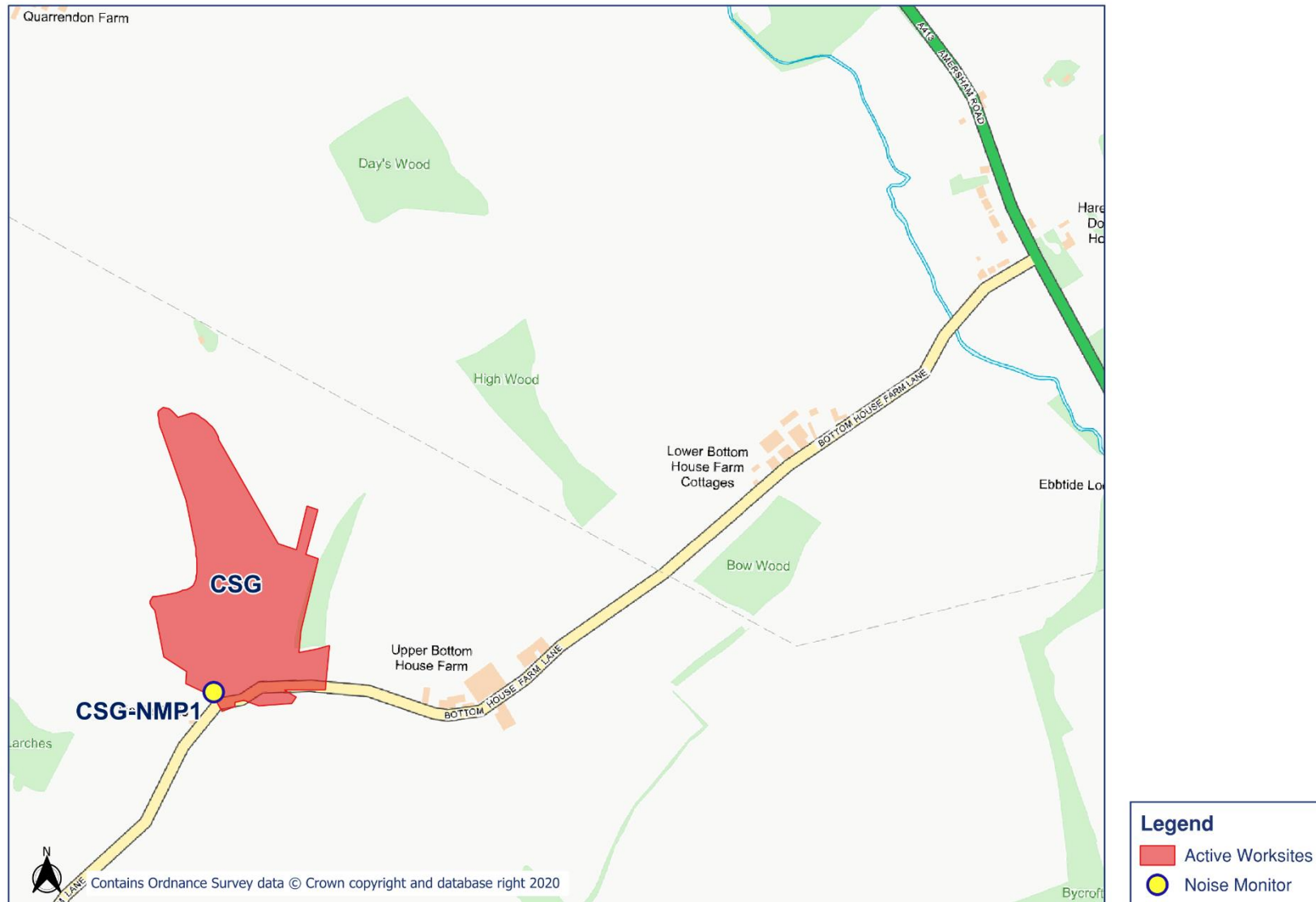


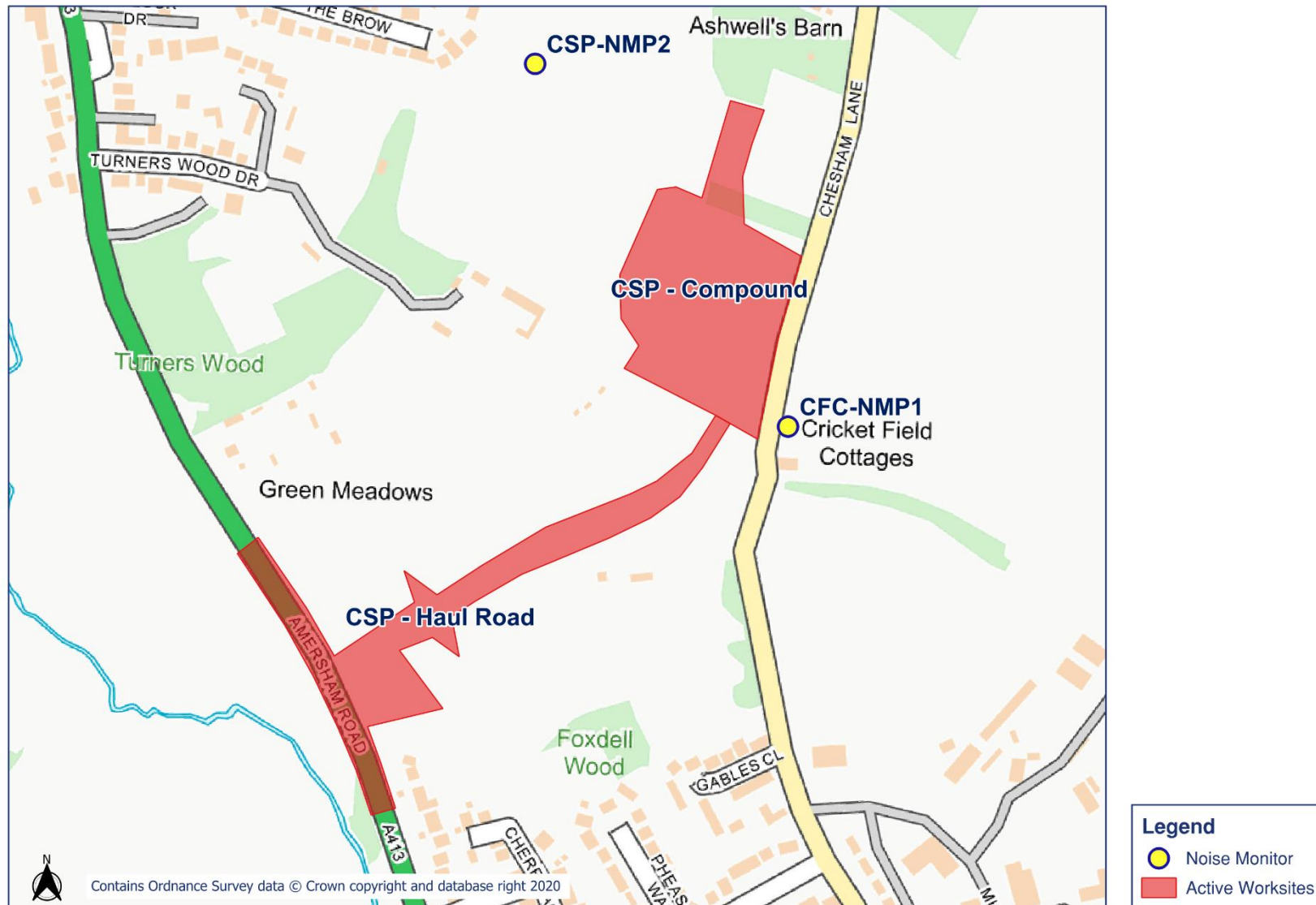


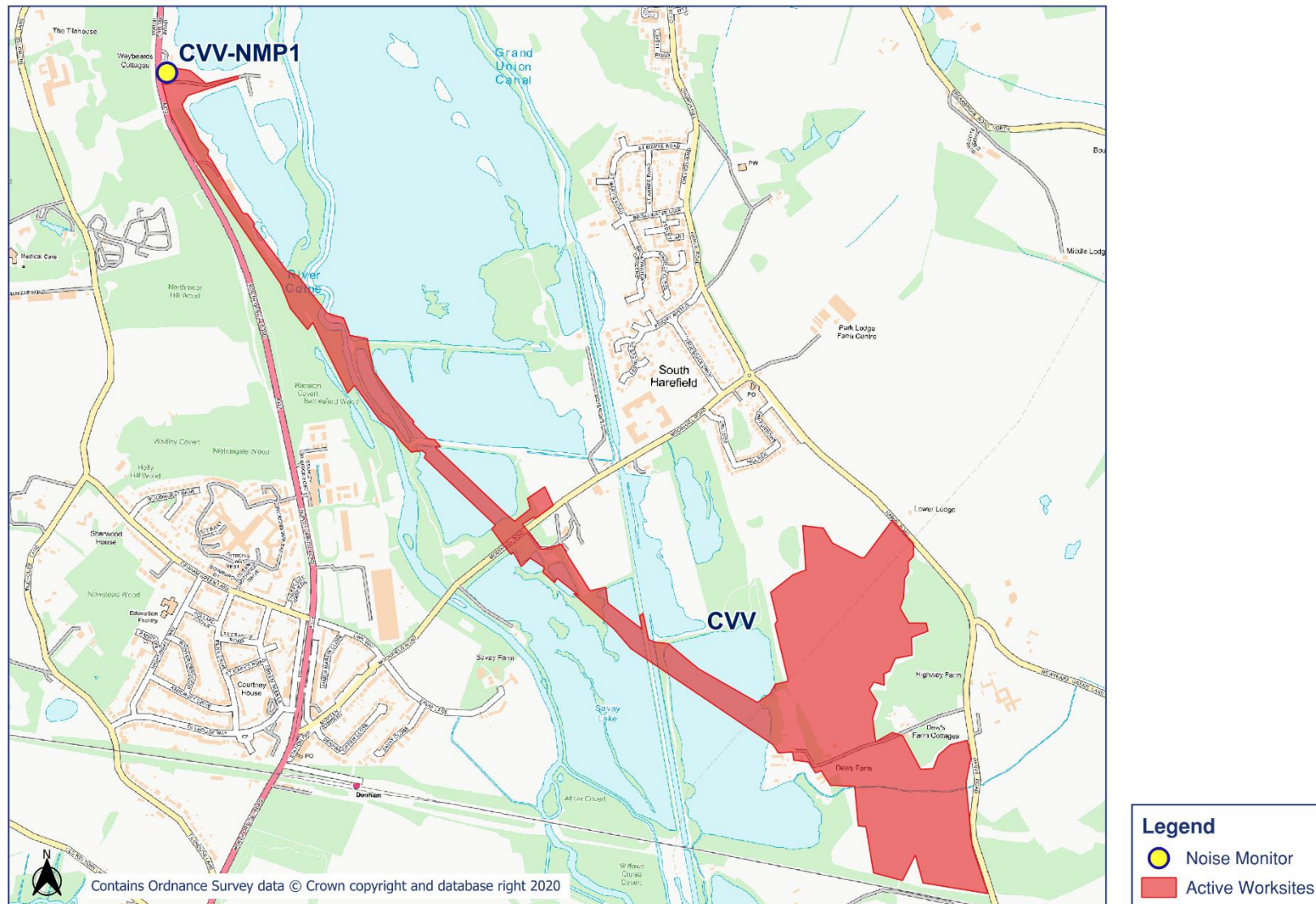
Noise and Vibration Monitoring Plan - 11

Noise and Vibration Monitoring Plan - 11







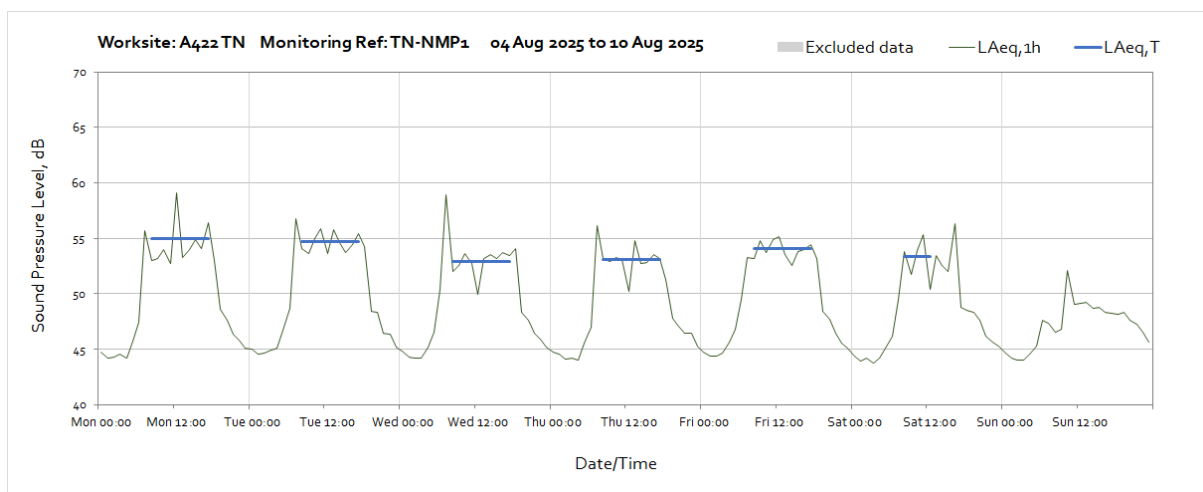
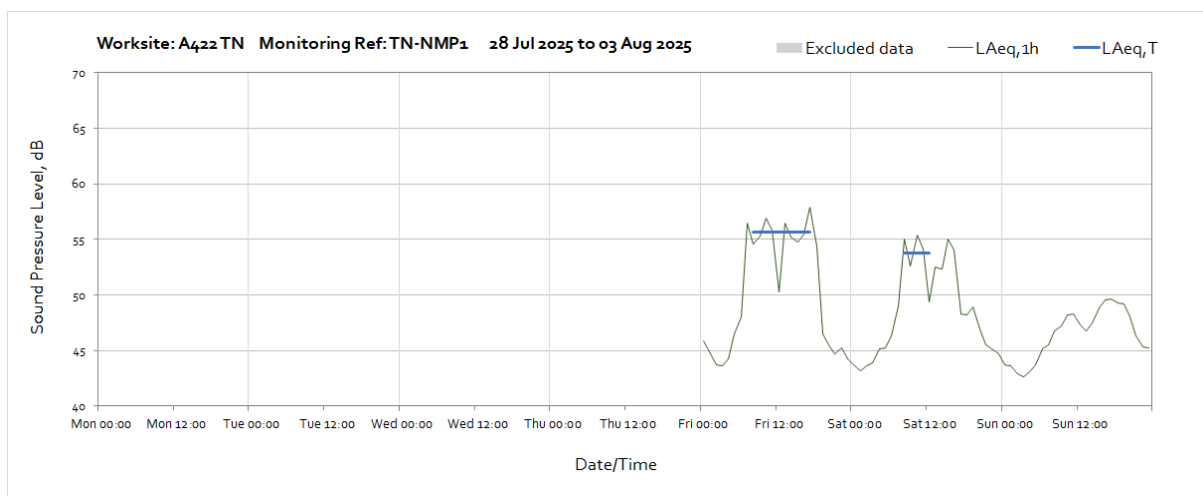


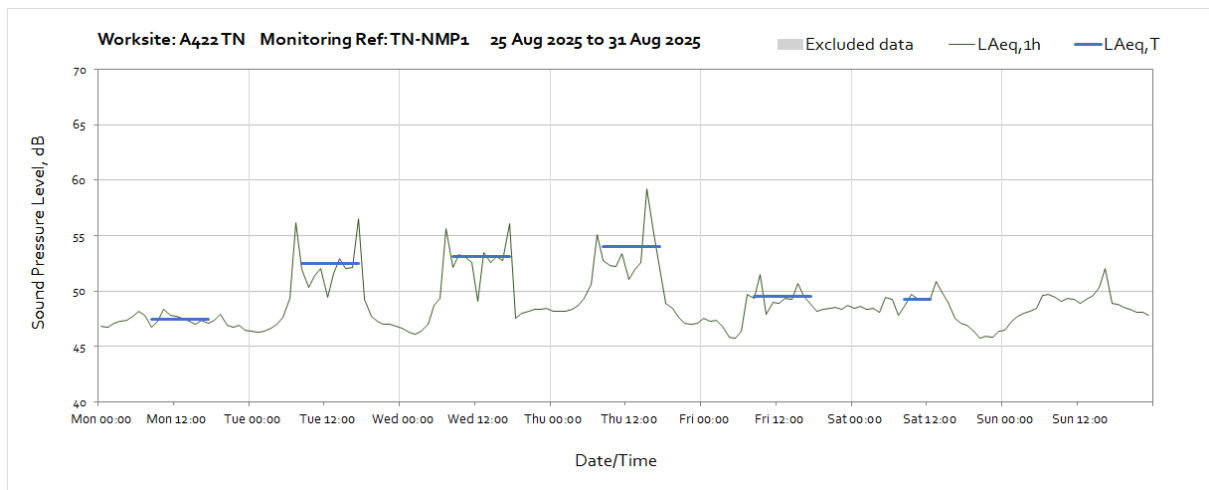
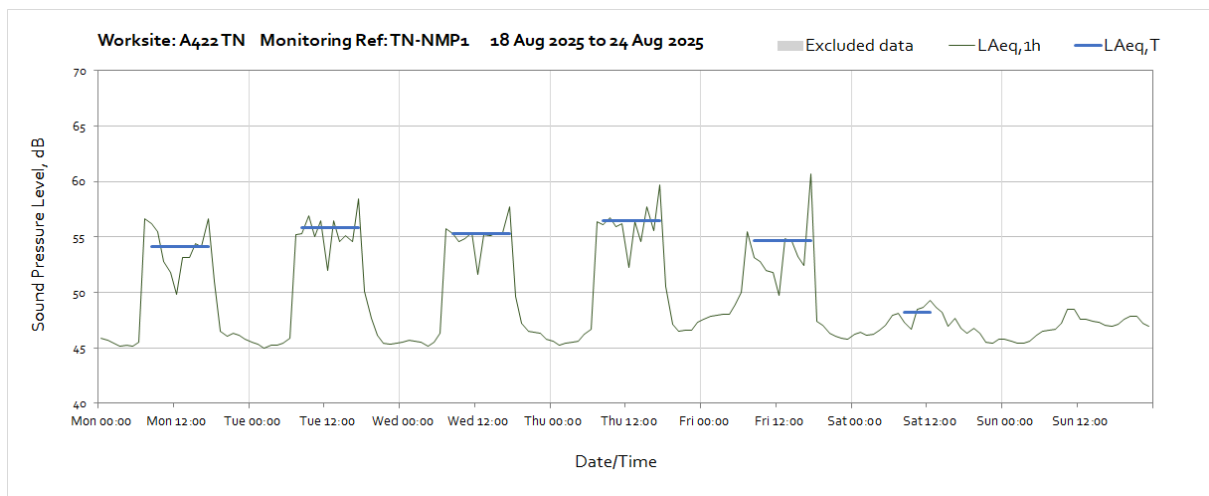
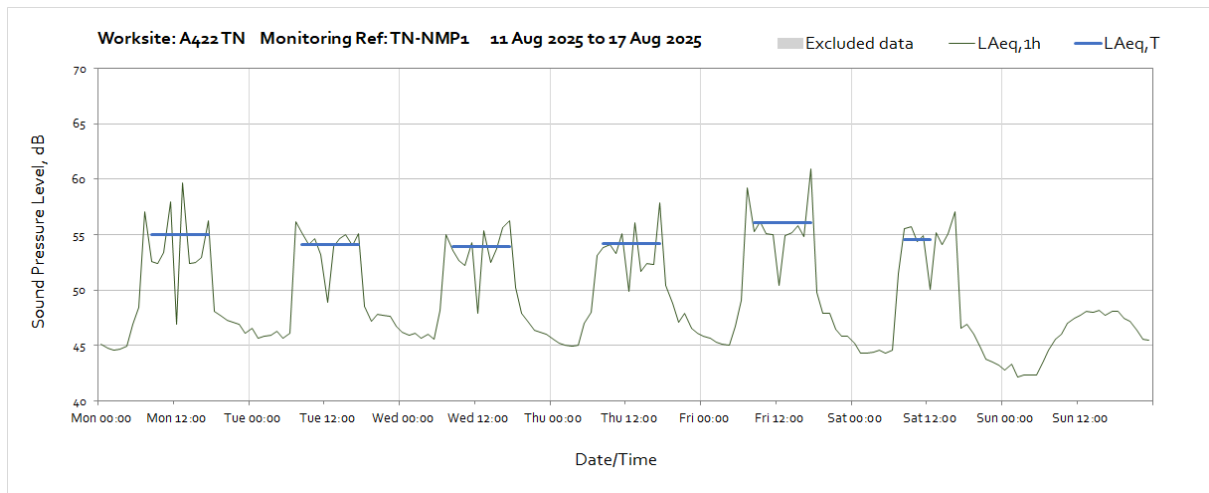
Appendix C Data

Noise

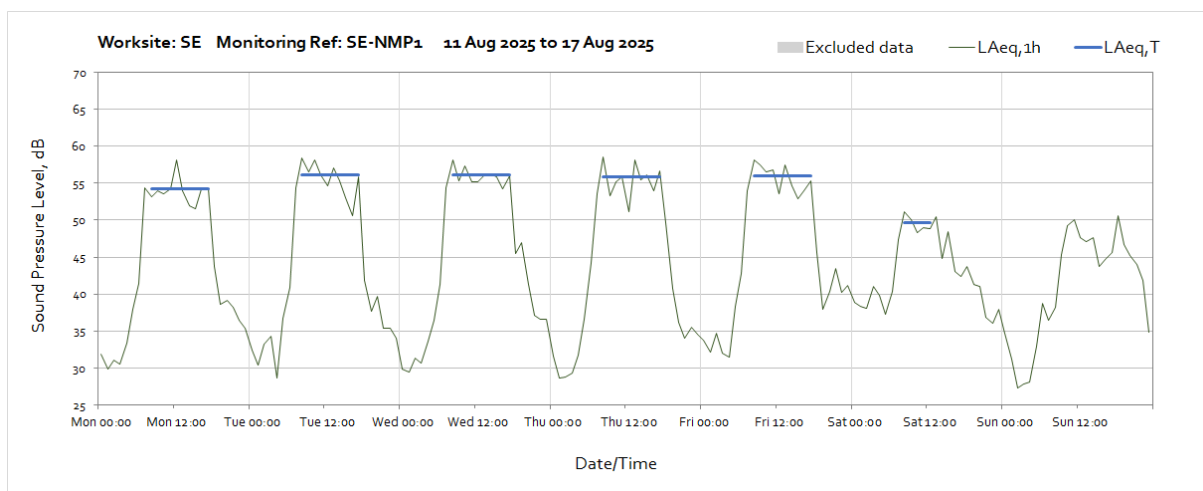
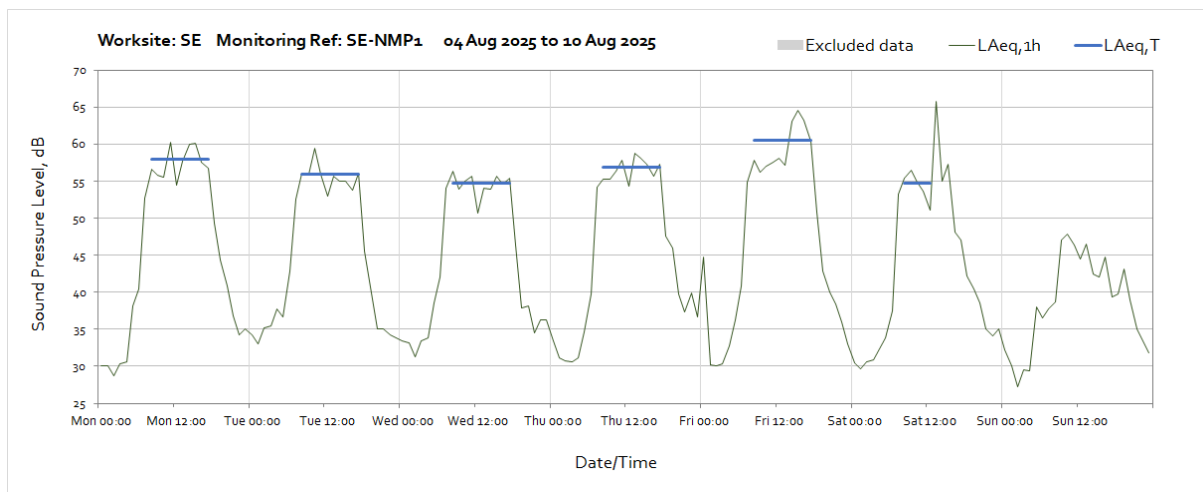
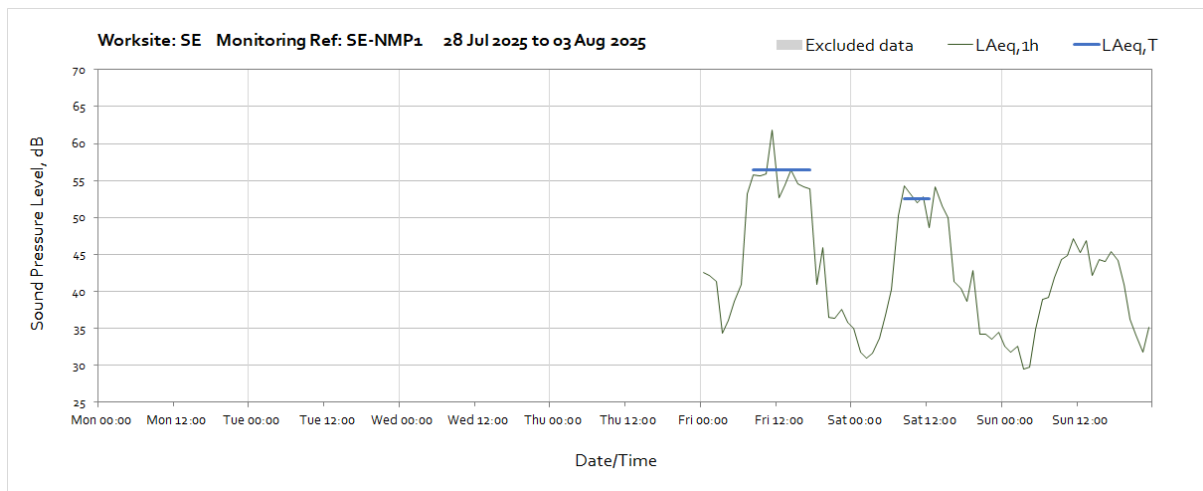
The following graphs show the hourly measured ambient noise level $L_{Aeq,1h}$ and, where relevant, the averaged noise level $L_{Aeq,T}$ values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods where noise levels are adversely affected by weather or only measured 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.

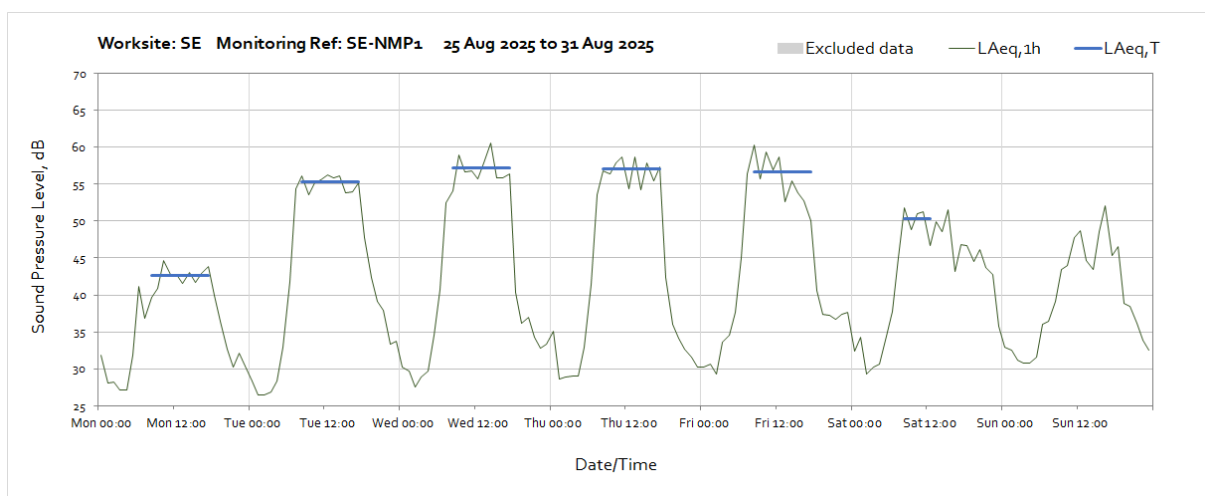
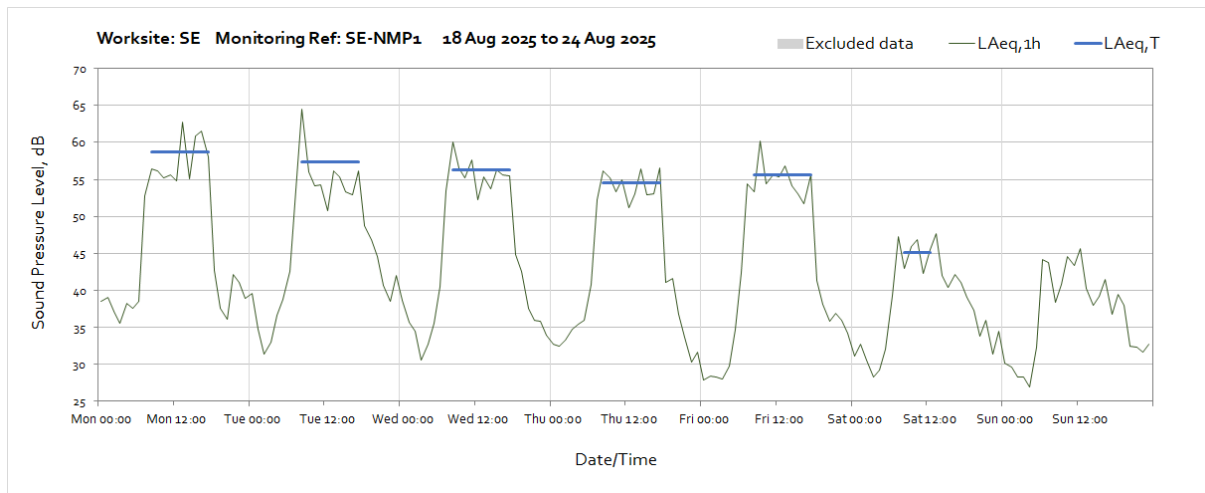
Worksite: A422 TN – Monitoring Ref: TN-NMP1



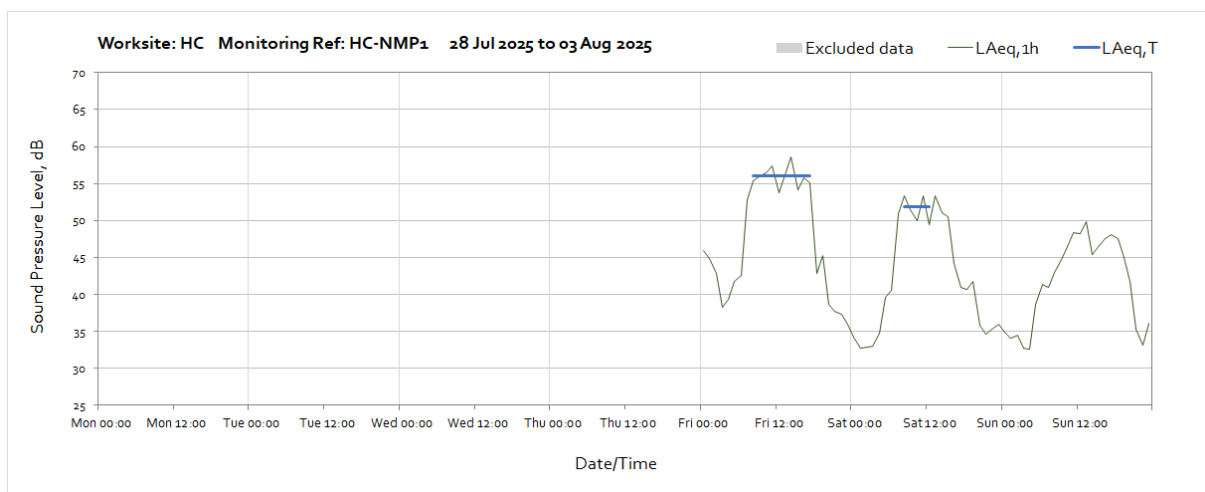


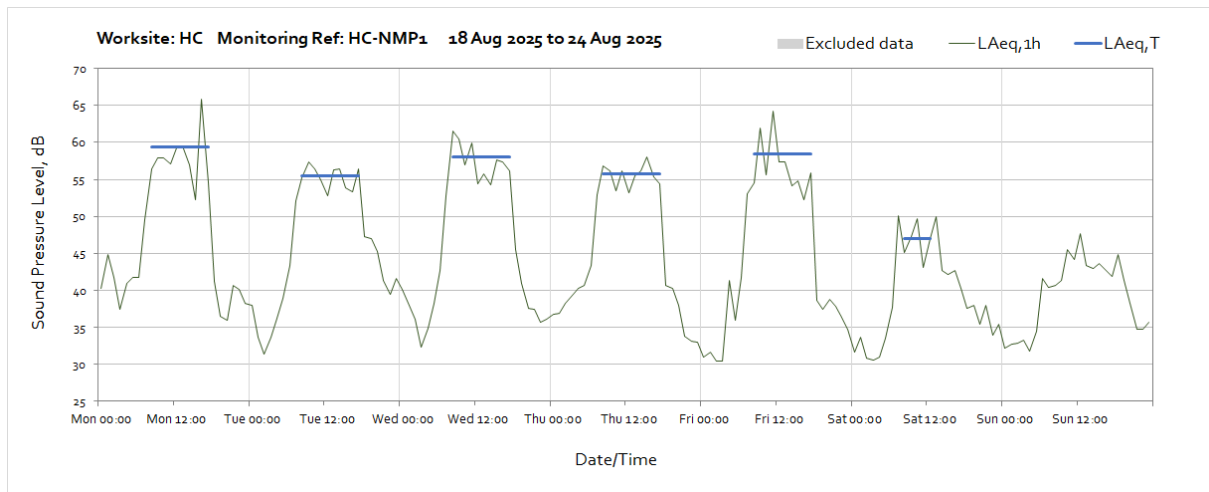
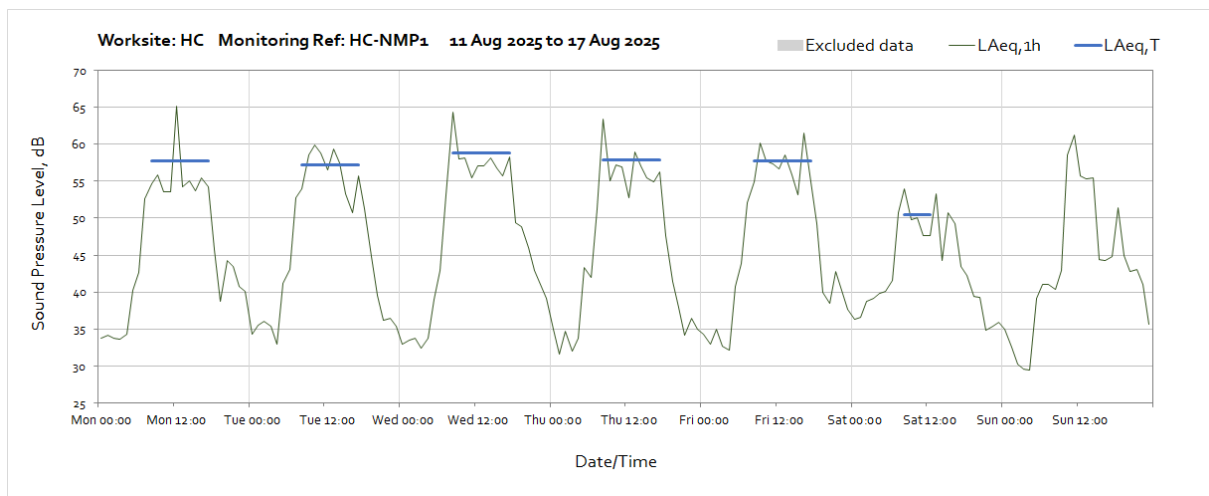
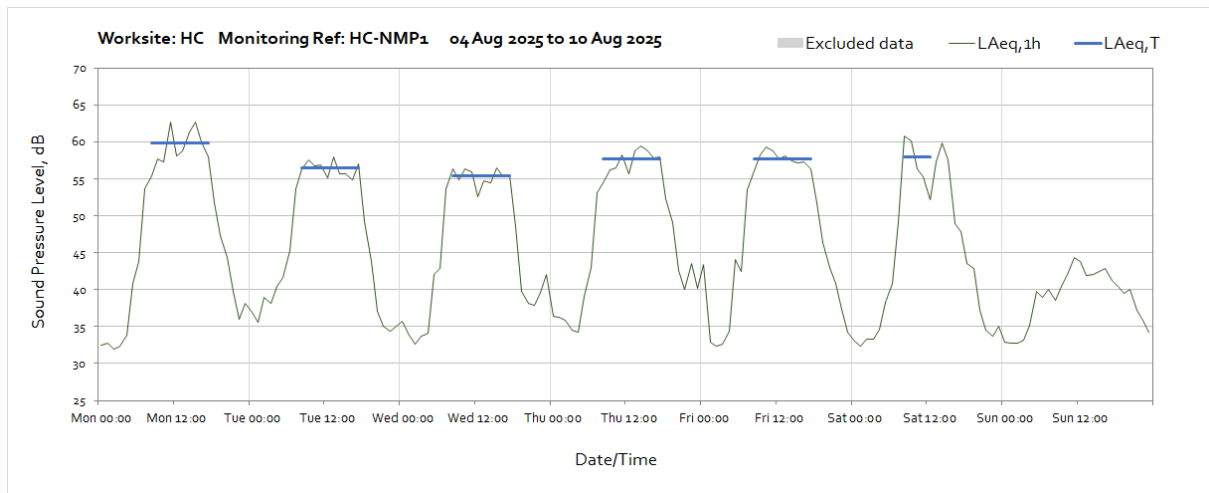
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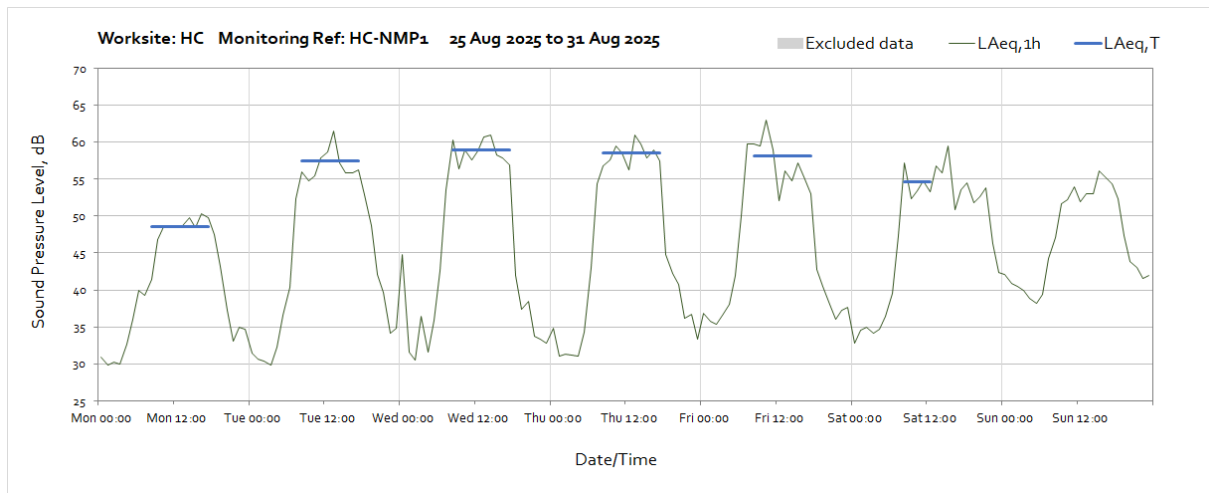




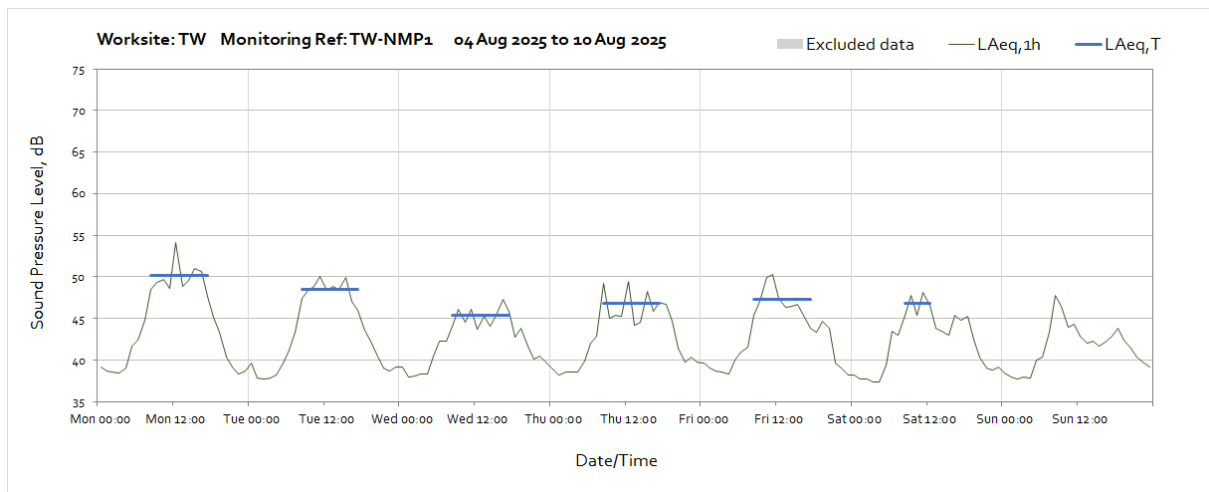
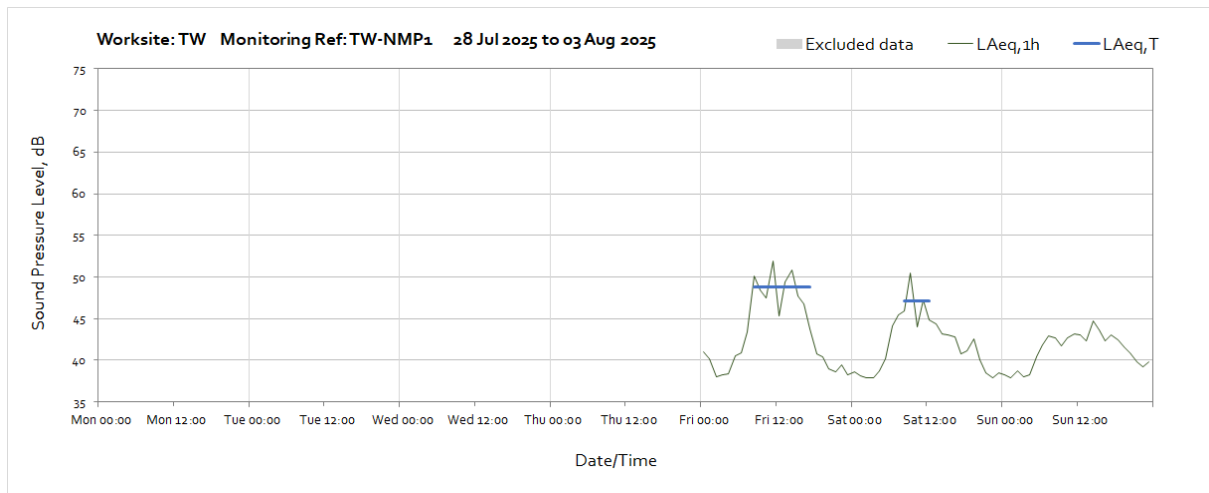
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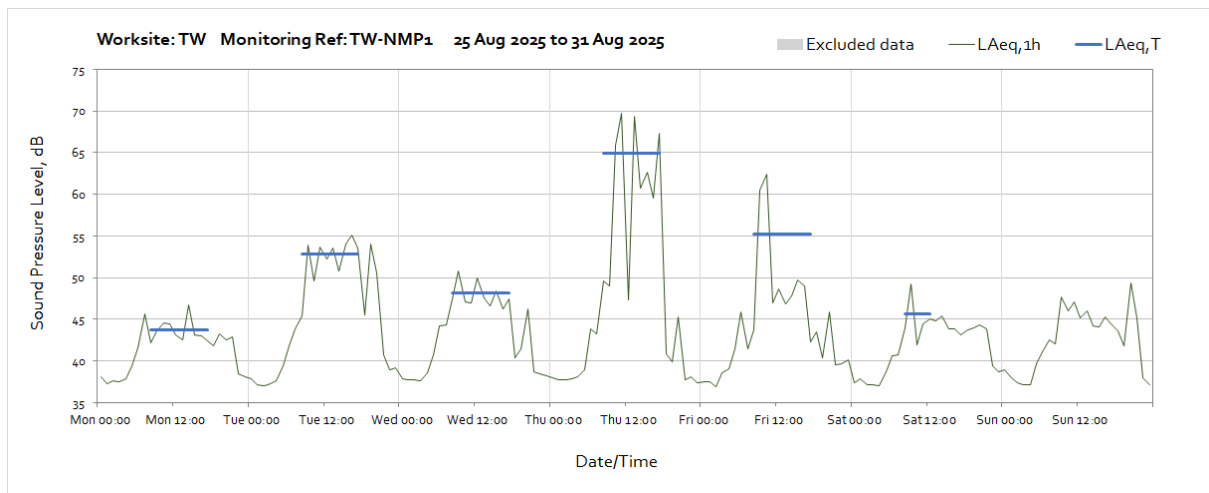
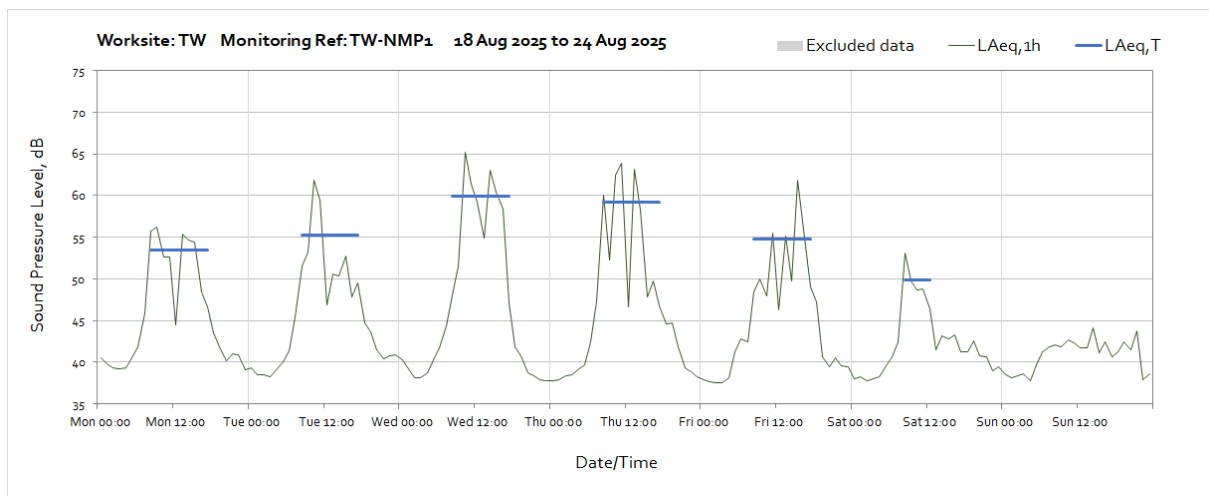
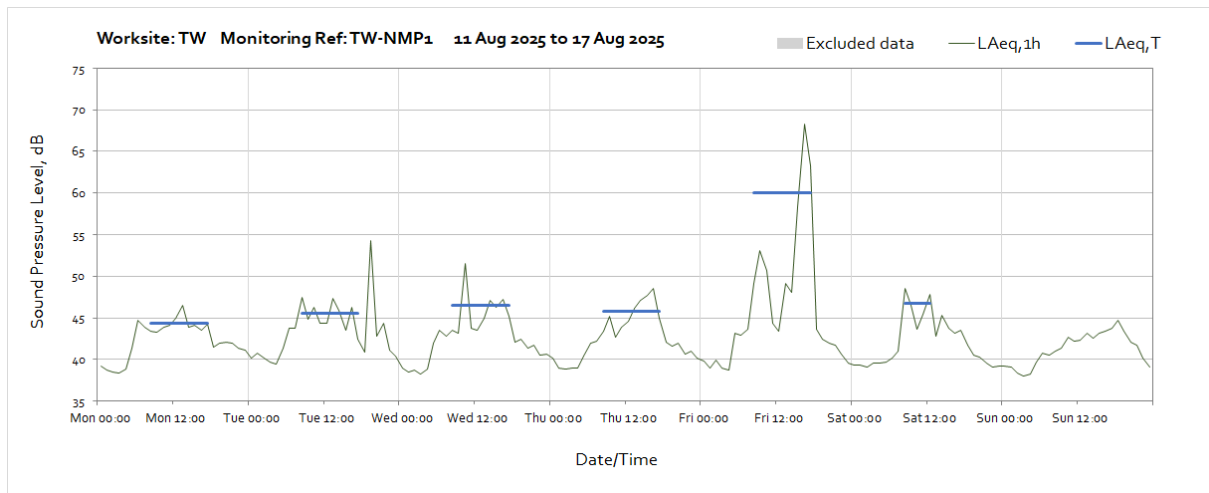




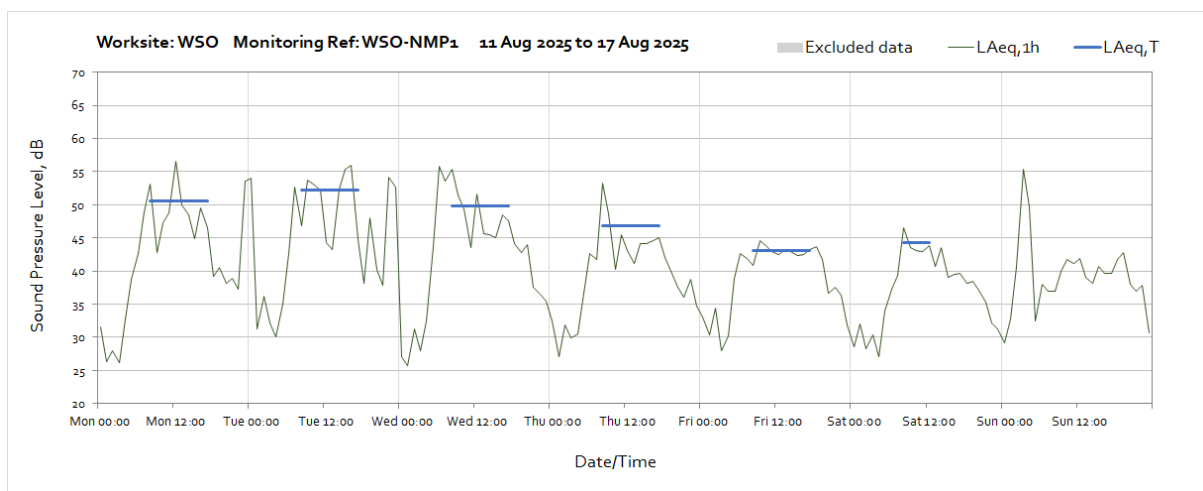
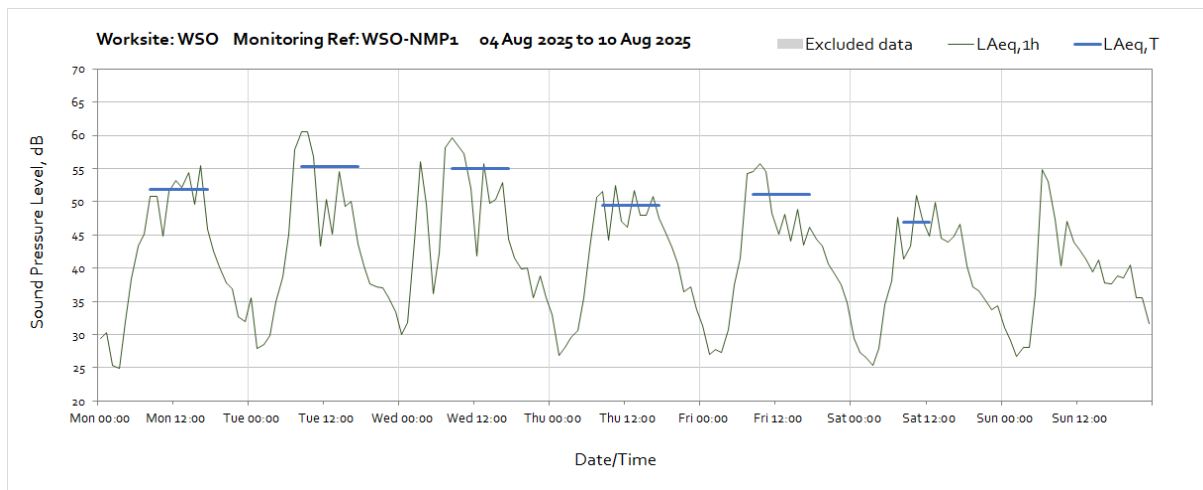
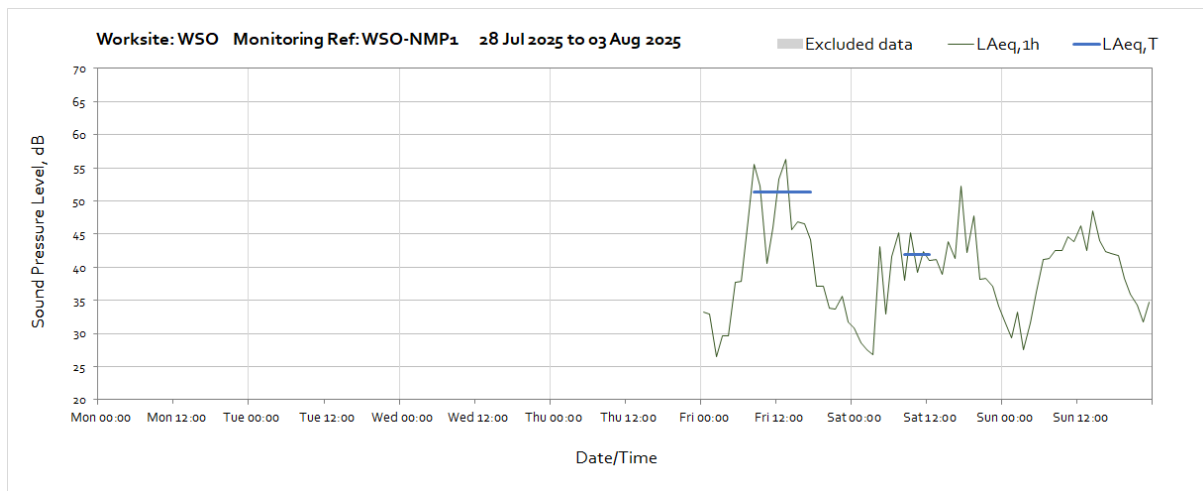


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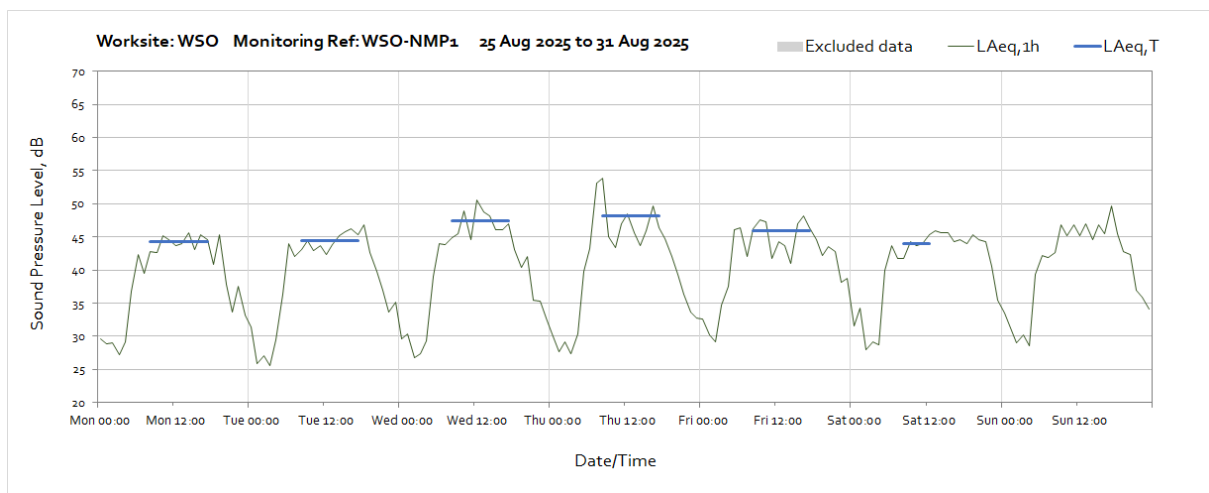
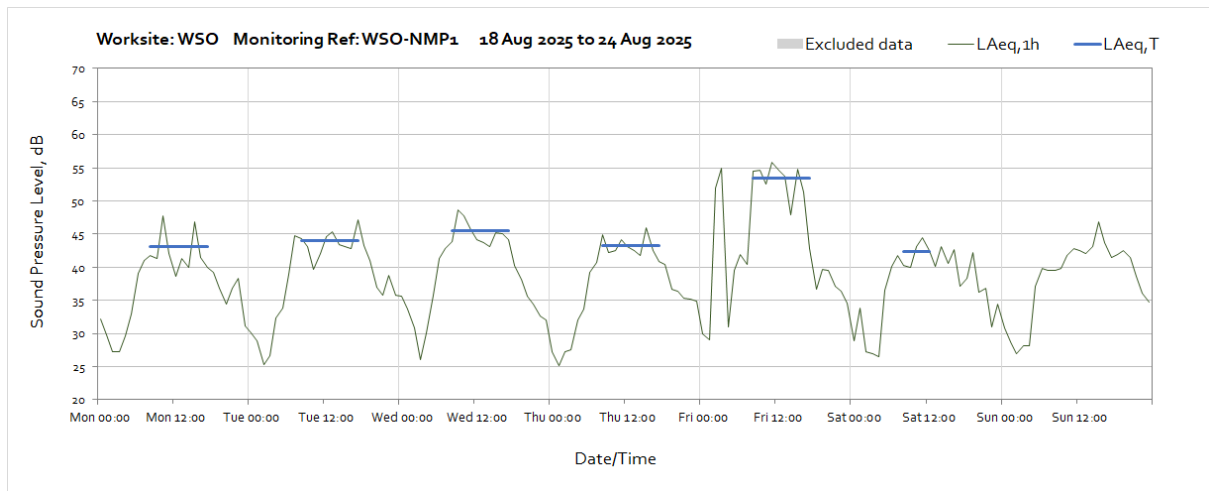




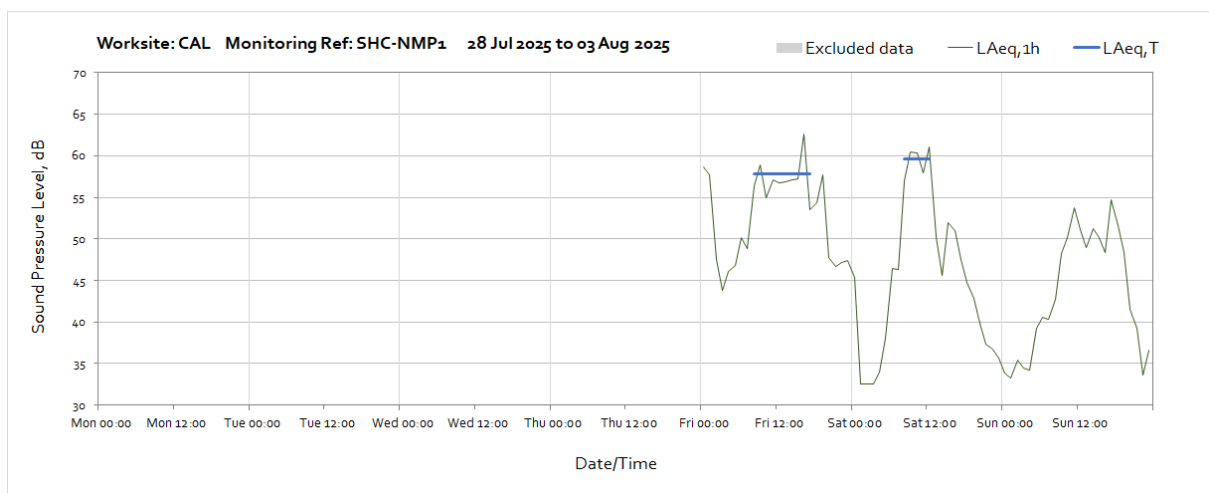
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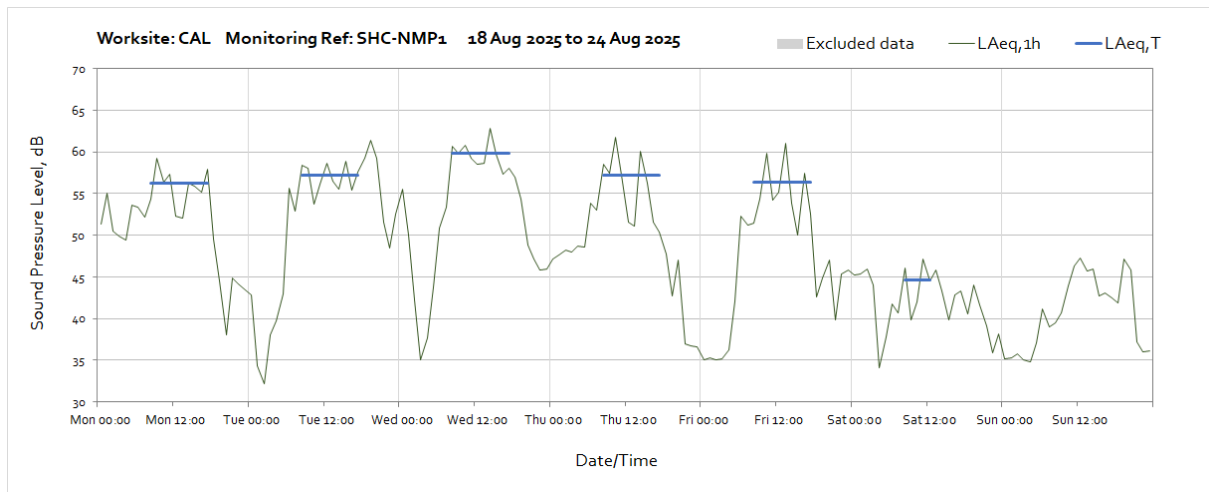
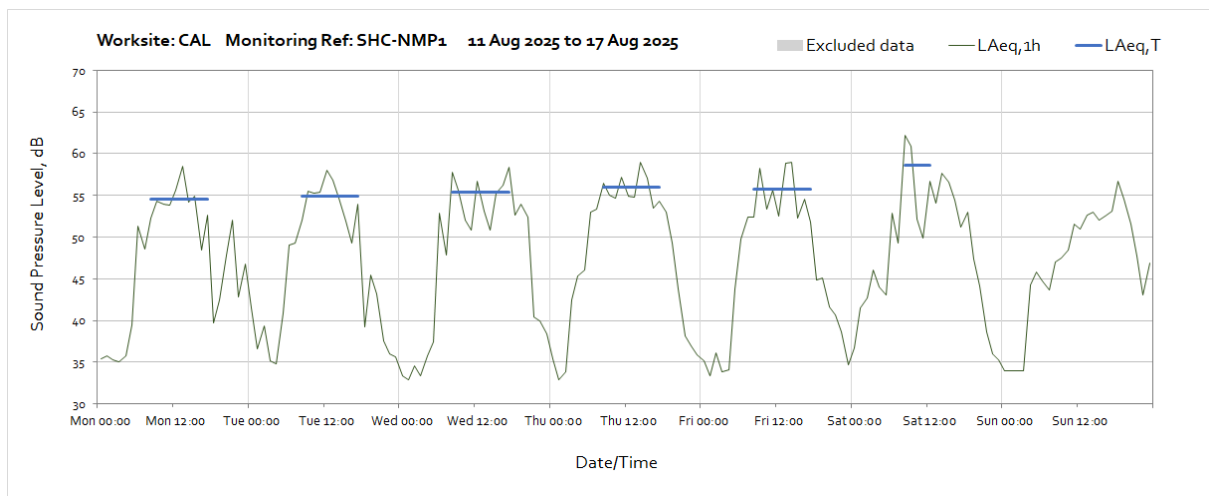
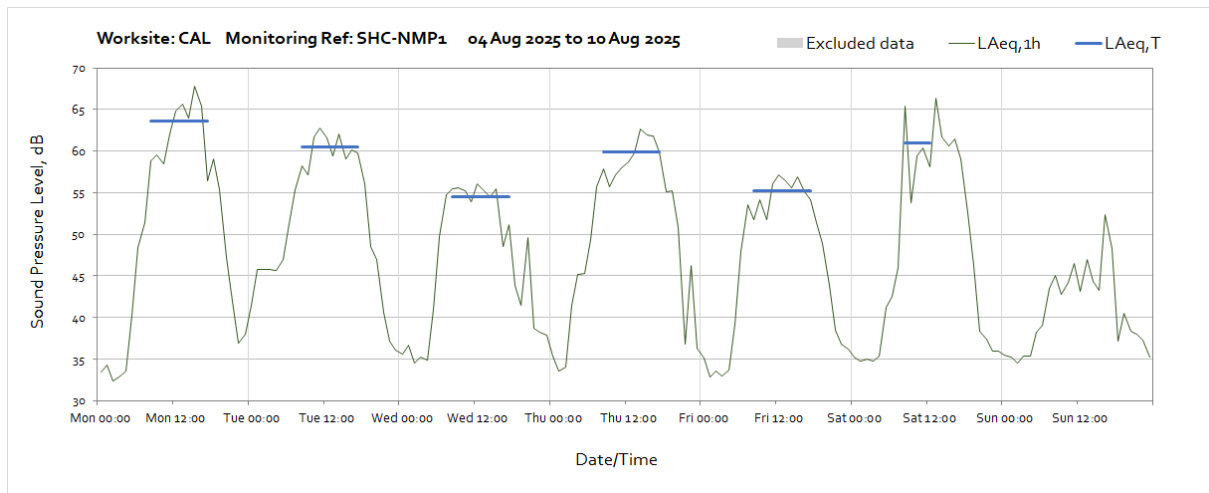


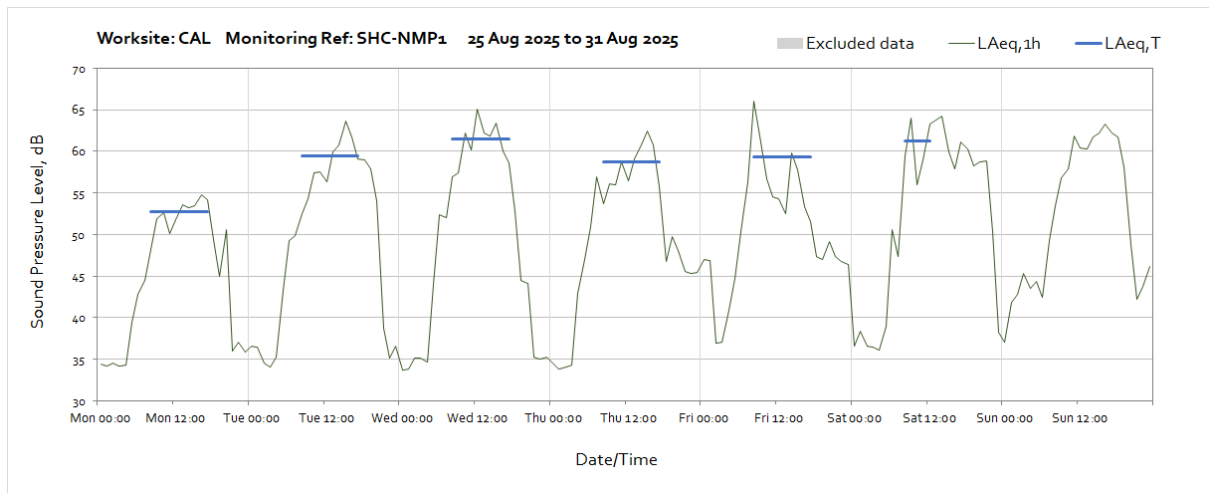
OFFICIAL



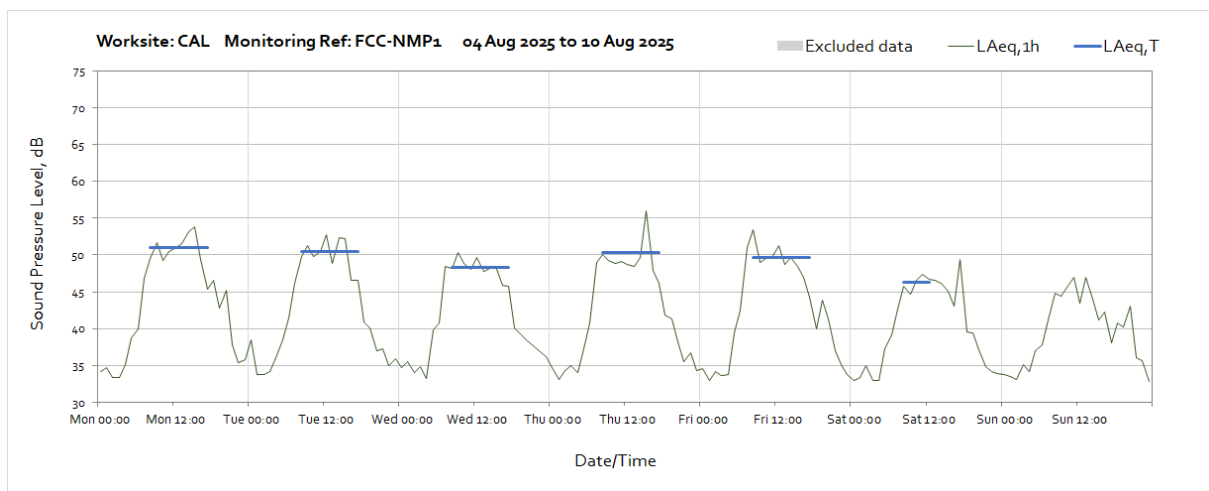
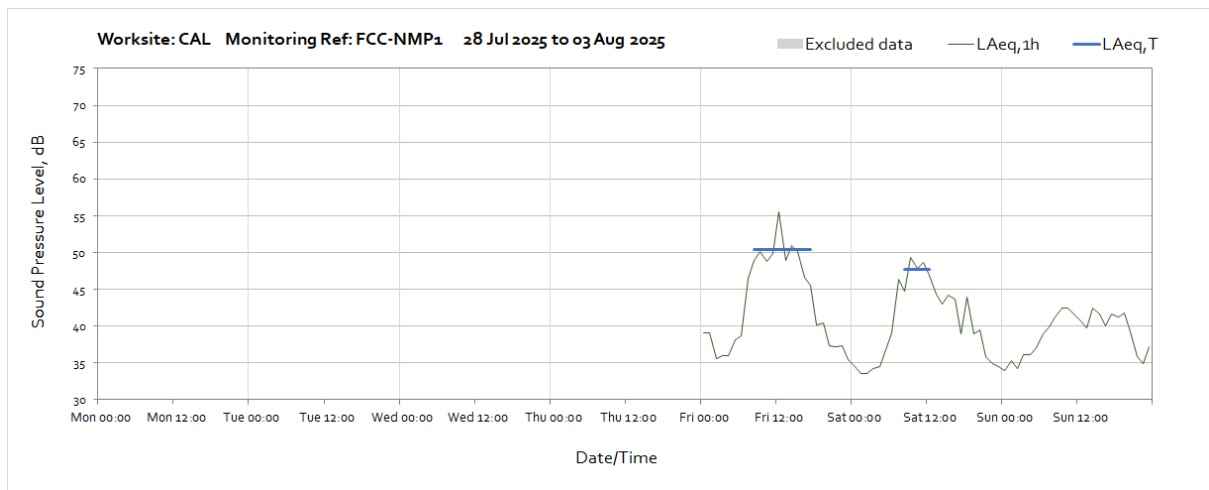
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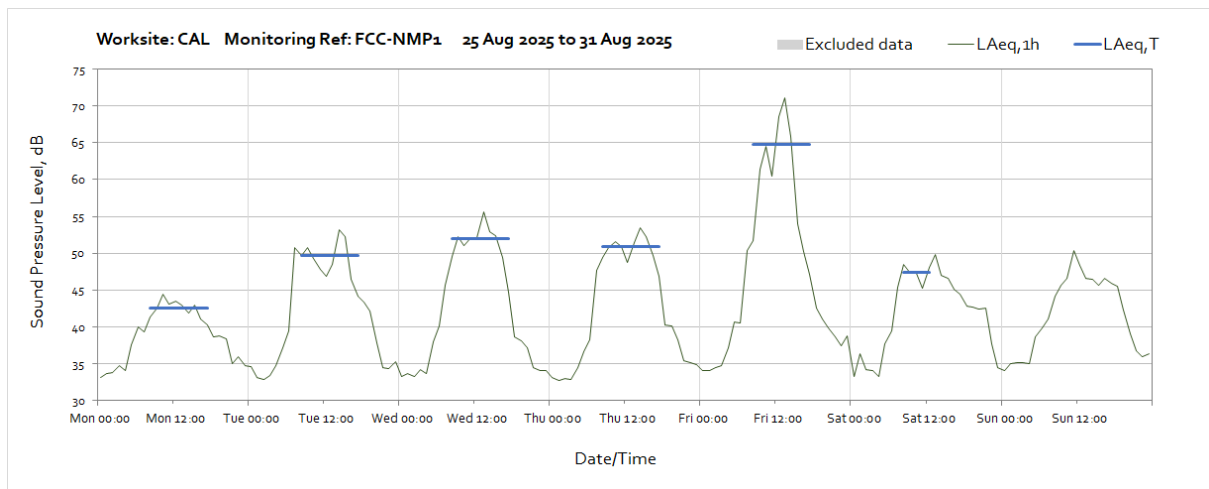
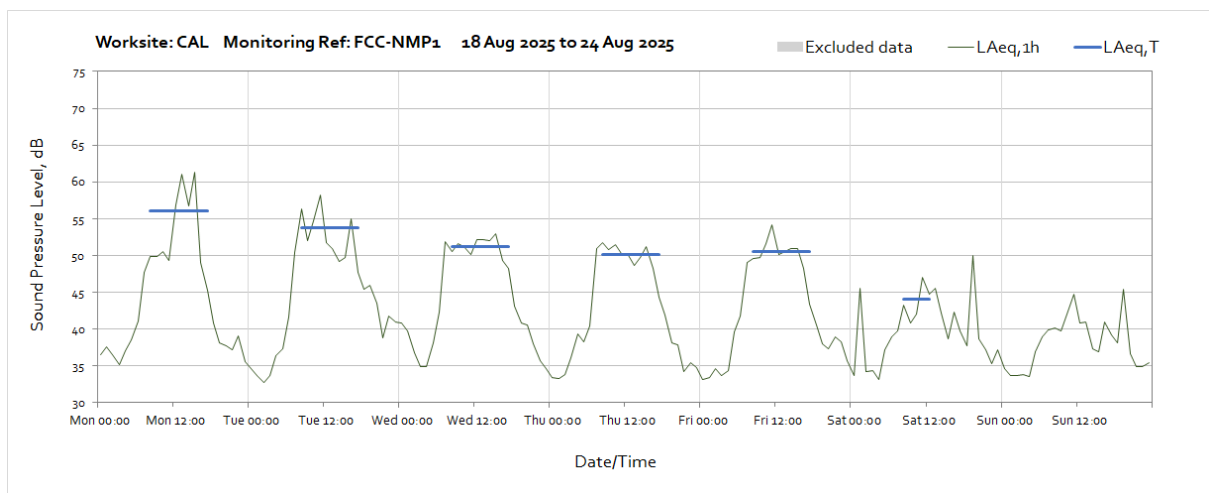
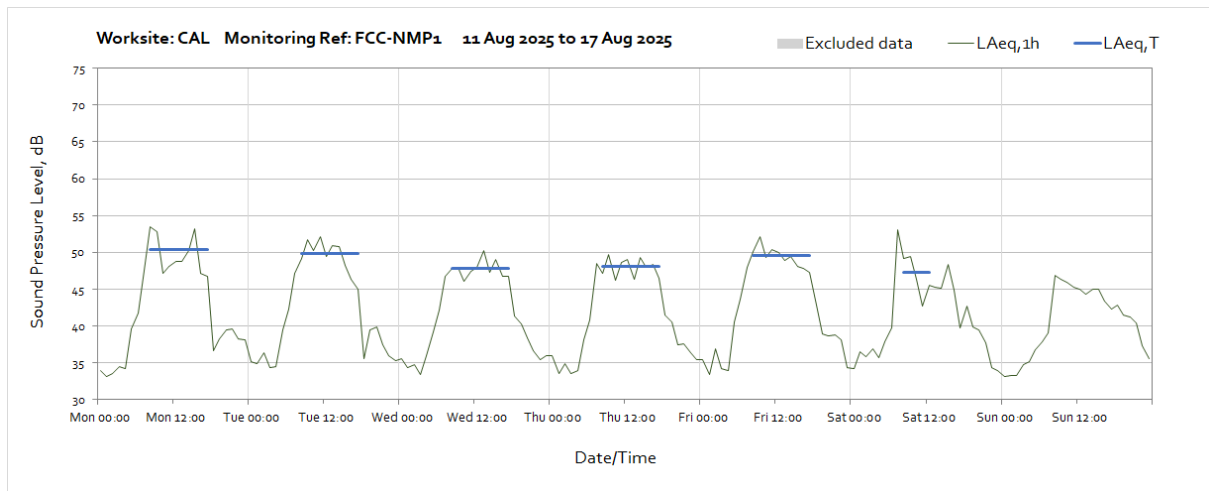




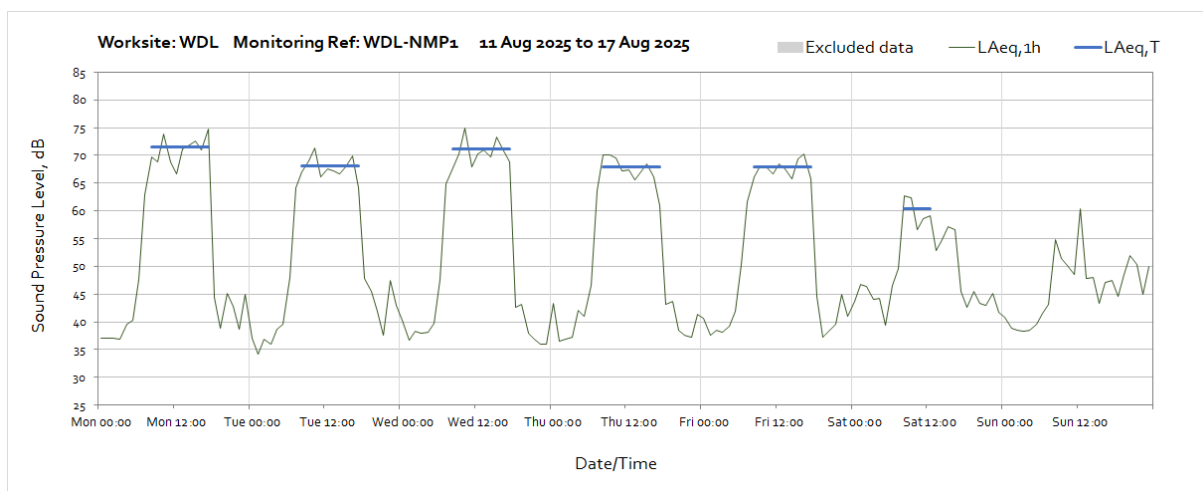
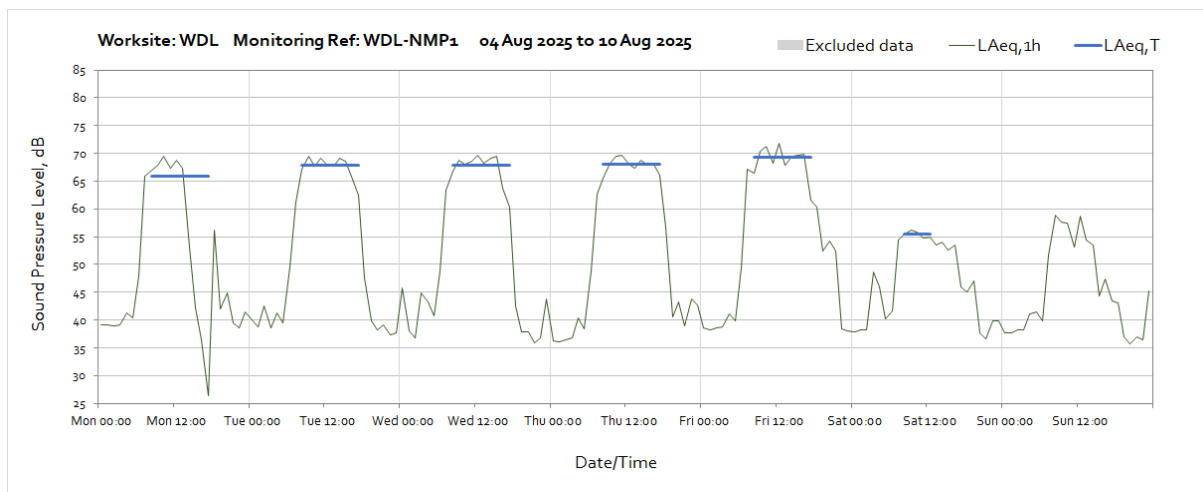
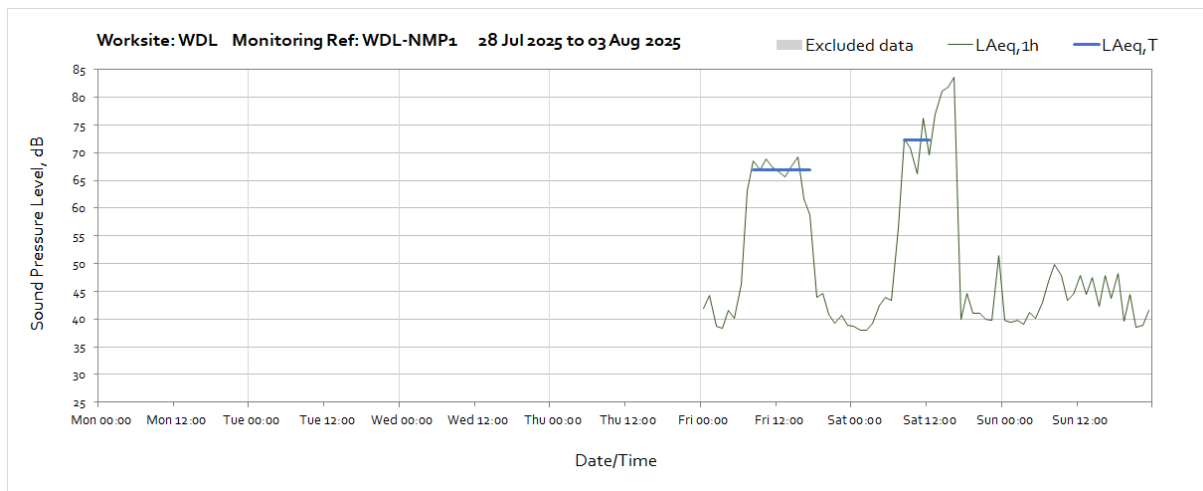


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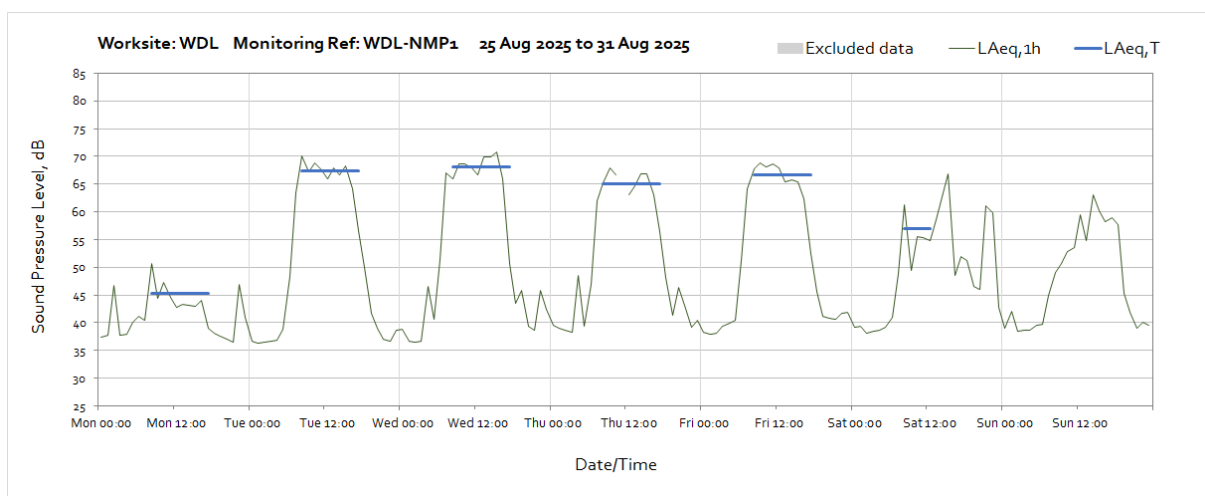
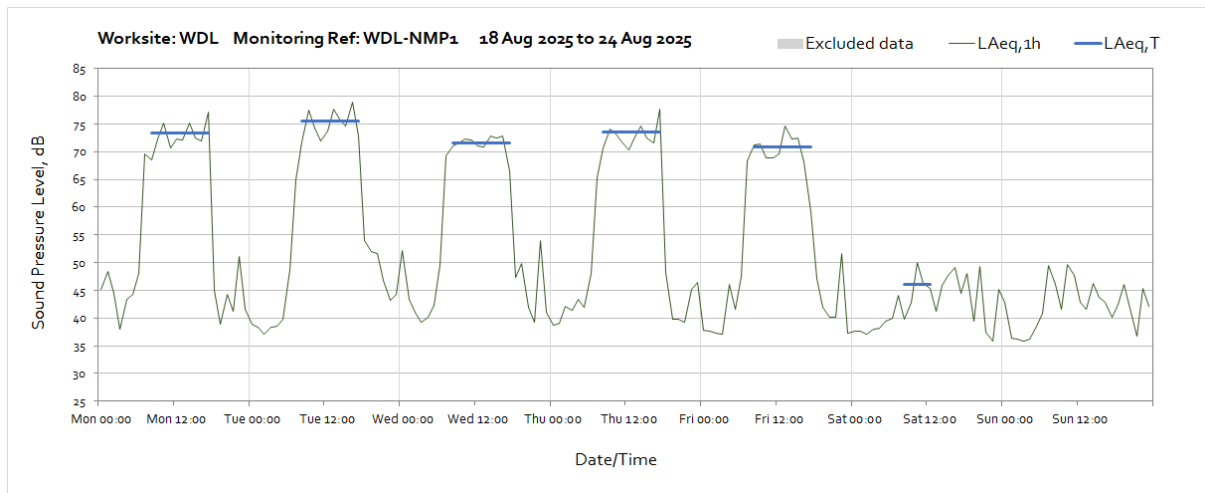




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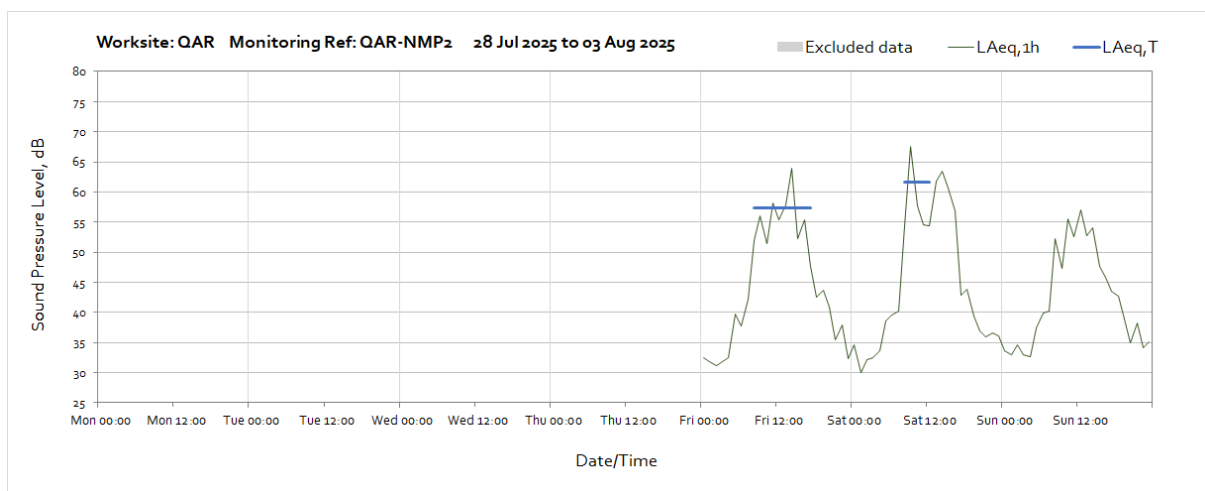


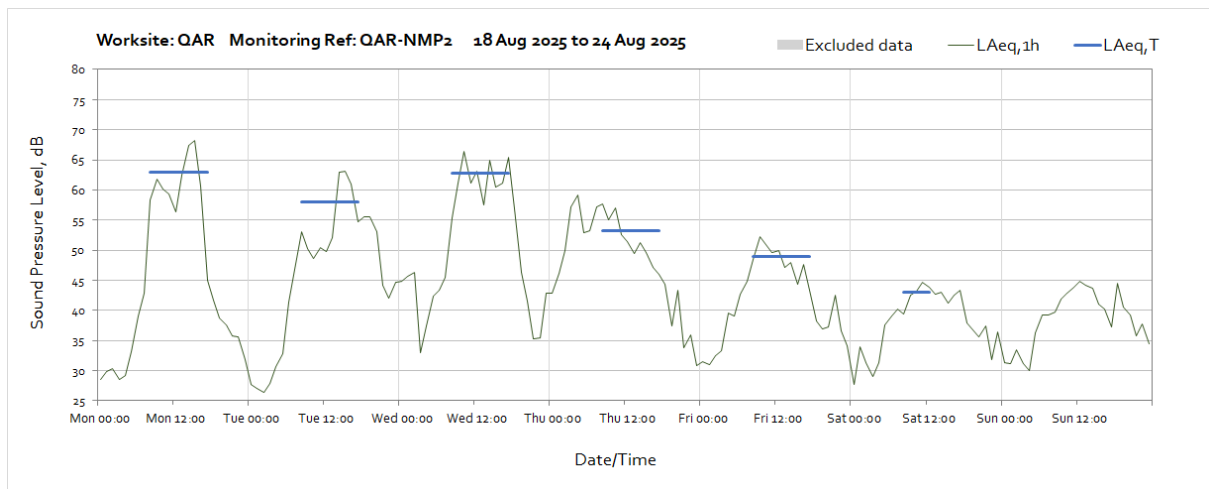
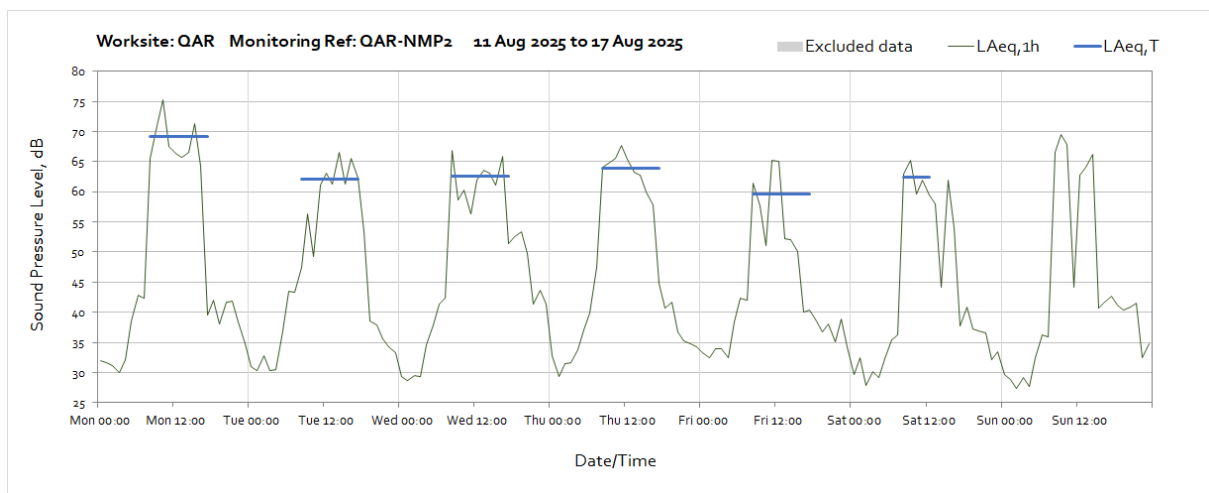
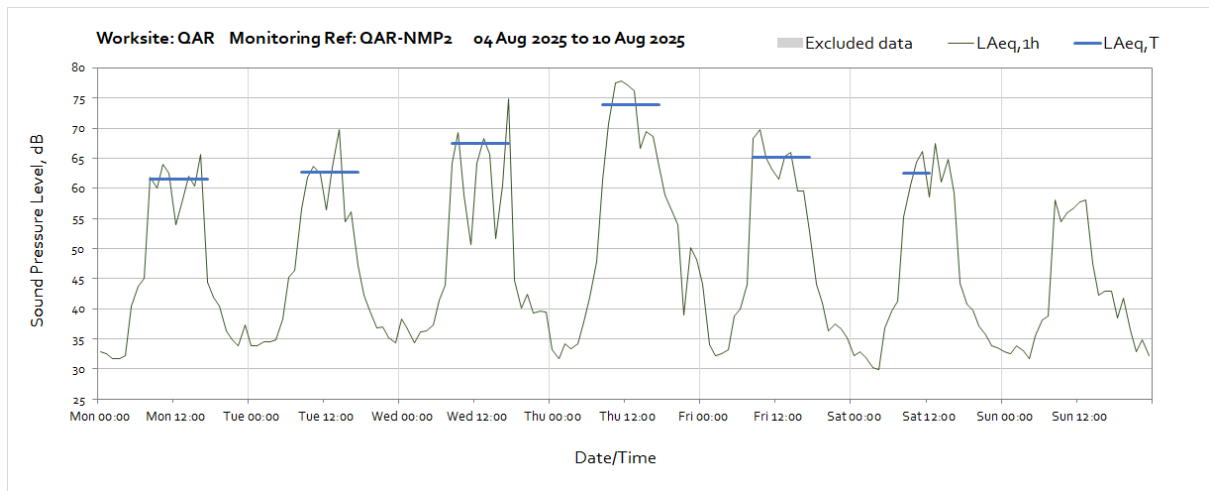
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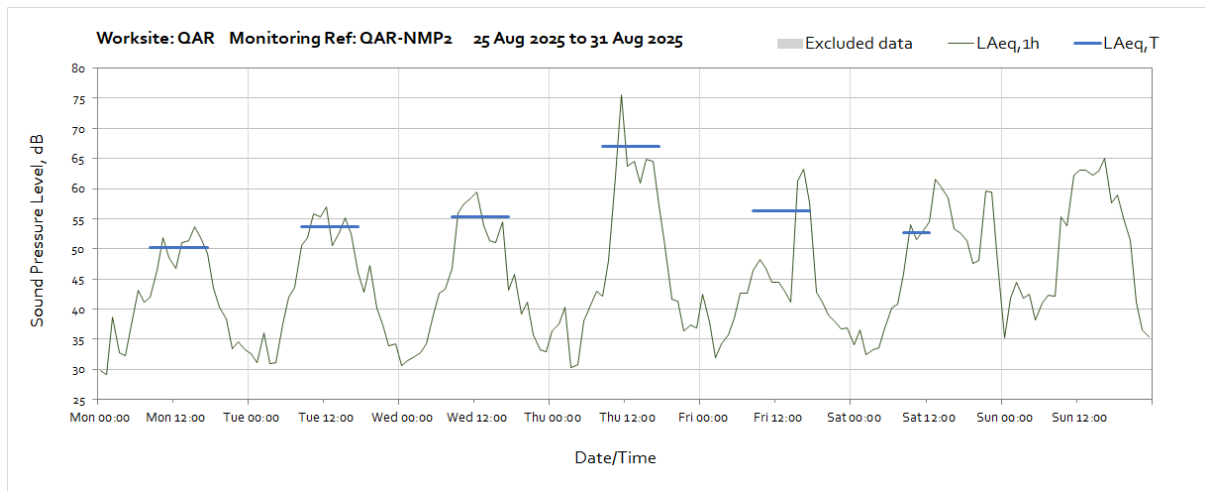


Note: Missing data between 11:00 and 12:00 on Thursday 28th August was due to relocation of the monitoring station.

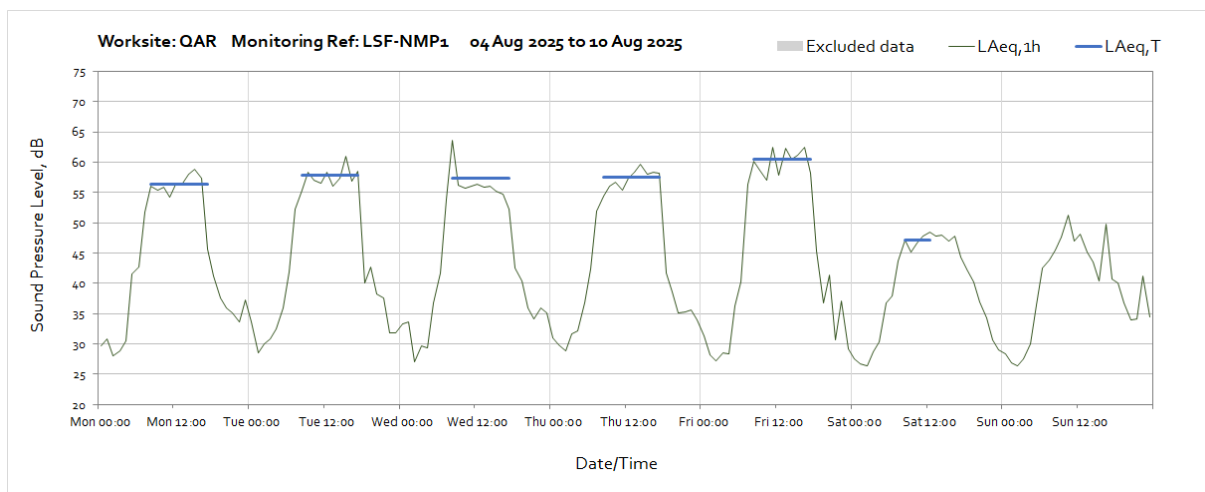
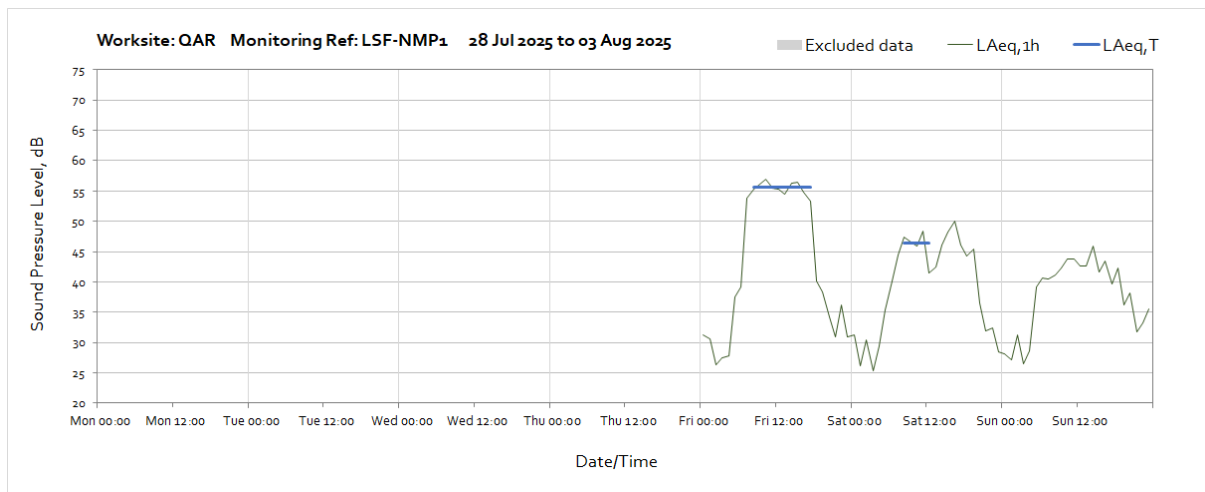
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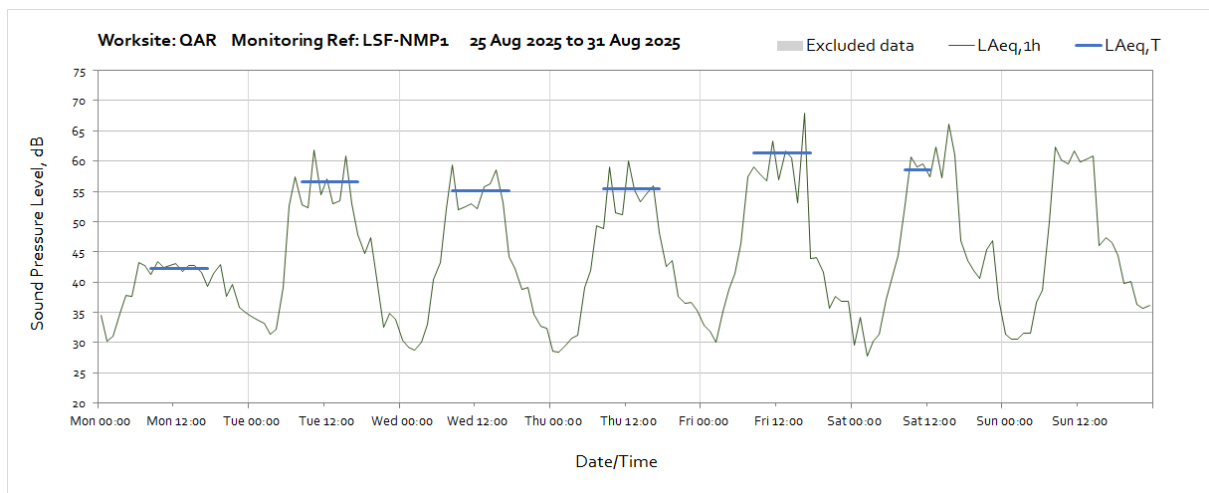
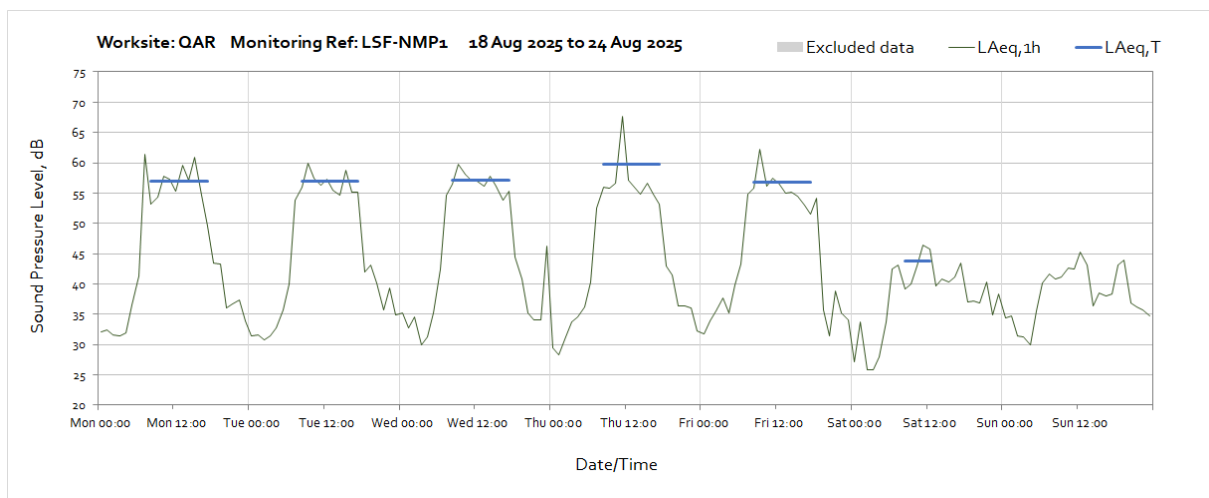
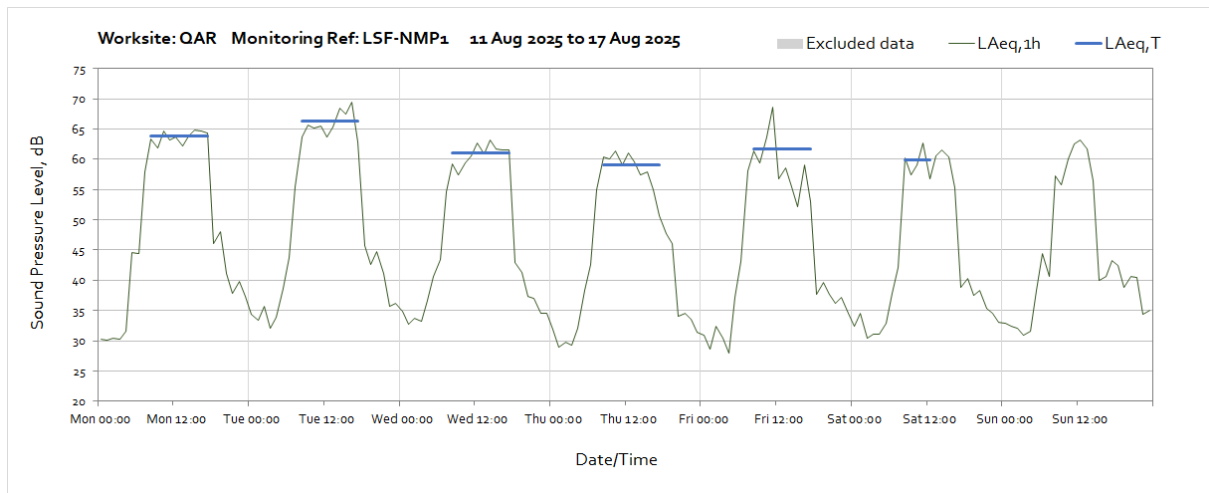




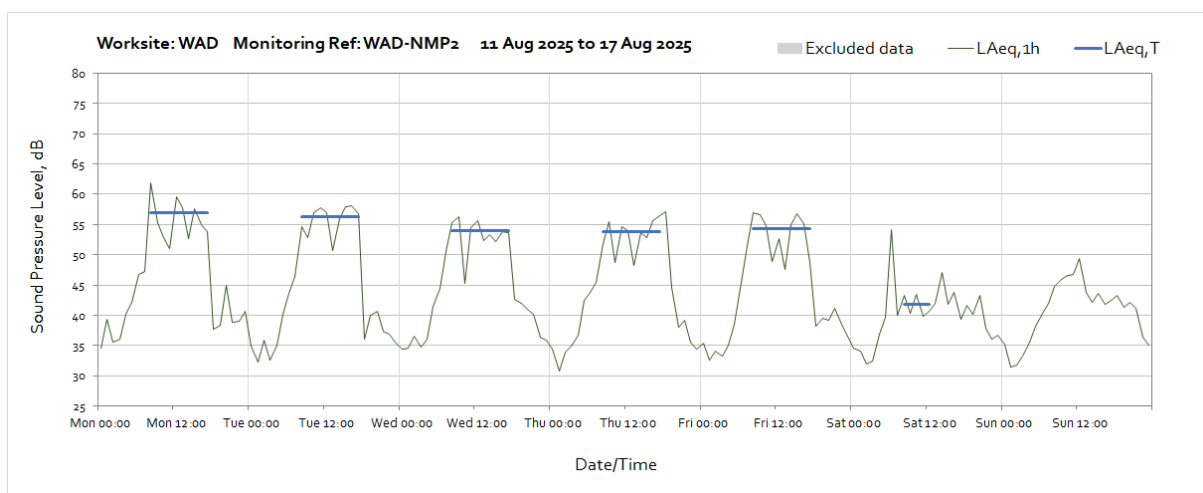
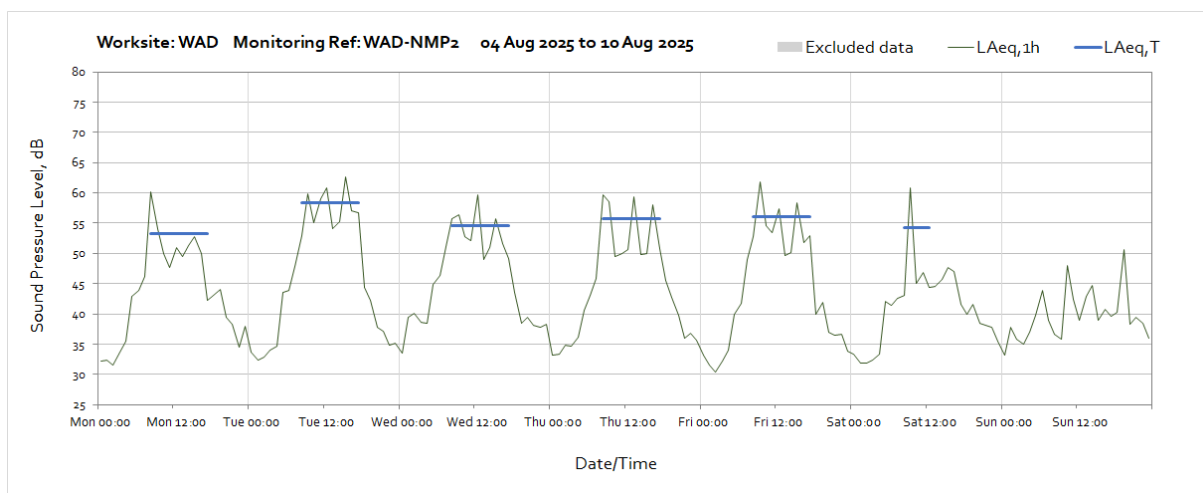
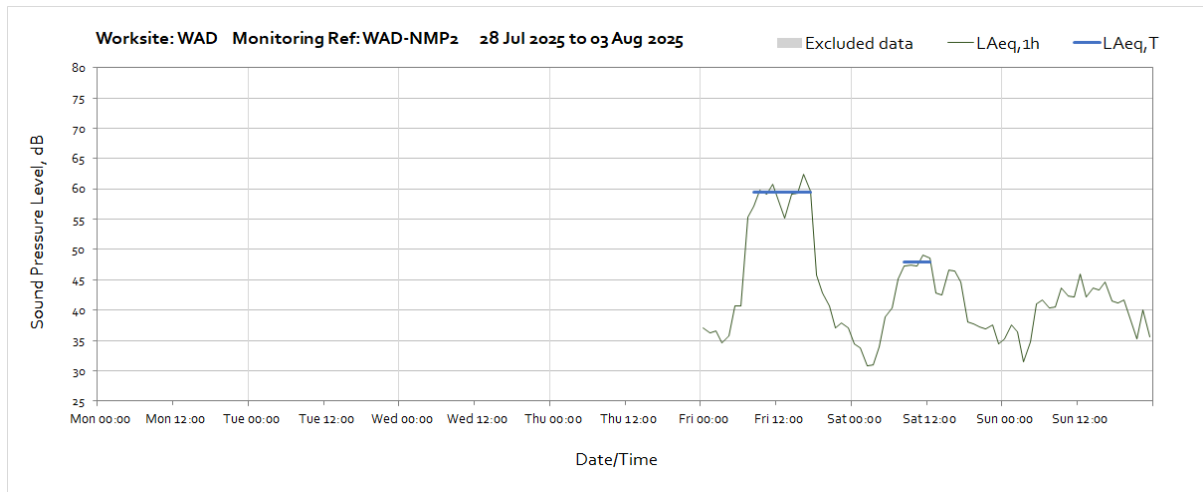


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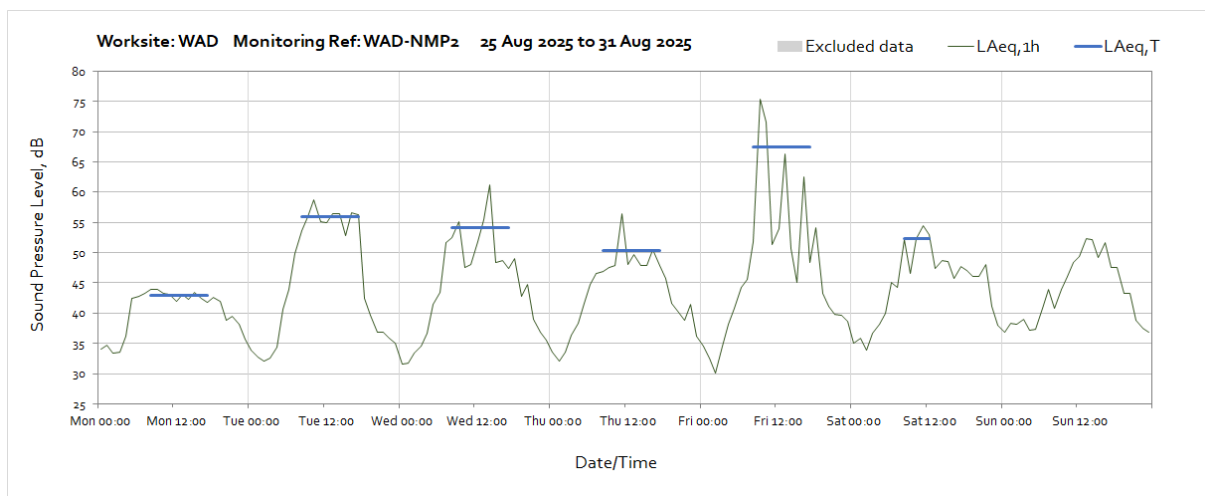
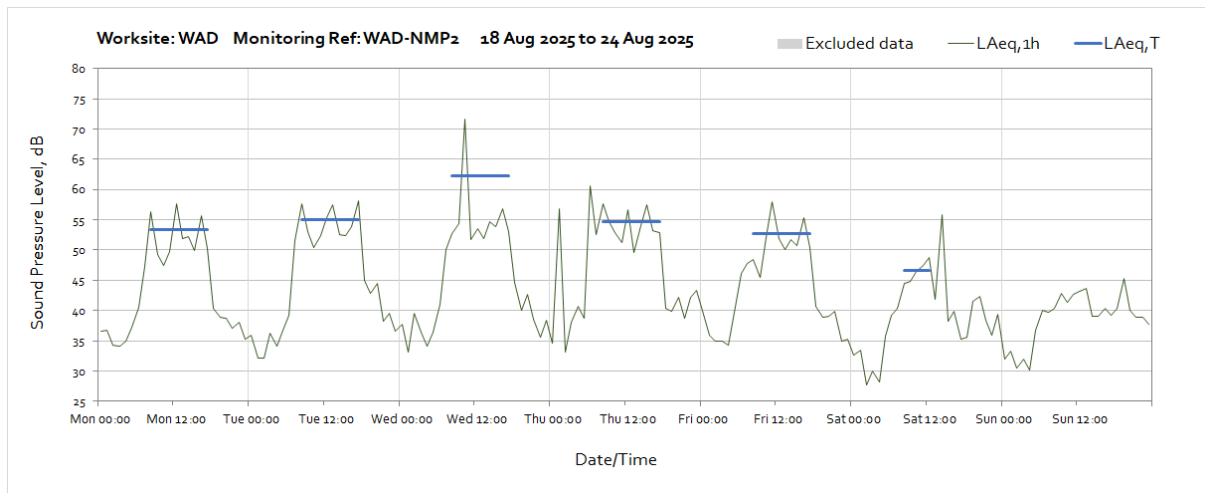




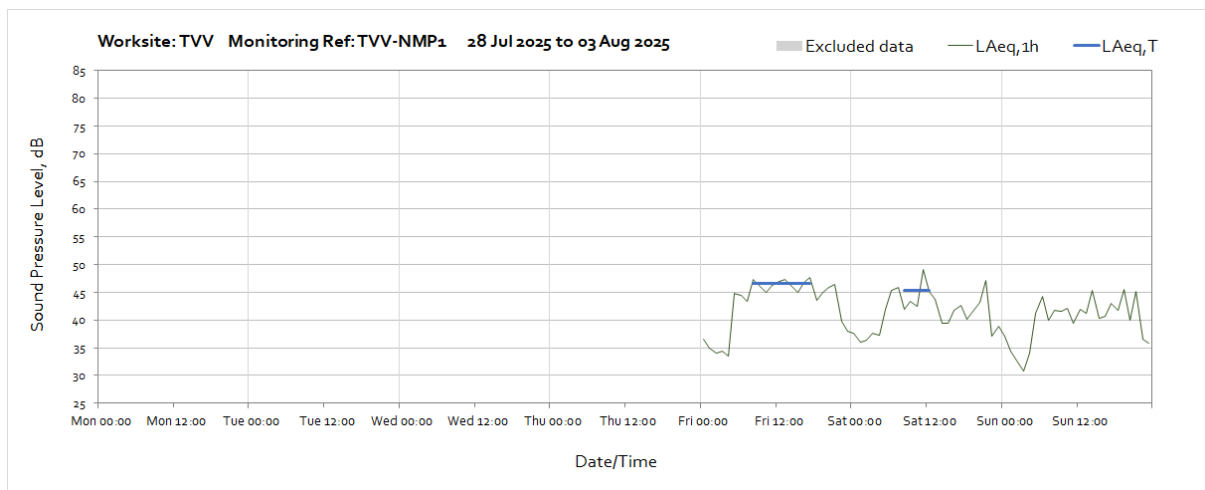
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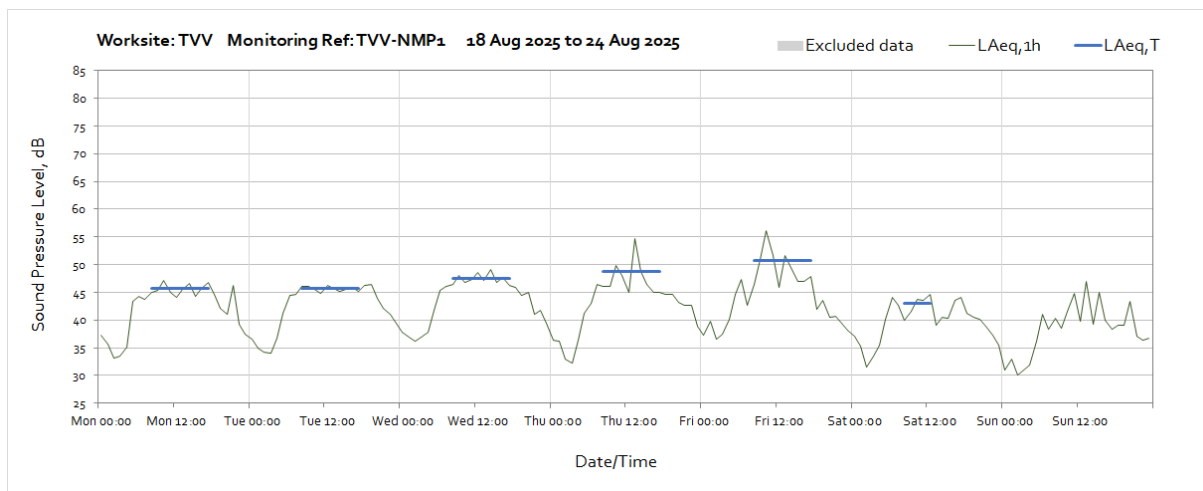
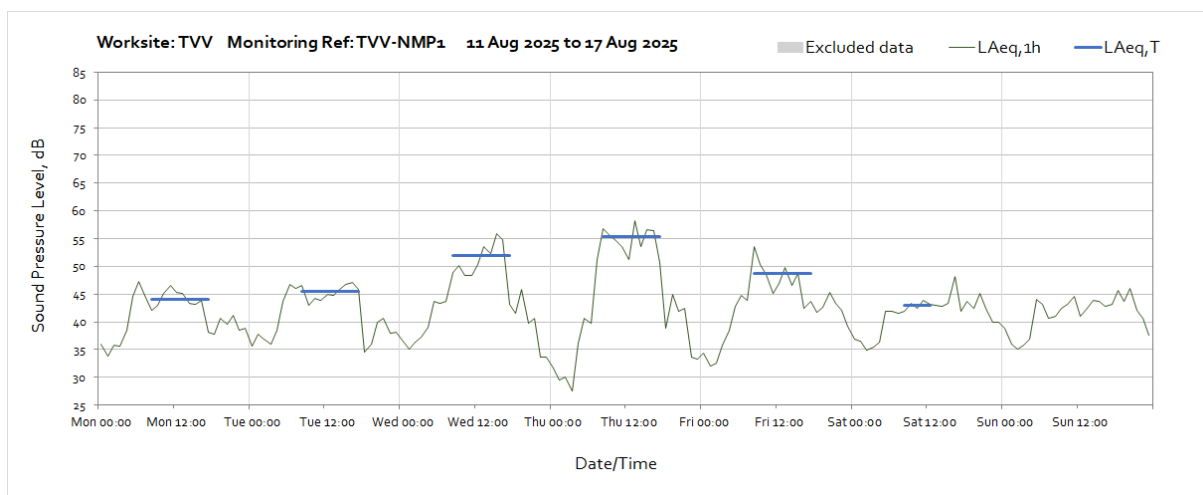
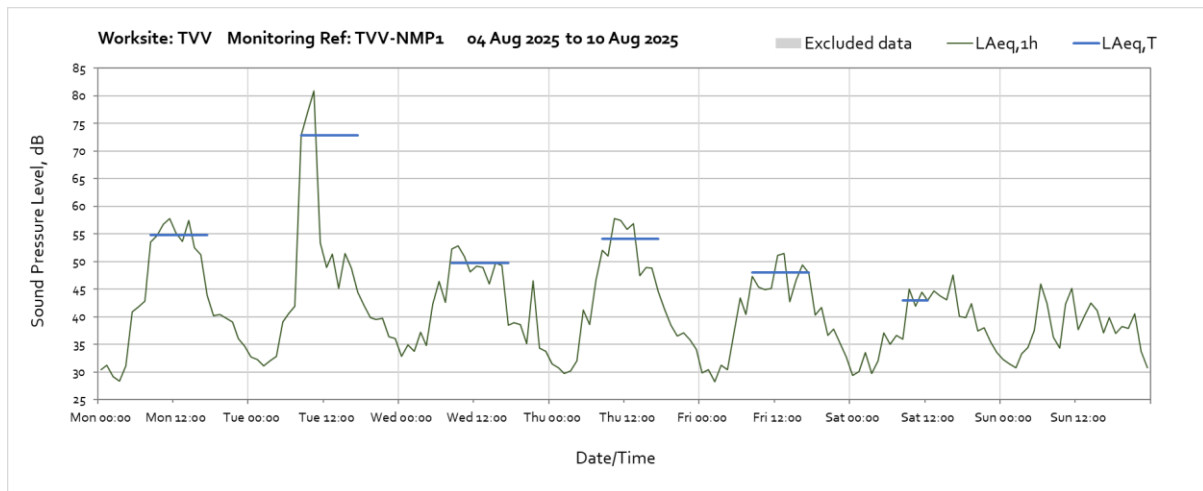


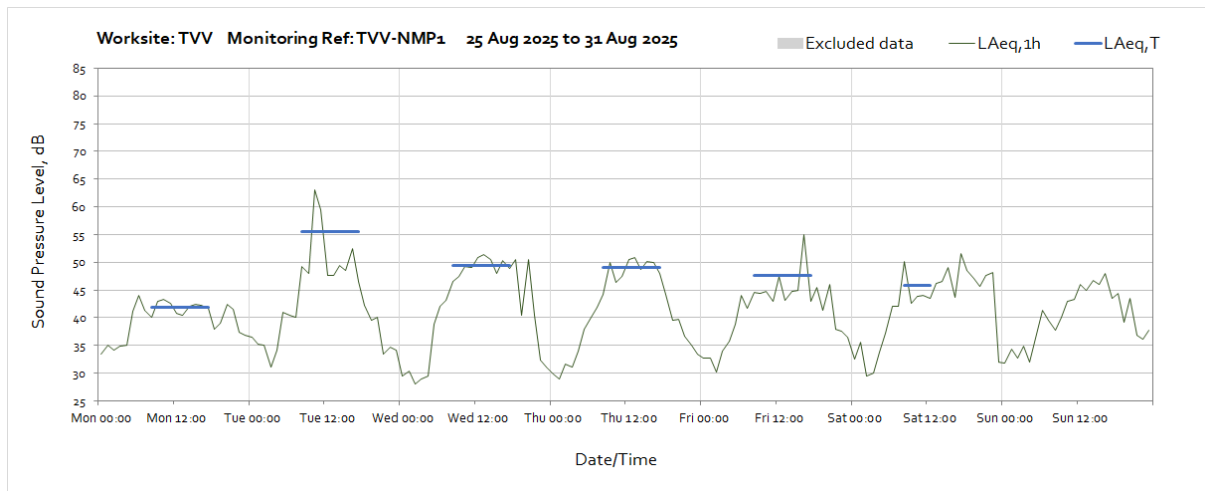
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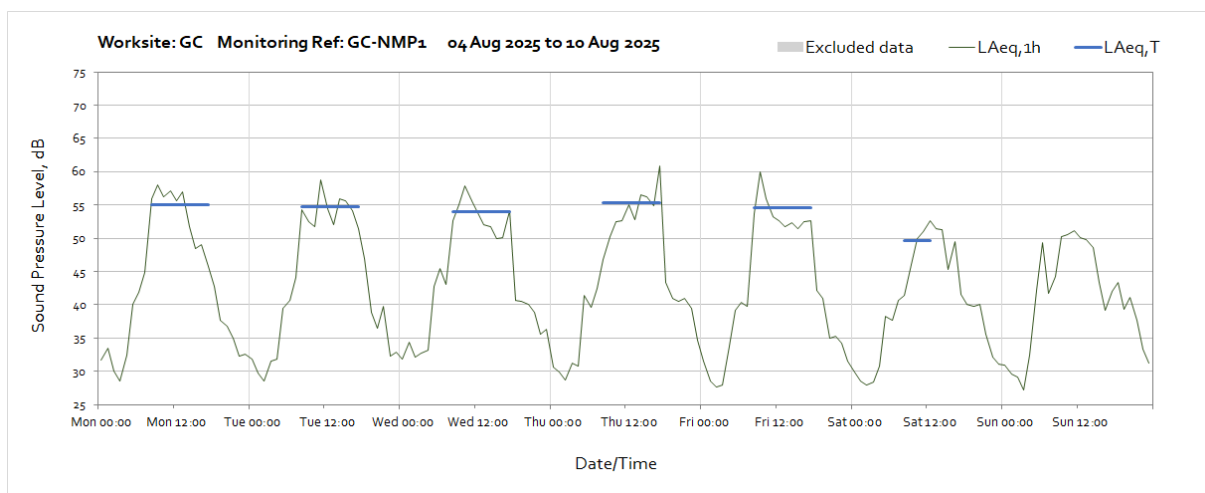
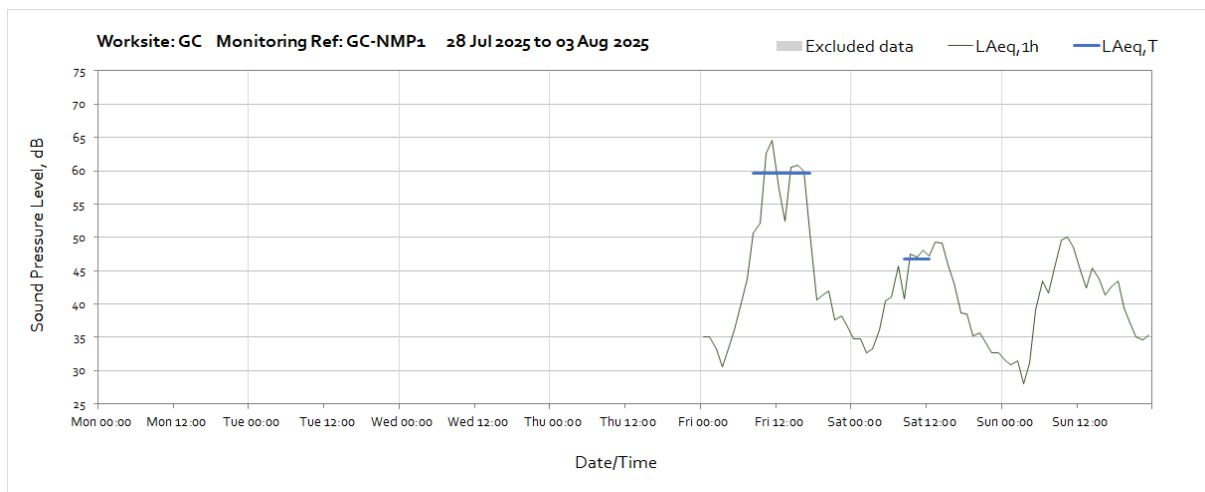
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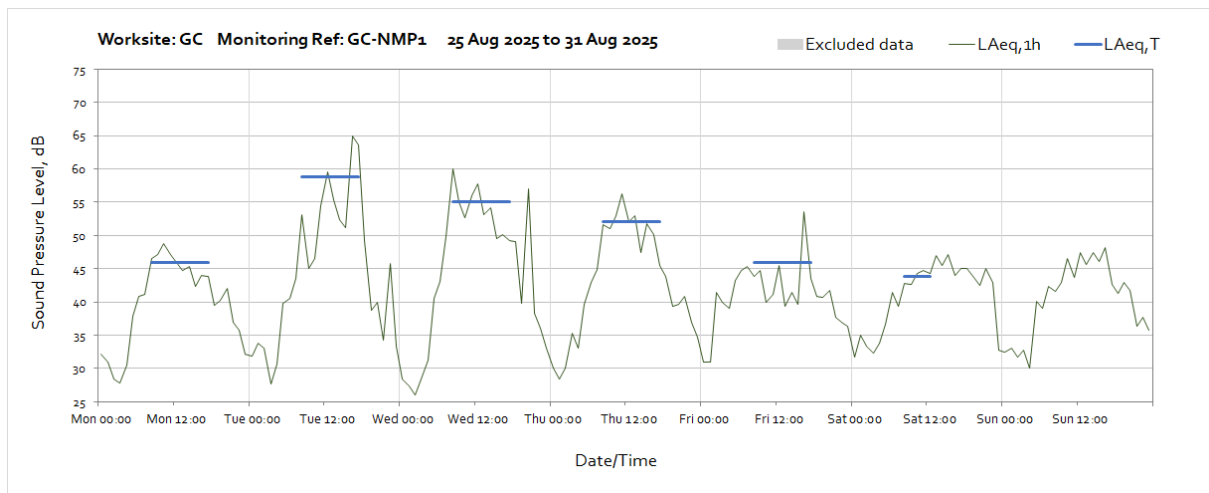
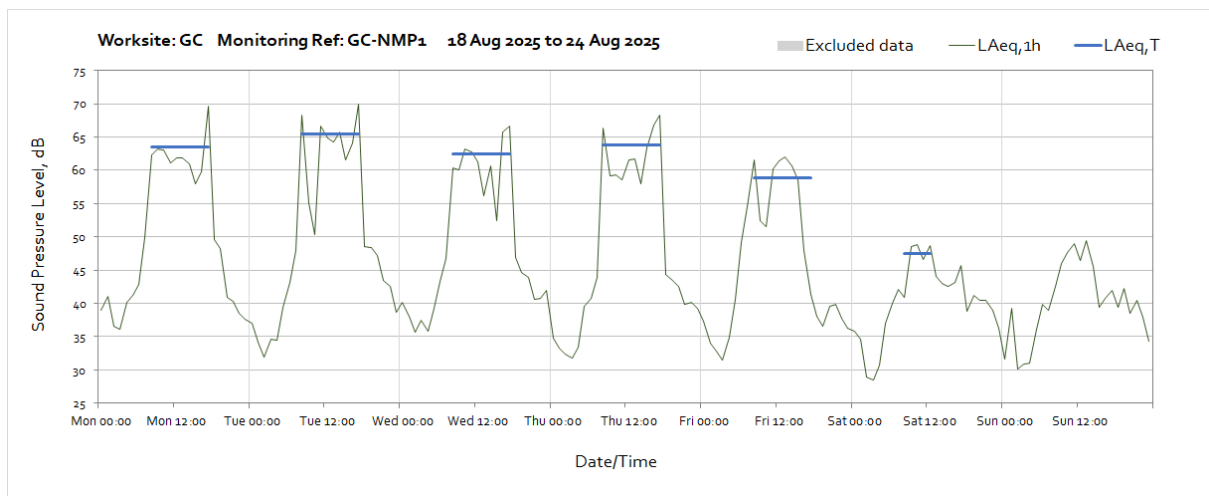
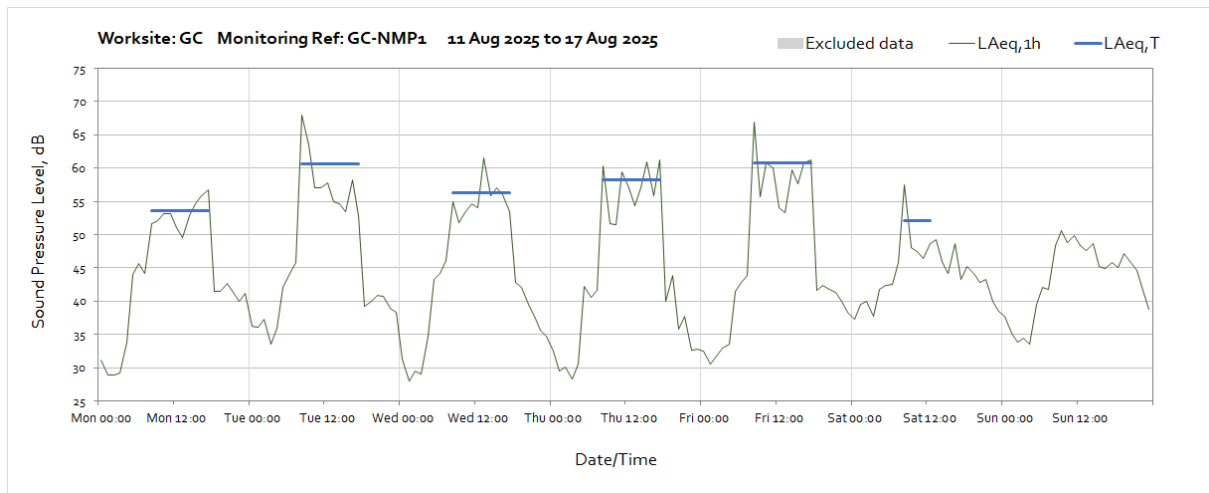




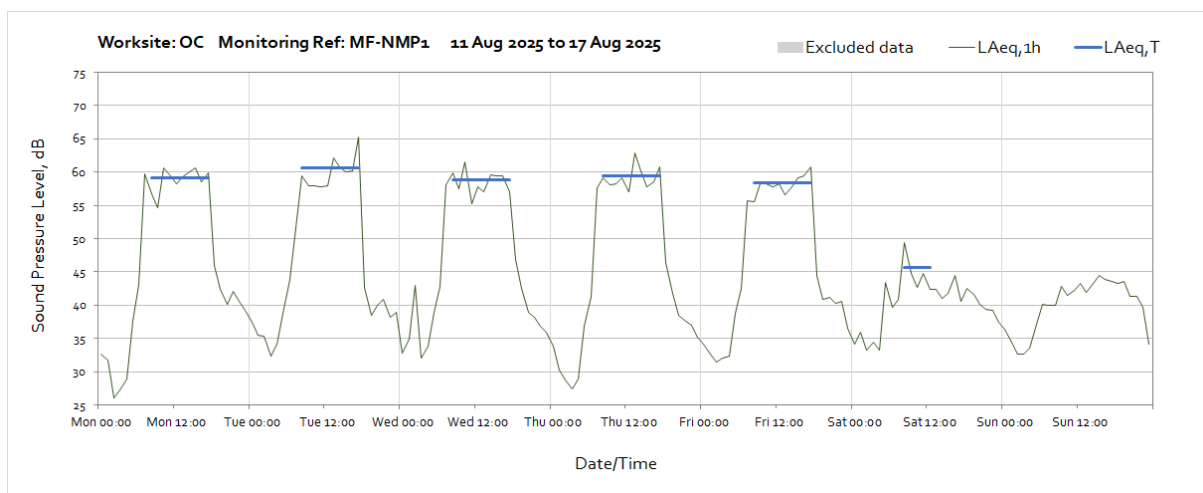
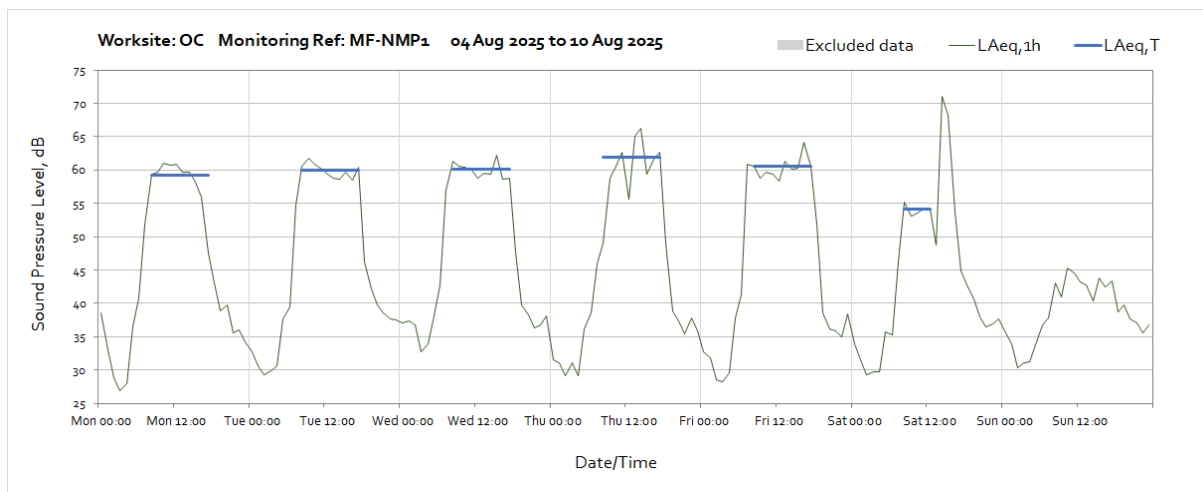
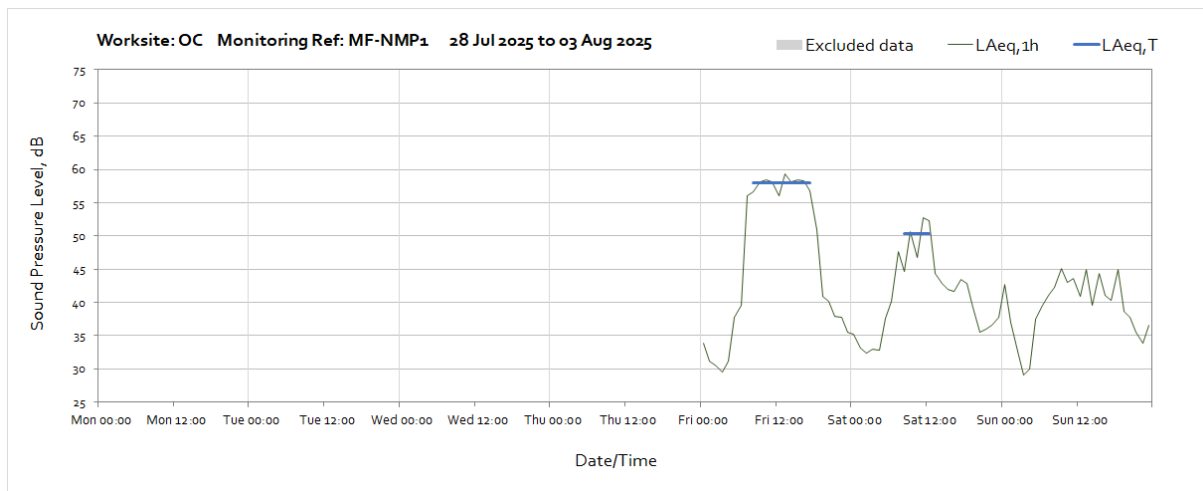


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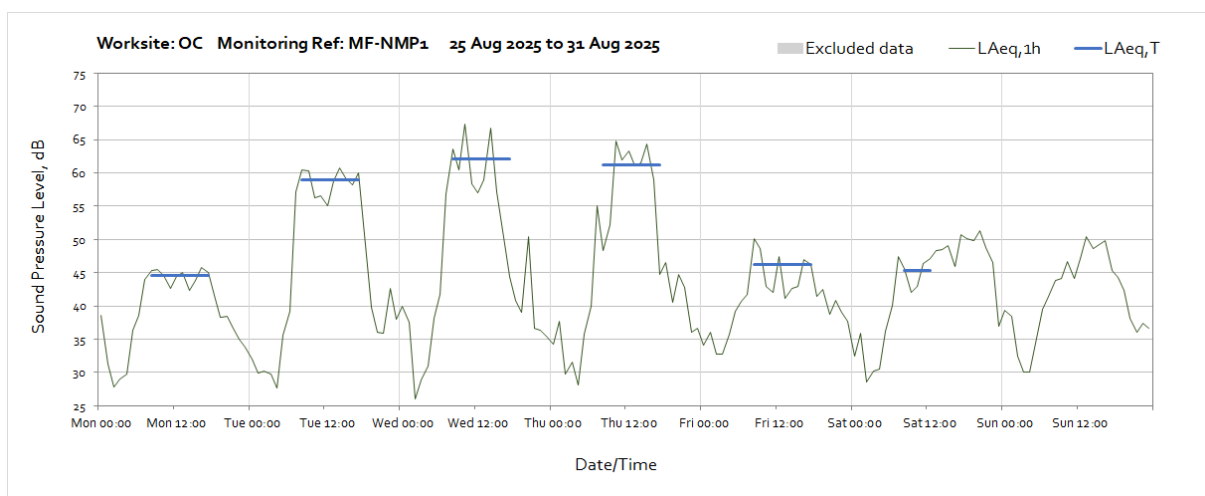
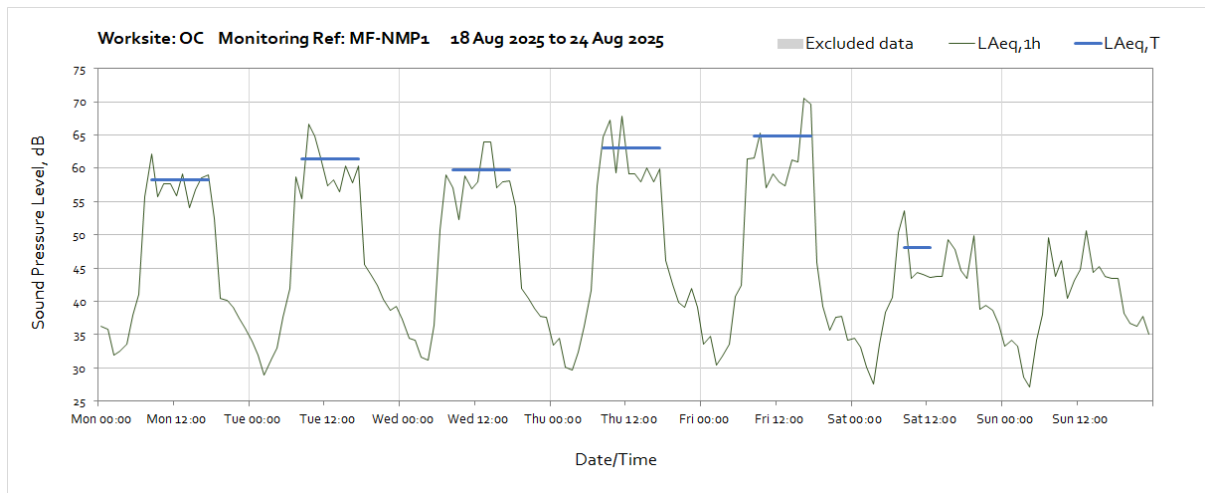




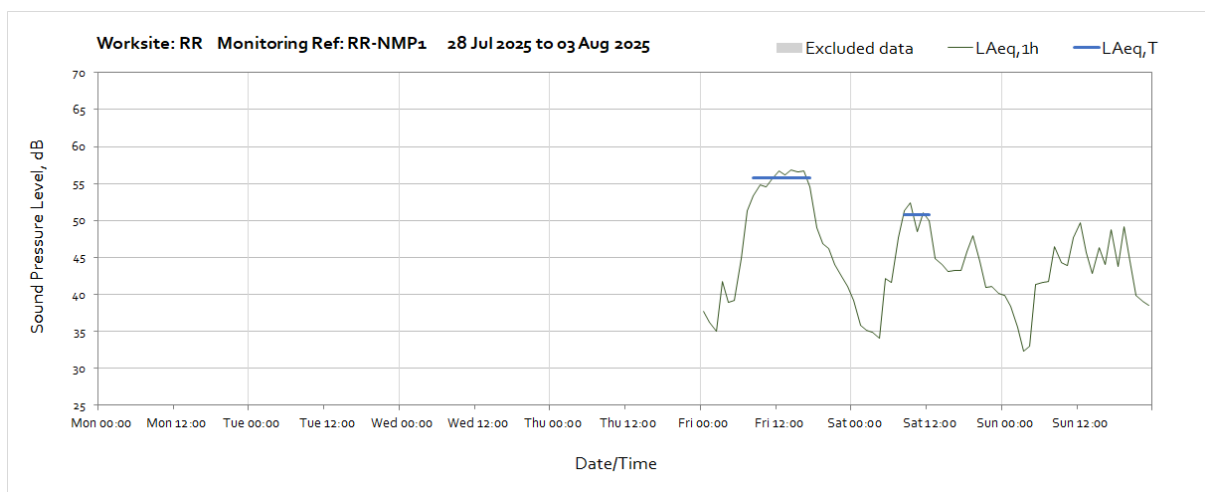
Worksite: OC – Monitoring Ref: MF-NMP1

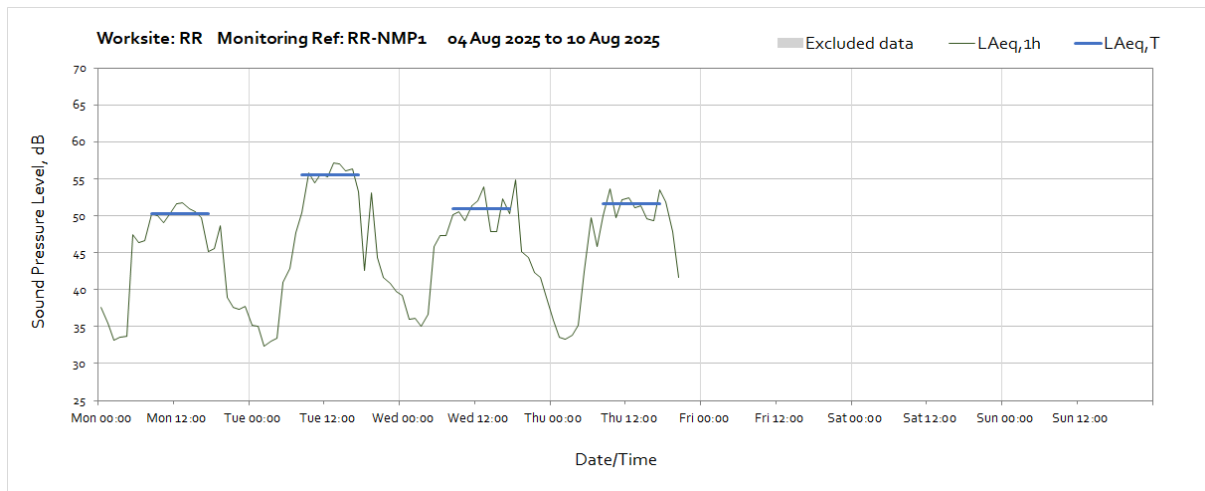


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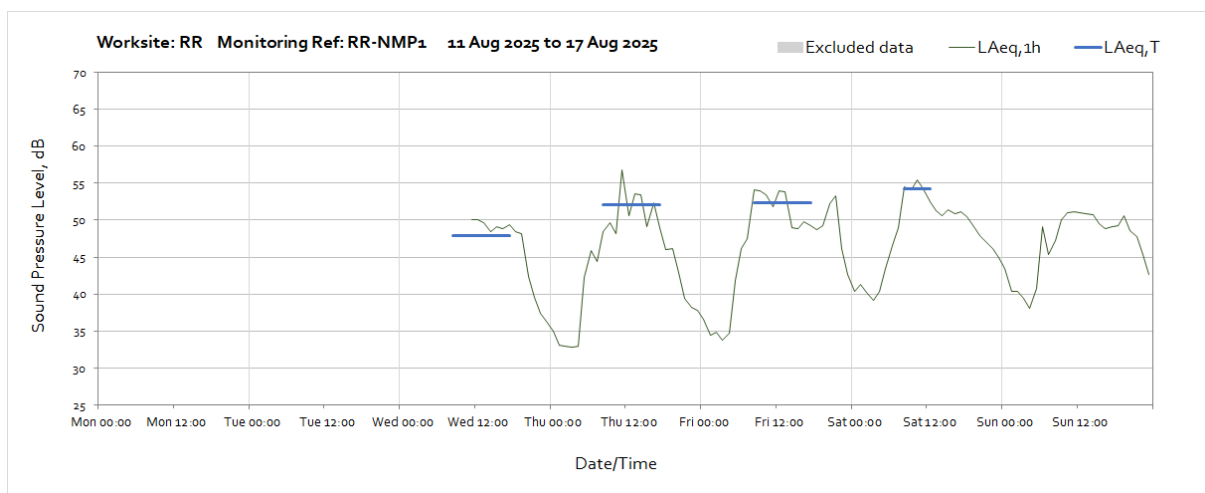


Worksite: RR – Monitoring Ref: RR-NMP1

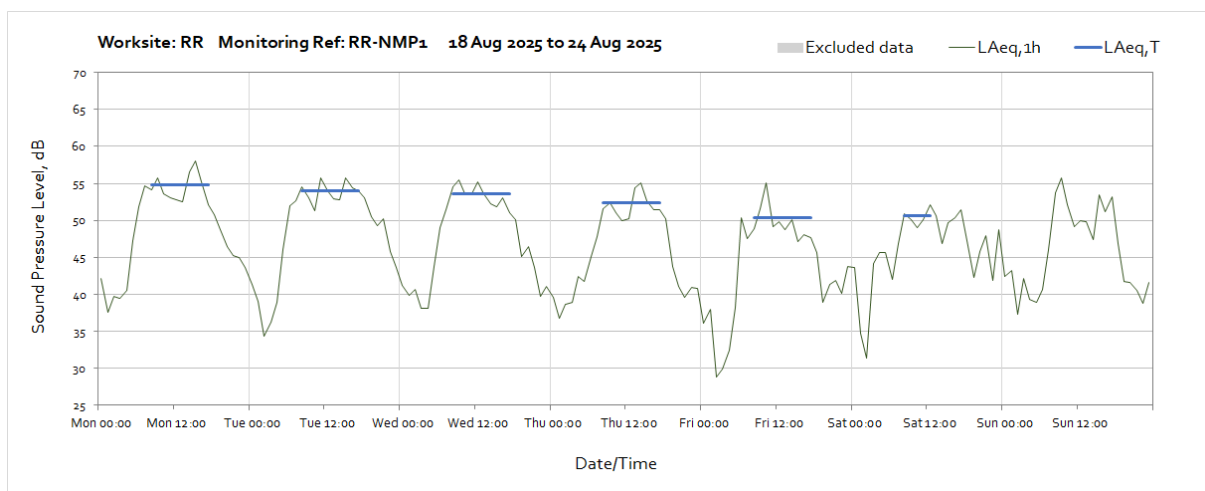


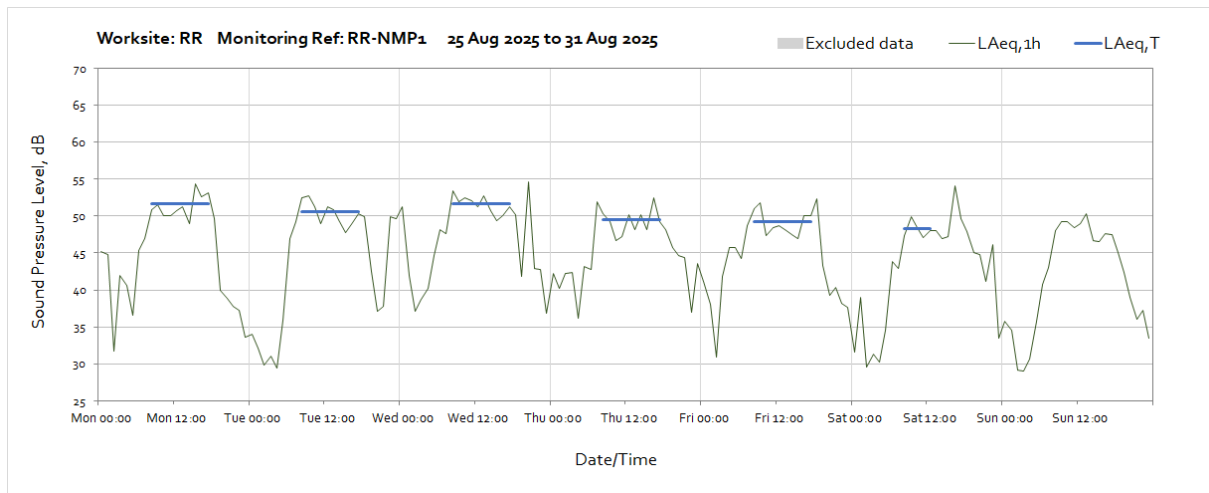


Note: Missing data between 21:00 on Thursday 7th August and 11:00 on Wednesday 13th August was due to a communication error between the monitoring station and server.

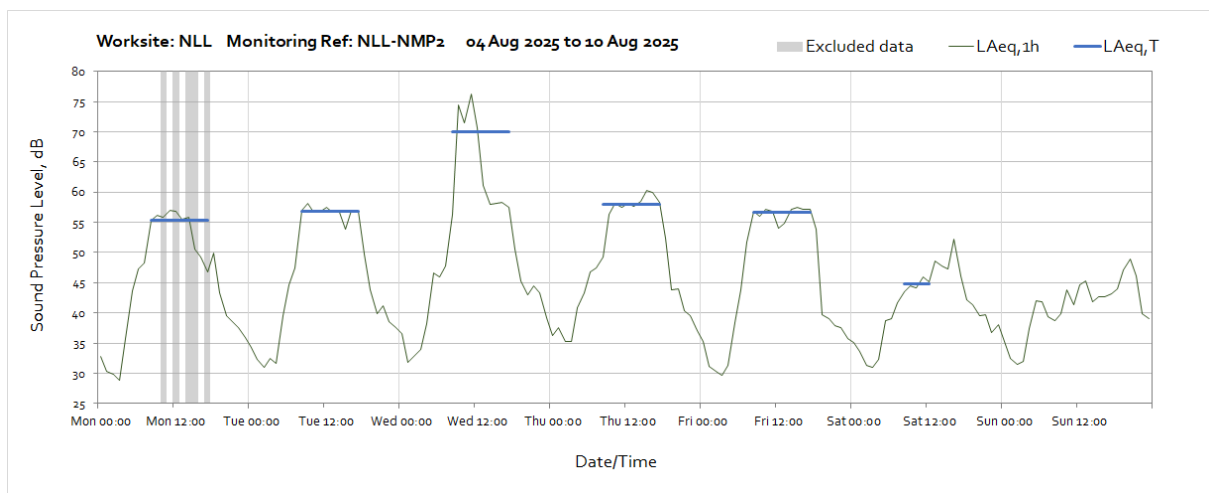
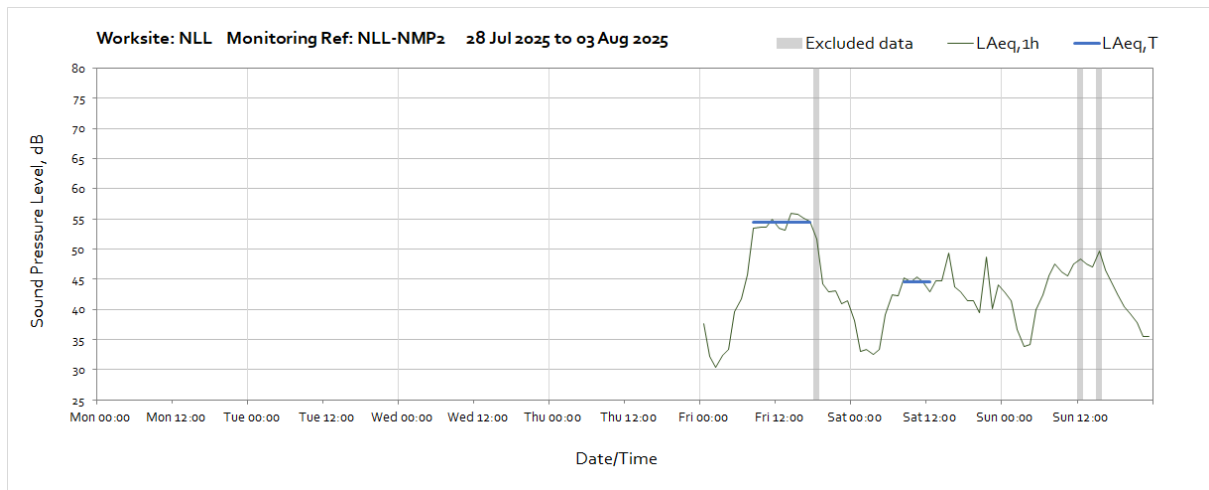


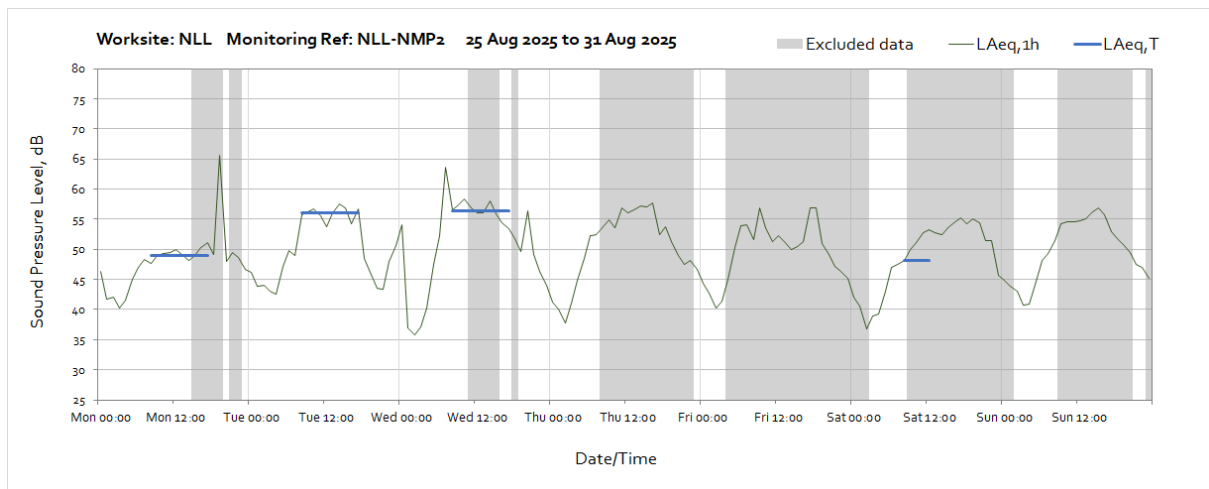
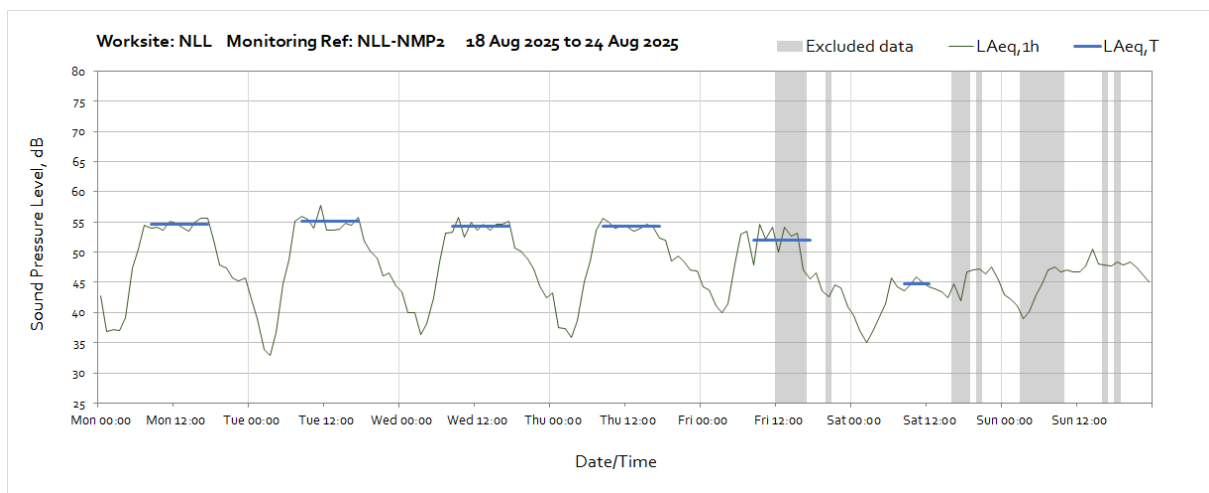
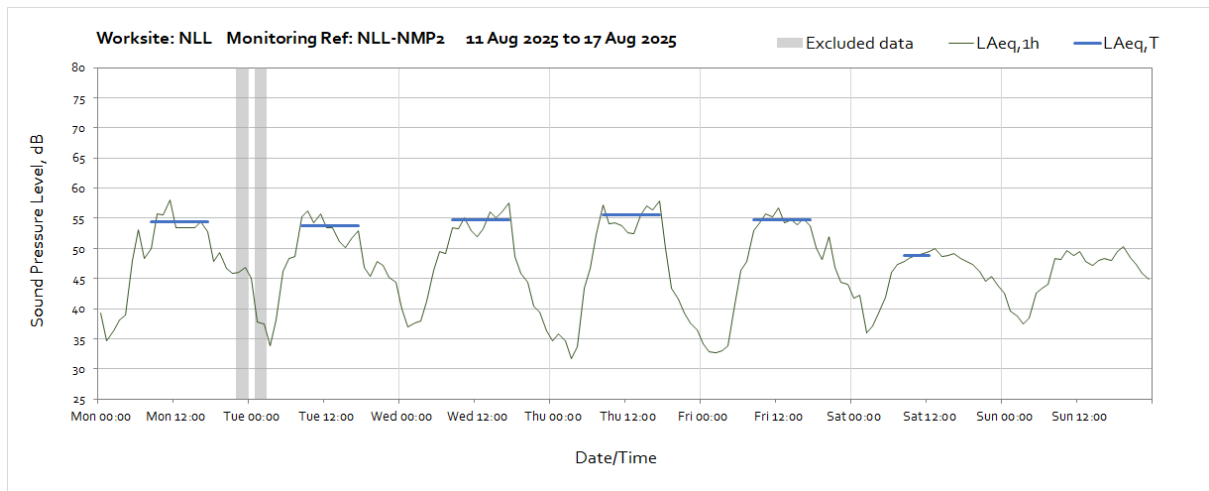
Note: Missing data between 21:00 on Thursday 7th August and 11:00 on Wednesday 13th August was due to a communication error between the monitoring station and server.



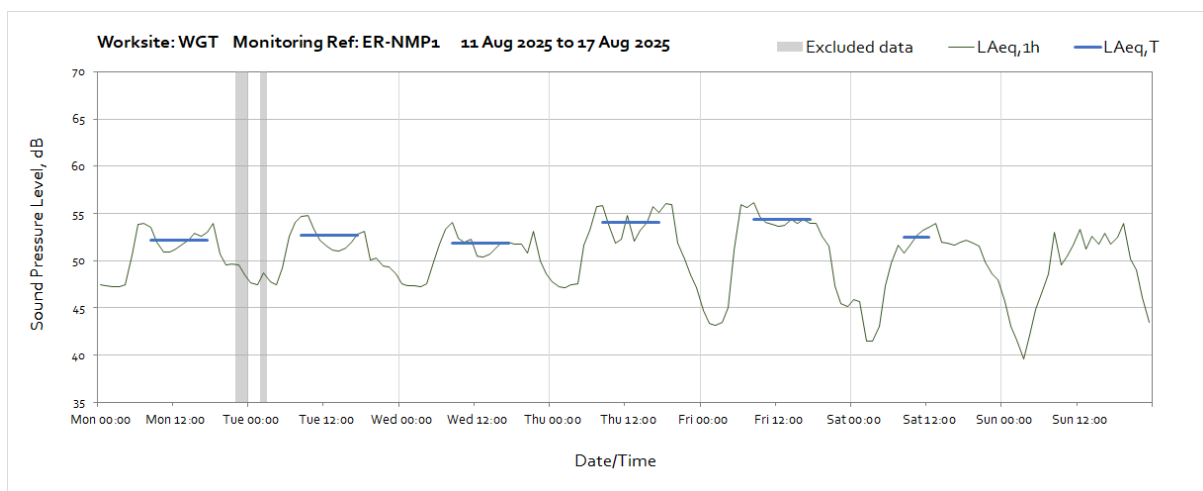
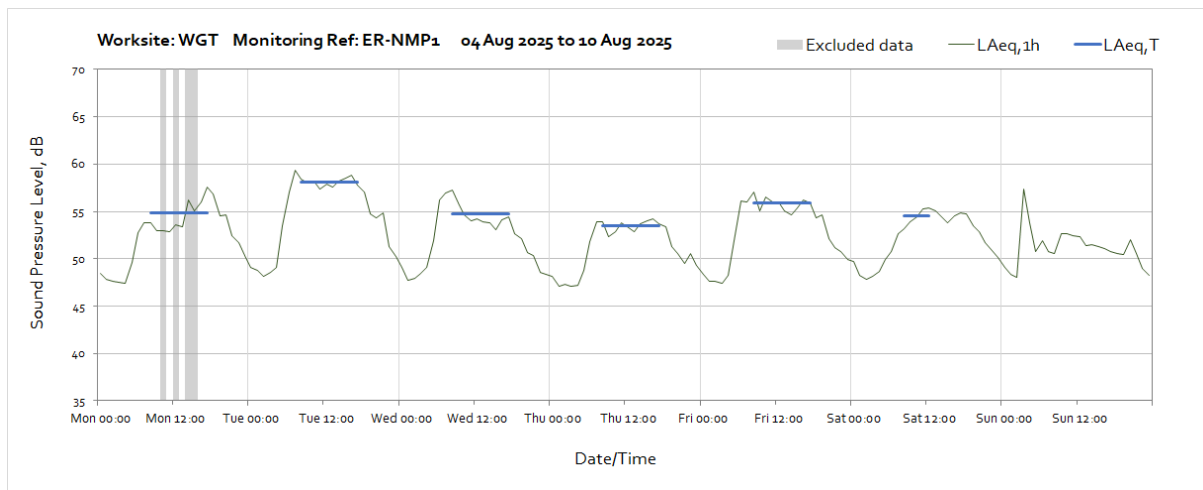
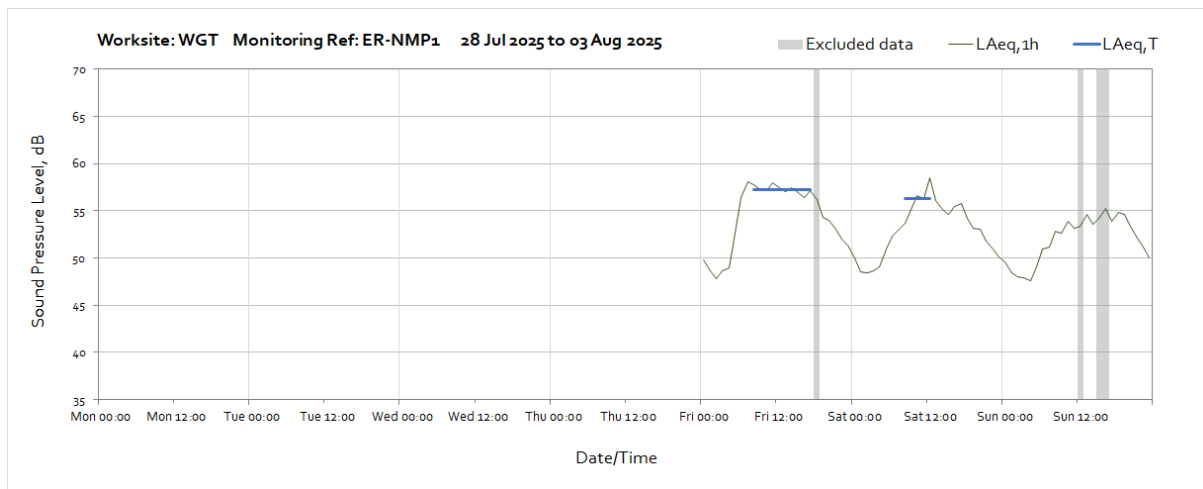


Worksite: NLL – Monitoring Ref: NLL-NMP2

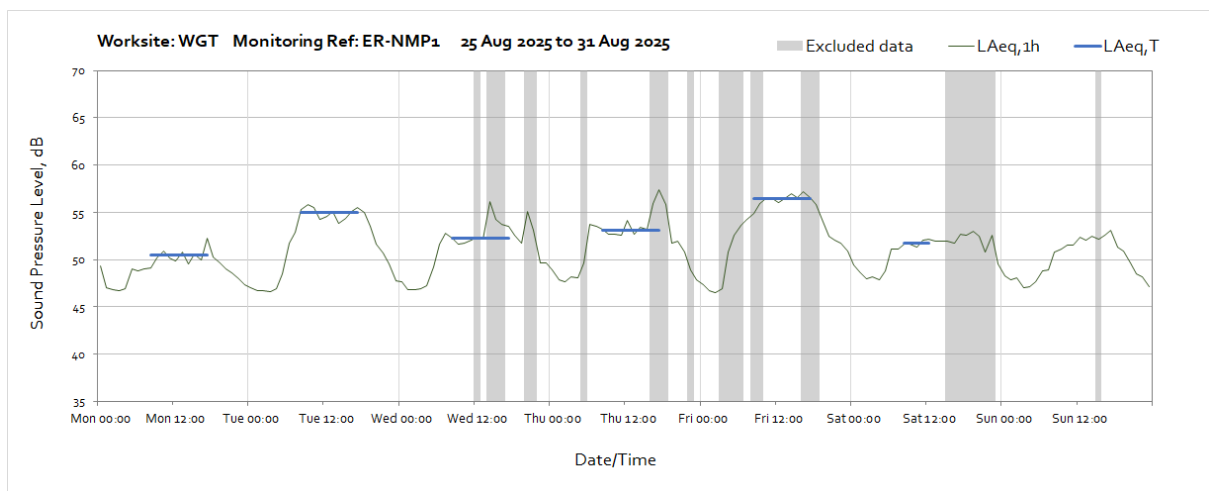
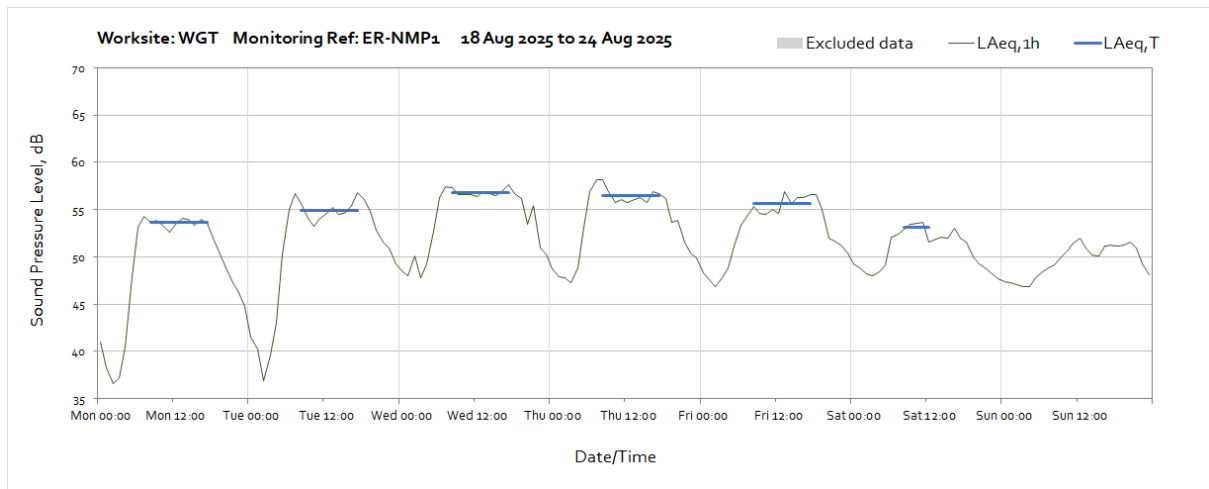




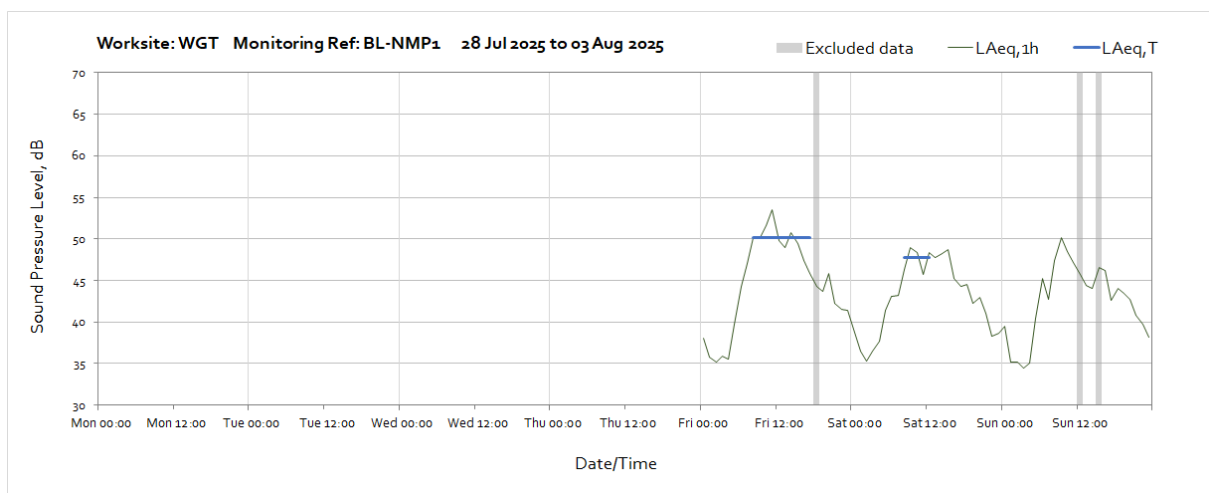
Worksite: WGT – Monitoring Ref: ER-NMP1

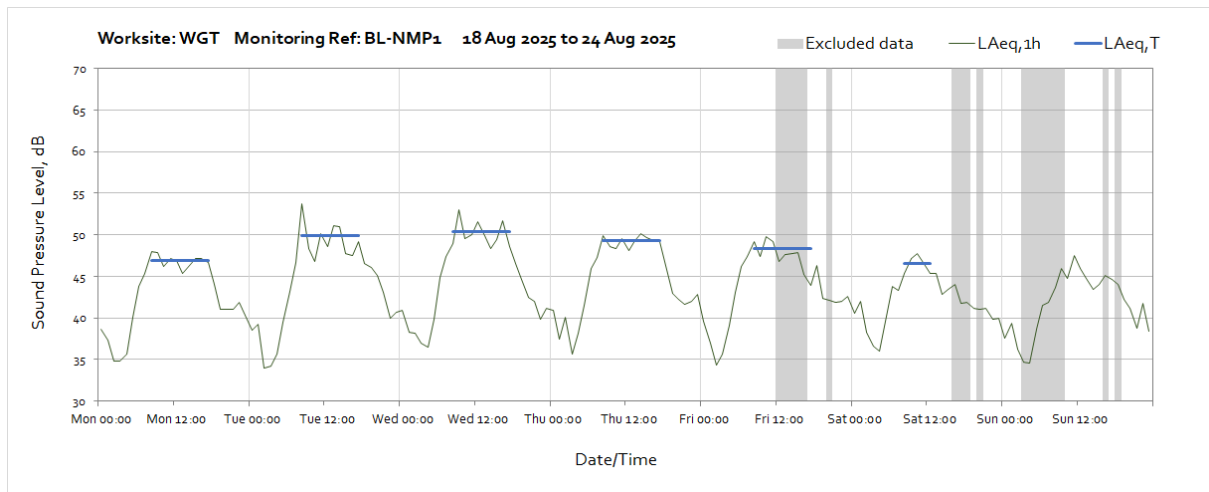
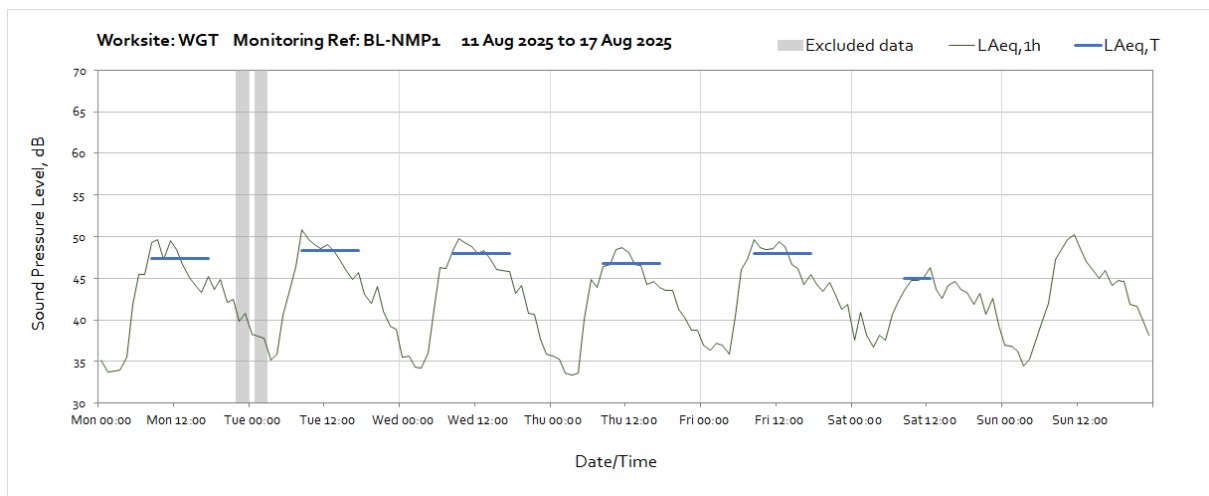
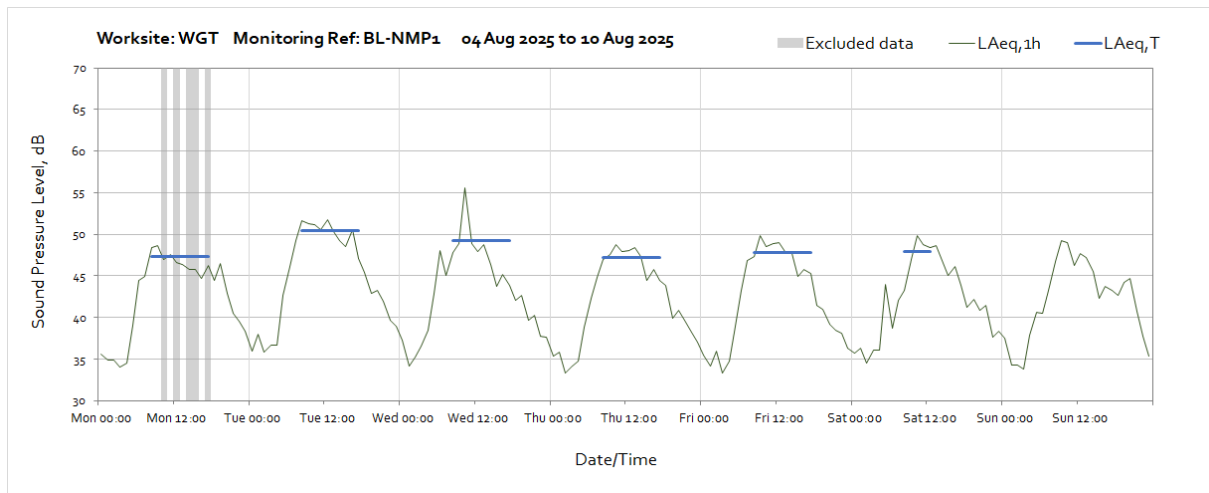


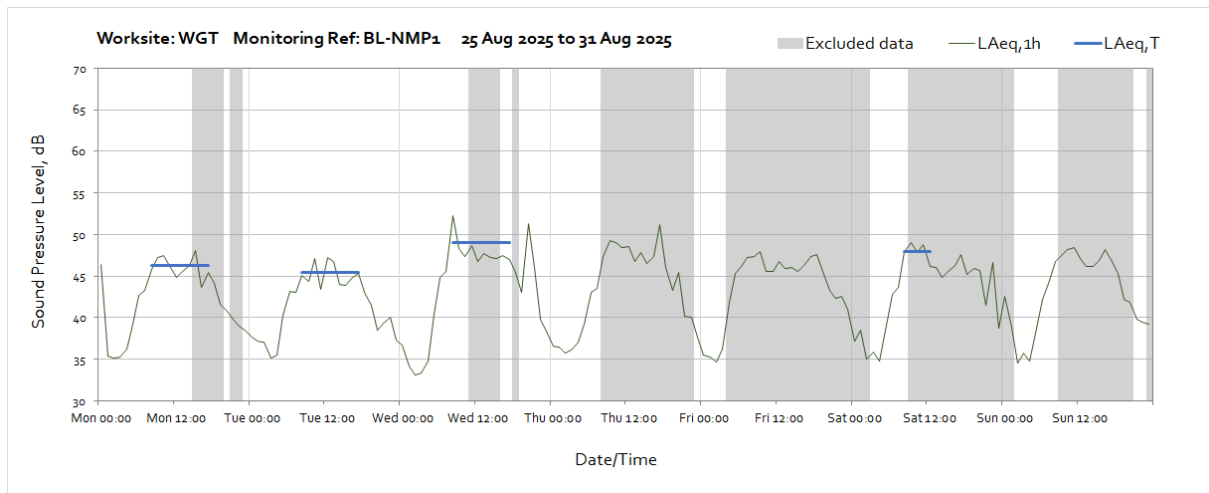
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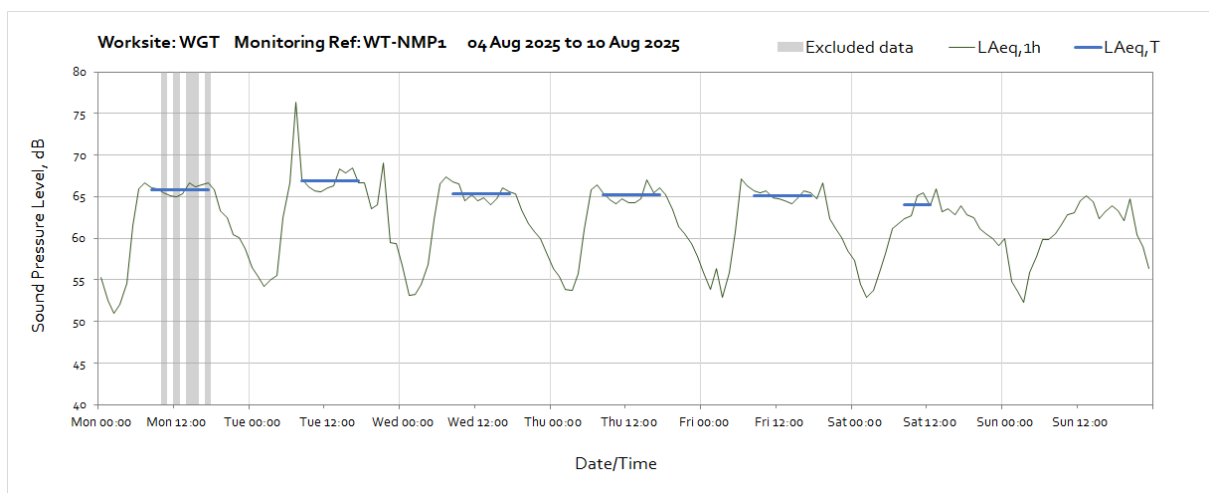
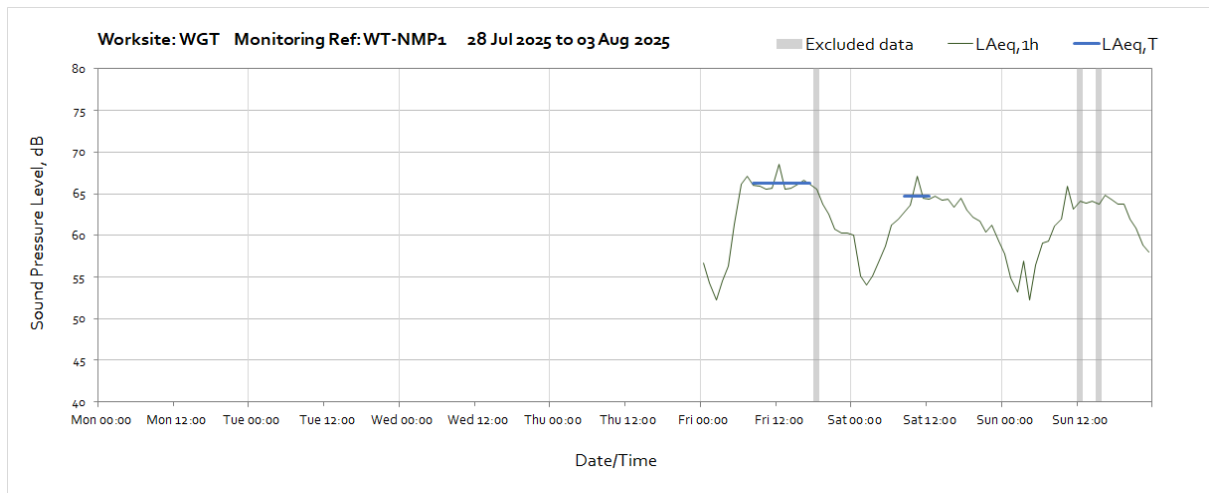
Worksite: WGT – Monitoring Ref: BL-NMP1

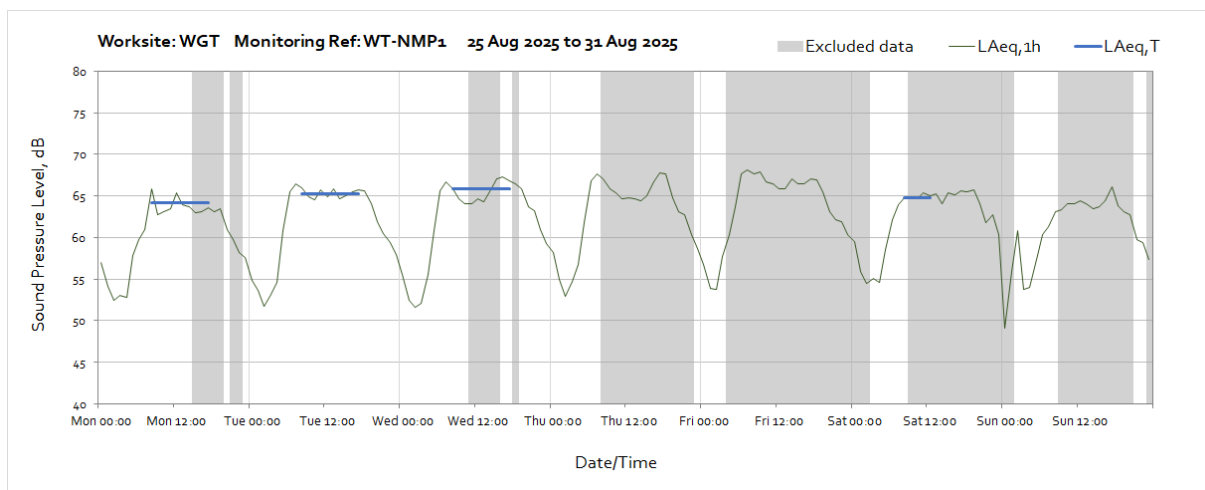
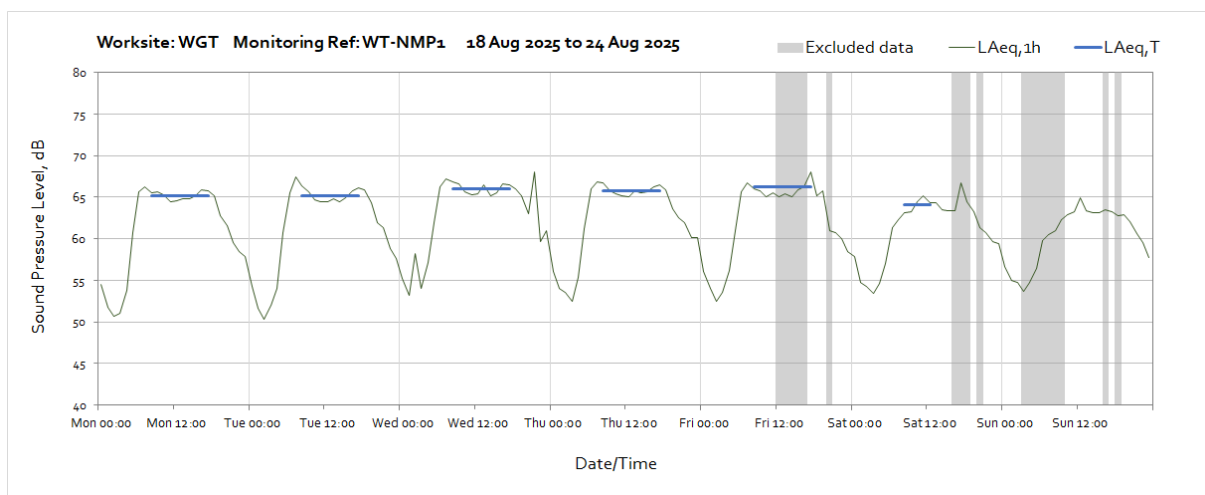
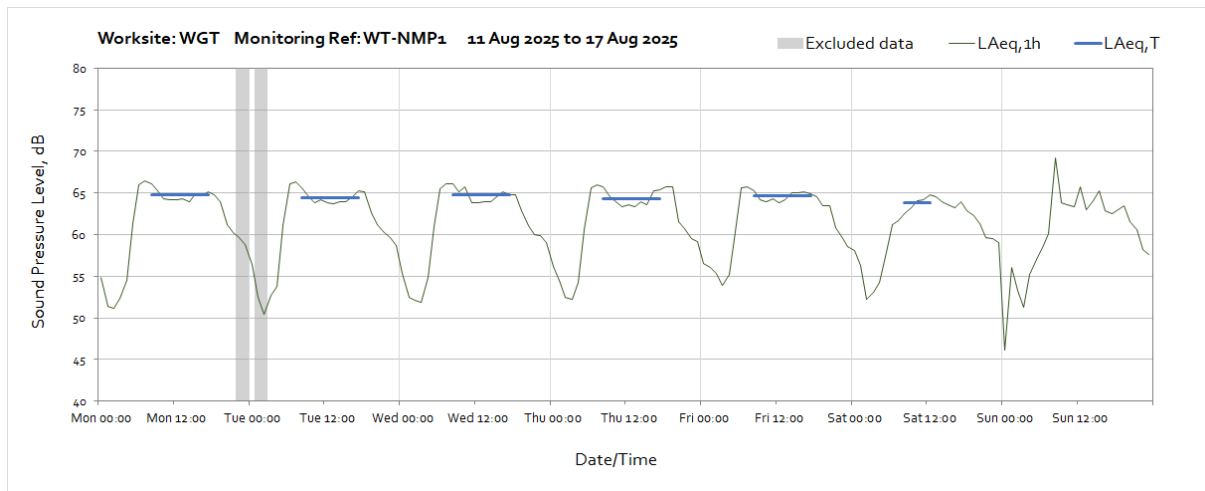




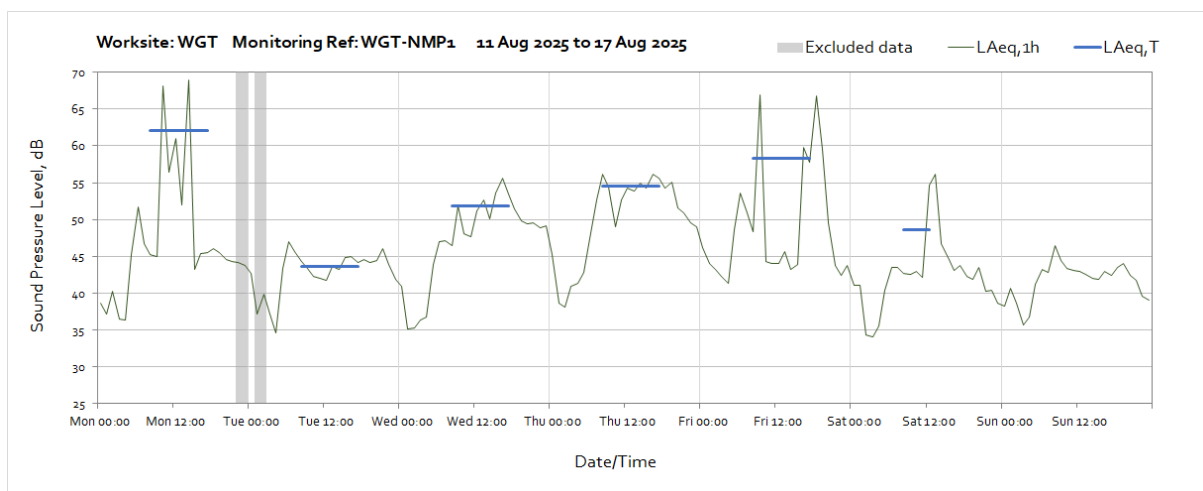
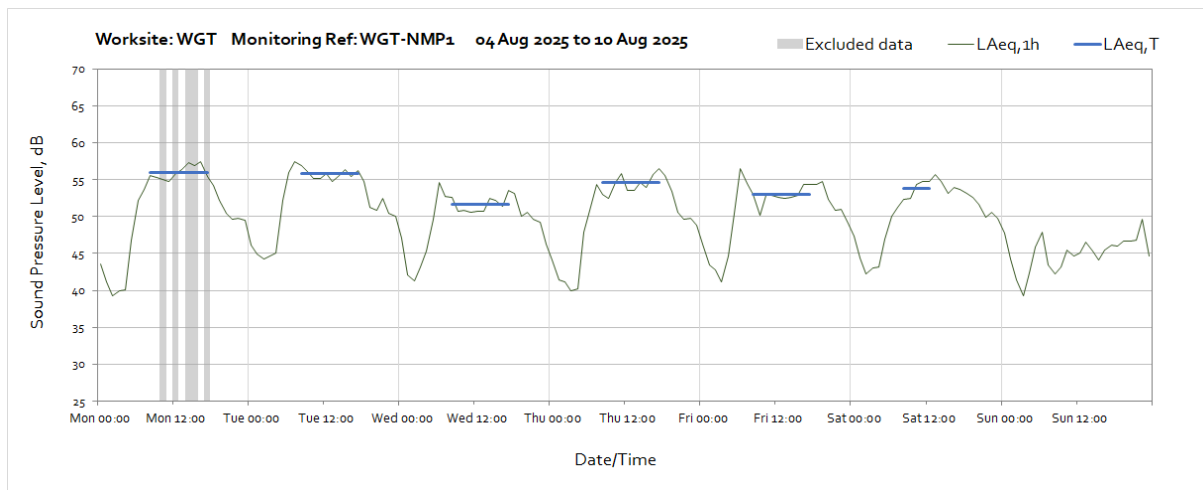
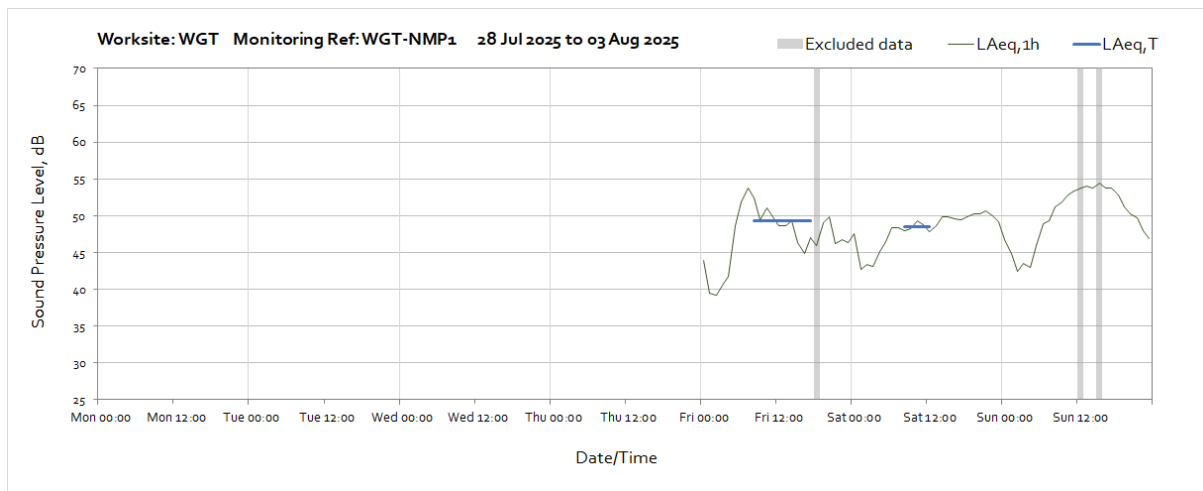


Worksite: WGT – Monitoring Ref: WT-NMP1

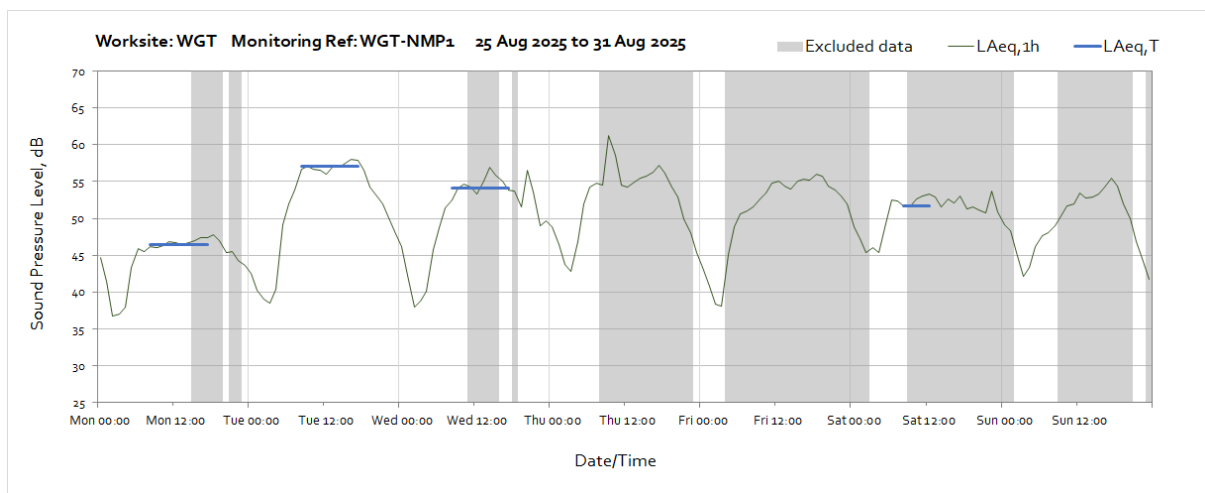
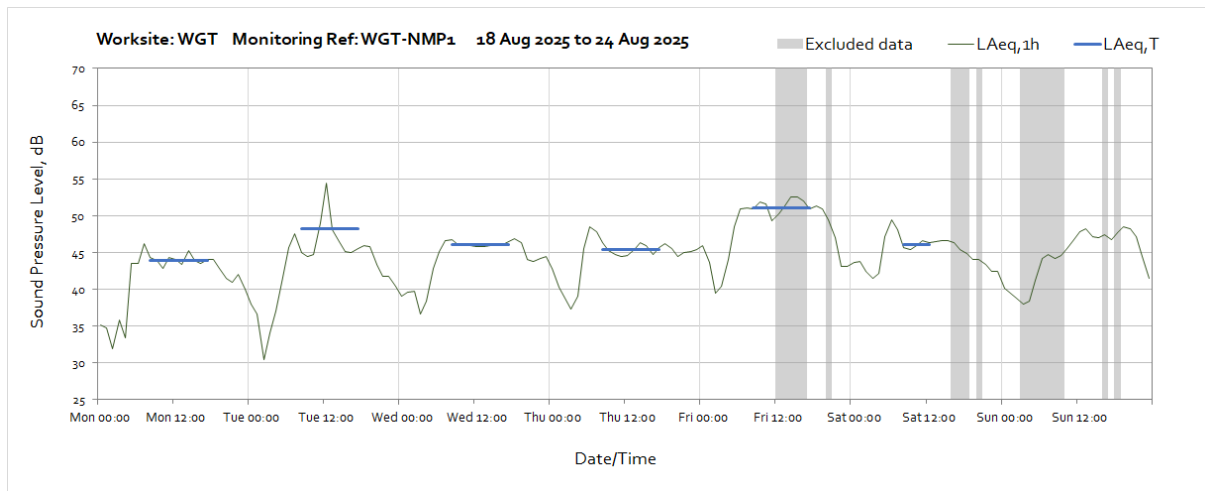




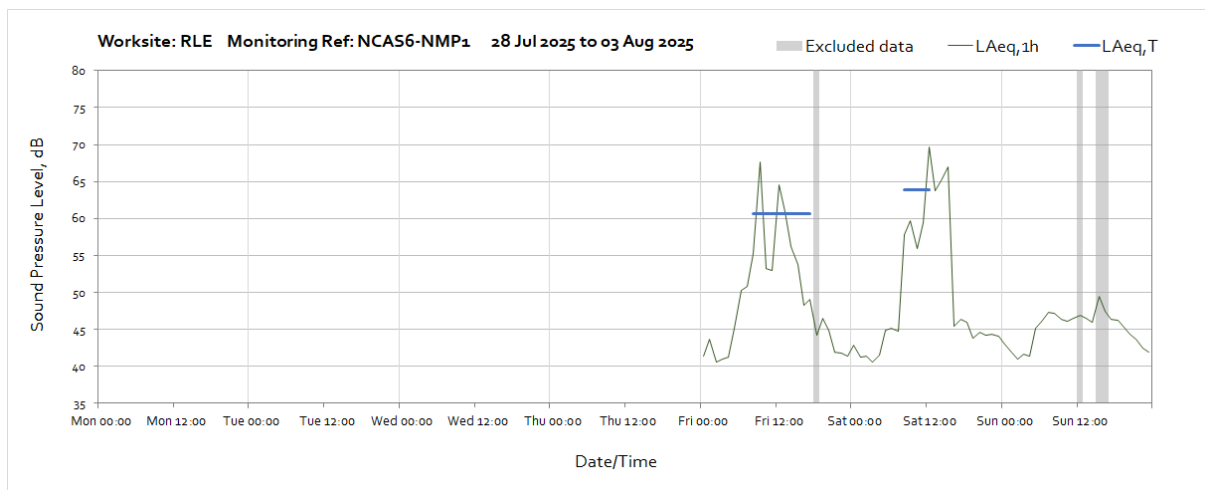
Worksite: WGT – Monitoring Ref: WGT-NMP1

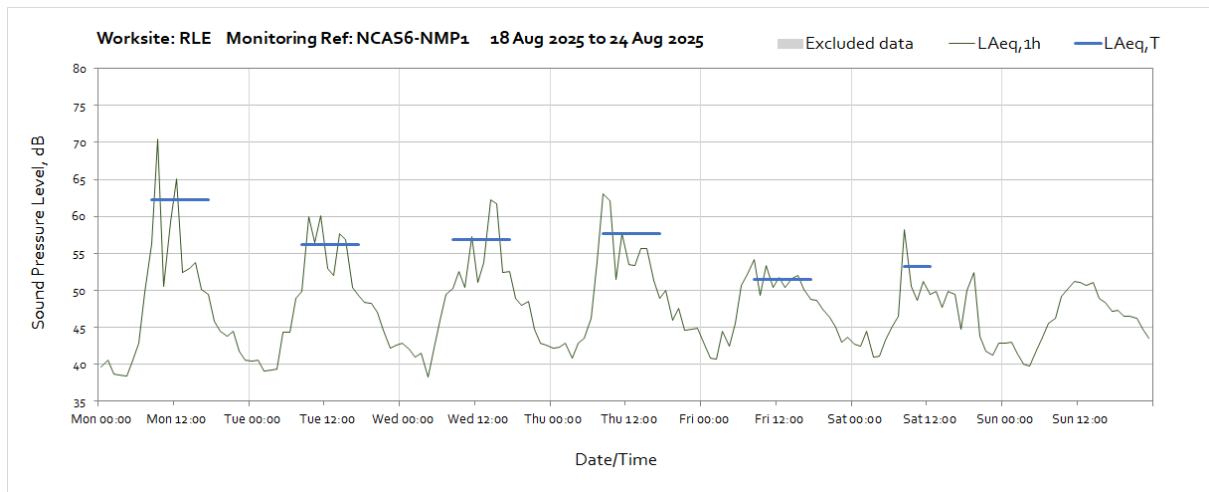
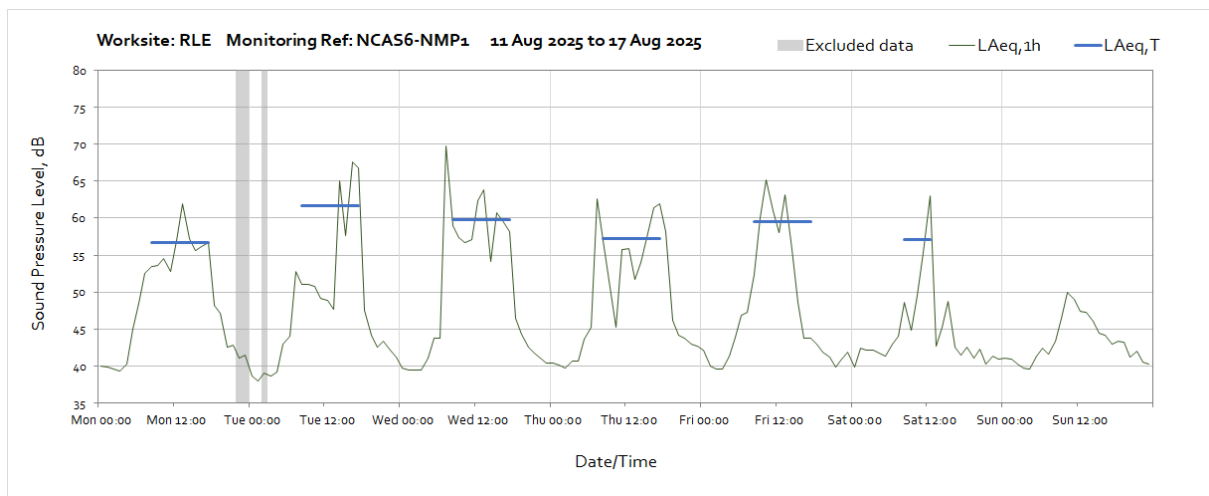
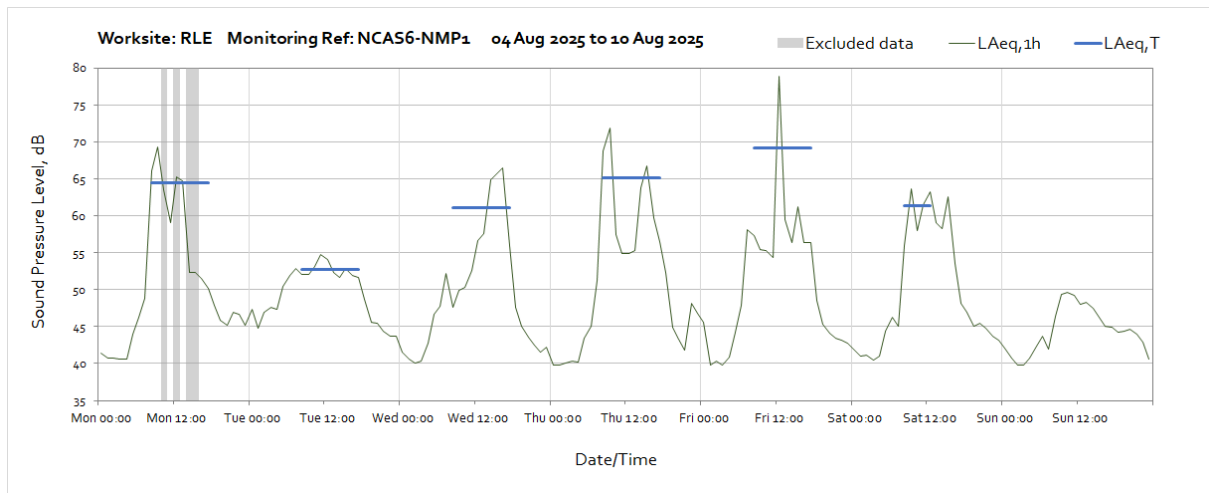


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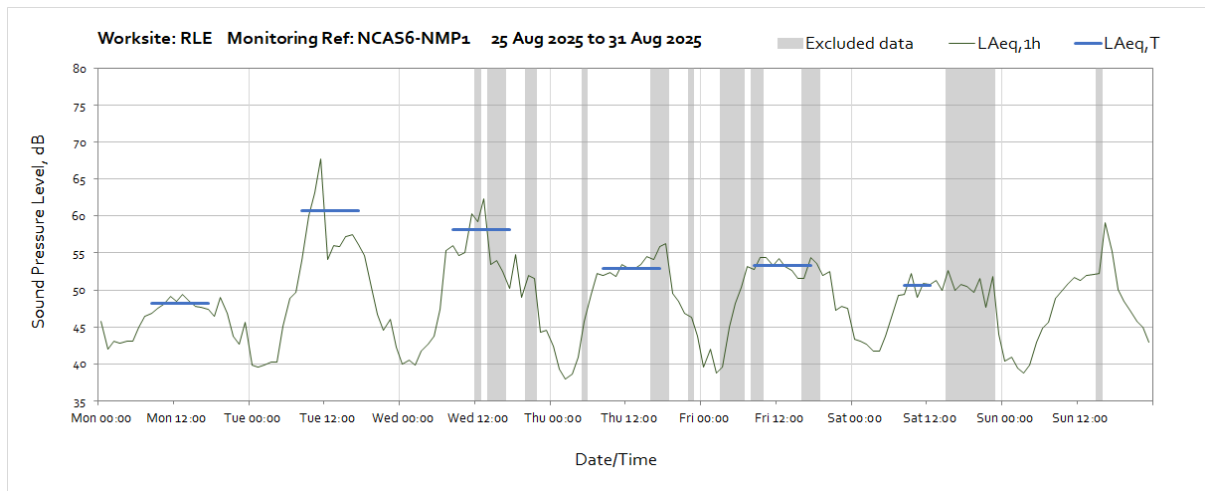


Worksite: RLE – Monitoring Ref: NCAS6-NMP1

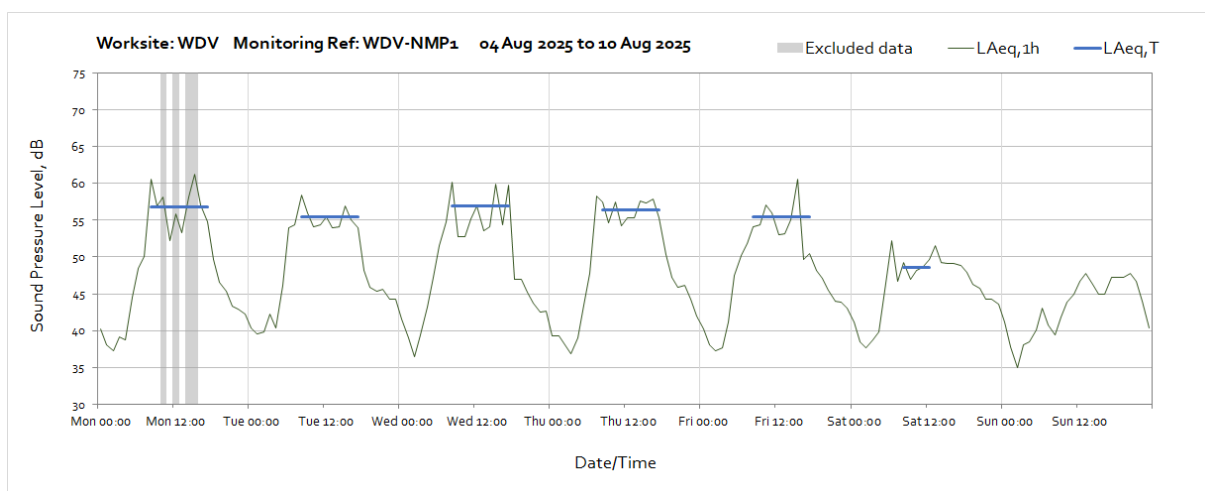
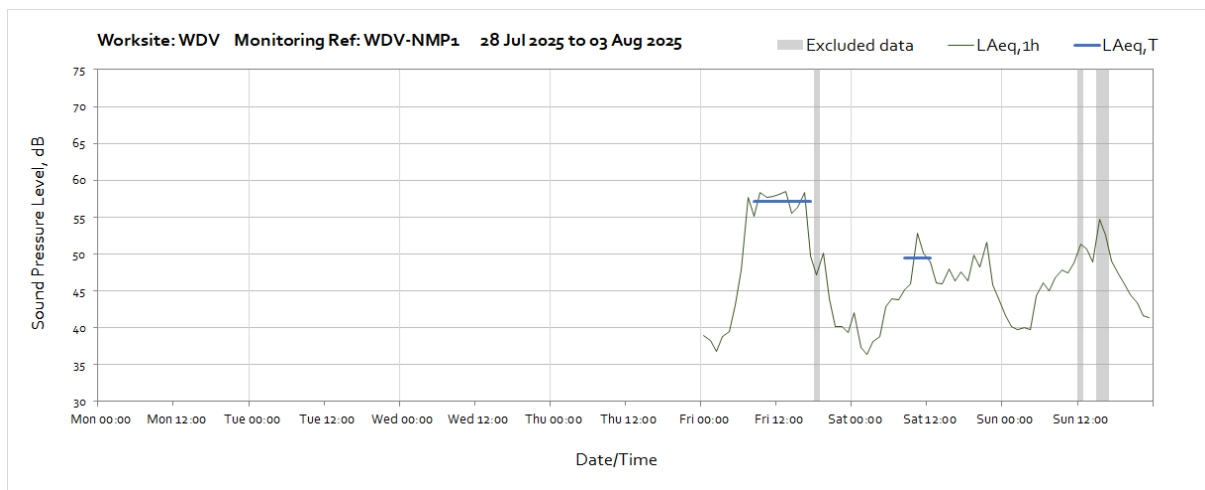


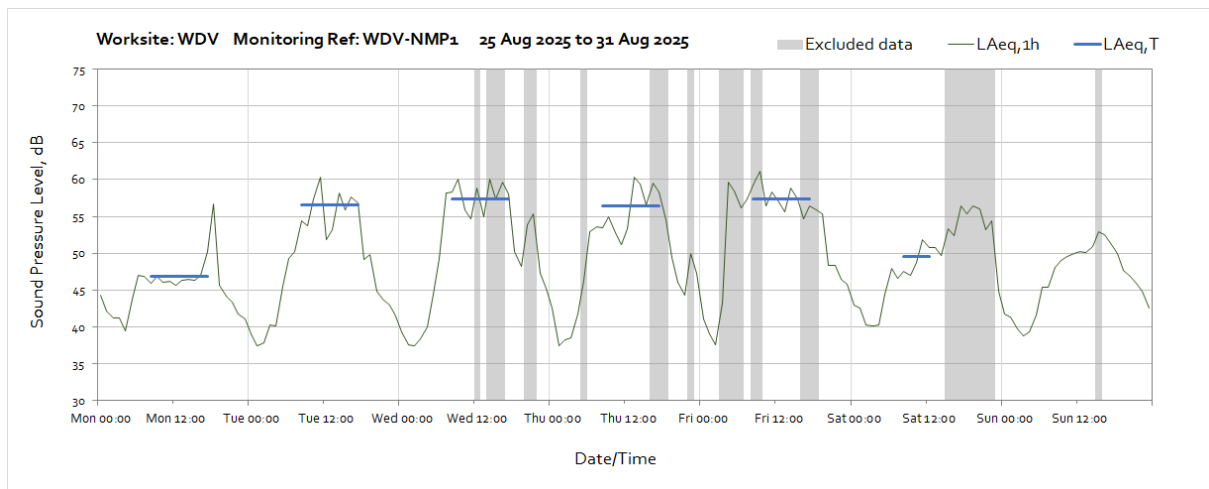
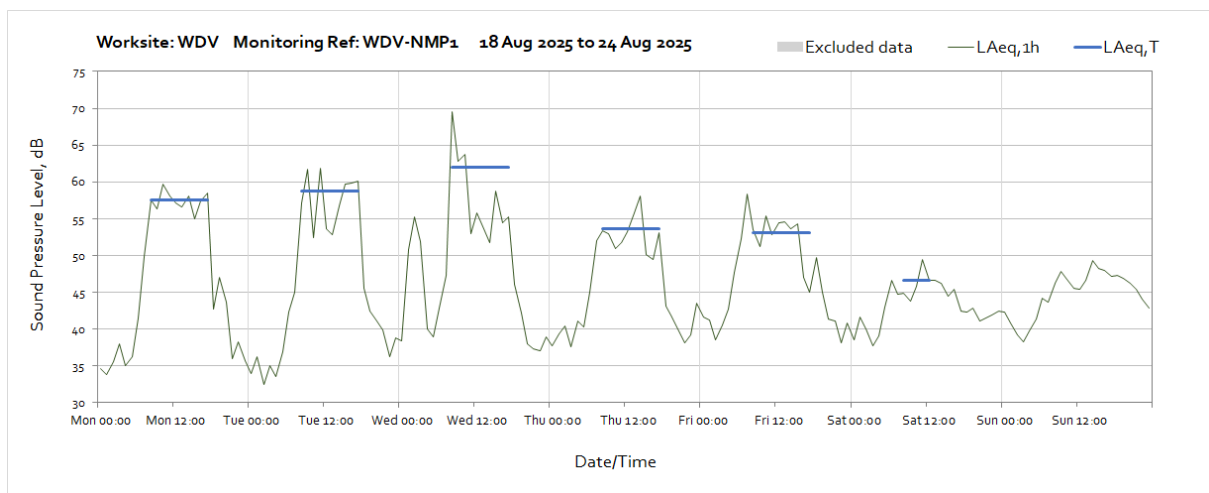
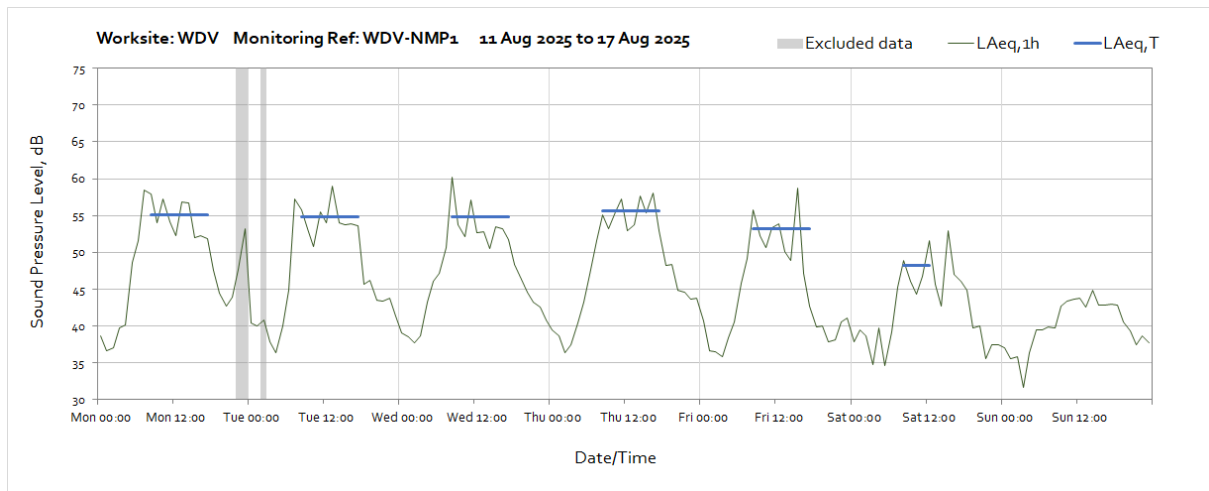


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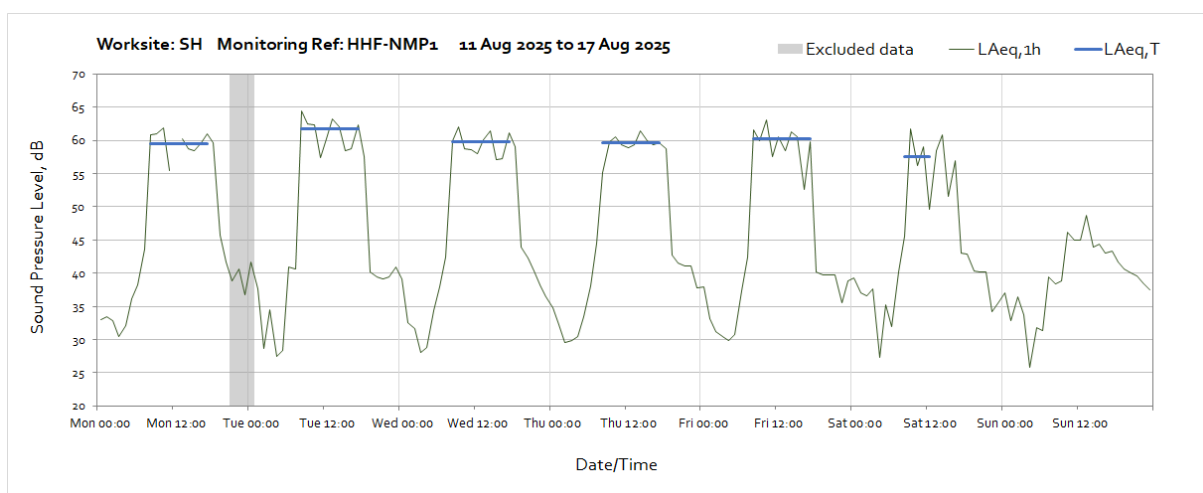
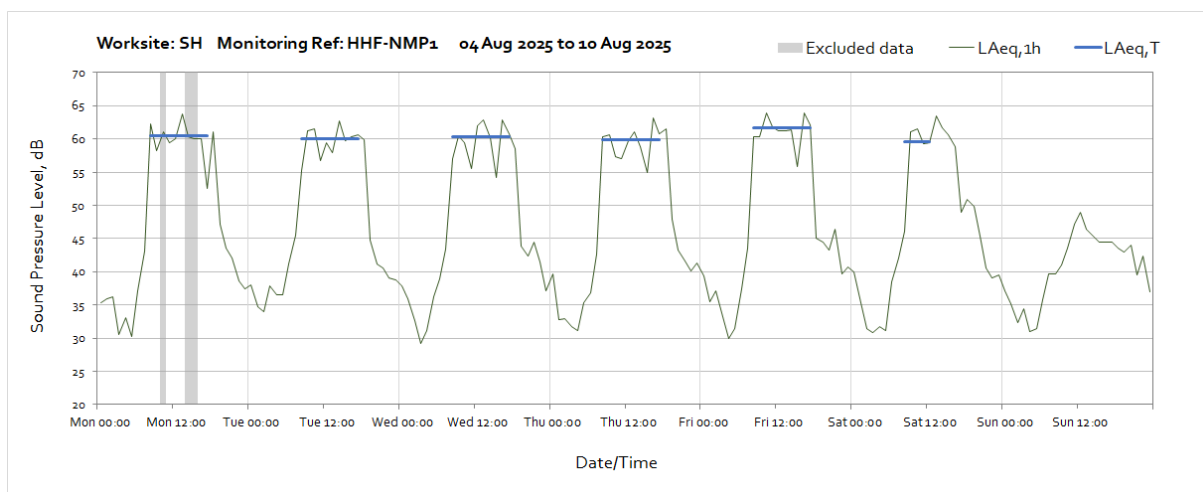
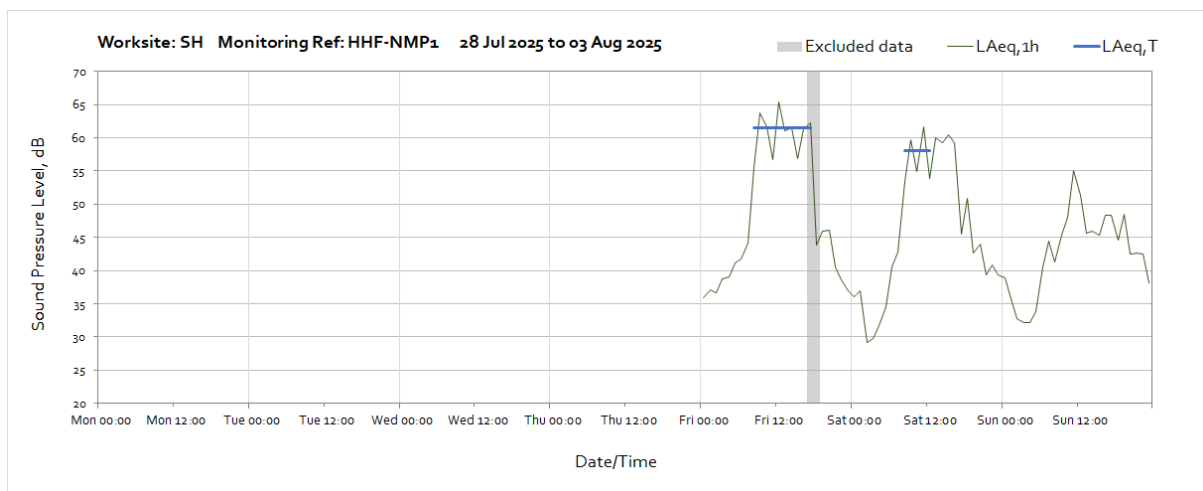


Worksite: WDV – Monitoring Ref: WDV-NMP1



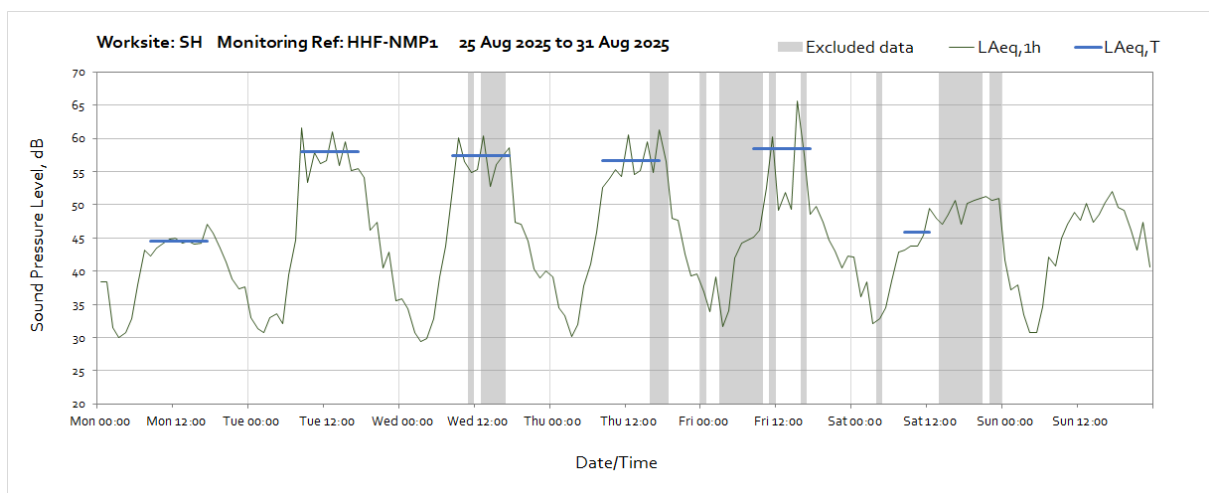
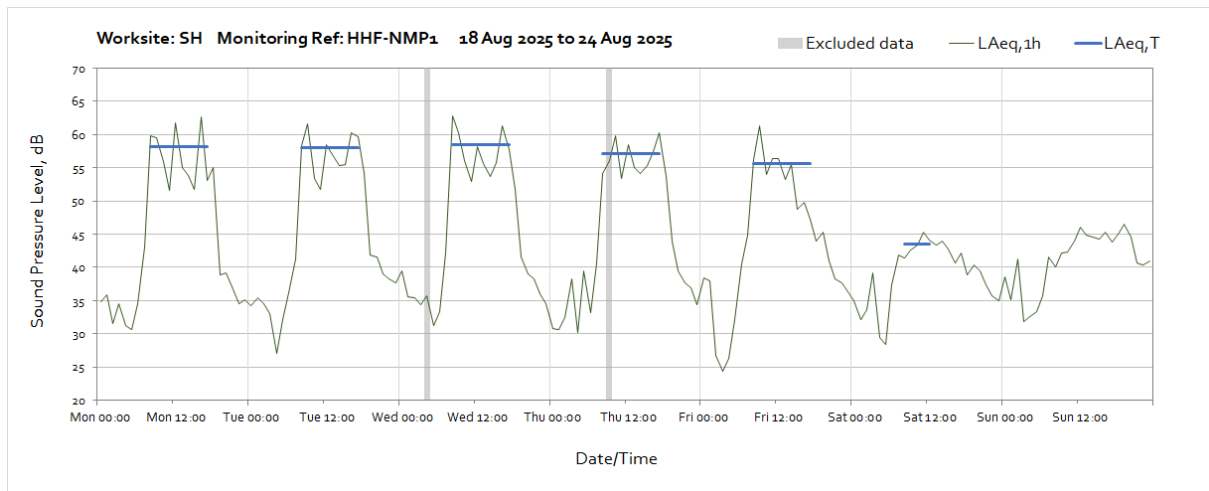


Worksite: SH – Monitoring Ref: HHF-NMP1

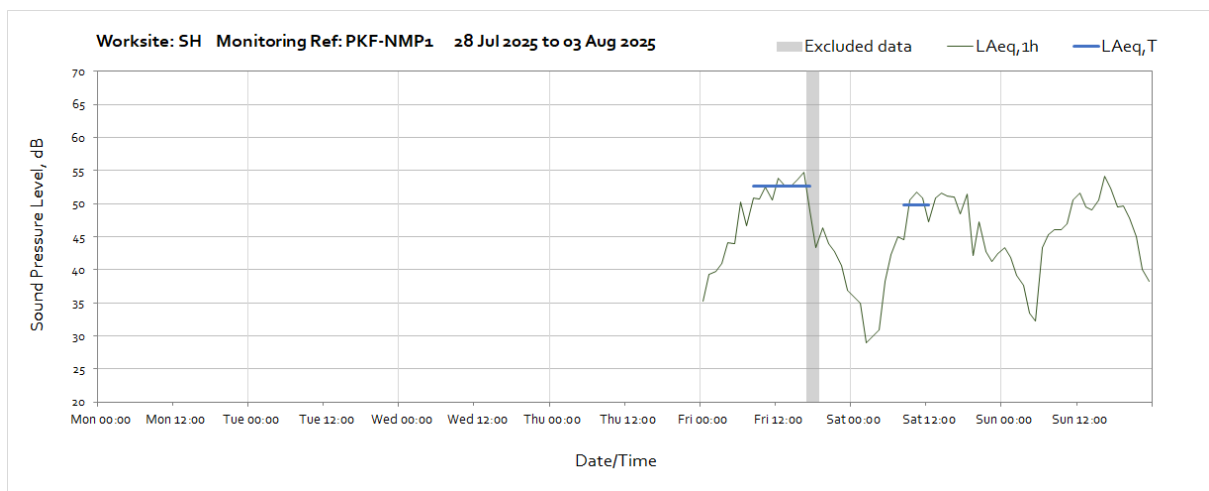


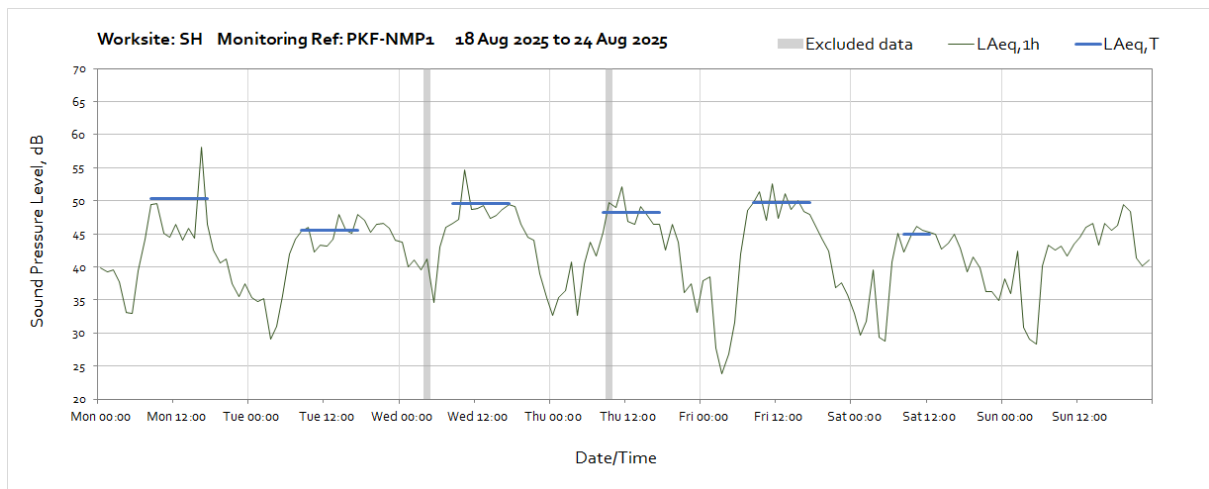
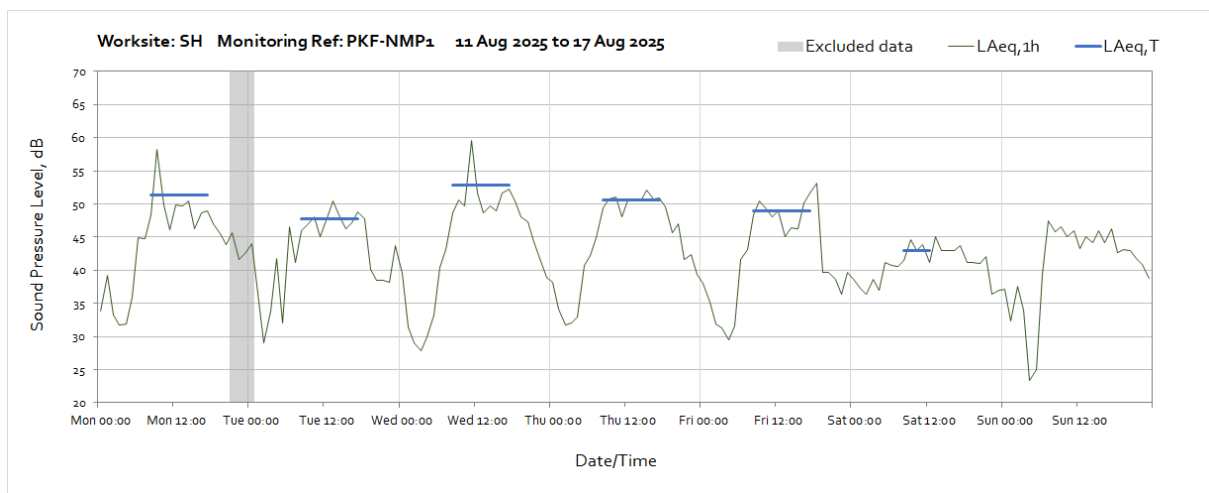
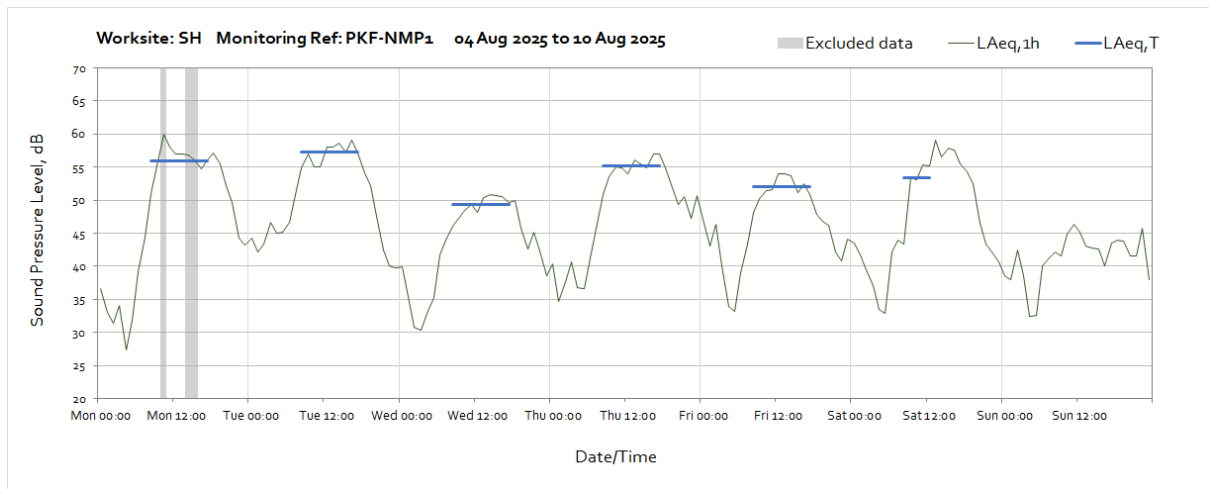
Note: Missing data between 12:00 and 13:00 on Monday 11th August was due a monitor field calibration.

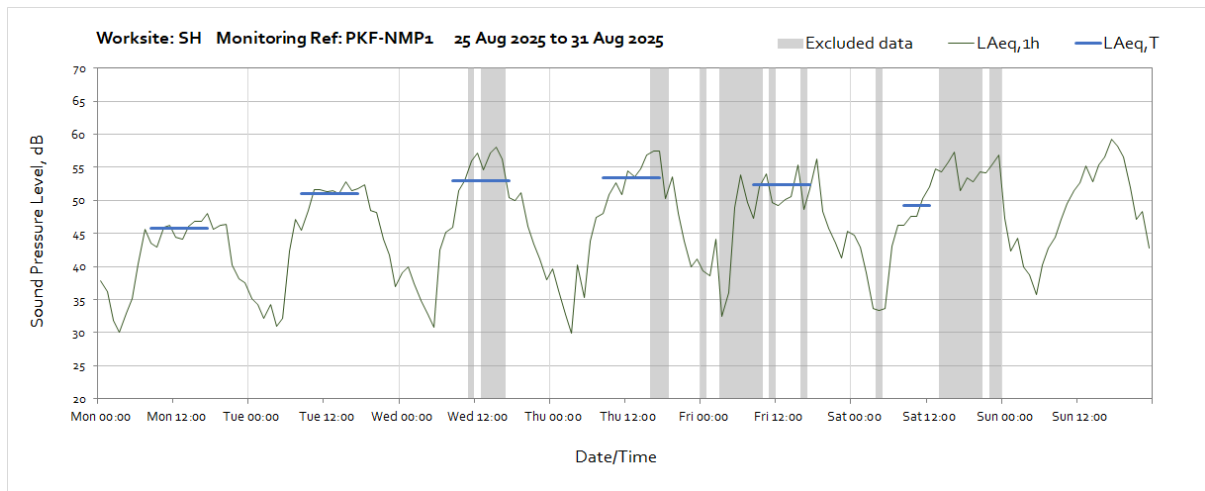
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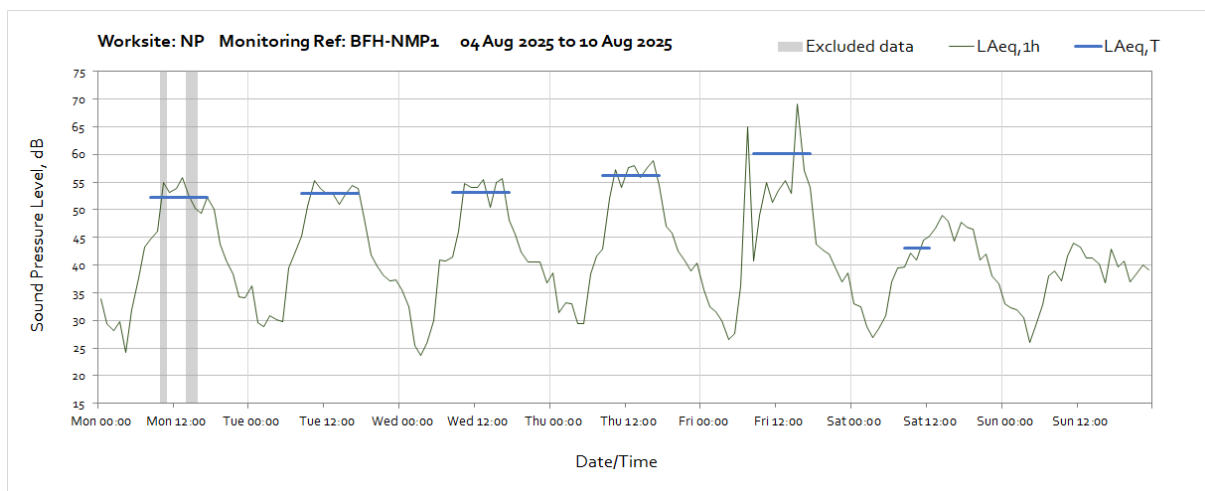
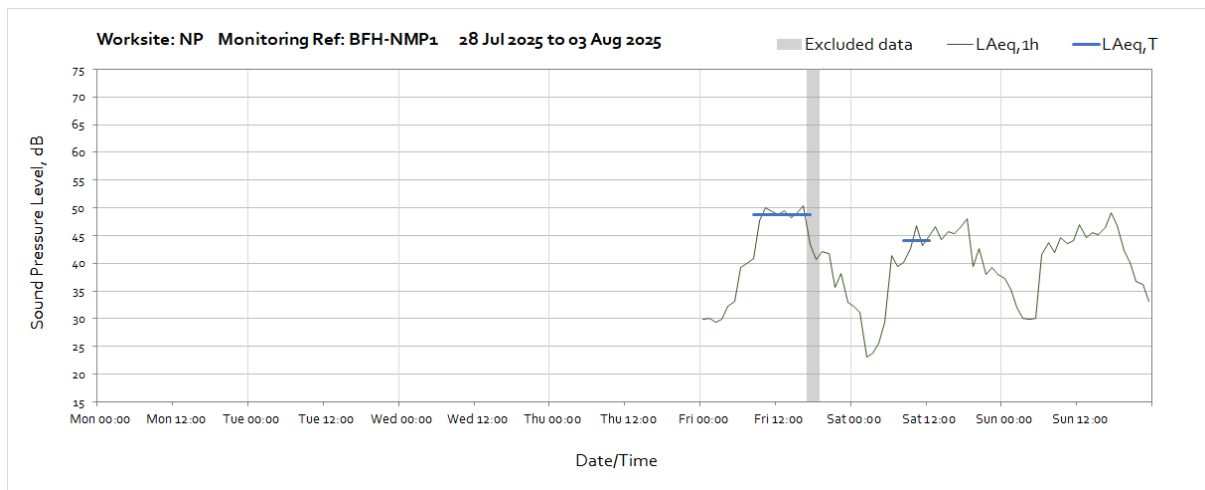
Worksite: SH – Monitoring Ref: PKF-NMP1

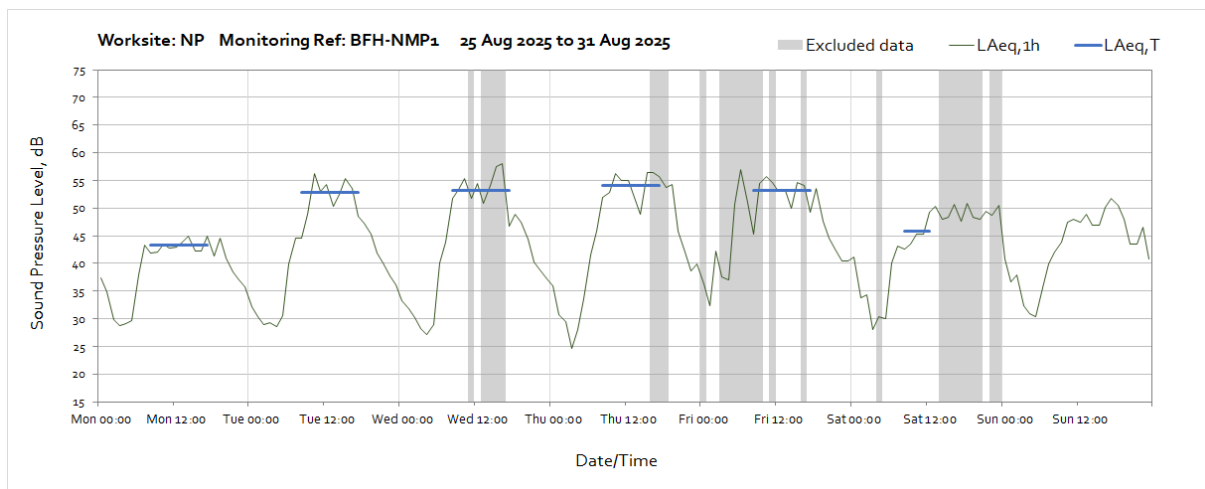
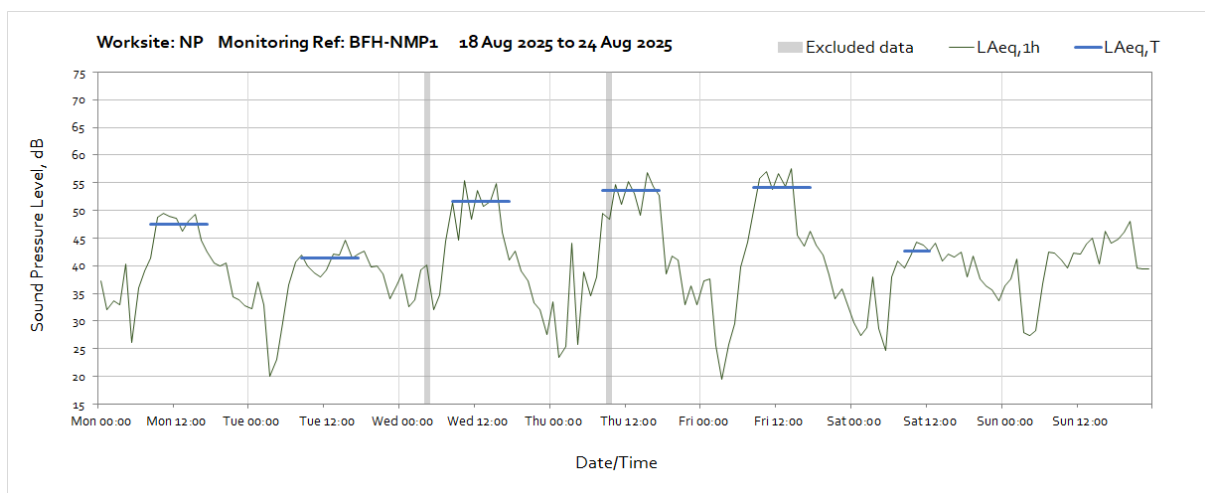
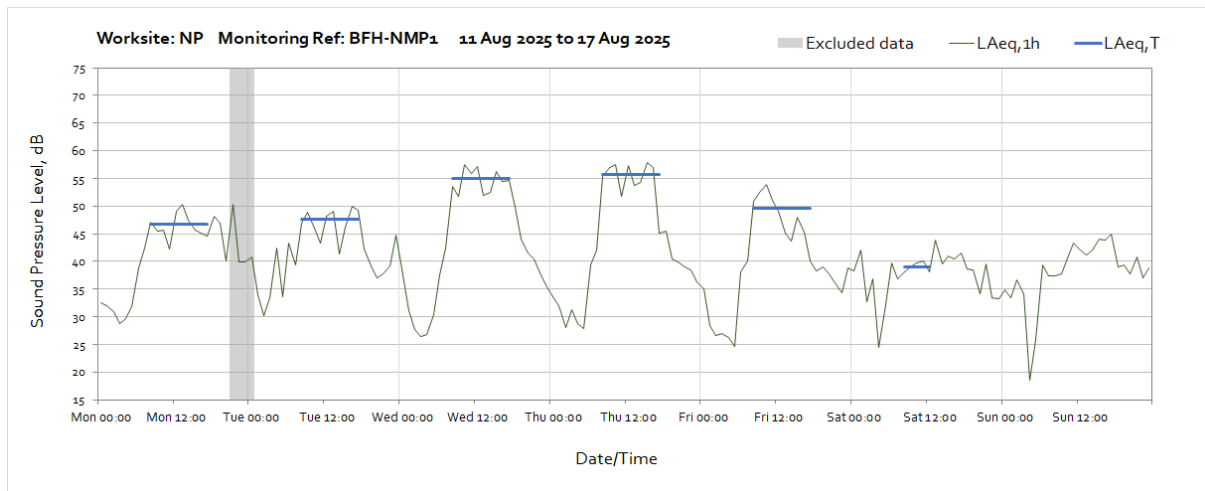




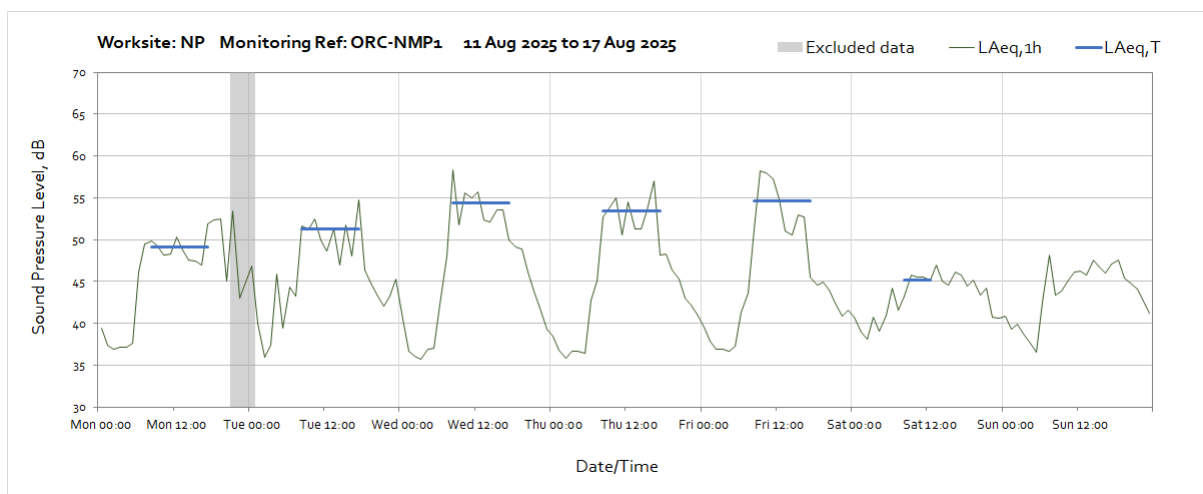
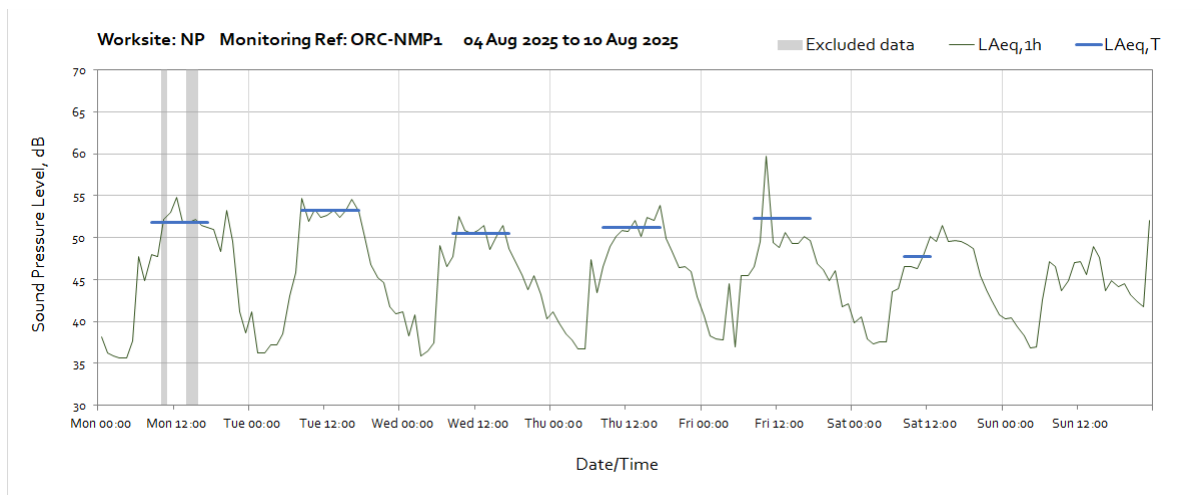
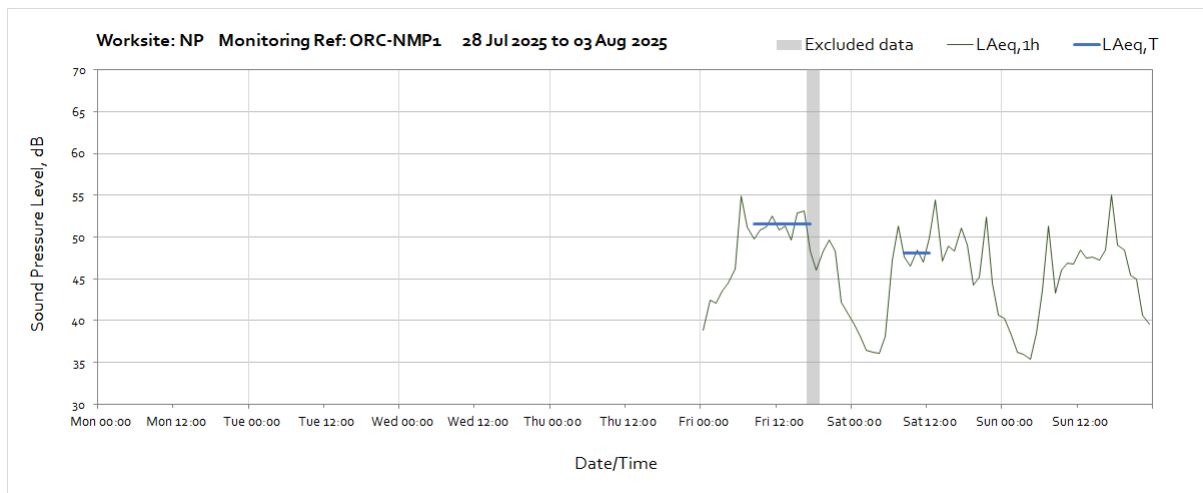


Worksite: NP – Monitoring Ref: BFH-NMP1

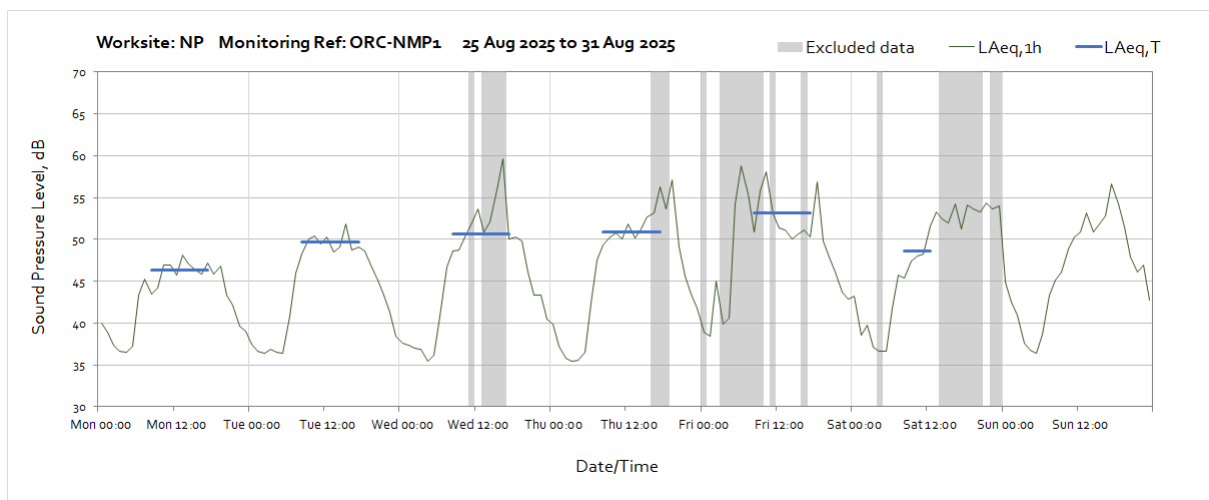
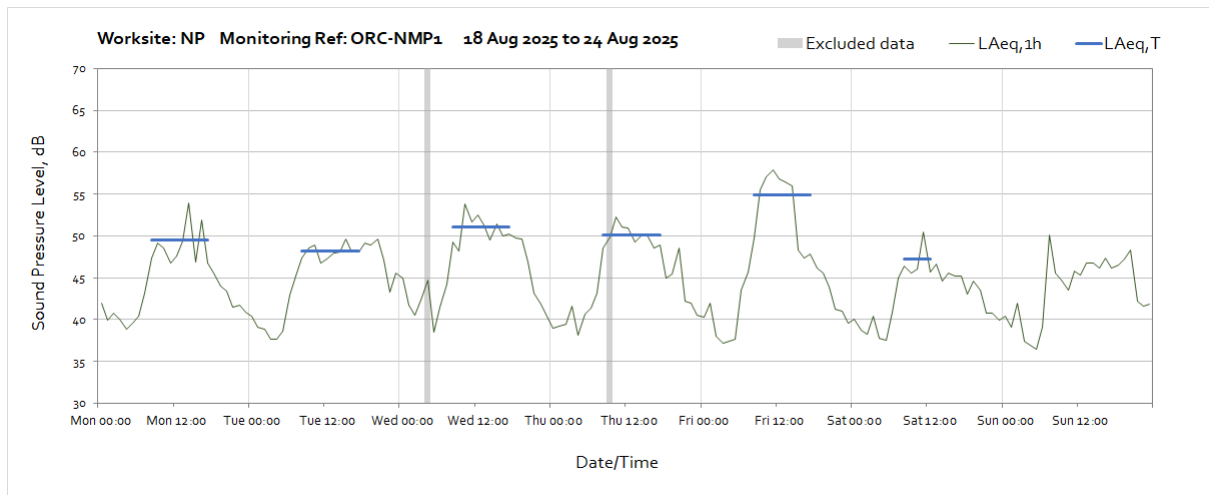




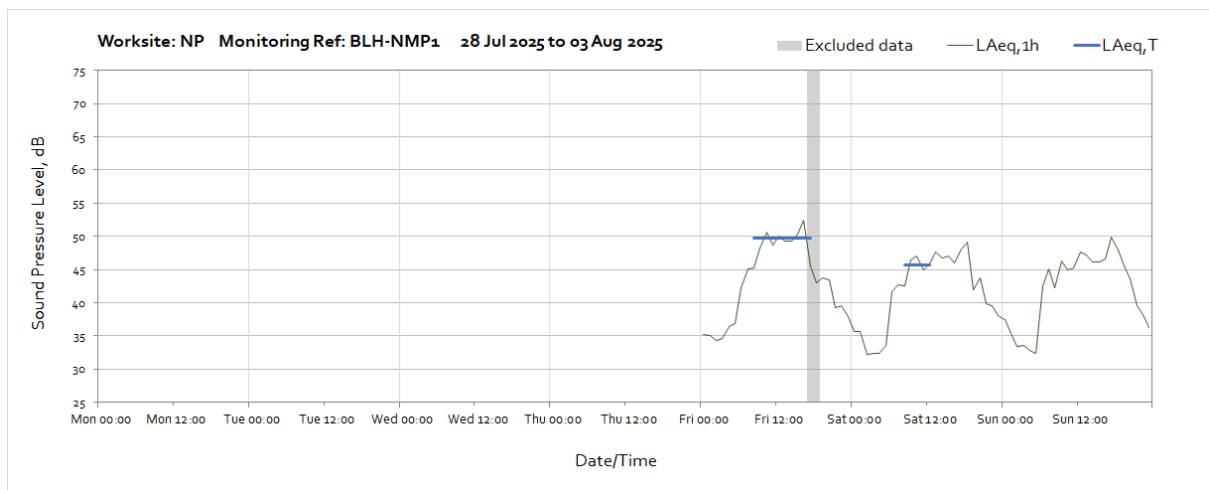
Worksite: NP – Monitoring Ref: ORC-NMP1

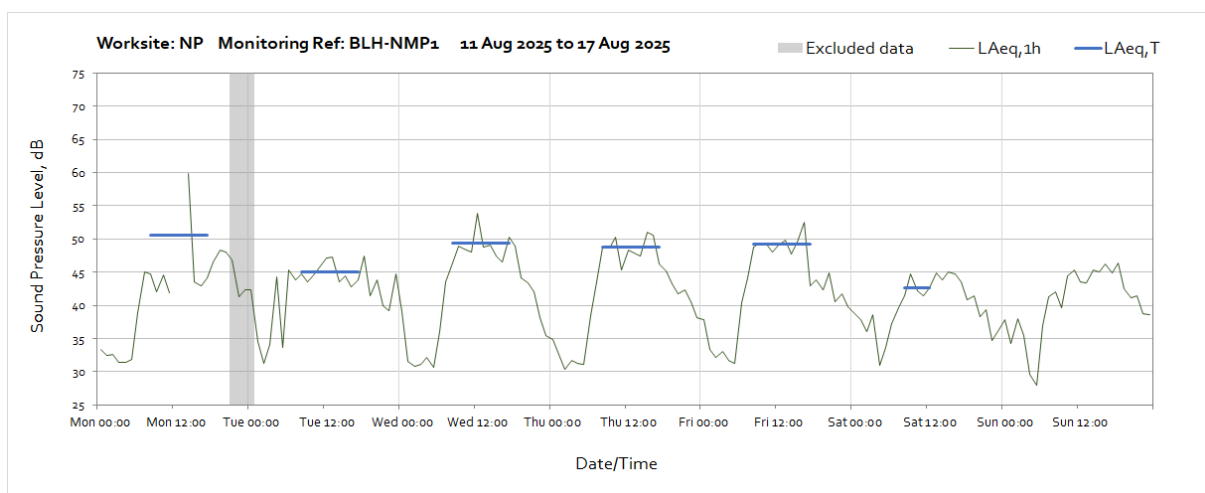
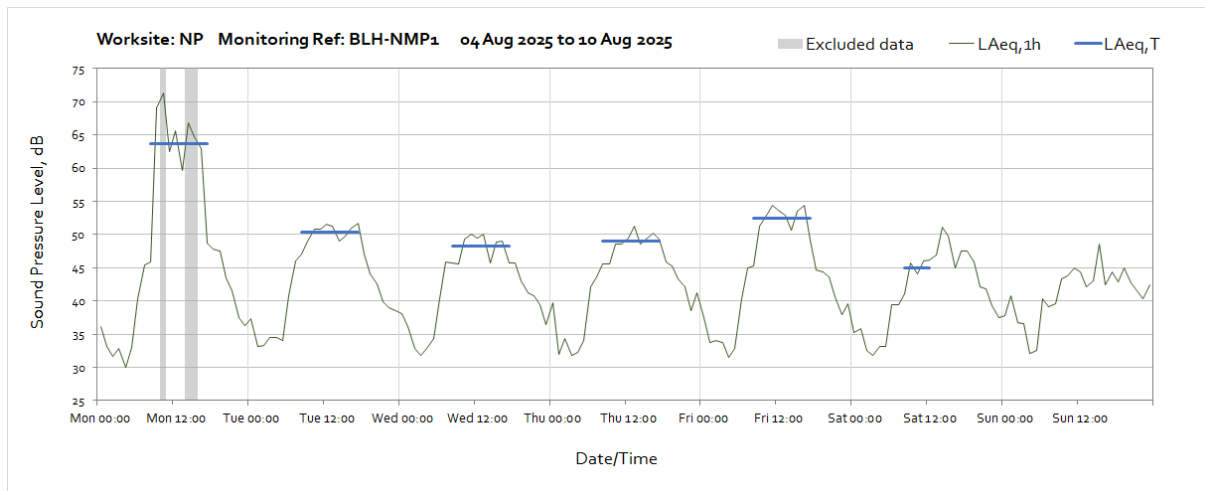


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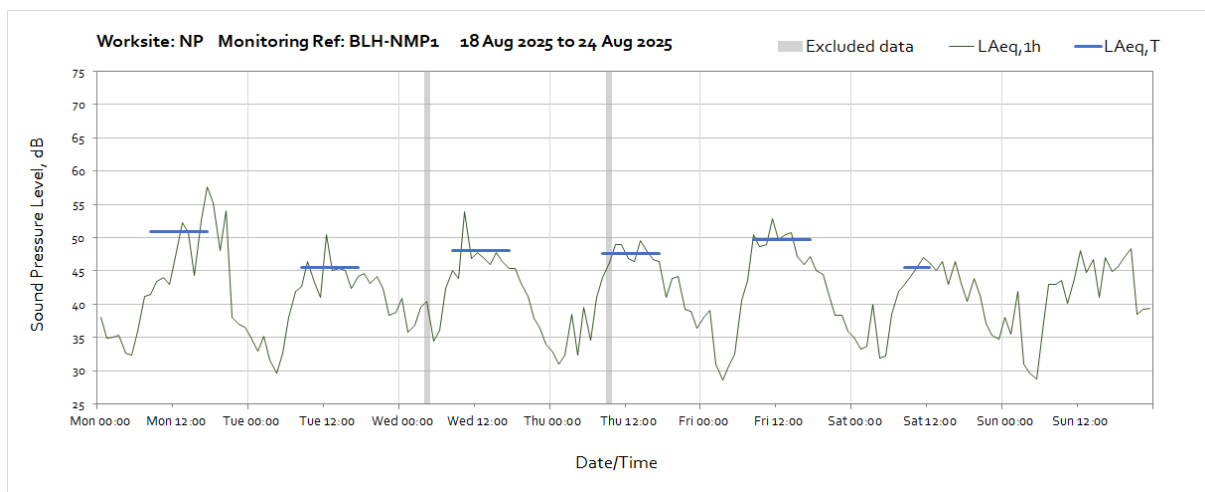


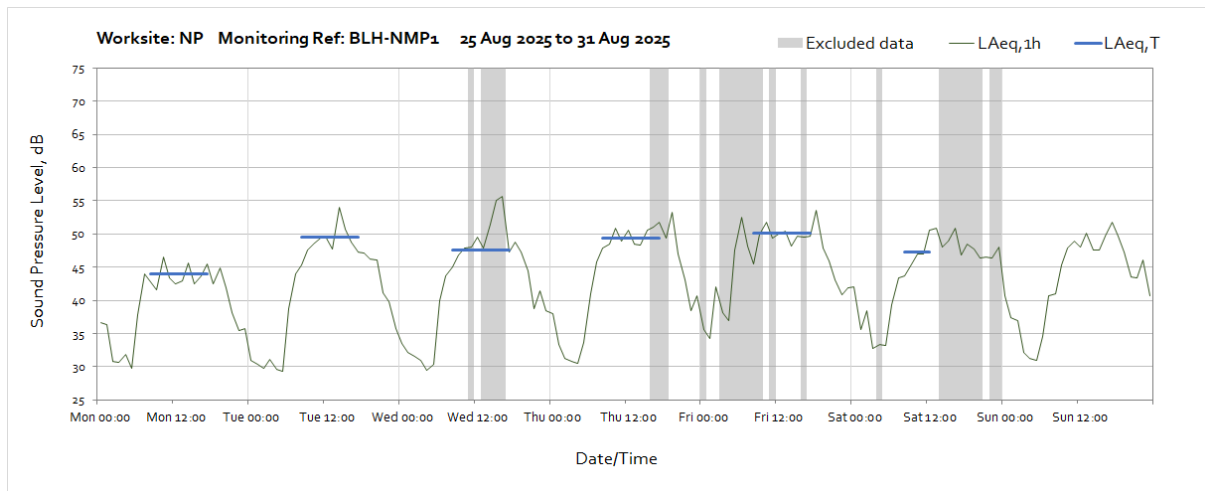
Worksite: NP – Monitoring Ref: BLH-NMP1



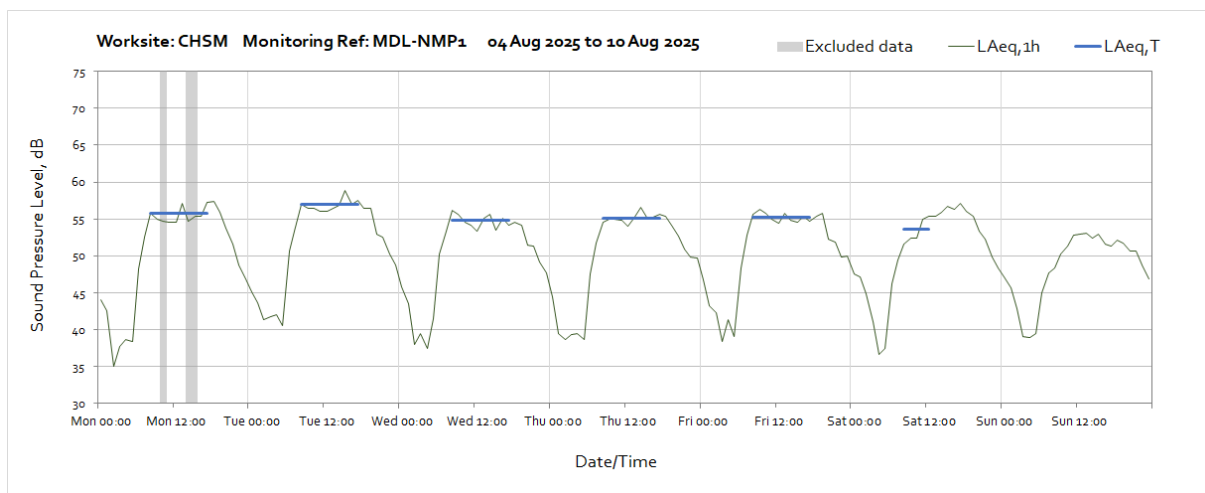
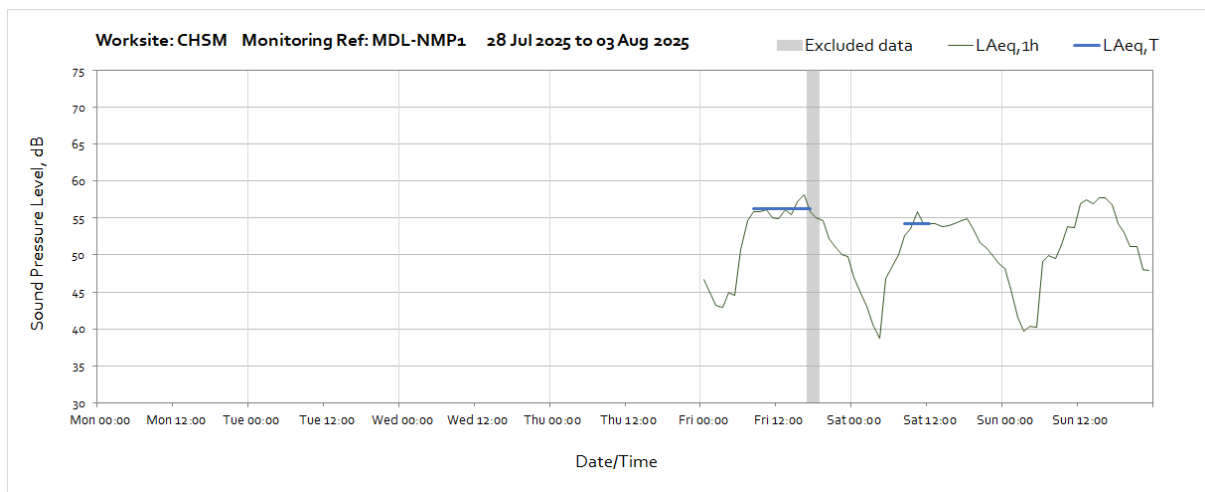


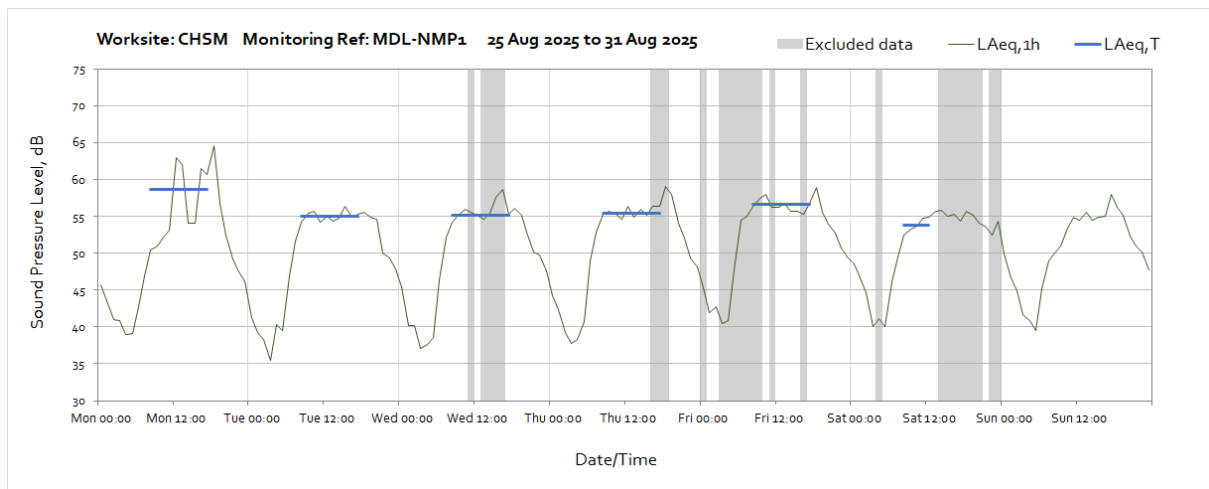
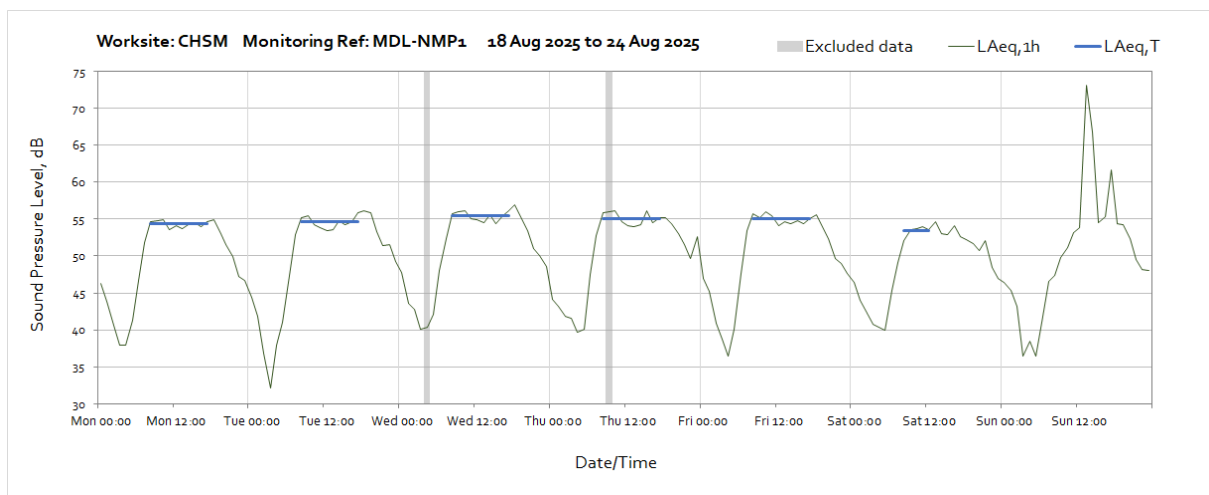
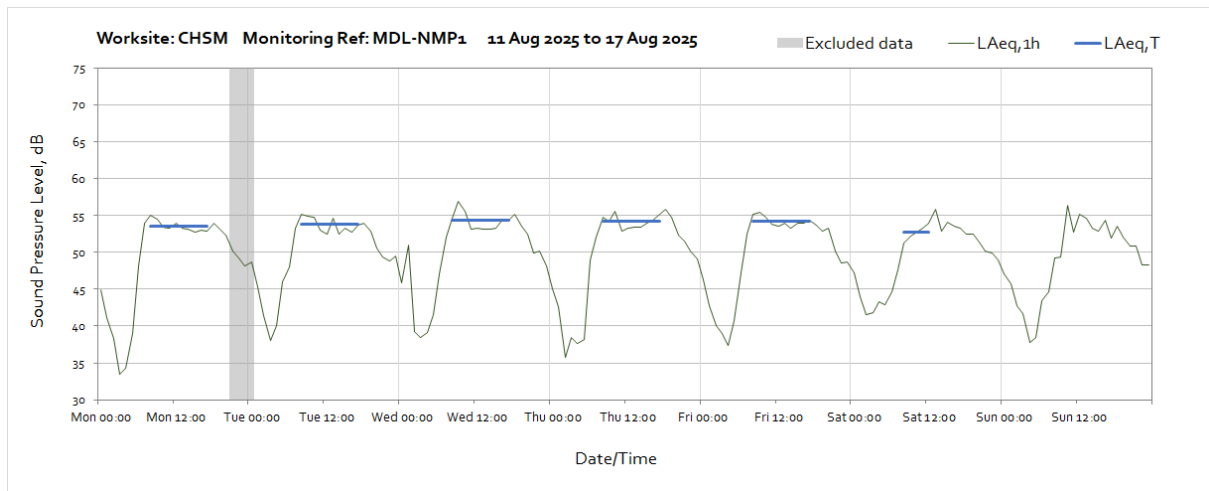
Note: Missing data between 12:00 and 14:00 on Monday 11th August was due to a monitor field calibration.



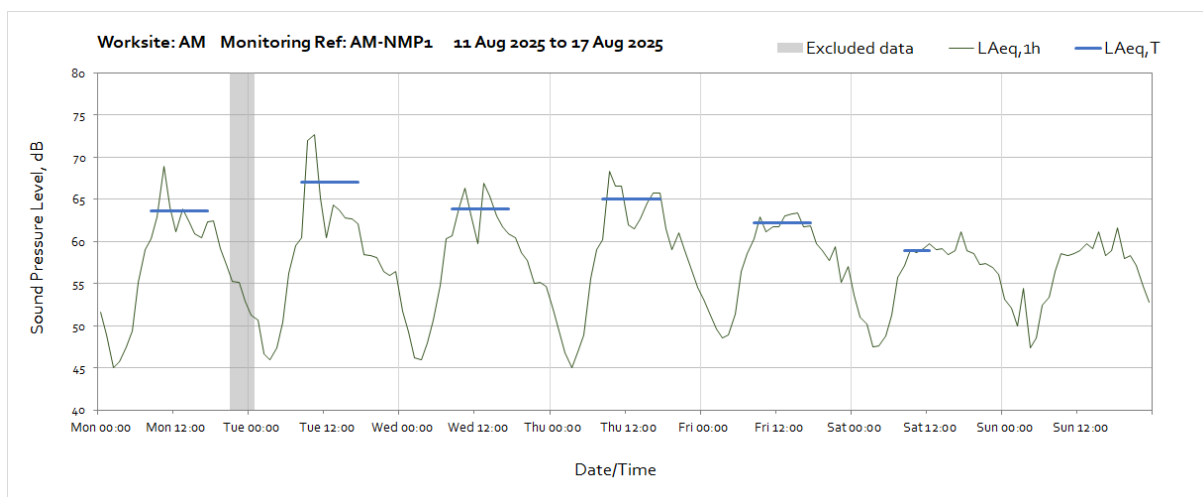
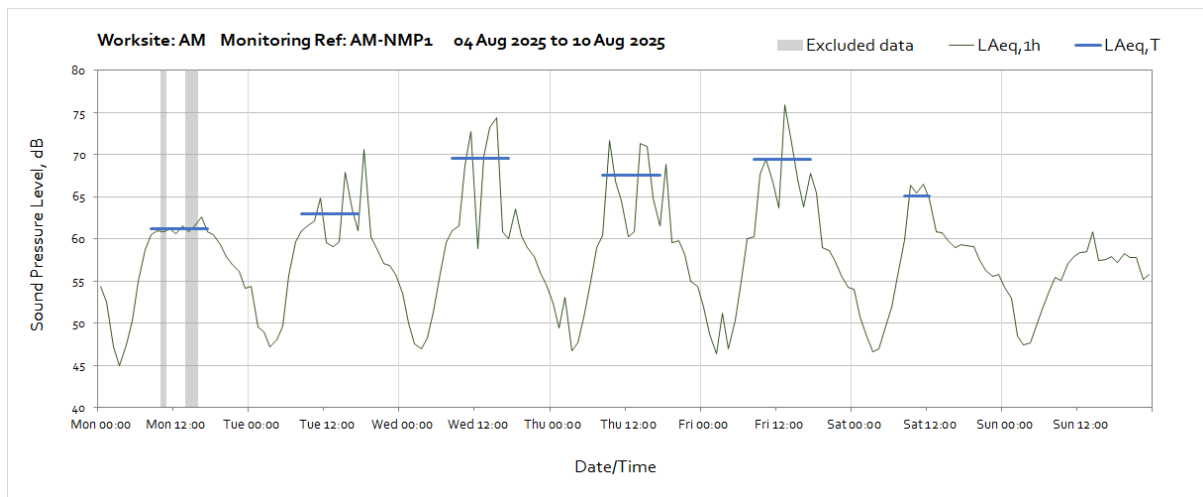
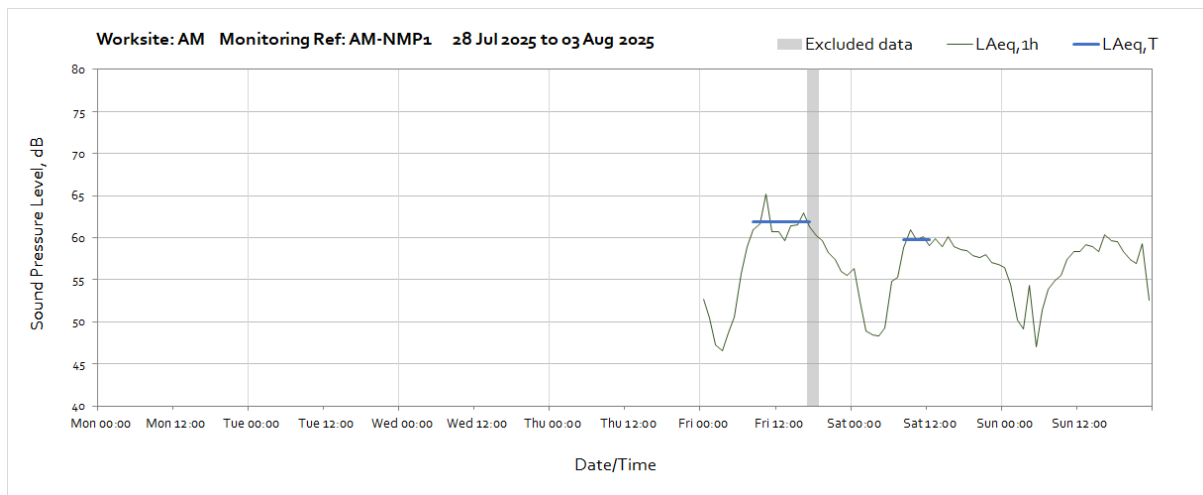


Worksite: CHSM – Monitoring Ref: MDL-NMP1

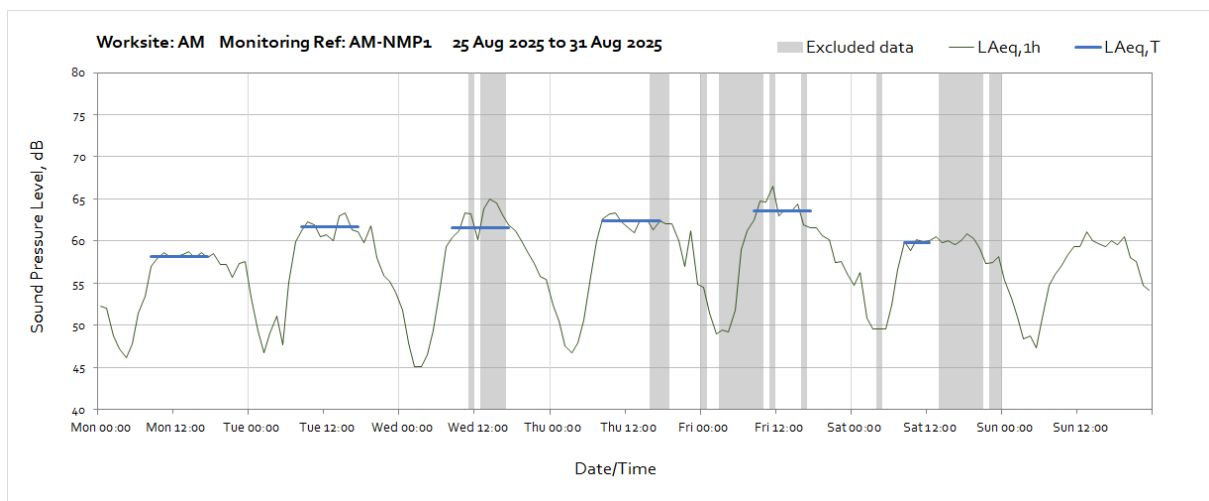
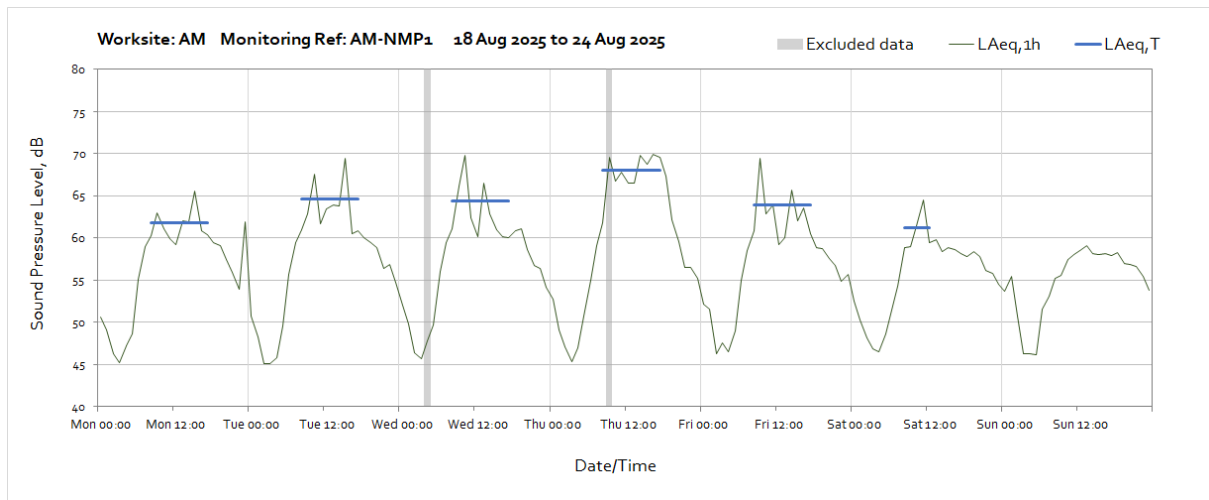




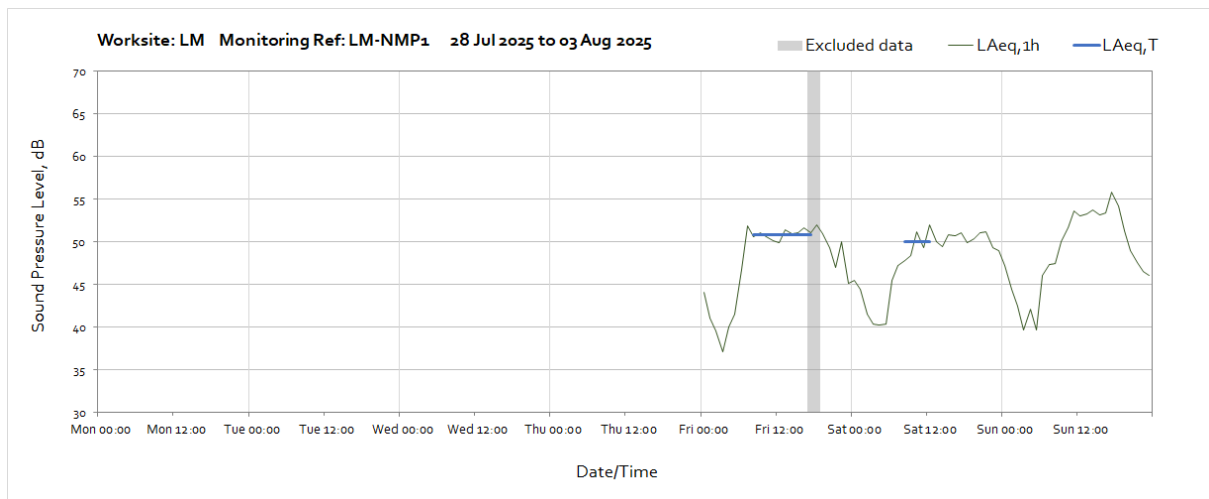
Worksite: AM – Monitoring Ref: AM-NMP1

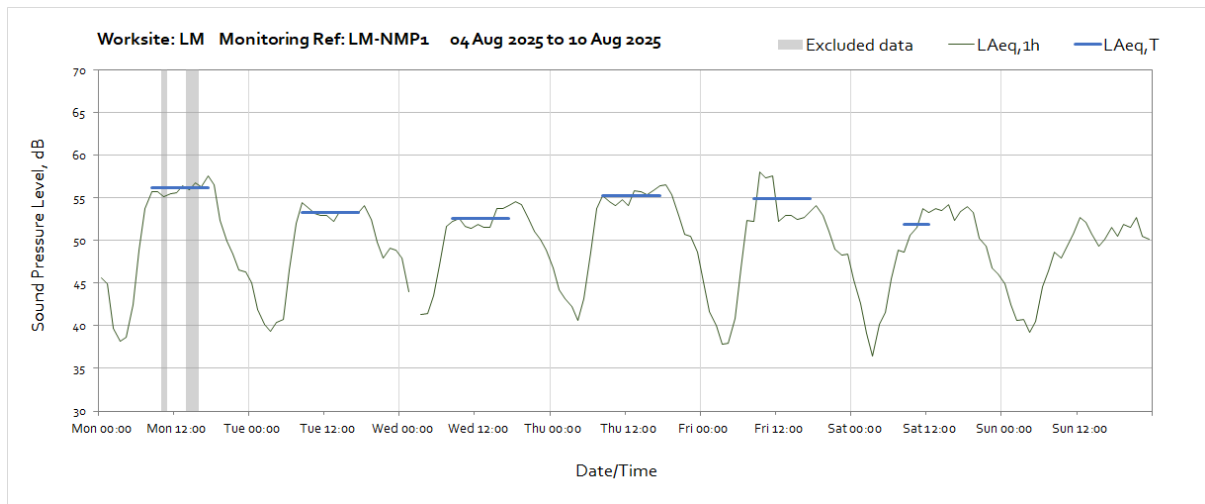


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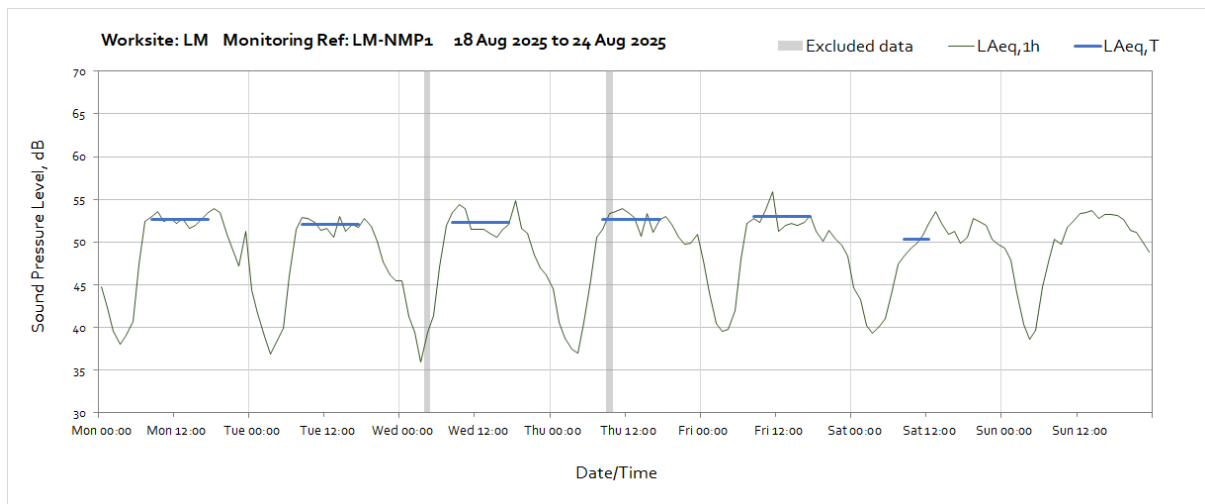
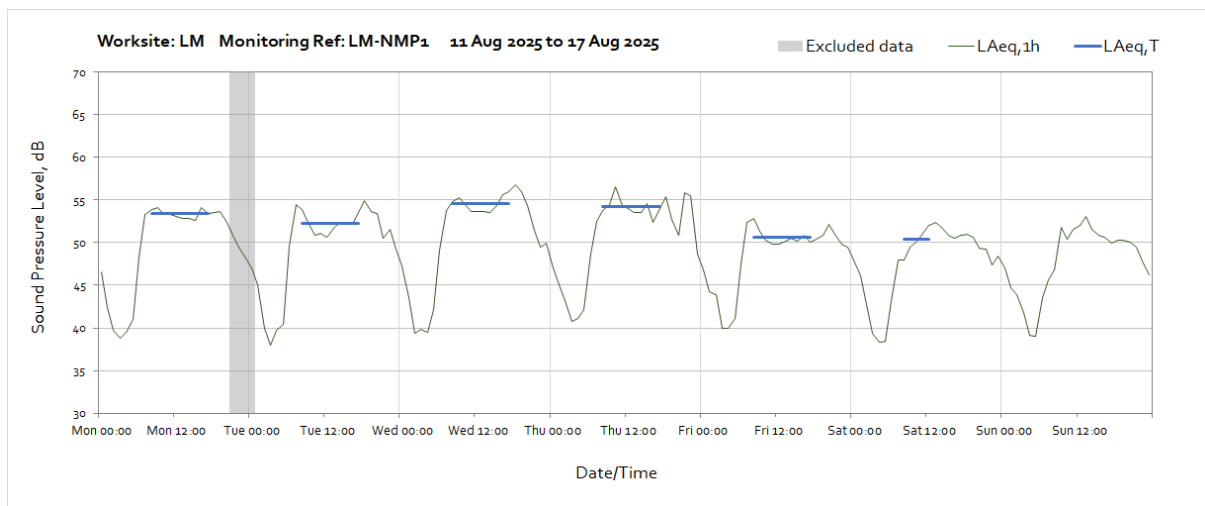


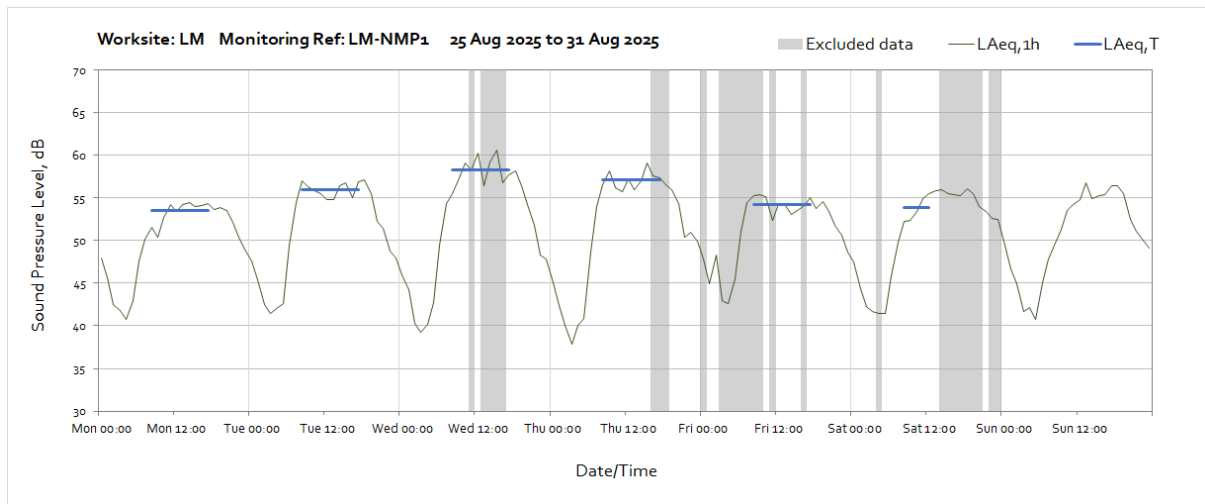
Worksite: LM – Monitoring Ref: LM-NMP1



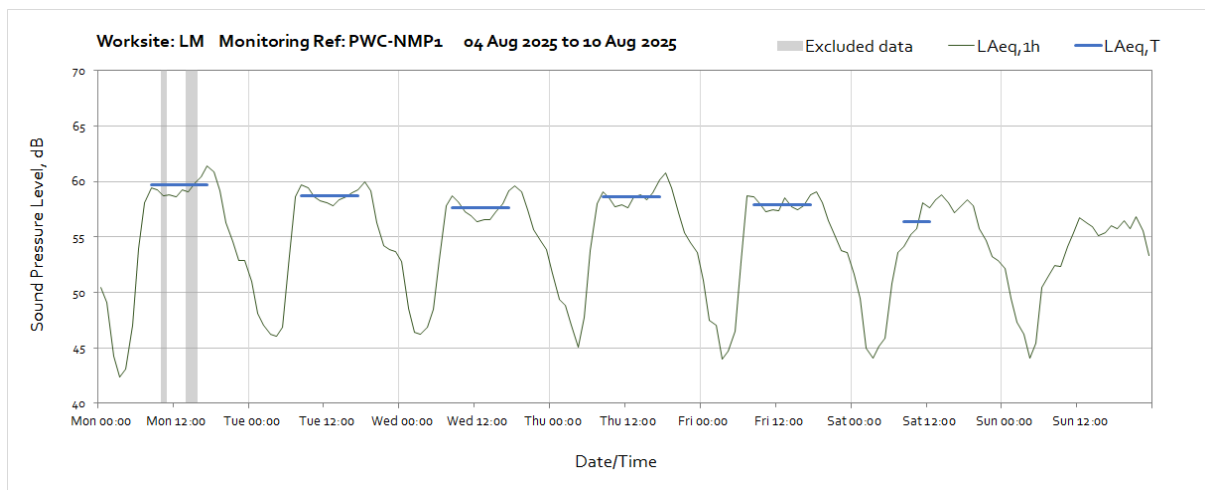
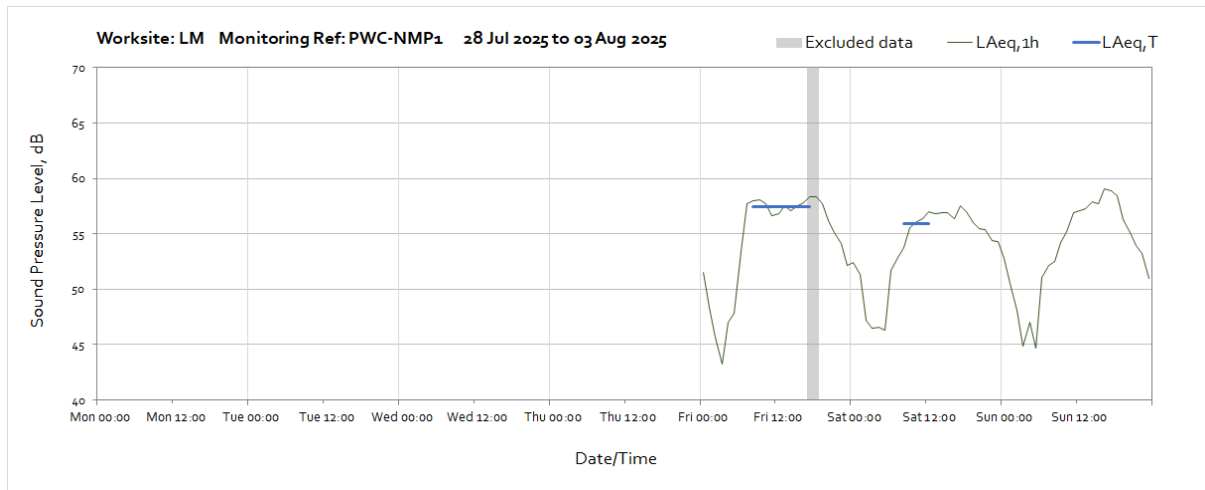


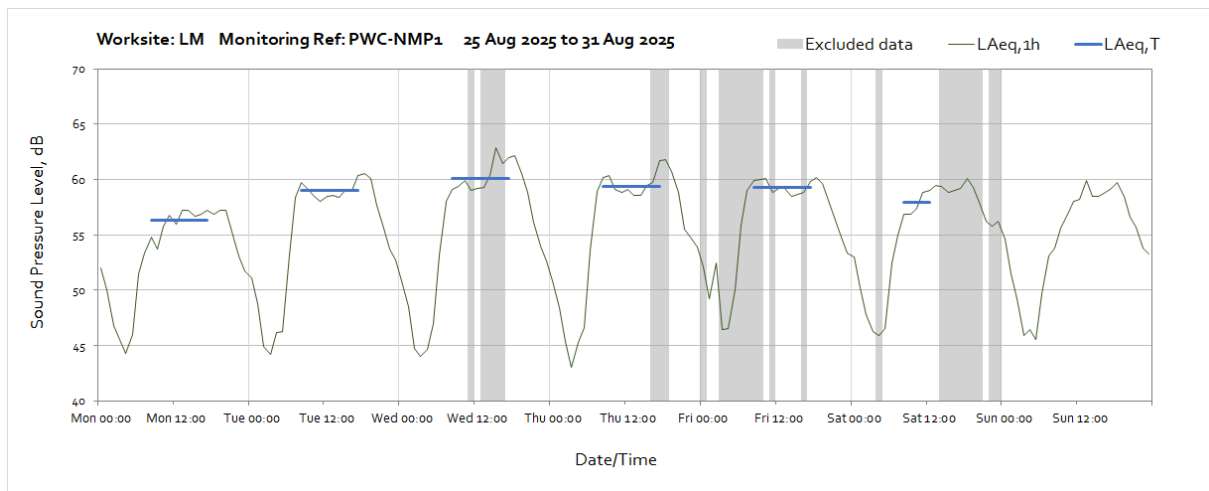
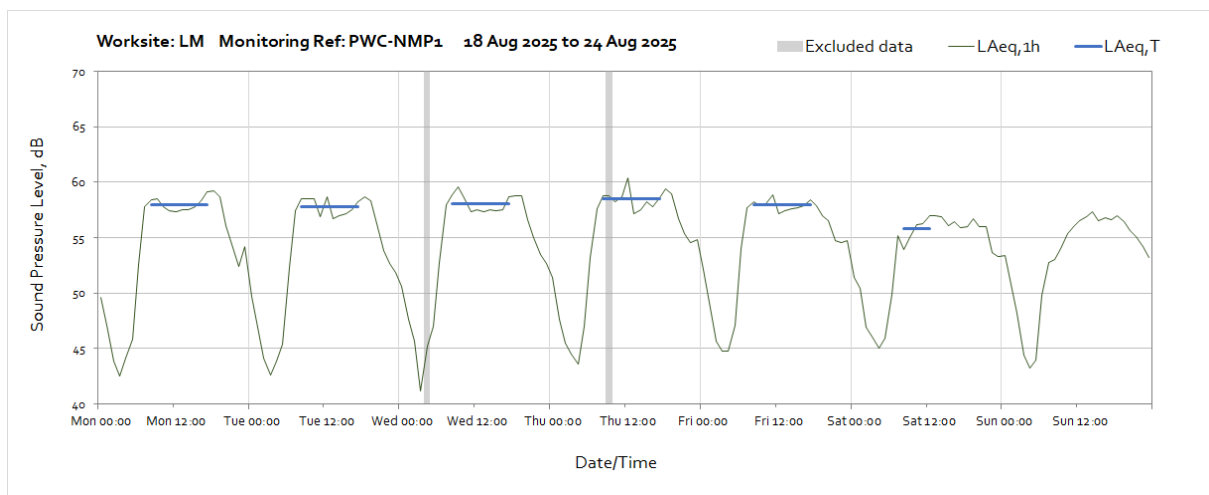
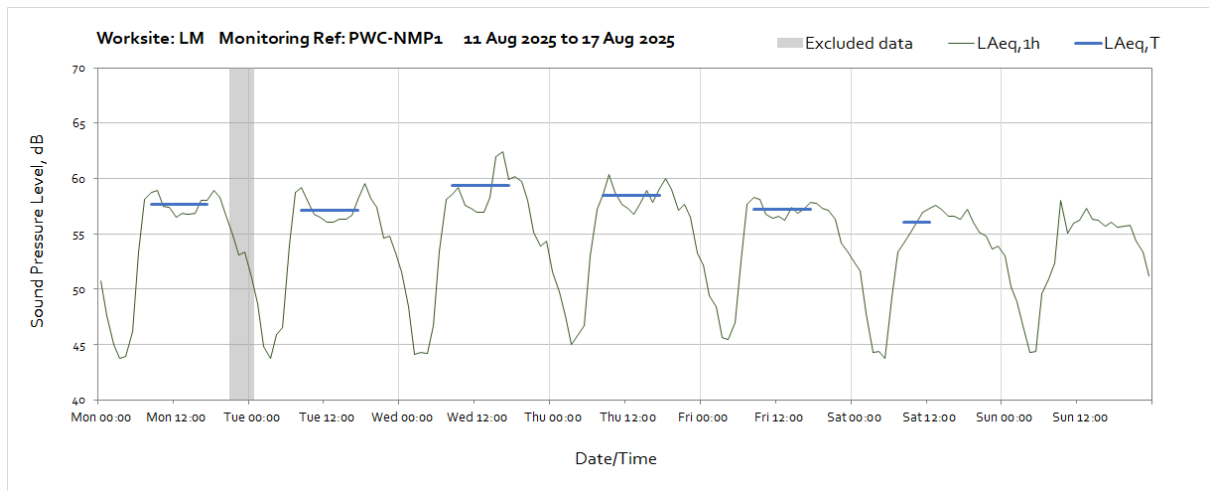
Note: Missing data between 02:00 and 03:00 on Wednesday 6th August was due to a communication error between the monitoring station and server.



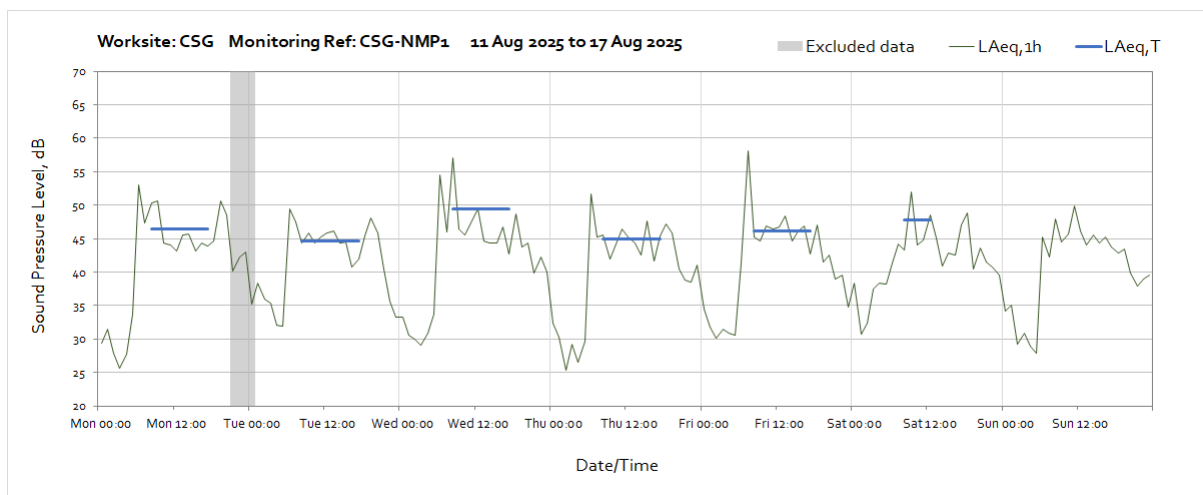
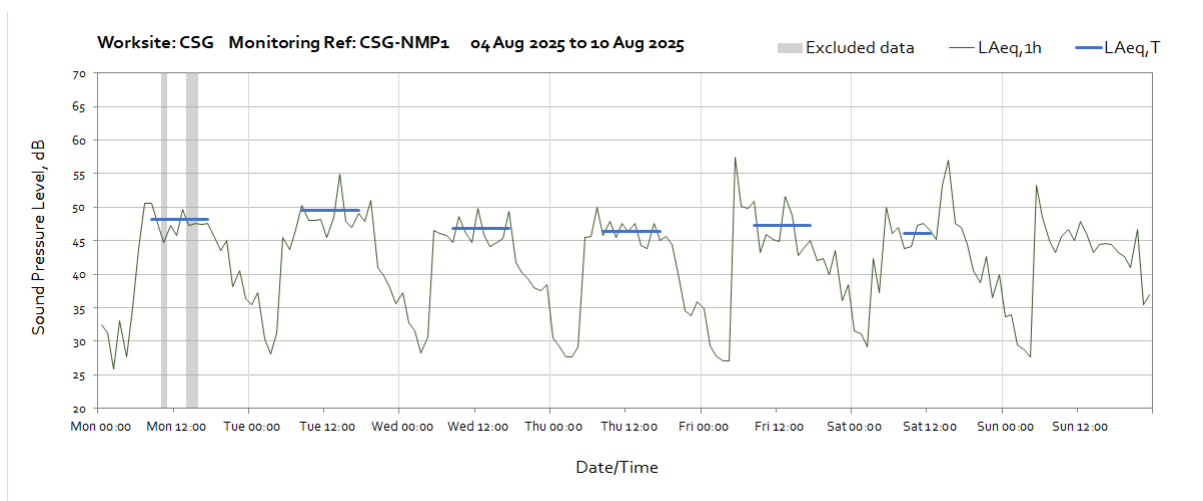
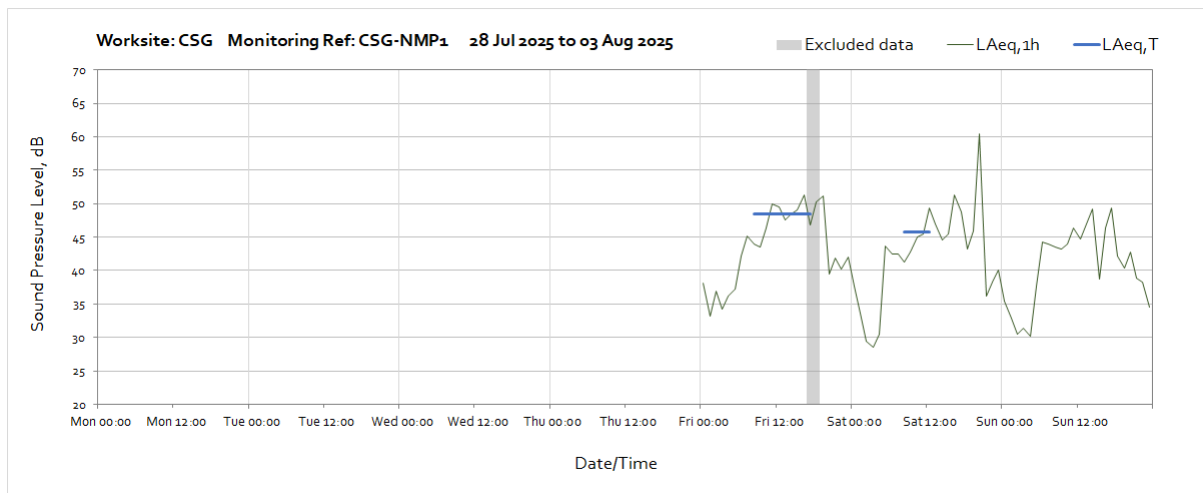


Worksite: LM – Monitoring Ref: PWC-NMP1

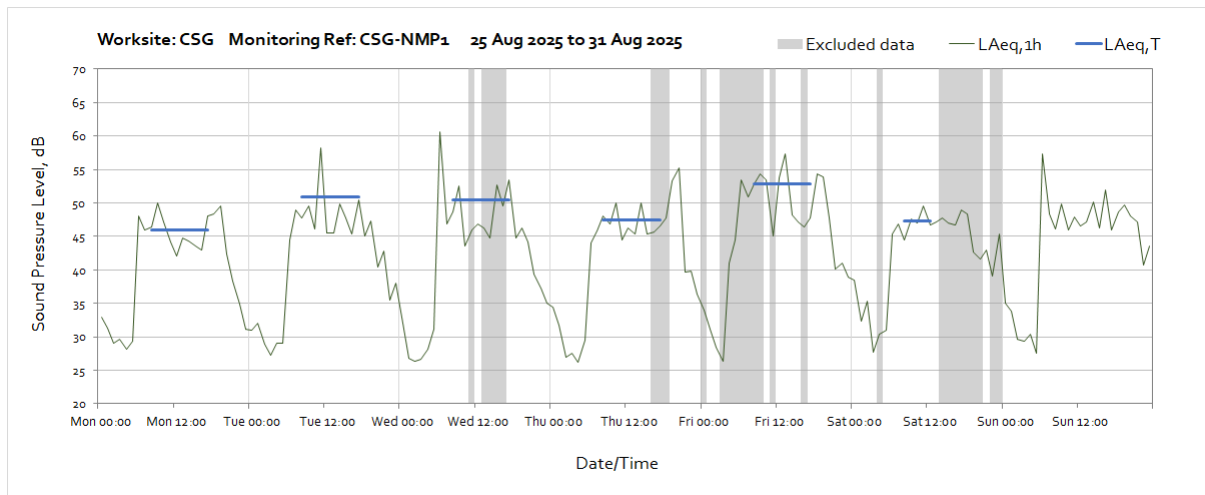
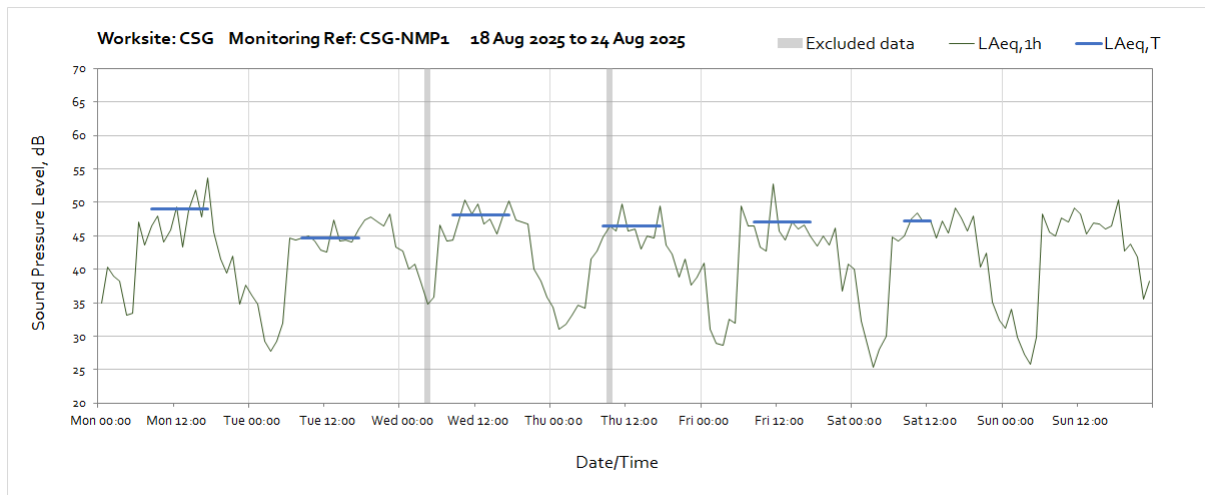




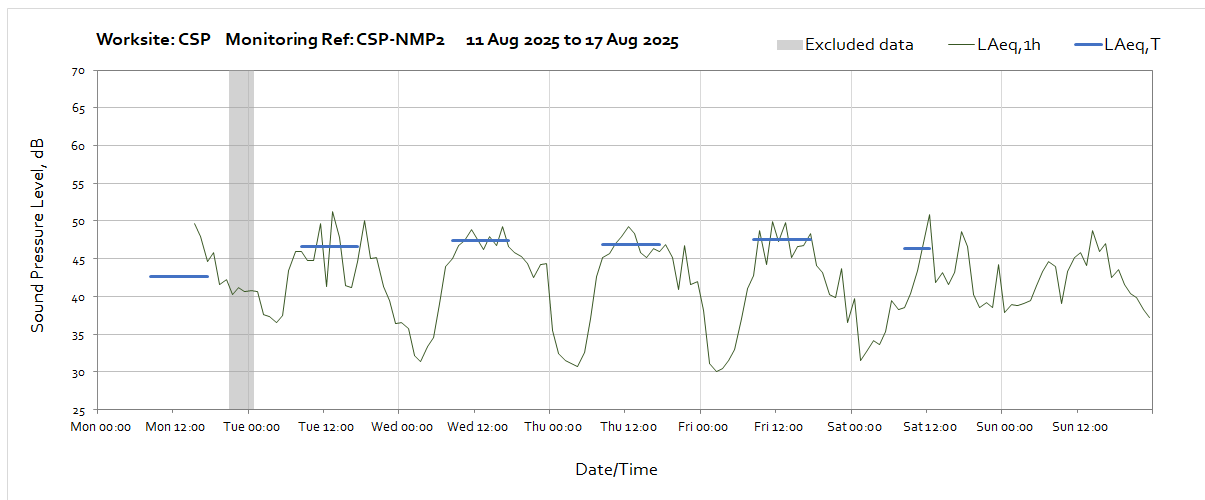
Worksite: CSG – Monitoring Ref: CSG-NMP1



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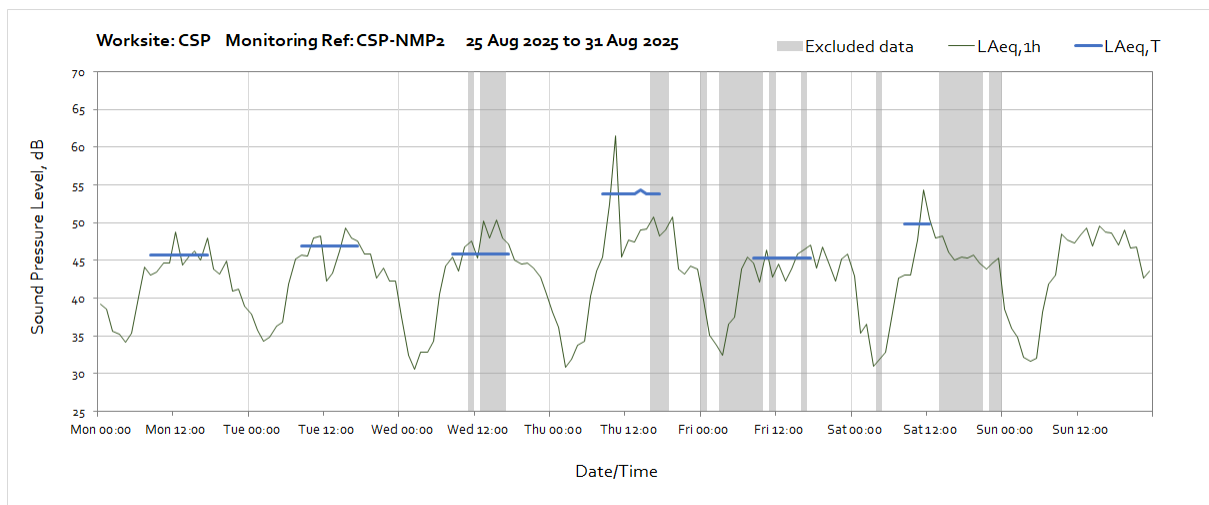
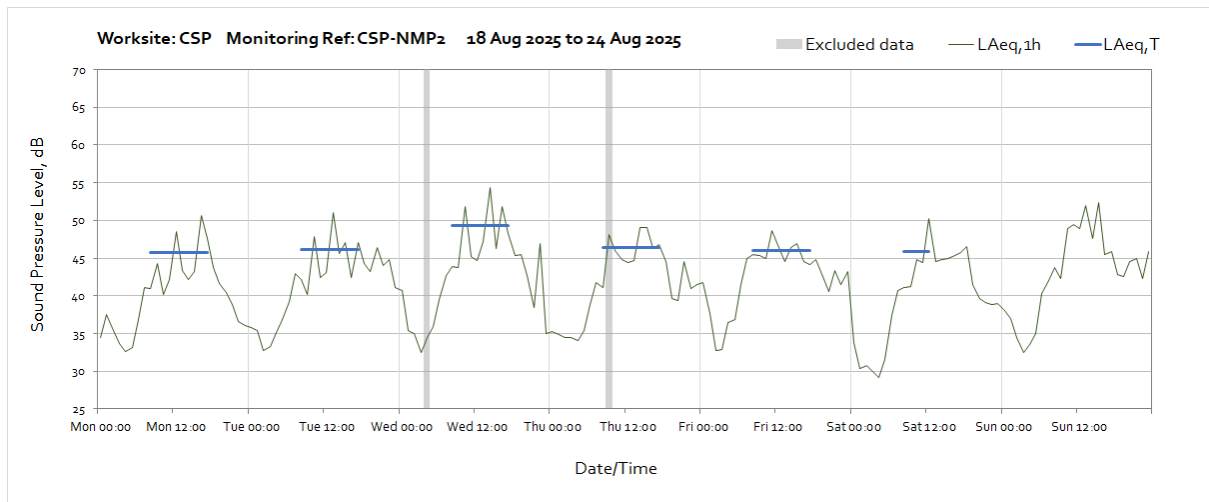


Worksite: CSP – Monitoring Ref: CSP-NMP2

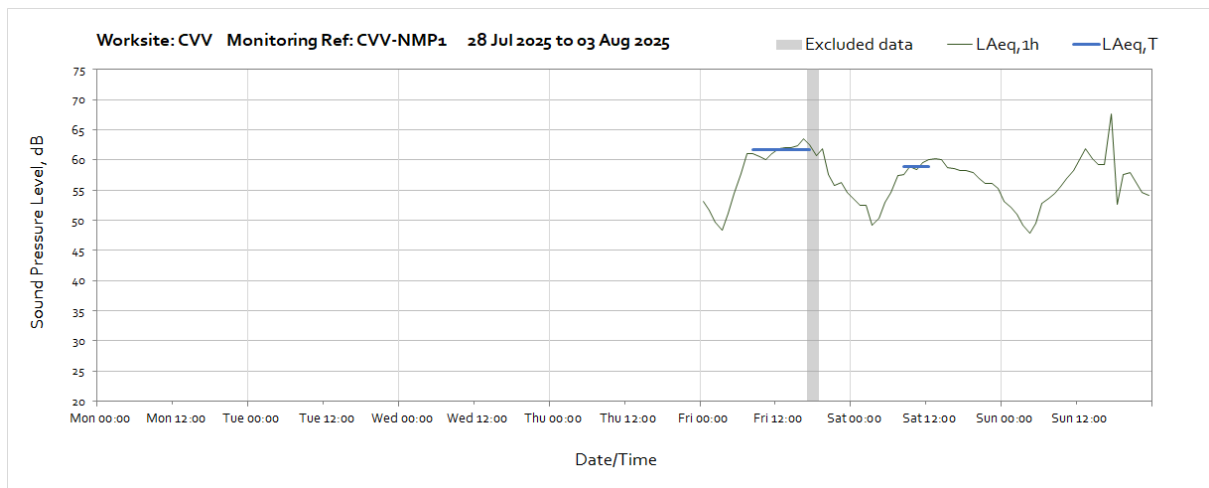


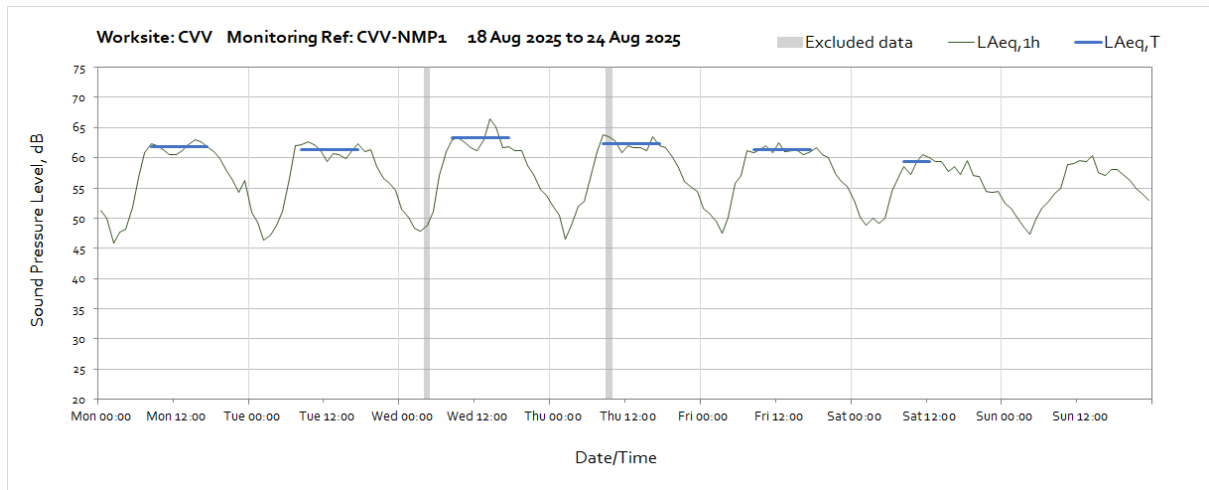
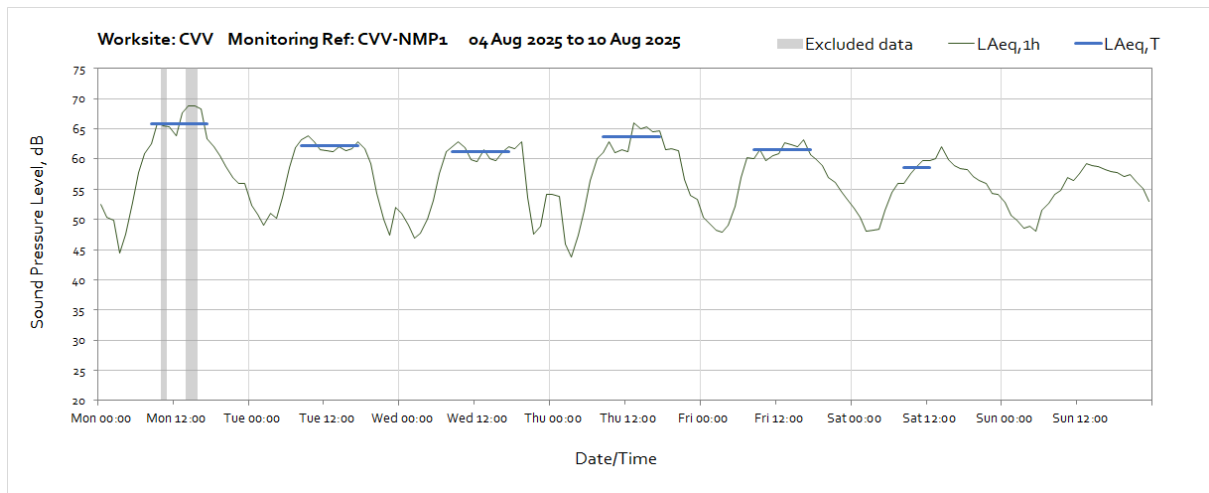
Note: Missing data from the start of the month until 15:00 on Monday 11th August was due to damage to the monitoring cable which has now been replaced.

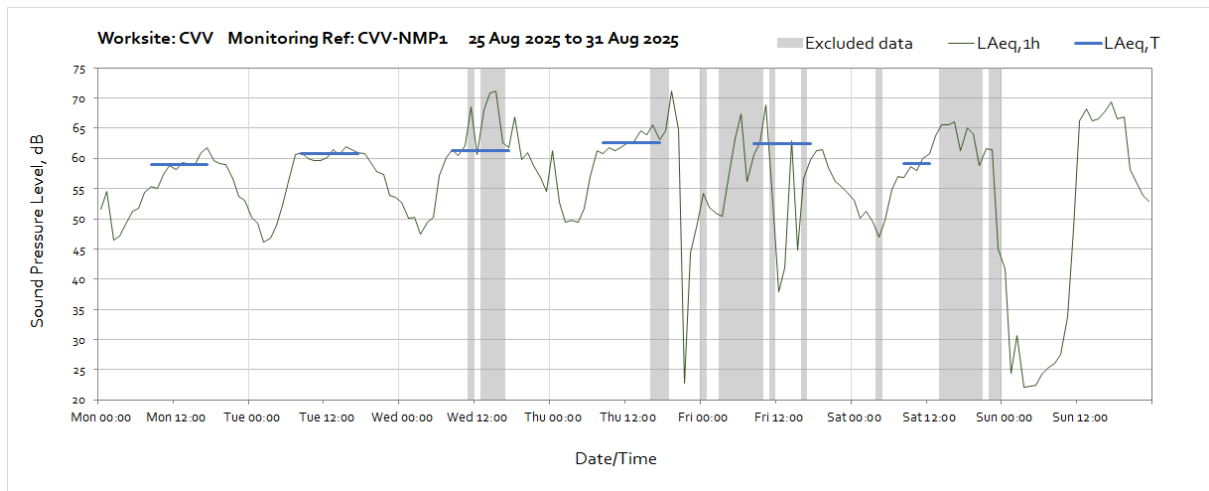
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Worksite: CVV- Monitoring Ref: CVV-NMP1



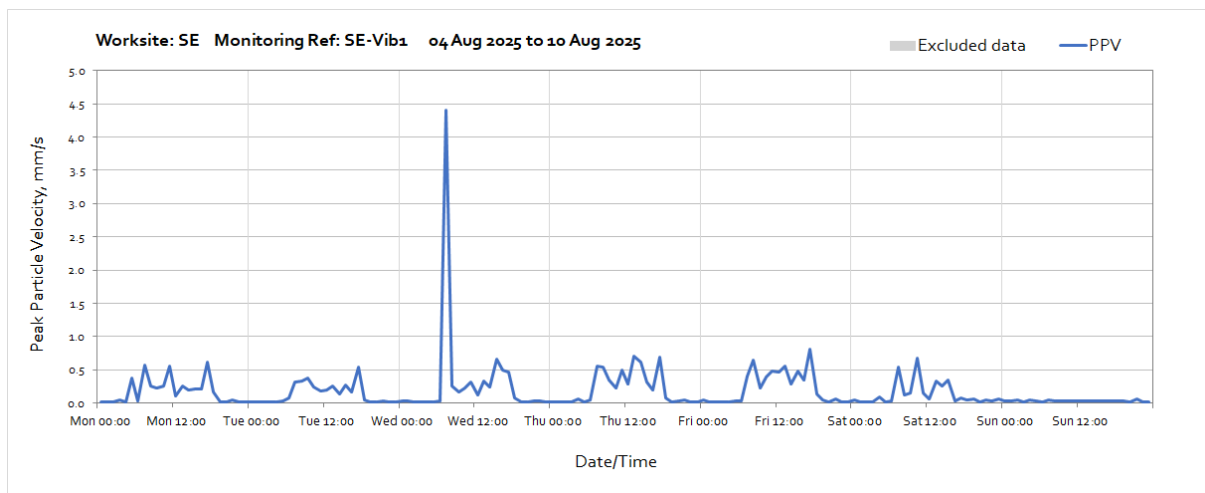
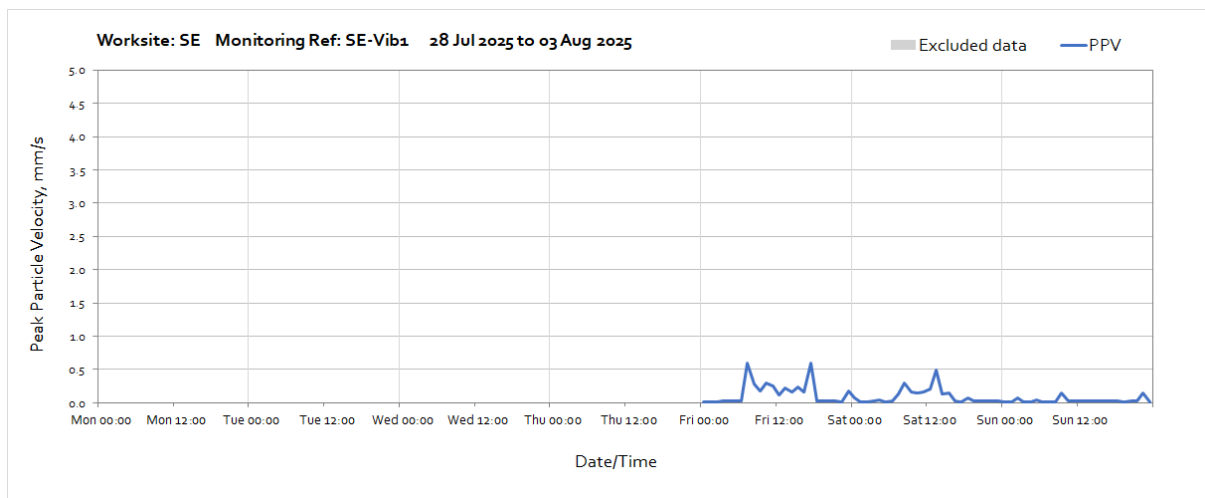


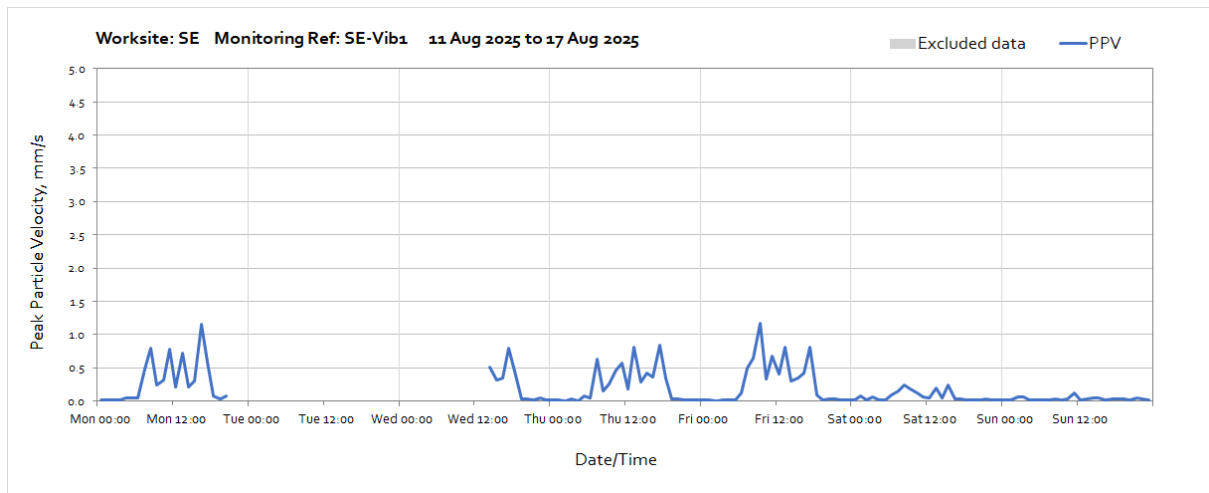


Vibration

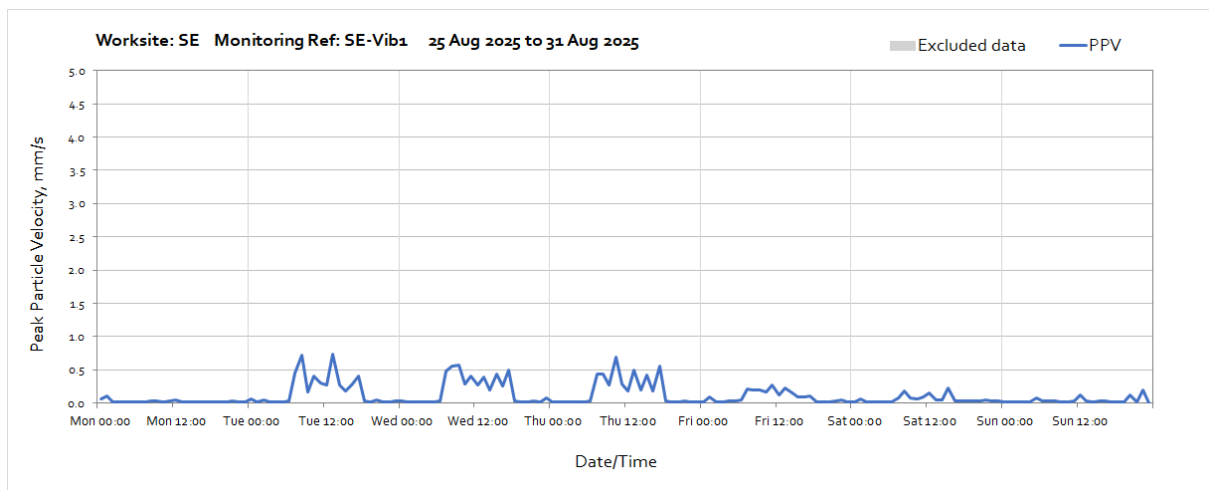
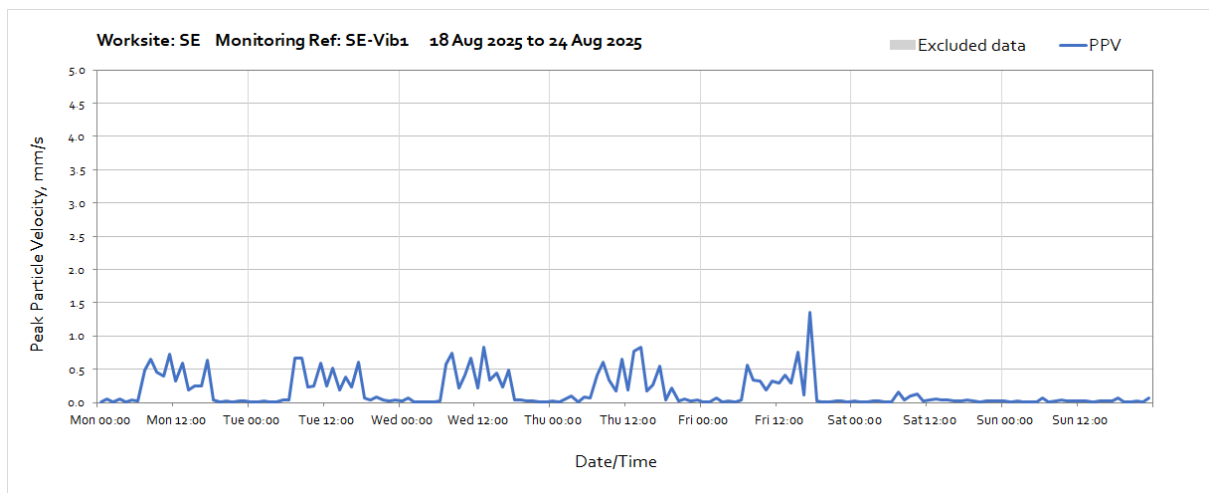
The following graphs show the hourly measured peak particle velocity PPV recorded during the monitoring period. The graphs show the highest PPV of the three orthogonal axes x, y and z. Periods where PPV values have been affected by local interference with the vibration monitor or only measured for part 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

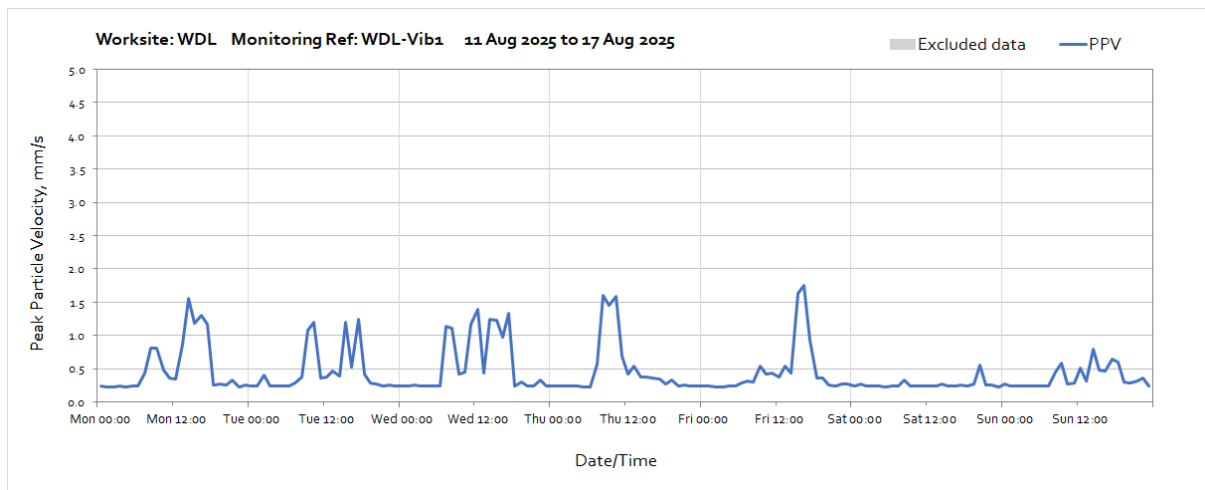
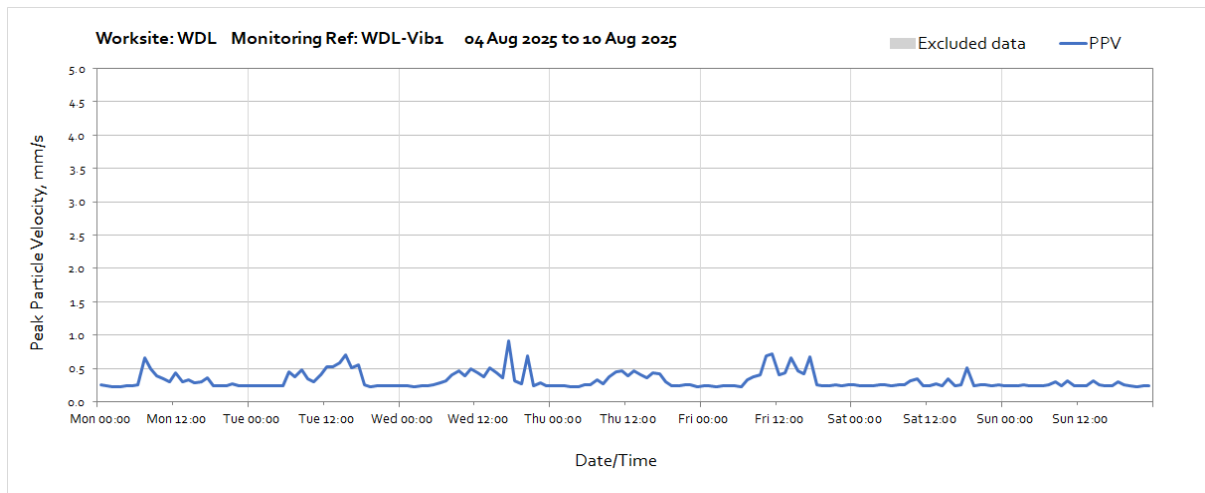
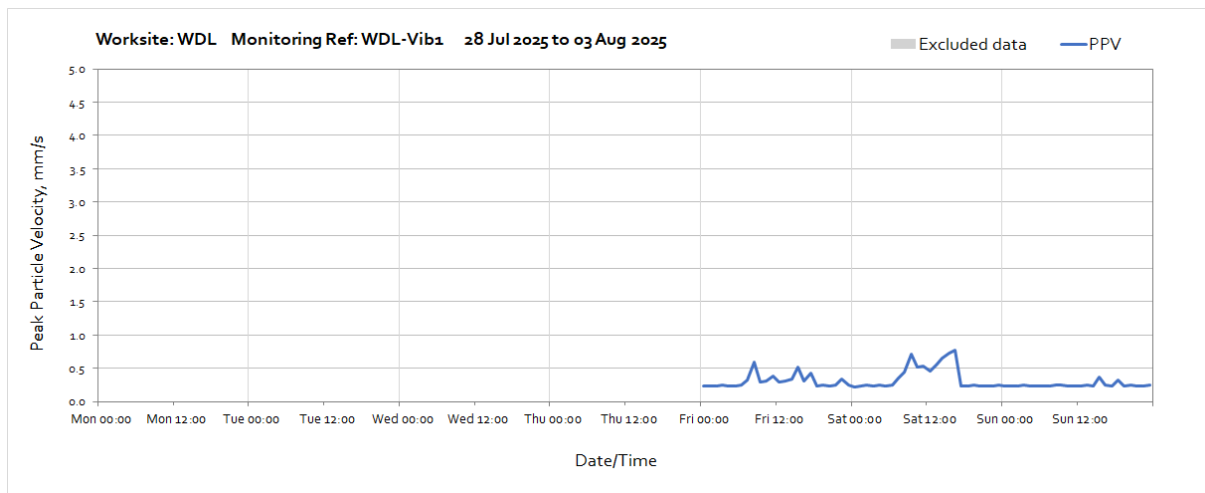




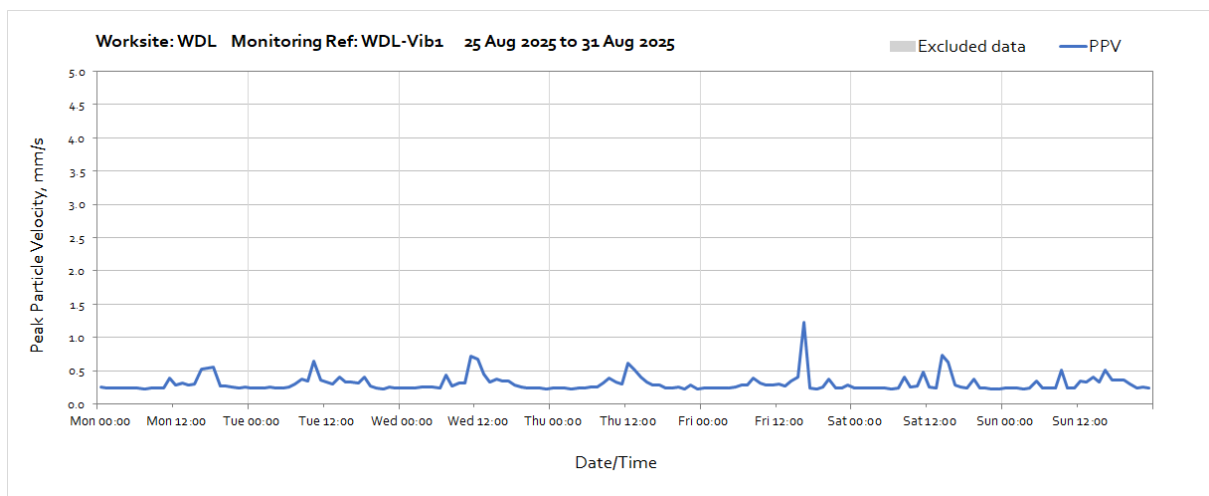
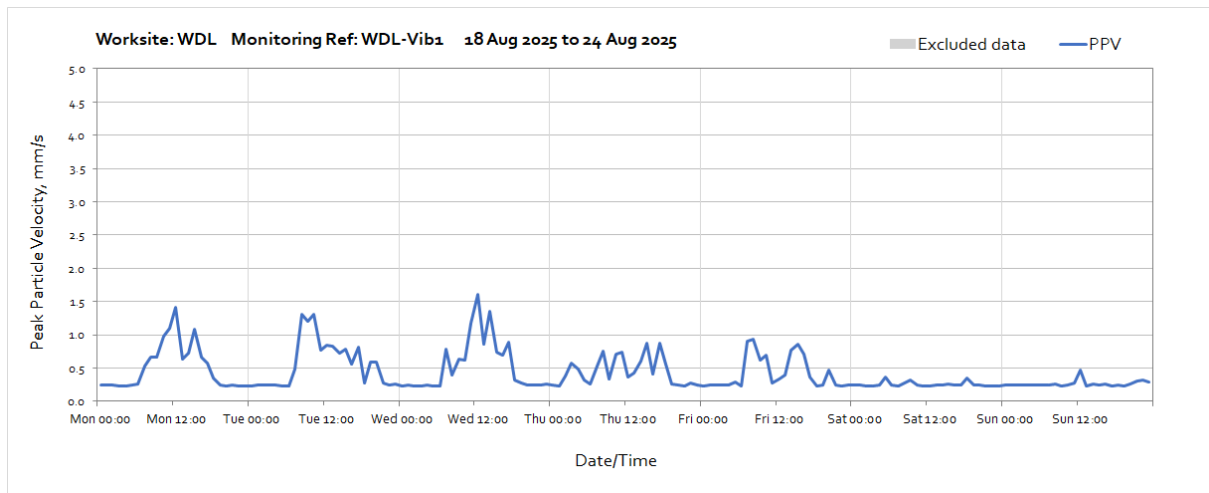
Note: Missing data between 21:00 on Monday 11th August until 14:00 on Wednesday 13th August was due to a depleted battery.



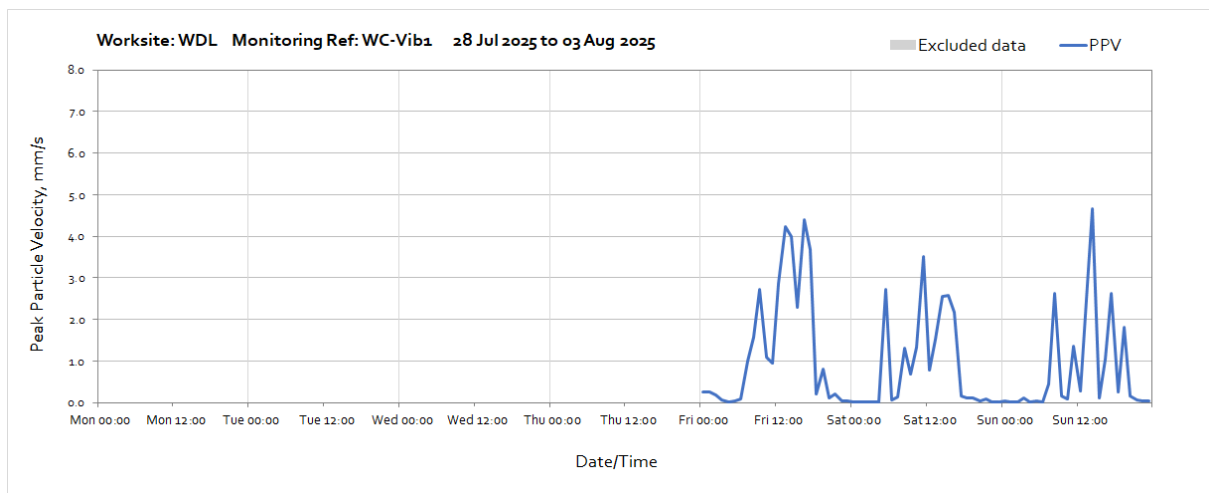
Worksite: WDL – Monitoring Ref: WDL-Vib1

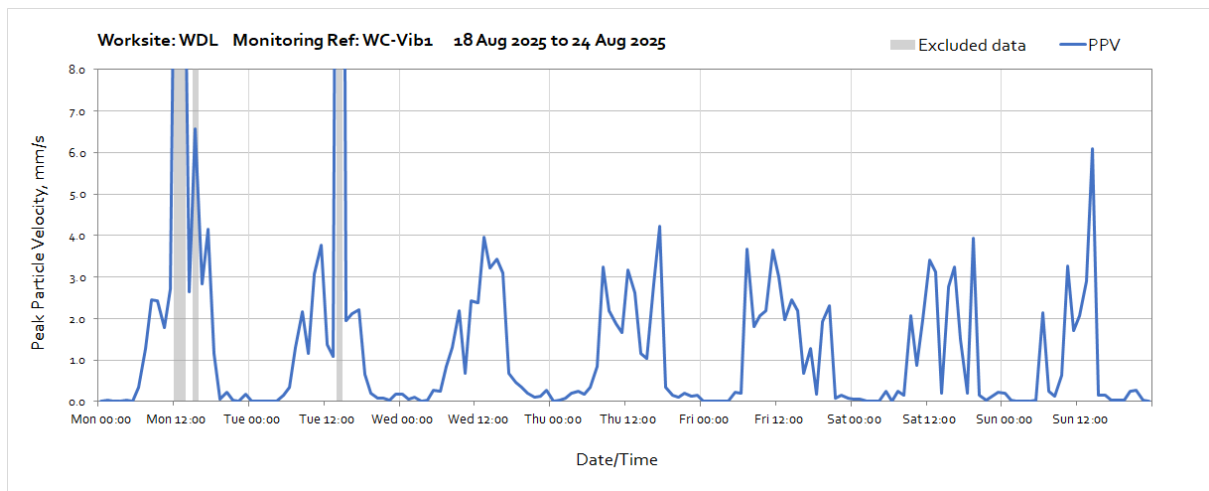
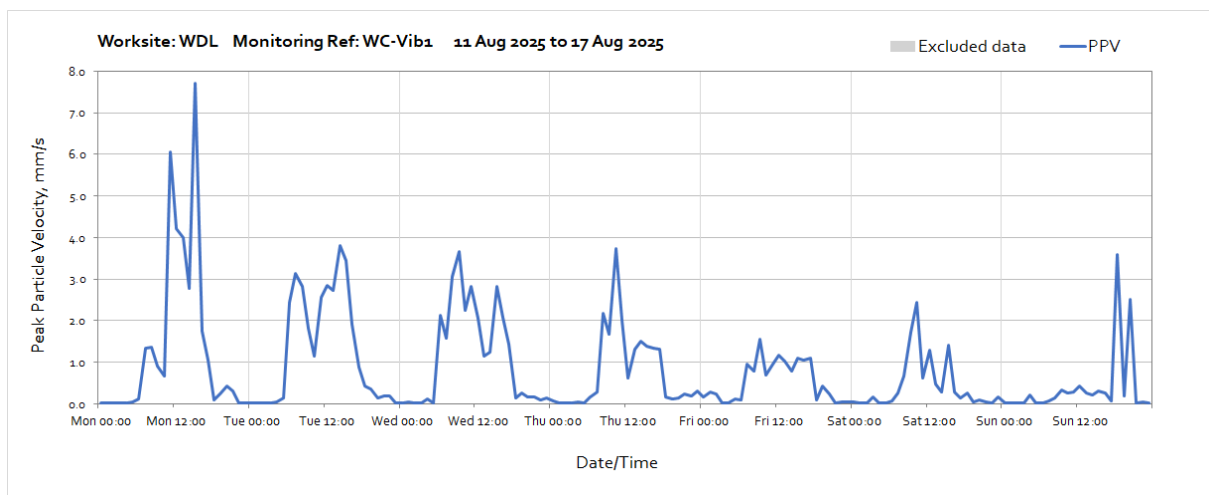
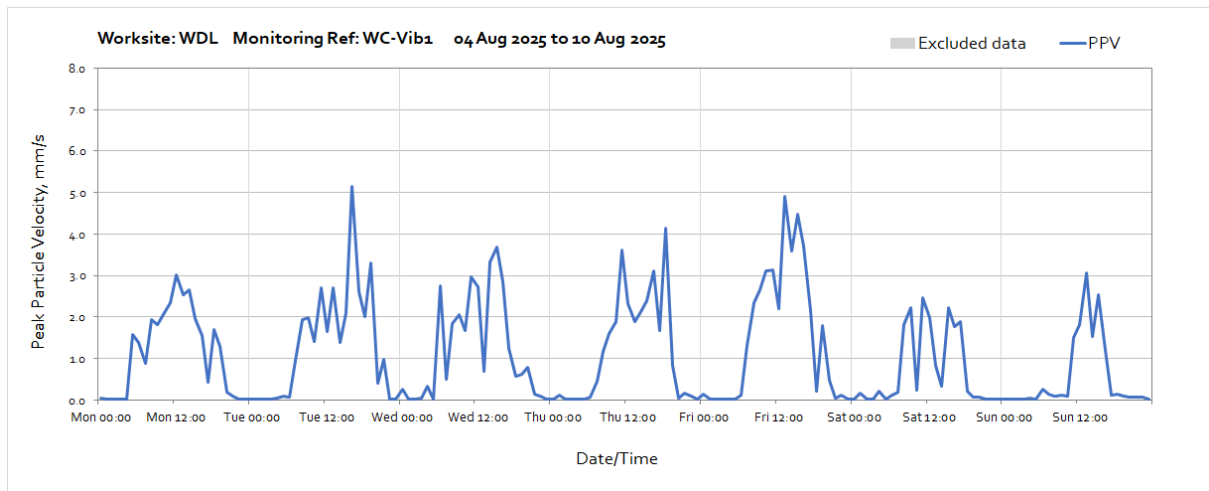


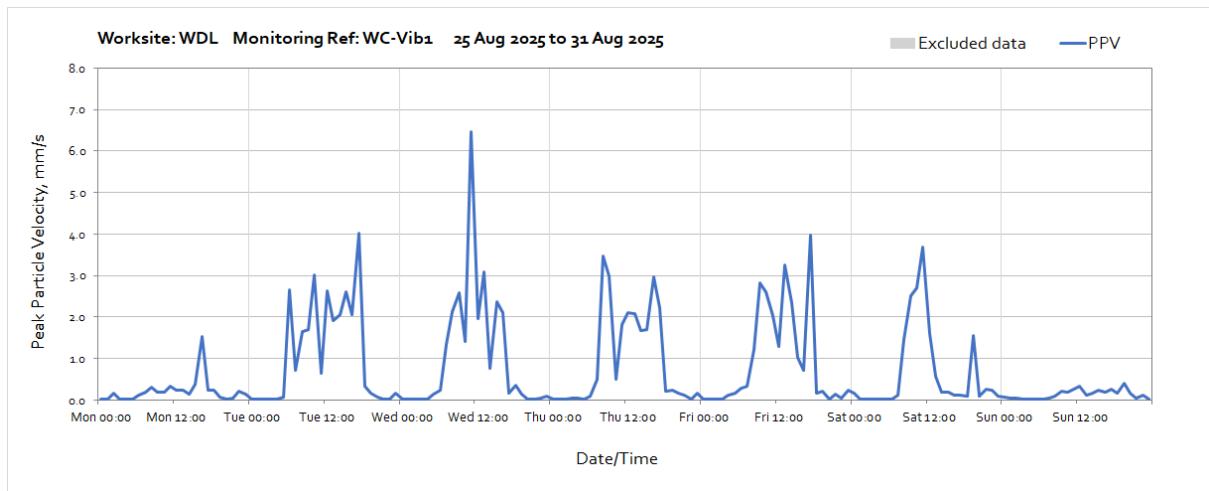
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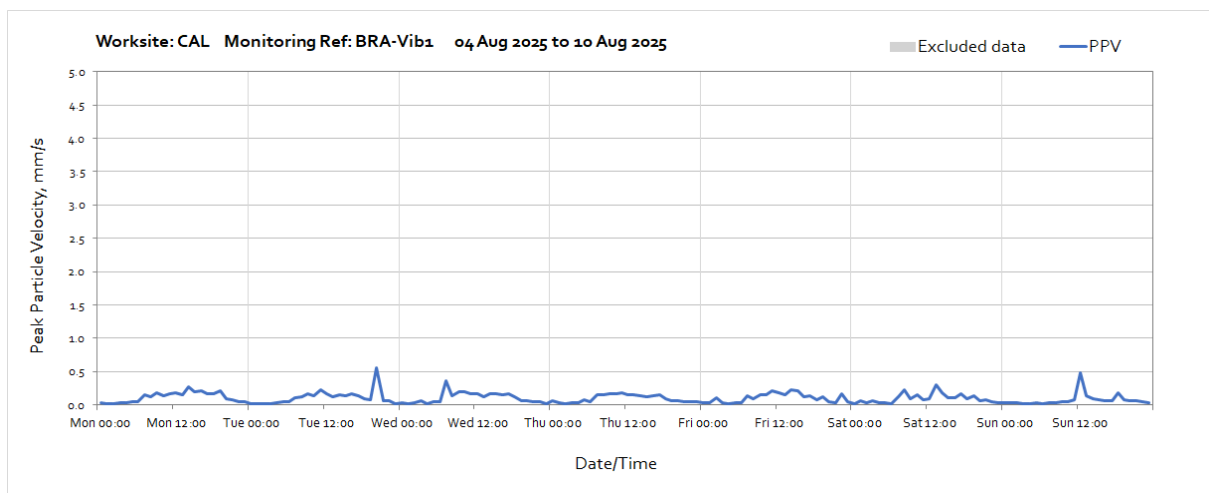
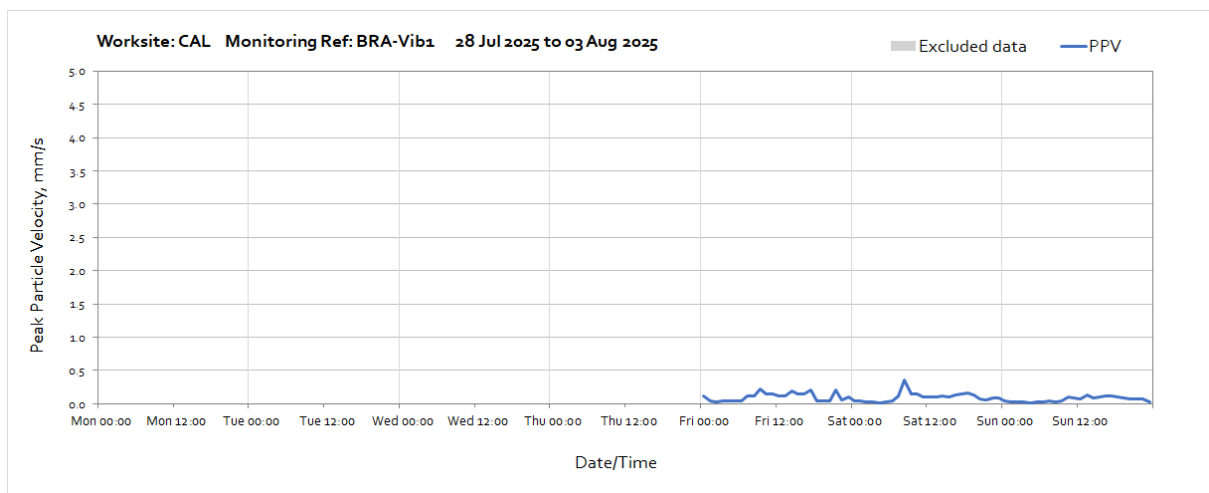
Worksite: WDL - Monitoring Ref: WC-Vib1

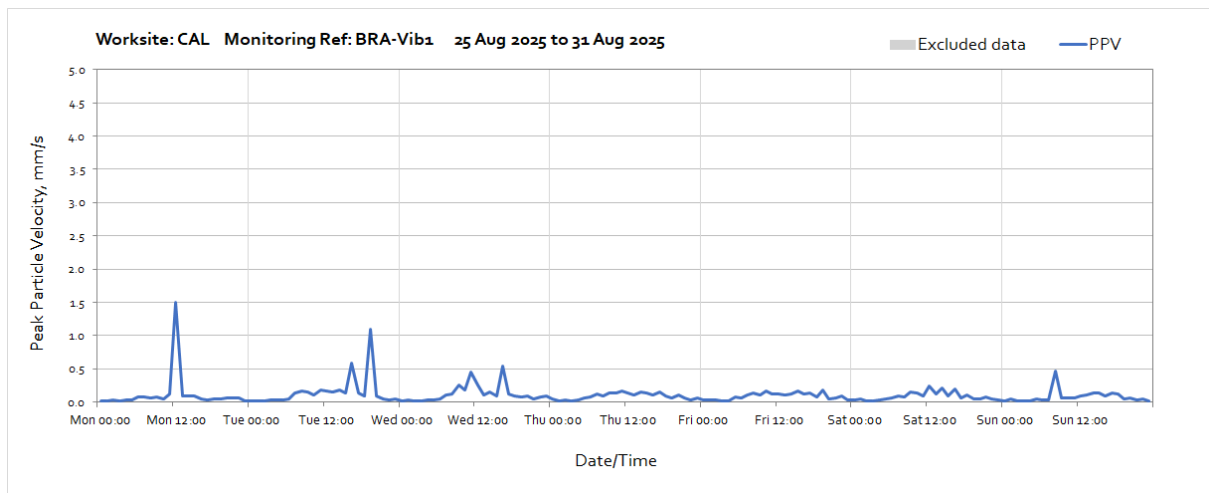
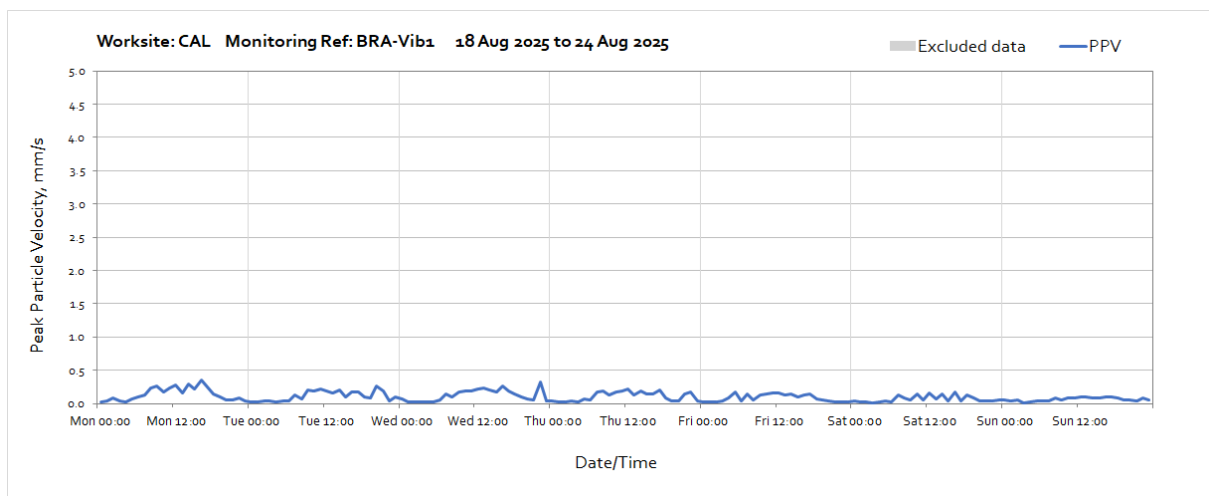
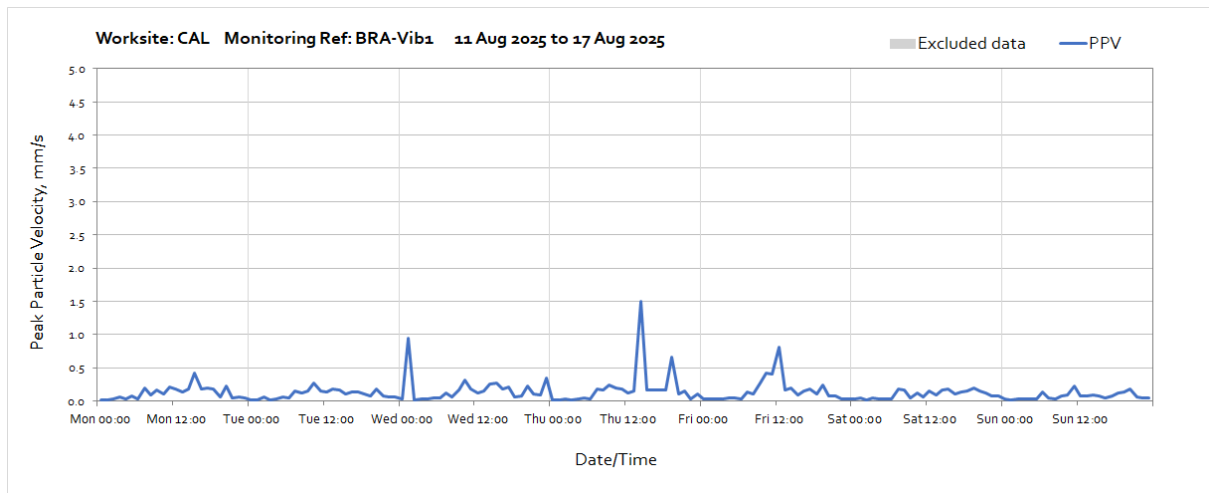






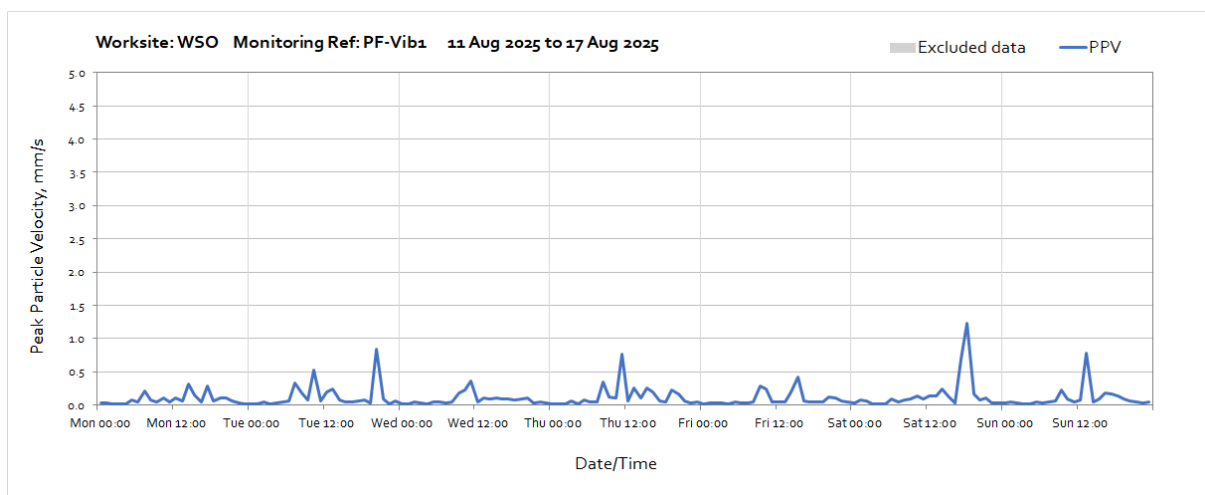
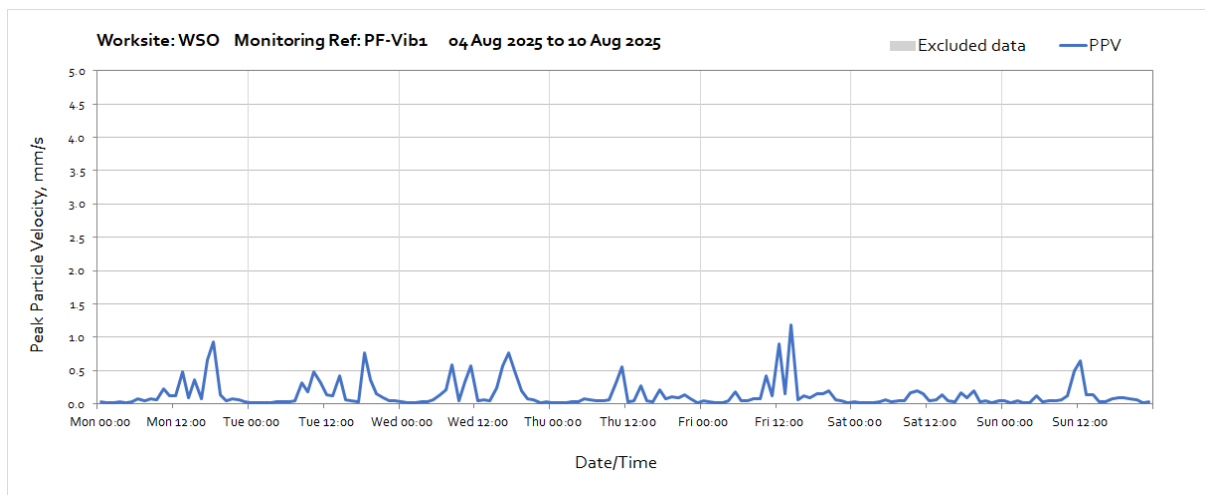
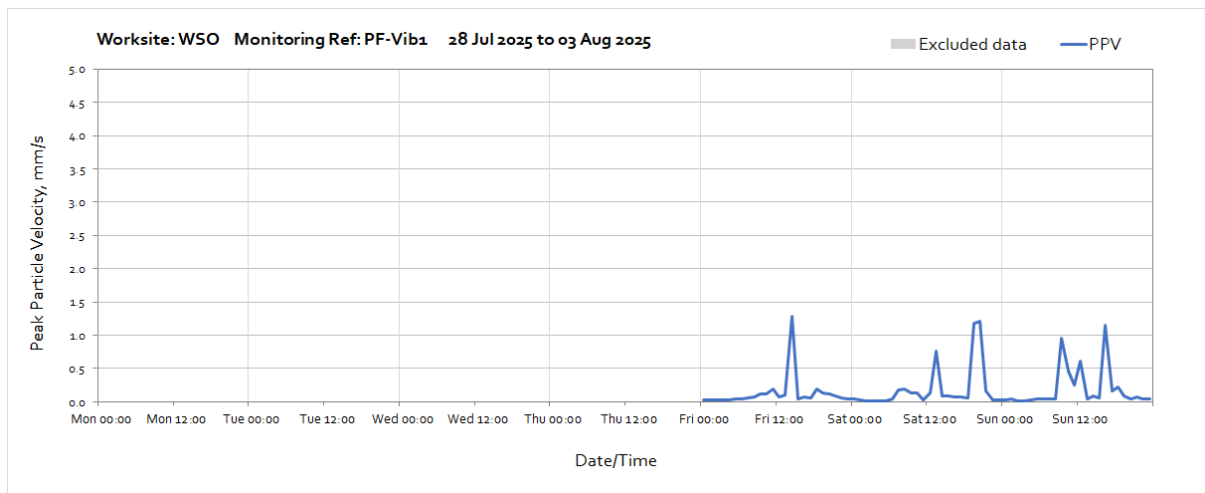
Worksite: CAL – Monitoring Ref: BRA-Vib1



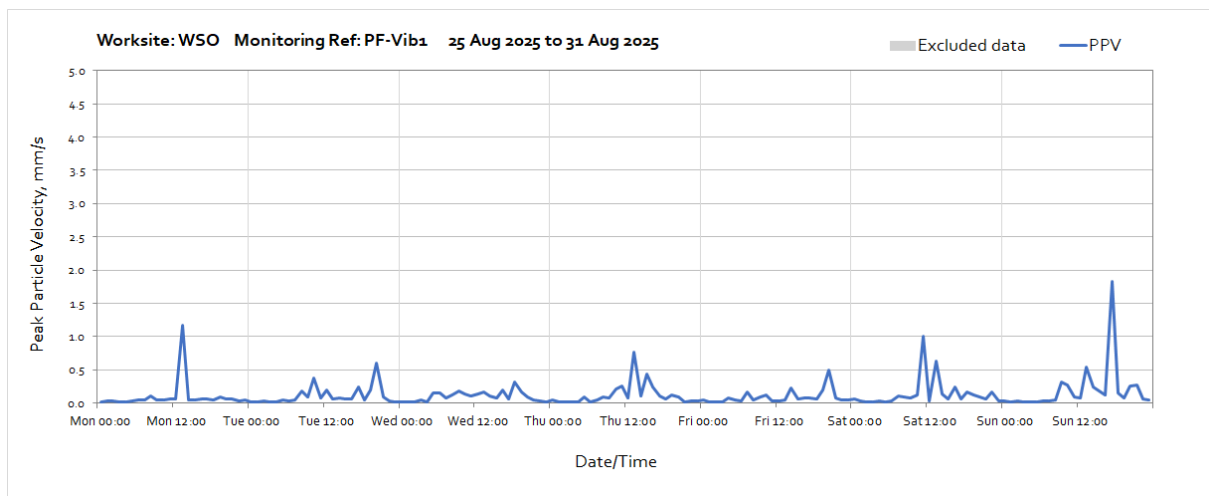
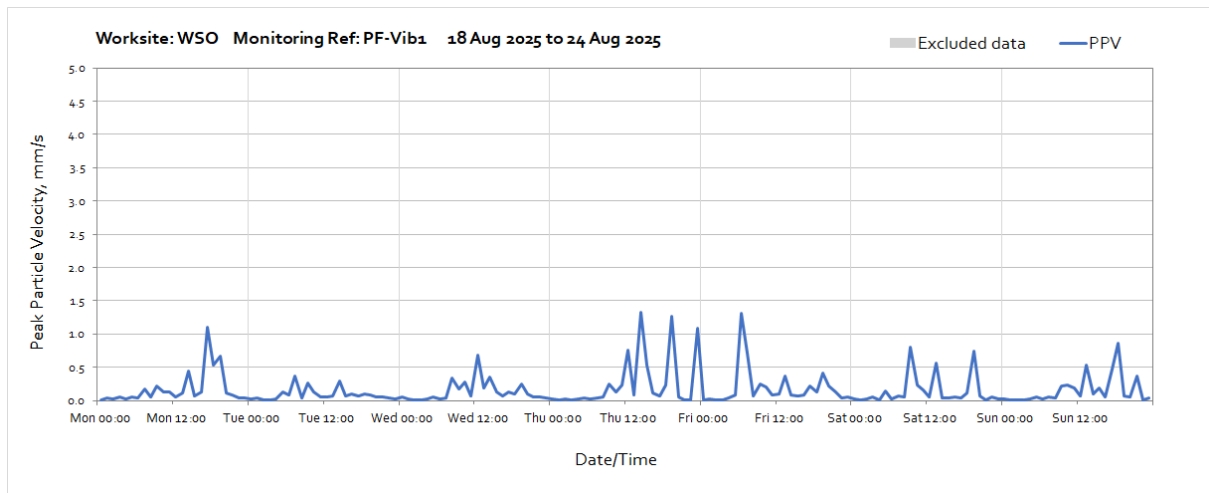


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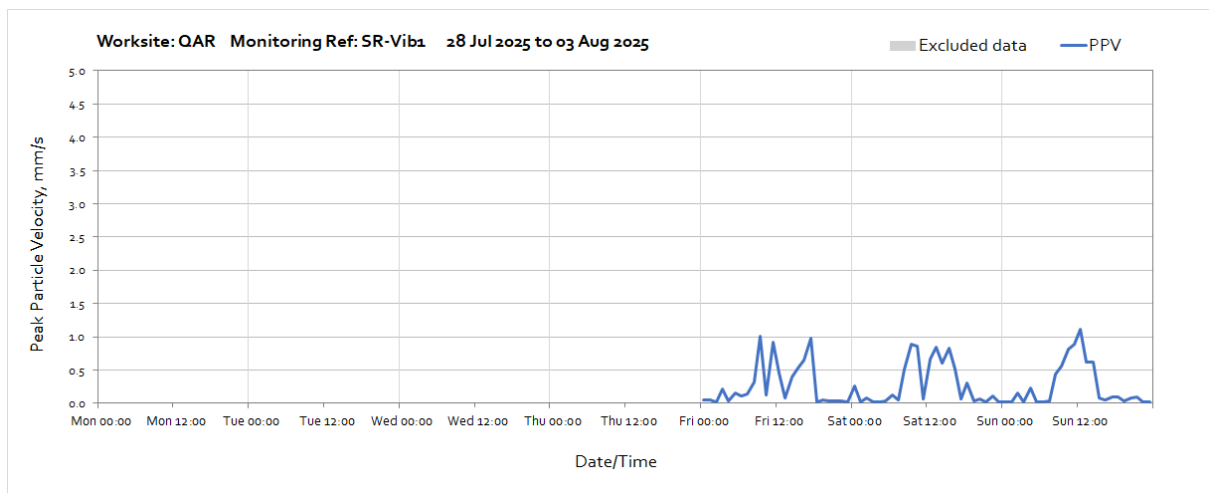
Worksite: WSO – Monitoring Ref: PF-Vib1

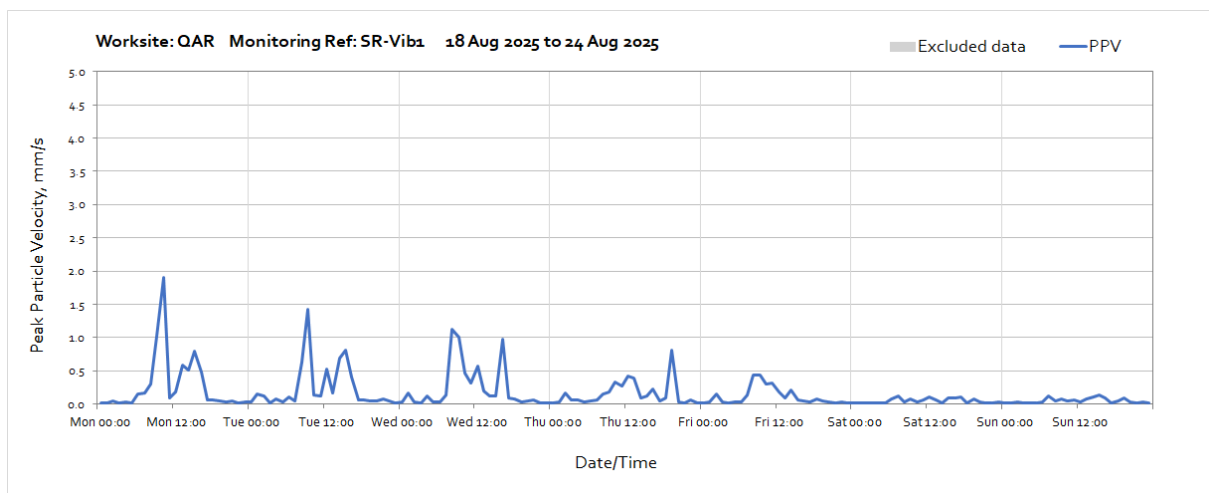
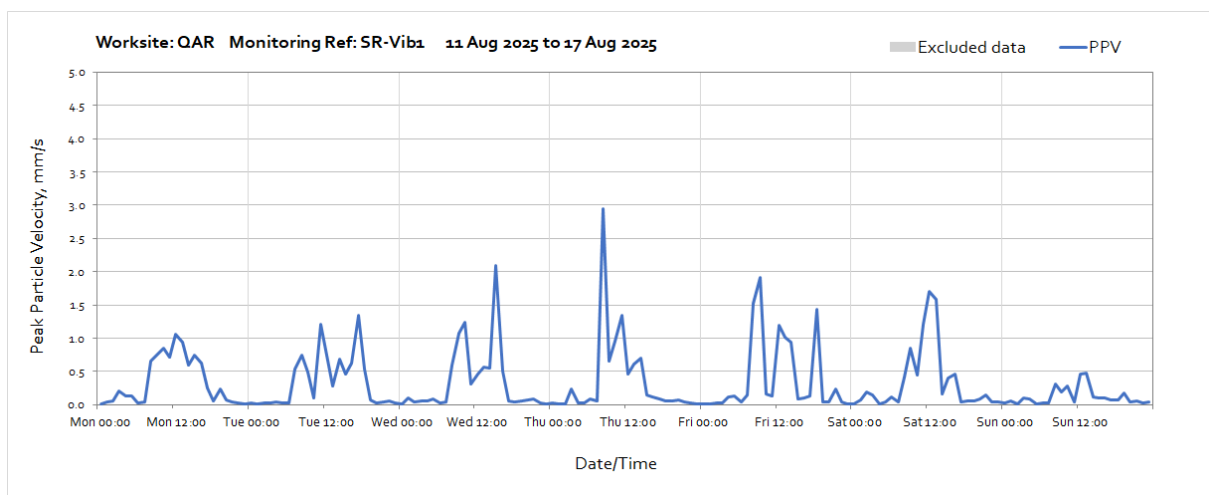
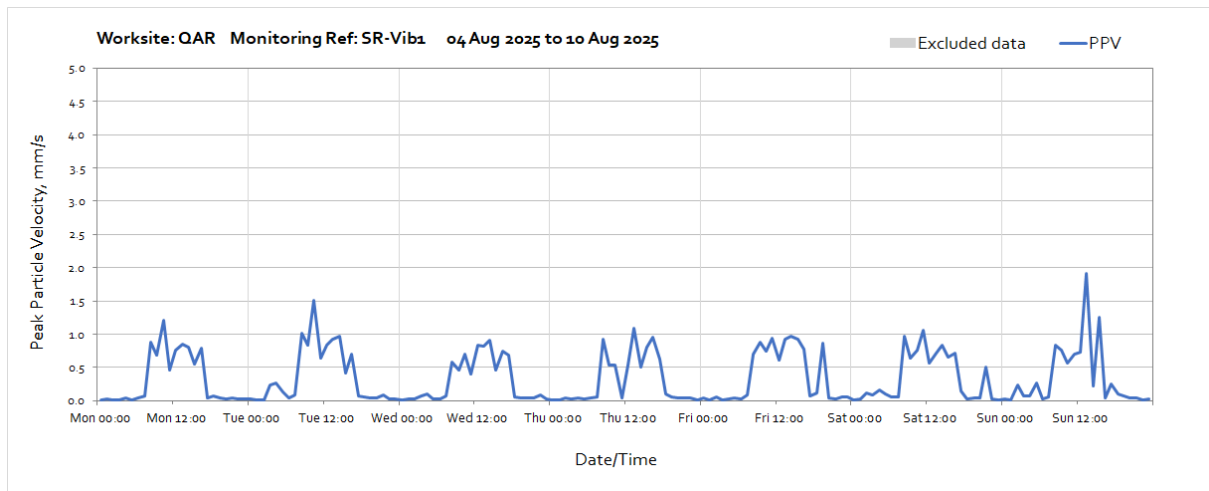


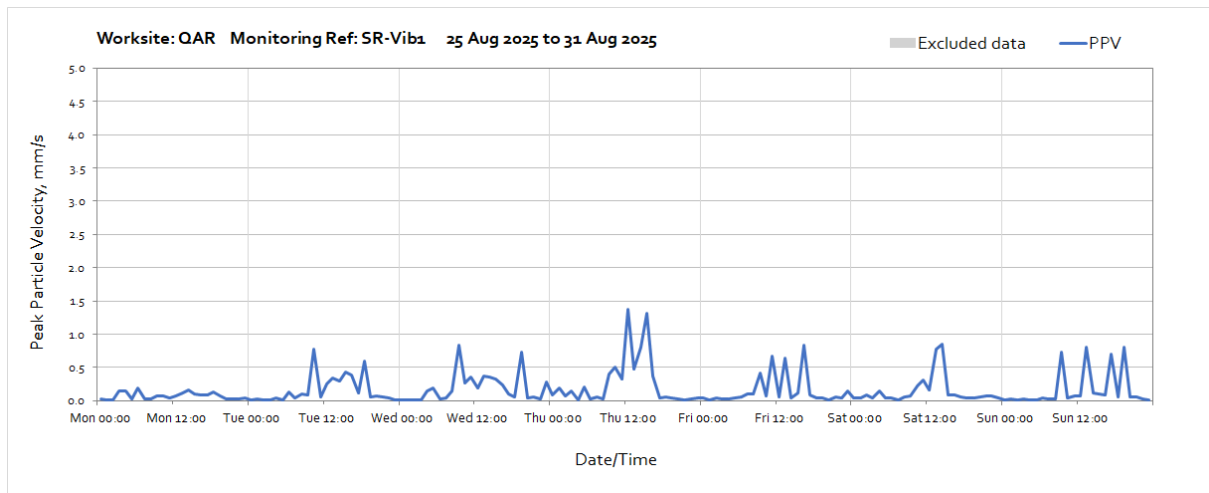
OFFICIAL



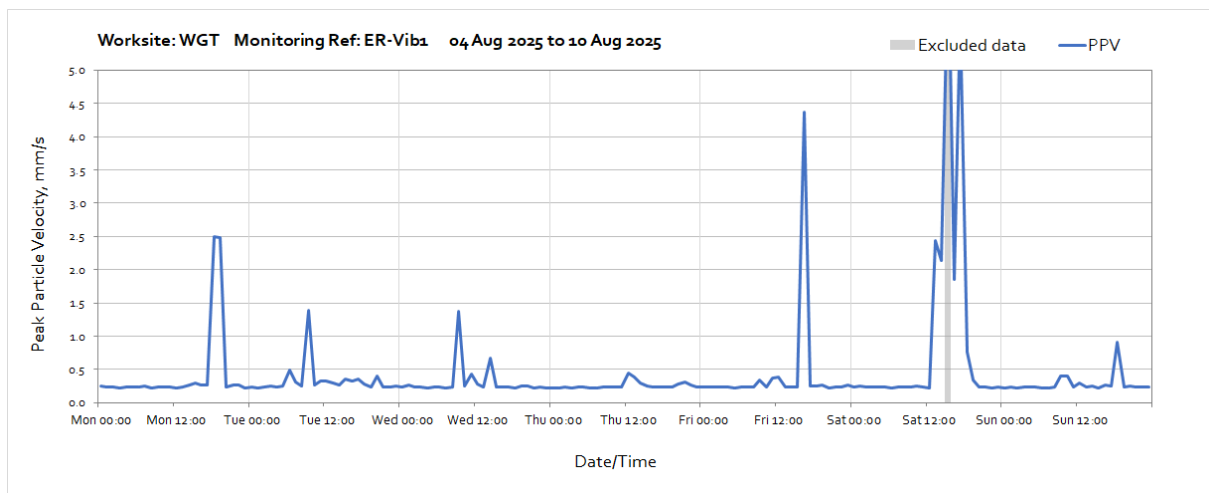
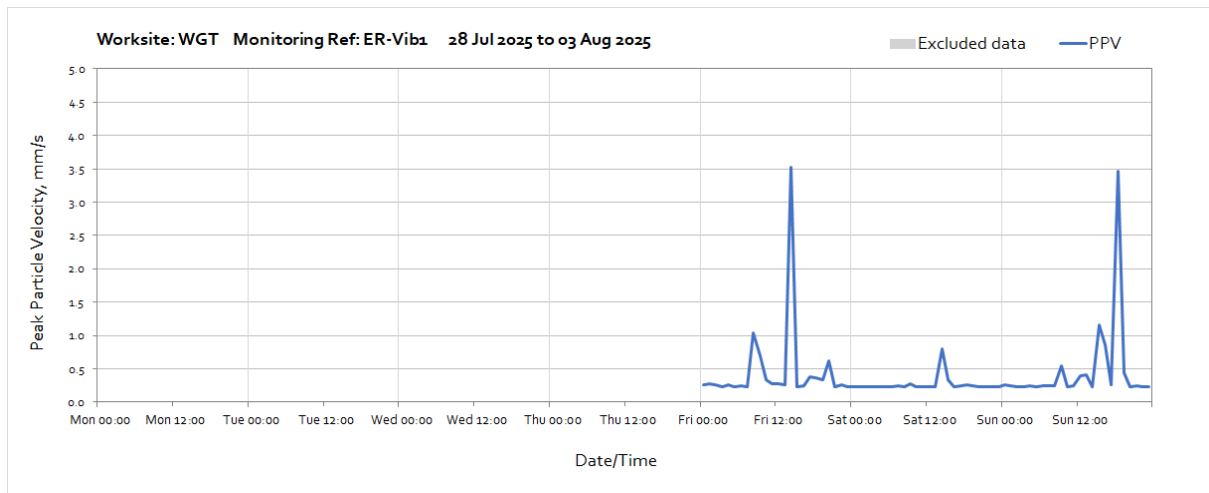
Worksite: QAR – Monitoring Ref: SR-Vib1







Worksite: WGT – Monitoring Ref: ER-Vib1



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