

Construction Noise and Vibration Monthly Report – March 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 March 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, viaduct works and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of School End (ref.: SE) and Hermitage Chetwode (ref.: HC), worksites where landscape bund construction, overbridge works, highway works, digging, compound dismantling, construction of temporary access road, site access and haul road maintenance and de-vegetation were underway.
- Noise and vibration were undertaken in the vicinity of Twyford worksite (ref.: TW), where viaduct works, stabilisation, material movements, stockpiling, site access and haul road maintenance and de-vegetation underway.
- Noise and vibration were undertaken in the vicinity of West Street Overbridge worksite (ref.: WSO), where commissioning, formwork reinforced concrete works, earthwork embankments and operation of overpumps were underway.
- Noise and vibration were undertaken in the vicinity of Calvert worksite (ref.: CAL), where production of concrete, material movements, earthworks and excavation were underway.
- Noise and vibration were undertaken in the vicinity of Woodlands worksite (ref.: WDL), where technical backfill, material movements and sheet piling were underway.
- Noise and vibration were undertaken in the vicinity of Quainton worksite (ref.: QAR), where no works were underway.
- Noise and vibration were undertaken in the vicinity of Oat Close worksite (ref: OC), where overbridge works, earthworks, excavation and construction of soil stabilisation area underway.
- Noise and vibration were undertaken in the vicinity of Waddesdon worksite (ref.: WAD), where formwork reinforced concrete works, piling and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Thames Valley Viaduct worksite (ref.: TVV), where formwork installation, lifting operations, installation of

satellite compound, formwork reinforced concrete works, earthworks, removal of platforms and construction of site access road were underway.

- Noise and vibration were undertaken in the vicinity of Risborough Road worksite (ref.: RR), where overbridge works, earthworks, drainage, boring and utility works were underway.
- Noise and vibration were undertaken in the vicinity of Aylesbury Golf Course worksite (ref.: GC), where road realignment, earthworks, culvert and utility works were underway.
- Noise and vibration were undertaken in the vicinity of Nash Lee Lane worksite (ref.: NLL), where overbridge works, concrete pours, constructing steelwork, reinforcement and formwork construction, utility works, installation of sumps, formation grading and shuttering were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Green Tunnel worksite (ref.: WGT), where excavation, stoning, stockpile movements, access road construction, deliveries, pre-treatment works, temporary bridge construction, concrete pours, de-mobilisation, site access and haul road diversion, waterproofing, invert blinding, office construction, utility works, crane mobilisation and cast installation were underway.
- Noise and vibration were undertaken in the vicinity of Grove Farm worksite (ref.: GF), where stockpile movements, bund construction, excavation, monitoring and underbridge works were underway.
- Noise and vibration were undertaken in the vicinity of Small Dean Viaduct Compound worksite (ref.: SDVC), where completion of lowering, installation of bearings, abutment wall construction, installation of reinforcement and formwork, casting and backfilling were underway.
- Noise and vibration were undertaken in the vicinity of Rocky Lane Embankment worksite (ref.: RLE), where concrete pours, temporary installation works, steel work installation, shuttering, lifting operations, drainage works, pavement installation and utility works were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Dean Viaduct worksite (ref.: WDV), where plank installation, reinforcement fixing, concrete pours, deck, utility and lifting works were underway.
- Noise and vibration were undertaken in the vicinity of Leather Lane worksite (ref.: LL), where capping beams, drainage works and concrete finishing works were underway.
- Noise and vibration were undertaken in the vicinity of South Heath worksite (ref.: SH), where earthworks, utility works, general site activities, overbridge construction,

ground investigation works, site access and haul road construction and operation 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 and 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:

- Grovill Embankment (Westbury) where excavation and replace was underway.
- School End North where bulk excavation, vegetation clearance, stockpiling, drainage, pond maintenance and excavation, removal of badger fencing, fencing works and vehicle movements were underway.
- Godington where site access road construction, topsoil stripping and vegetation clearance were underway.
- Turweston A422 structure where compound development, temporary bridge and road diversions were underway.

- Addison Road where ballast installation, earthwork embankments and parapet installation were underway.
- East West Rail Overbridge where formwork reinforced concrete works were underway.
- Charndon Lodge Underbridge and Pumping Station where technical backfill and drainage works were underway.
- Infrastructure Maintenance Depot (IMD) where technical backfill and earthworks filling were underway.
- Shepherds Furze Culvert where installation of pre-cast units was underway.
- MCJ where bulk excavation and earthworks including excavation and filling and were underway.
- Bat Mitigation Structure where earthworks including excavation and filling were underway.
- Greatmoor Culverts where waterproofing was underway.
- GUN28 overbridge where formwork reinforced concrete works and technical backfill were underway.
- Doddershall Culverts where technical backfilling was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Along A41 where concrete batching plant operation, compound operation, and overbridge works was underway.
- South PRA where culvert construction, drainage and construction of relief road were underway.
- Cranwell where culvert works and earthworks were underway.
- Blackgrove where overbridge works and earthworks were underway.
- North Quainton where overbridge works and earthworks were underway.
- Westfield where excavation including pond excavation was underway.
- Bowood Lane where earthworks was underway.
- Nash Lee Road Diversion where platform extensions 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 one (1) time during the reporting period.

One (1) exceedance of trigger levels as defined in Section 61 consents occurred 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 March 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 reinforcement installation, concrete pours and backfilling.
 - Viaduct works including lowering and bearing installation, site demobilisation, installation of concrete slab and reinforcement.
 - Earthworks including landscape filling, lime stabilisation, bulk excavation and material movements.
- 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:
 - Landscape bund construction.
 - Overbridge works including parapet deliveries and installation.
 - Highway works including backfilling.

- Digging.
- Compound dismantling.
- Construction of temporary access road.
- Site access and haul road maintenance.
- De-vegetation.
- Twyford worksite, ref.: TW (see Plan 2 in Appendix A), where works activities included:
 - Viaduct works, including excavation and piling.
 - Stabilisation.
 - Material movements.
 - Stockpiling.
 - Site access and haul road maintenance.
 - De-vegetation.
- West Street Overbridge worksite, ref.: WSO (see Plan 2 in Appendix A), where works activities included:
 - Commissioning.
 - Formwork reinforced concrete works.
 - Earthwork embankments.
 - Operation of overpumps.
- Calvert worksite, ref.: CAL (see Plan 3 in Appendix A) where works activities included:
 - Production of concrete.
 - Material movements.
 - Earthworks.
 - Excavation.
- Woodlands worksite, ref.: WDL (see Plan 4 in Appendix A) where works activities included:
 - Technical backfill.
 - Material movements.

- Sheet piling.
- Quainton worksite, ref.: QAR (see Plan 4 in Appendix A) where no works activities were underway.
- Oat Close worksite, ref.: OC (see Plan 6 in Appendix A), where works activities included:
 - Overbridge works including reinforced concrete works.
 - Earthworks.
 - Excavation.
 - Construction of soil stabilisation area.
- Waddesdon worksite, ref.: WAD (see Plan 5 in Appendix A), where works activities included:
 - Formwork reinforced concrete works.
 - Piling.
 - Earthworks.
- Thames Valley Viaduct worksite, ref.: TVV (see Plan 5 in Appendix A), where works activities included:
 - Formwork installation.
 - Lifting operations.
 - Installation of satellite compound.
 - Formwork reinforced concrete works.
 - Earthworks.
 - Removal of platforms.
 - Construction of site access road.
- Risborough Road worksite, ref.: RR (see Plan 6 in Appendix A), where works activities included:
 - Overbridge works including formwork reinforced concrete works.
 - Earthworks.
 - Drainage works.
 - Boring.
 - Utility works.

- Aylesbury Golf Course worksite, ref.: GC (see Plan 6 in Appendix A), where works activities included:
 - Road realignment.
 - Earthworks.
 - Culvert works including backfilling and formwork reinforced concrete works.
 - Utility works including drilling and earthworks.
- Nash Lee Lane worksite, ref.: NLL (see Plan 6 in Appendix A), where works activities included: Your location
 - Overbridge works.
 - Concrete pours.
 - Constructing steelwork.
 - Reinforcement and formwork construction.
 - Utility works.
 - Installation of sumps.
 - Formation grading.
 - Shuttering.
- Wendover Green Tunnel worksite, ref.: WGT (see Plan 7 in Appendix A), where works activities included:
 - Excavation.
 - Stoning.
 - Stockpile movements.
 - Access road construction.
 - Deliveries.
 - Pre-treatment works.
 - Temporary bridge construction.
 - Concrete pours.
 - De-mobilisation.
 - Site access and haul road diversion.
 - Waterproofing.

- Invert blinding.
- Office construction.
- Utility works.
- Crane mobilisation.
- Cast installation.
- Grove Farm worksite, ref.: GF (see Plan 7 in Appendix A), where works activities included:
 - Stockpile movements.
 - Bund construction.
 - Excavation.
 - Monitoring.
 - Underbridge works including reinforcement, formwork installation, concrete pours, backfilling, blinding installation and installation of timber.
- Small Dean Viaduct Compound worksite, ref.: SDVC (see Plan 7 in Appendix A), where works activities included:
 - Completion of lowering.
 - Installation of bearings.
 - Abutment wall construction.
 - Installation of reinforcement.
 - Installation of formwork.
 - Casting.
 - Backfilling.
- Rocky Lane Embankment worksite, ref.: RLE (see Plan 7 in Appendix A), where works activities included:
 - Concrete pours.
 - Temporary installation works.
 - Steelwork installation.
 - Shuttering.
 - Lifting operations.

- Drainage works.
- Pavement installation.
- Utility works.
- Wendover Dean Viaduct worksite, ref.: WDV (see Plan 7 in Appendix A), where works activities included:
 - Plank installation.
 - Reinforcement fixing.
 - Deck works including formwork.
 - Utility works.
 - Concrete pours.
 - Lifting works.
- Leather Lane worksite, ref.: LL (see Plan 8 in Appendix A), where works activities included:
 - Capping beams.
 - Drainage works.
 - Concrete finishing works.
- South Heath worksite, ref.: SH (see Plan 8 in Appendix A), where works activities included:
 - Earthworks.
 - Utility works, including drainage.
 - 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:

- Grovill Embankment (Westbury) where excavation and replace was underway.
- School End North where bulk excavation, vegetation clearance, stockpiling, drainage, pond maintenance and excavation, removal of badger fencing, fencing works and vehicle movements were underway.
- Godington where site access road construction, topsoil stripping and vegetation clearance were underway.
- Turweston A422 structure where compound development, temporary bridge and road diversions were underway.

- Addison Road where ballast installation, earthwork embankments and parapet installation were underway.
- East West Rail Overbridge where formwork reinforced concrete works were underway.
- Charndon Lodge Underbridge and Pumping Station where technical backfill and drainage works were underway.
- Infrastructure Maintenance Depot (IMD) where technical backfill and earthworks filling were underway.
- Shepherds Furze Culvert where installation of pre-cast units was underway.
- MCJ where bulk excavation and earthworks including excavation and filling and were underway.
- Bat Mitigation Structure where earthworks including excavation and filling were underway.
- Greatmoor Culverts where waterproofing was underway.
- GUN28 overbridge where formwork reinforced concrete works and technical backfill were underway.
- Doddershall Culverts where technical backfilling was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Along A41 where concrete batching plant operation, compound operation, and overbridge works was underway.
- South PRA where culvert construction, drainage and construction of relief road were underway.
- Cranwell where culvert works and earthworks were underway.
- Blackgrove where overbridge works and earthworks were underway.
- North Quainton where overbridge works and earthworks were underway.
- Westfield where excavation including pond excavation was underway.
- Bowood Lane where earthworks was underway.
- Nash Lee Road Diversion where platform extensions 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 Forty (40) noise and seven (7) vibration monitoring installations were active in March in the BS area. Table 2 summarises the location of noise and vibration monitoring installations within the BS area in March 2025.
- 1.2.2 An additional vibration monitor, ref.: SR-Vib1, was installed within the vicinity of Quainton worksite, ref.: QAR, on 1st March.
- 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
	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
QAR	QAR-NMP2	Station Road, Quainton
	SR-Vib1	Station Road, Quainton
	LSF-NMP1	Upper South Farm
OC	MF-NMP1	Moat Farm, Marsh Lane
GC	GC-NMP1	Aylesbury, Buckinghamshire
WAD	WAD-NMP2	Waddesdon, Buckinghamshire
TVV	TVV-NMP1	Aylesbury, Buckinghamshire
RR	RR-NMP1	Stoke Mandeville, Aylesbury
NLL	NLL-NMP1	Nash Lee Lane, Nash Lee

Worksite Reference	Measurement Reference	Address
	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
GF	GF-NMP1	Grove Farm, Wendover
	GF-Vib1	Grove Farm, Wendover
SDVC	SDVC-NMP1	Rocky Lane, Wendover
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover
	NCAS5-NMP1	Chesham Lane, The Lee, Wendover
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover
LL	GD-NMP1	Grimms Ditch, The Lee, South Heath
SH	HGF-NMP1	Hunts Green Farm, Kings Lane, 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	CFC-NMP1	Cricket Field Cottages, Chesham Lane, Chalfont St. Peter
	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 LAeq,T (Highest Day LAeq,T)					Saturday Average LAeq,T (Highest Day LAeq,T)					Sunday / Public Holiday Average LAeq,T (Highest Day LAeq,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	50.9 (55.6)	53.5 (55.8)	47.7 (51.1)	46.8 (50.5)	47.3 (54.8)	47.8 (50.1)	50.7 (52.0)	50.3 (52.4)	48.1 (52.1)	46.4 (48.1)	47.1 (53.1)	47.3 (58.5)
SE	SE-NMP1	School End, Chetwode	Free-field	52.8 (59.5)	58.6 (61.0)	42.1 (49.6)	38.7 (50.6)	38.5 (49.1)	49.4 (50.3)	52.4 (56.1)	50.5 (54.2)	46.6 (54.9)	39.6 (50.2)	43.4 (51.5)	39.4 (54.0)
HC	HC-NMP1	Hermitage, Chetwode	Free-field	54.0 (57.0)	60.3 (63.9)	43.7 (54.5)	41.1 (48.4)	41.9 (47.7)	52.0 (53.3)	53.7 (56.4)	53.1 (55.4)	48.5 (58.1)	42.6 (49.4)	44.2 (51.8)	42.6 (53.7)
TW	TW-NMP1	Twyford	Free-field	47.2 (50.7)	54.4 (62.1)	45.0 (48.0)	43.1 (47.8)	44.2 (56.7)	46.4 (47.7)	49.2 (52.1)	50.9 (57.7)	47.9 (64.8)	44.9 (51.1)	45.7 (50.6)	44.4 (51.2)
WSO	WSO-NMP1	West Street, Twyford	Free-field	51.2 (61.4)	61.1 (66.9)	45.0 (49.4)	40.9 (49.0)	39.9 (51.0)	44.9 (47.7)	51.3 (59.4)	47.4 (50.3)	46.7 (61.1)	39.3 (48.4)	44.6 (53.4)	40.1 (47.8)
CAL	SHC-NMP1	School Hill Compound, Calvert	Free-field	58.9 (61.7)	60.8 (65.5)	50.0 (56.4)	49.0 (65.0)	49.9 (63.2)	56.8 (58.9)	59.9 (62.5)	61.5 (67.1)	56.4 (66.2)	49.8 (60.9)	55.4 (69.5)	51.0 (57.4)
	FCC-NMP1	Calvert South	Free-field	52.0 (59.6)	53.6 (69.5)	45.6 (49.5)	42.8 (50.2)	42.1 (49.8)	48.8 (52.1)	48.7 (51.4)	44.9 (46.5)	45.1 (60.7)	41.5 (49.6)	46.4 (67.4)	42.5 (50.3)
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Free-field	63.2 (66.7)	68.8 (69.8)	47.9 (53.7)	45.4 (53.1)	47.1 (61.3)	58.7 (62.1)	63.6 (65.2)	61.1 (66.8)	54.8 (66.2)	44.1 (49.6)	56.1 (67.2)	44.5 (54.6)

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average LAeq,T (Highest Day LAeq,T)					Saturday Average LAeq,T (Highest Day LAeq,T)					Sunday / Public Holiday Average LAeq,T (Highest Day LAeq,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	50.0 (52.6)	52.9 (73.2)	47.6 (57.1)	44.8 (61.4)	42.1 (59.9)	45.6 (47.8)	48.3 (53.7)	48.6 (56.9)	49.7 (65.3)	41.4 (47.3)	46.8 (53.6)	43.0 (52.8)
	LSF-NMP1	Upper South Farm	Free-field	54.3 (57.7)	57.0 (59.7)	44.2 (52.6)	38.9 (53.0)	40.6 (51.2)	53.8 (56.2)	54.8 (57.2)	51.5 (53.8)	50.7 (67.2)	40.5 (48.5)	48.2 (56.8)	41.2 (54.3)
GC	GC-NMP1	Aylesbury, Buckinghamshire	Free-field	48.1 (50.6)	53.5 (56.6)	46.2 (50.2)	43.6 (52.5)	43.3 (57.7)	47.7 (50.4)	46.3 (47.8)	47.3 (50.3)	45.7 (50.4)	43.4 (49.8)	45.4 (49.2)	43.6 (52.2)
OC	MF-NMP1	Moat Farm, Marsh Lane	Free-field	53.8 (61.0)	64.1 (71.4)	49.0 (71.4)	41.6 (49.9)	39.5 (50.7)	54.6 (59.3)	60.1 (70.6)	59.0 (69.7)	56.8 (70.8)	39.1 (43.2)	43.4 (48.1)	39.7 (46.2)
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Free-field	50.9 (54.8)	53.3 (55.9)	45.0 (51.0)	43.3 (51.3)	42.8 (52.9)	47.8 (52.7)	51.1 (57.6)	47.5 (50.1)	47.2 (60.2)	41.1 (45.5)	45.5 (51.3)	41.9 (51.4)
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	Free-field	48.9 (52.7)	55.3 (61.9)	46.5 (51.3)	44.1 (53.2)	42.5 (50.9)	45.8 (47.2)	50.0 (53.7)	49.0 (51.2)	47.3 (53.5)	42.6 (48.6)	45.4 (52.0)	43.1 (49.1)
RR	RR-NMP1	Stoke Mandeville, Aylesbury	Free-field	54.1 (58.9)	56.0 (59.4)	52.1 (56.5)	50.3 (55.0)	47.3 (58.1)	50.2 (54.4)	51.7 (55.0)	51.1 (55.1)	52.3 (56.2)	47.2 (55.4)	51.6 (55.7)	49.1 (57.6)
NLL	NLL-NMP1	Nash Lee Lane, Nash Lee	Free-field	56.3 (60.4)	61.3 (70.0)	53.1 (55.7)	51.1 (54.3)	50.0 (56.6)	52.1 (54.1)	59.8 (65.7)	55.4 (61.9)	52.3 (57.9)	49.3 (51.8)	50.8 (53.9)	50.5 (56.8)
	NLL-NMP2	Nash Lee Lane, Nash Lee	Free-field	56.2 (59.8)	58.4 (62.1)	52.7 (55.1)	50.6 (55.5)	49.4 (59.6)	52.2 (53.8)	57.2 (61.4)	52.2 (53.7)	51.7 (55.6)	48.2 (52.8)	50.7 (54.3)	50.0 (57.2)

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average LAeq,T (Highest Day LAeq,T)					Saturday Average LAeq,T (Highest Day LAeq,T)					Sunday / Public Holiday Average LAeq,T (Highest Day LAeq,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
WGT	ER-NMP1	Ellesborough Rd, Wendover	Free-field	57.0 (60.3)	57.2 (67.6)	54.9 (57.8)	51.6 (55.4)	49.8 (59.1)	52.8 (55.7)	54.5 (57.8)	52.8 (54.5)	52.4 (56.0)	48.9 (52.0)	54.0 (58.3)	52.3 (58.7)
	BL-NMP1	Bacombe Lane, Wendover	Free-field	50.1 (52.0)	63.6 (68.7)	47.9 (50.4)	46.6 (52.2)	47.0 (53.9)	48.1 (50.5)	57.0 (63.2)	46.3 (47.5)	46.9 (49.6)	45.6 (51.1)	47.3 (50.3)	46.0 (53.7)
	WT-NMP1	A413, Wendover	Free-field	68.3 (69.6)	67.1 (68.0)	66.9 (67.9)	63.6 (71.3)	61.5 (73.2)	64.6 (65.7)	65.8 (66.1)	65.7 (66.9)	64.8 (67.0)	59.0 (62.8)	65.6 (69.2)	62.4 (69.1)
	WGT-NMP1	Wendover, Aylesbury	Free-field	53.2 (59.6)	52.6 (64.0)	52.1 (58.9)	49.1 (56.7)	48.2 (62.8)	49.6 (54.2)	50.3 (55.0)	49.4 (56.4)	49.5 (59.0)	46.3 (56.6)	49.7 (56.3)	45.6 (57.3)
GF	GF-NMP1	Grove Farm, Wendover	Free-field	52.9 (55.5)	55.8 (61.4)	52.5 (58.1)	48.8 (57.3)	47.1 (54.7)	50.6 (54.7)	55.2 (64.4)	47.0 (49.5)	52.7 (61.3)	46.4 (52.9)	51.8 (60.1)	46.8 (54.4)
SDVC	SDVC-NMP1	Rocky Lane, Wendover	Free-field	64.0 (65.4)	62.4 (65.0)	61.5 (63.0)	59.4 (62.6)	56.9 (64.8)	60.8 (62.4)	61.6 (63.1)	61.2 (62.1)	61.0 (62.9)	56.4 (60.9)	61.1 (64.4)	58.6 (64.7)
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Free-field	55.5 (61.9)	58.6 (68.5)	48.6 (51.6)	45.2 (49.4)	43.9 (52.0)	47.4 (50.2)	53.7 (59.8)	54.0 (60.0)	50.1 (61.7)	44.5 (53.3)	47.0 (53.3)	44.2 (54.7)
	NCAS5-NMP1	Chesham Lane, The Lee, Wendover	Free-field	56.8 (60.1)	56.3 (59.4)	54.7 (59.7)	51.7 (56.8)	49.6 (58.7)	53.5 (55.3)	54.7 (55.6)	55.2 (56.0)	52.9 (56.9)	49.0 (55.2)	52.3 (55.0)	50.1 (57.7)
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover	Free-field	54.7 (59.1)	59.4 (61.6)	51.9 (57.3)	46.9 (54.5)	45.7 (57.1)	51.9 (53.5)	56.4 (61.0)	56.4 (59.3)	51.7 (62.8)	44.8 (50.8)	47.4 (52.7)	44.6 (56.0)

OFFICIAL

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average LAeq,T (Highest Day LAeq,T)					Saturday Average LAeq,T (Highest Day LAeq,T)					Sunday / Public Holiday Average LAeq,T (Highest Day LAeq,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
LL	GD-NMP1	Grimms Ditch, The Lee, South Heath	Free-field	49.2 (51.5)	49.7 (52.6)	48.5 (53.2)	45.0 (55.2)	44.7 (55.9)	47.4 (48.2)	48.3 (49.2)	46.9 (48.2)	49.9 (64.5)	44.7 (50.4)	48.2 (58.1)	43.9 (51.1)
SH	HGF-NMP1	Hunts Green Farm, Kings Lane, South Heath	Free-field	49.7 (70.3)	50.4 (58.0)	47.1 (55.7)	40.4 (48.8)	41.9 (55.1)	48.4 (50.6)	48.7 (50.5)	46.1 (47.8)	45.4 (50.6)	42.3 (54.4)	46.8 (61.9)	41.7 (52.1)
	PKF-NMP1	Park Farm, South Heath	Free-field	48.7 (51.2)	50.6 (54.7)	46.7 (51.9)	42.9 (53.7)	41.6 (53.0)	45.5 (47.7)	47.7 (49.0)	46.7 (49.8)	45.4 (51.4)	41.6 (54.4)	45.3 (53.0)	39.7 (49.6)
NP	BFH-NMP1	Bury Farm, Great Missenden	Free-field	48.3 (61.9)	46.7 (49.1)	45.0 (51.8)	40.5 (49.9)	40.1 (49.8)	44.4 (46.2)	46.3 (49.7)	44.8 (47.0)	44.2 (49.4)	39.8 (49.2)	43.6 (49.4)	39.7 (49.1)
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath	Free-field	(50.5) (53.5)	(50.7) (53.3)	(48.8) (52.9)	44.3 (55.0)	43.2 (59.0)	48.7 (51.7)	50.1 (51.3)	47.7 (48.1)	47.0 (53.1)	43.8 (54.8)	47.5 (54.4)	42.1 (54.2)
	BLH-NMP1	Bayleys Hatch, South Heath, Great Missenden	Free-field	(50.3) (52.0)	49.0 50.8	46.9 (53.0)	42.2 (54.1)	43.0 (53.2)	48.8 (49.5)	49.3 (52.6)	47.8 (48.5)	50.6 (75.8)	42.3 (51.4)	47.4 (53.3)	42.8 (52.0)
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	Free-field	58.6 (60.3)	56.8 (58.8)	55.9 (58.3)	52.3 (56.9)	48.4 (58.8)	54.3 (55.8)	56.1 (57.6)	56.2 (60.5)	54.2 (57.1)	47.2 (54.3)	55.4 (70.4)	49.0 (58.3)
AM	AM-NMP1	Whielden Lane, Amersham	Free-field	61.4 (63.0)	65.6 (70.4)	59.0 (61.3)	56.7 (62.1)	53.0 (60.7)	57.9 (59.7)	59.8 (60.0)	59.3 (60.0)	57.8 (61.2)	52.2 (58.7)	58.4 (60.5)	53.6 (60.9)
LM	LM-NMP1	Little Missenden, A413, Amersham	Free-field	53.7 (58.8)	52.4 (55.8)	53.8 (56.9)	50.5 (56.0)	46.6 (56.7)	50.0 (53.9)	51.3 (54.0)	52.6 (54.4)	51.3 (54.6)	45.5 (49.6)	49.6 (53.9)	45.6 (54.1)

OFFICIAL

Worksite Reference	Measurement Reference	Site Address	Free-Field or Façade Measurement	Weekday Average LAeq,T (Highest Day LAeq,T)					Saturday Average LAeq,T (Highest Day LAeq,T)					Sunday / Public Holiday Average LAeq,T (Highest Day LAeq,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
	PWC-NMP1	Patricia Holmes, LM Worksite, Amersham	Free-field	61.4 (62.9)	60.1 (61.3)	60.9 (62.4)	57.3 (60.4)	53.6 (61.7)	57.5 (59.1)	59.1 (59.6)	59.1 (60.1)	58.8 (60.9)	52.2 (56.0)	58.3 (63.7)	53.1 (61.0)
CSG	CSG-NMP1	CSG Worksite, Bottom House Farm Lane	Free-field	50.1 (56.2)	51.0 (63.6)	48.2 (56.2)	41.0 (52.0)	45.1 (58.6)	51.9 (55.4)	50.9 (53.5)	49.1 (52.4)	48.0 (54.3)	45.4 (55.9)	49.3 (58.2)	45.0 (56.6)
CSP	CFC-NMP1	Cricket Field Cottages, Chesham Lane, Chalfont St. Peter	Free-field	59.2 (60.7)	58.5 (61.8)	57.2 (60.2)	52.5 (56.0)	49.8 (58.9)	54.3 (56.8)	57.7 (59.5)	57.5 (58.6)	54.9 (57.6)	50.8 (61.4)	54.5 (58.2)	49.7 (57.8)
	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite	Free-field	47.6 (51.5)	48.2 (50.6)	46.7 (50.7)	43.9 (50.7)	40.8 (50.4)	45.4 (47.5)	48.2 (50.0)	47.9 (51.1)	46.4 (51.8)	40.2 (46.8)	46.1 (53.7)	40.2 (48.3)
CVV	CVV-NMP1	Northern boundary, Load Test Pile 1 Worksite	Free-field	63.3 (64.3)	61.8 (63.6)	60.8 (62.4)	57.4 (61.0)	56.2 (66.0)	59.6 (60.3)	60.7 (61.2)	61.7 (66.5)	59.0 (61.4)	53.5 (60.9)	58.9 (63.2)	56.0 (63.5)

- 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	2.11 (X-axis)
WDL	WDL-Vib1	Station Road, Quainton	0.04 (Z-axis)
QAR	SR-Vib1	Station Road, Quainton	1.31 (X-axis)
CAL	BRA-Vib1	13 Brackley Lane, Calvert Village	0.94 (Z-axis)
WSO	PF-Vib1	Twyford, Buckinghamshire	1.46 (Y-axis)
WGT	ER-Vib1	46, Ellesborough Rd, Wendover	2.99 (Y-axis)
GF	GF-Vib1	Grove Farm, Wendover	3.98 (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	Weekday	0800-1800	1	No exceedance
TW	TW-NMP1	Twyford	All days	All periods	No exceedance	No exceedance
WSO	WSO-NMP1	West Street, Twyford	Weekday Saturday Sunday Night	0700-0800 0800-1800 1400-2200 0700-2200 2200-0700	3 9 1 2 30	No exceedance No exceedance No exceedance No exceedance No exceedance
CAL	SHC-NMP1	School Hill Compound, Calvert	All days	All periods	Not Applicable*	Not Applicable*
	FCC-NMP1	Calvert South	Weekdays	0800-1800	5	No exceedance
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Weekday Saturday	0700-0800 0800-1800 0700-0800 0800-1300 1300-1400 1400-2200	16 18 3 4 4 11	No exceedance No exceedance No exceedance No exceedance No exceedance 1

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	All days	All periods	No exceedance	No exceedance
	LSF-NMP1	Upper South Farm	All days	All periods	No exceedance	No exceedance
GC	GC-NMP1	Aylesbury, Buckinghamshire	All days	All periods	No exceedance	No exceedance
OC	MF-NMP1	Moat Farm, Marsh Lane	Weekday Saturday	0800-1800 0800-1300	12 2	No exceedance No exceedance
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	All days	All periods	No exceedance	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-NMP1	Nash Lee Lane, Nash Lee	Weekday Saturday	0800-1800 0800-1300	5 1	No exceedance No exceedance
	NLL-NMP2	Nash Lee Lane, Nash Lee	All days	All periods	No exceedance	No exceedance
WGT	ER-NMP1	Ellesborough Rd, Wendover	Weekday	0800-1800	2	No exceedance
	BL-NMP1	Bacombe Lane, Wendover	Weekday Saturday	0800-1800 0800-1300	13 1	No exceedance No exceedance
	WT-NMP1	A413, Wendover	Weekday Saturday	0800-1800 0800-1300	21 5	No exceedance No exceedance
	WGT-NMP1	Wendove, Aylesbury	Weekday	0800-1800	1	No exceedance
GF	GF-NMP1	Grove Farm, Wendover	Saturday	0800-1300	1	No exceedance
SDVC	SDVC-NMP1	Rocky Lane, Wendover	All days	All periods	No exceedance	No exceedance
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Weekday	0800-1800	3	No exceedance
	NCAS5-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
LL	GD-NMP1	Grimms Ditch, The Lee, South Heath	All days	All periods	No exceedance	No exceedance
SH	HGF-NMP1	Hunts Green Farm, Kings Lane, South Heath	All days	All periods	No exceedance	No exceedance
	PKF-NMP1	Park Farm, South Heath	All days	All periods	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	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	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	CFC-NMP1	Cricket Field Cottages, Chesham Lane	All days	All periods	No exceedance	No exceedance
	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 Exceedances of the LOAEL were recorded at twelve (12) monitoring locations during the month of March 2025. LOAEL exceedances were recorded during weekday and Saturday daytime and evening, Sunday and night working periods.

2.2.7 For the purpose of reporting the number of days where the SOAEL is exceeded, 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, Quainton	1

2.2.8 One (1) SOAEL exceedance was recorded due to HS2 construction works during March 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
-	OC	6/3/2025 0800-1800	Soil stabilisation works.	71.4 dB L _{Aeq,8hr}	Was within Section 61 consent agreement.

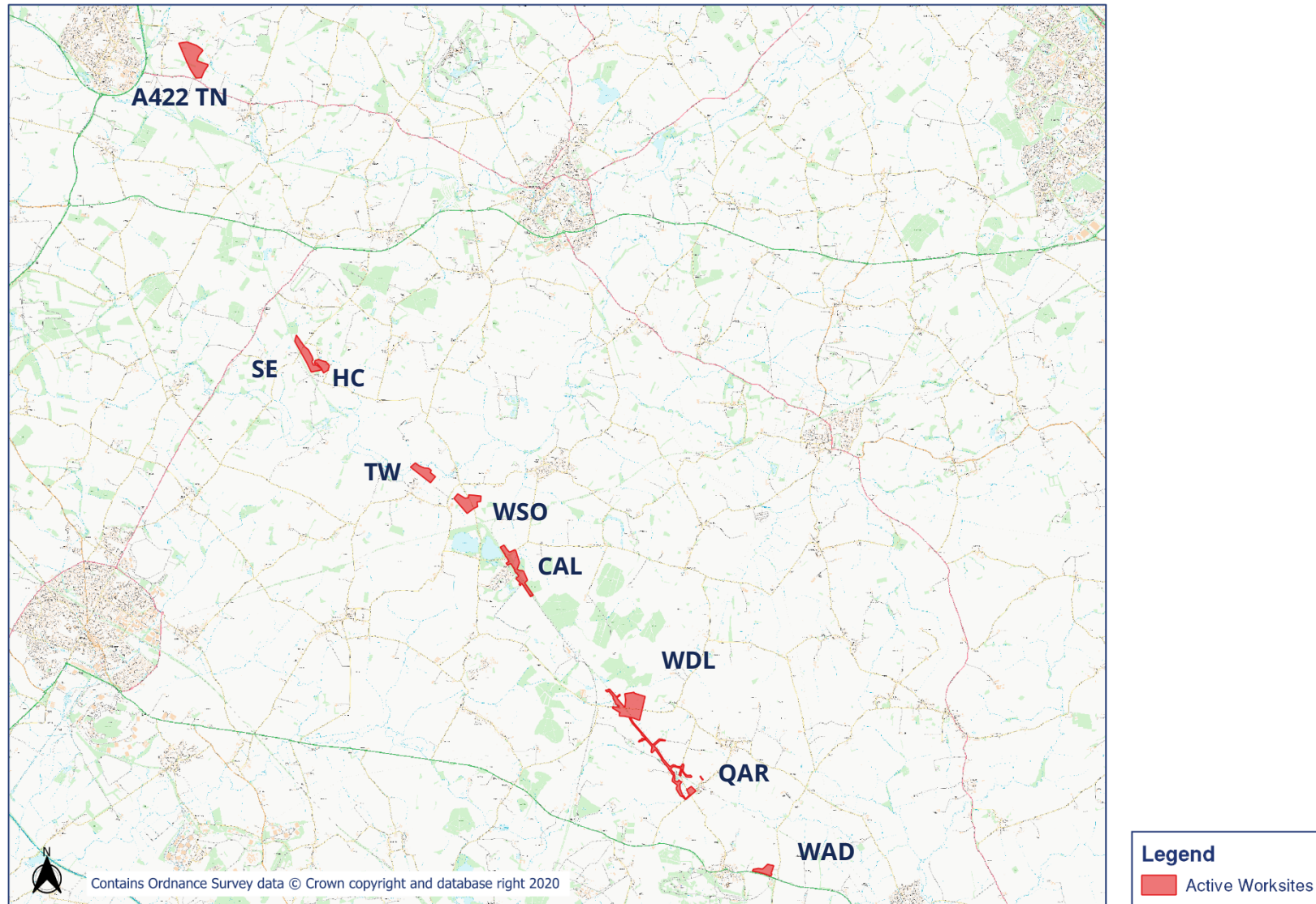
2.4 Complaints

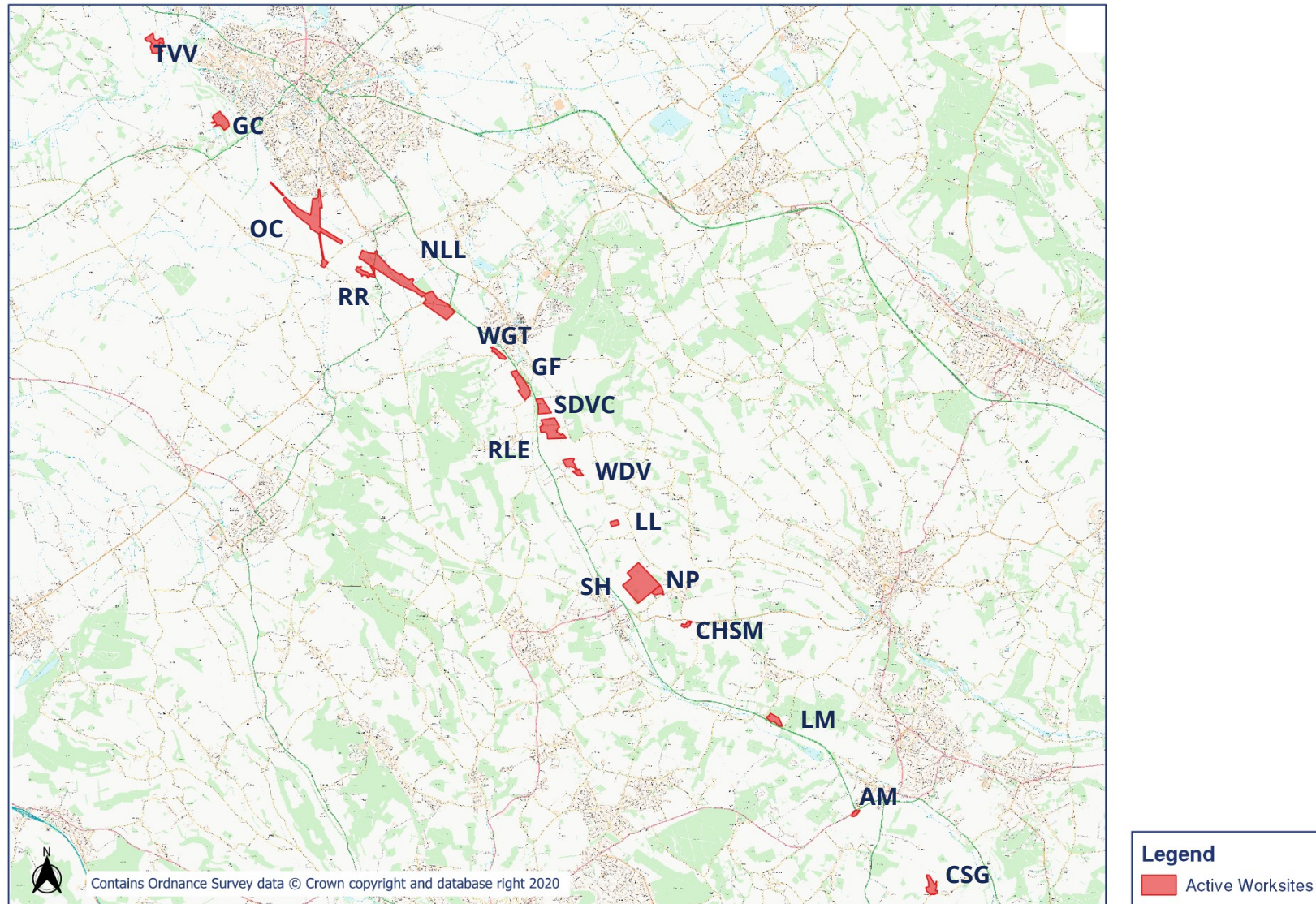
2.4.1 Table 8 provides a summary of complaint information related to noise and vibration received during the reporting period, along with the findings of any investigation.

Table 8: Summary of Complaints

Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
HS2-25-46159-C	CSP	Vibration felt at property.	The property is located a considerable distance away from any HS2 works, therefore it is unlikely that vibration described is linked to HS2 works.	Results of the investigation have been provided to resident.

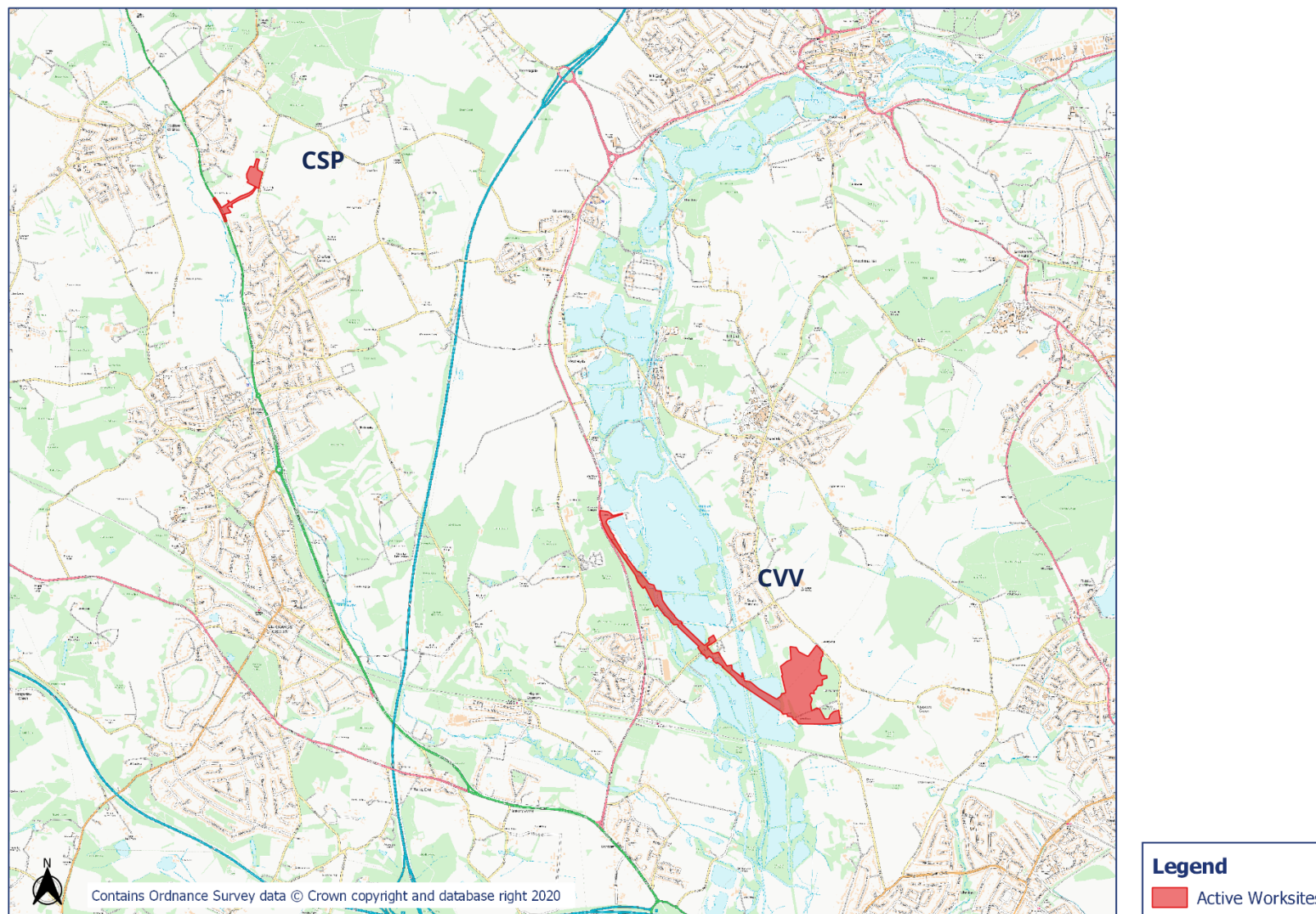
Appendix A Site Locations



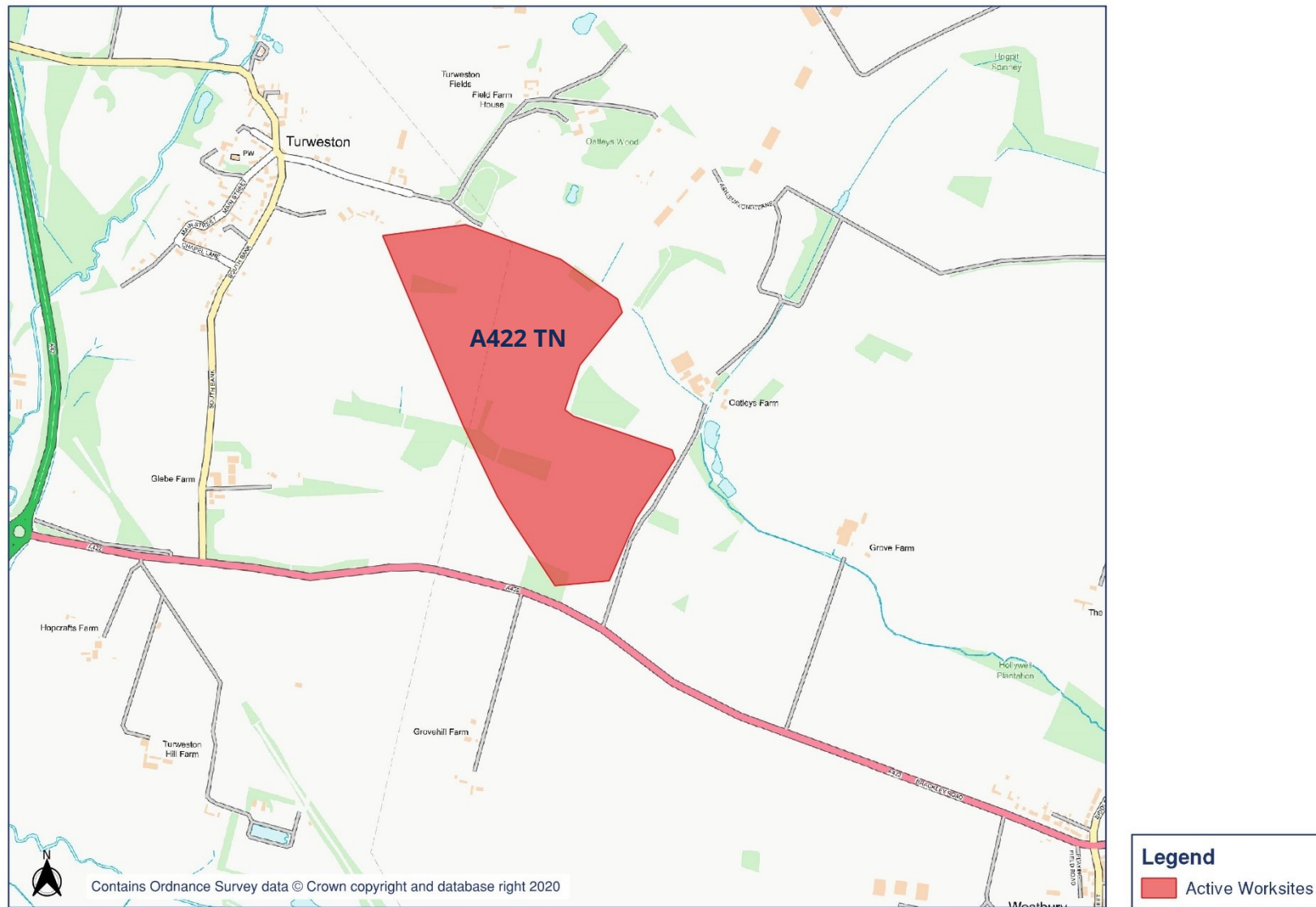


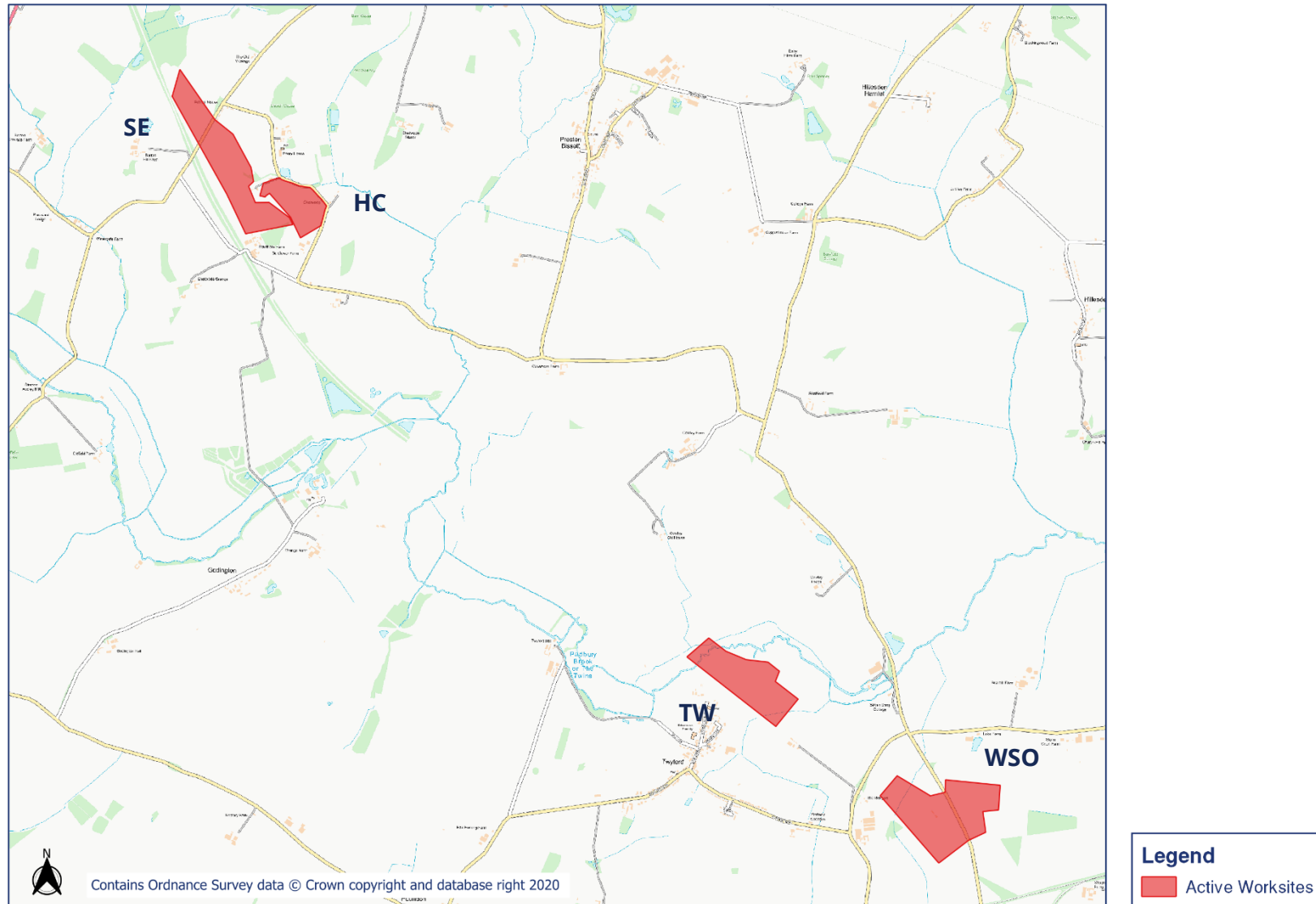
HS2

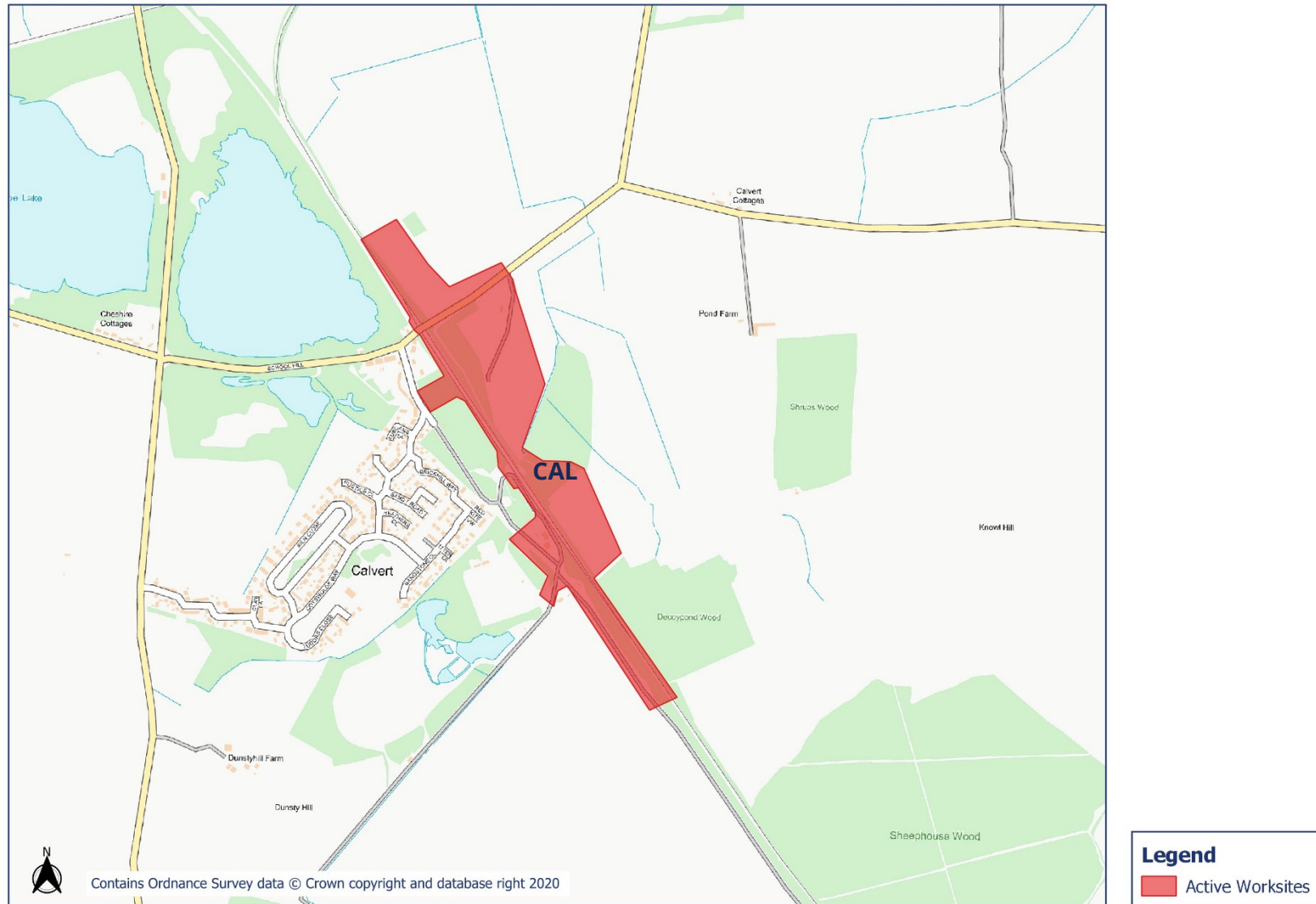
Worksite Identification Plan - Overview 3

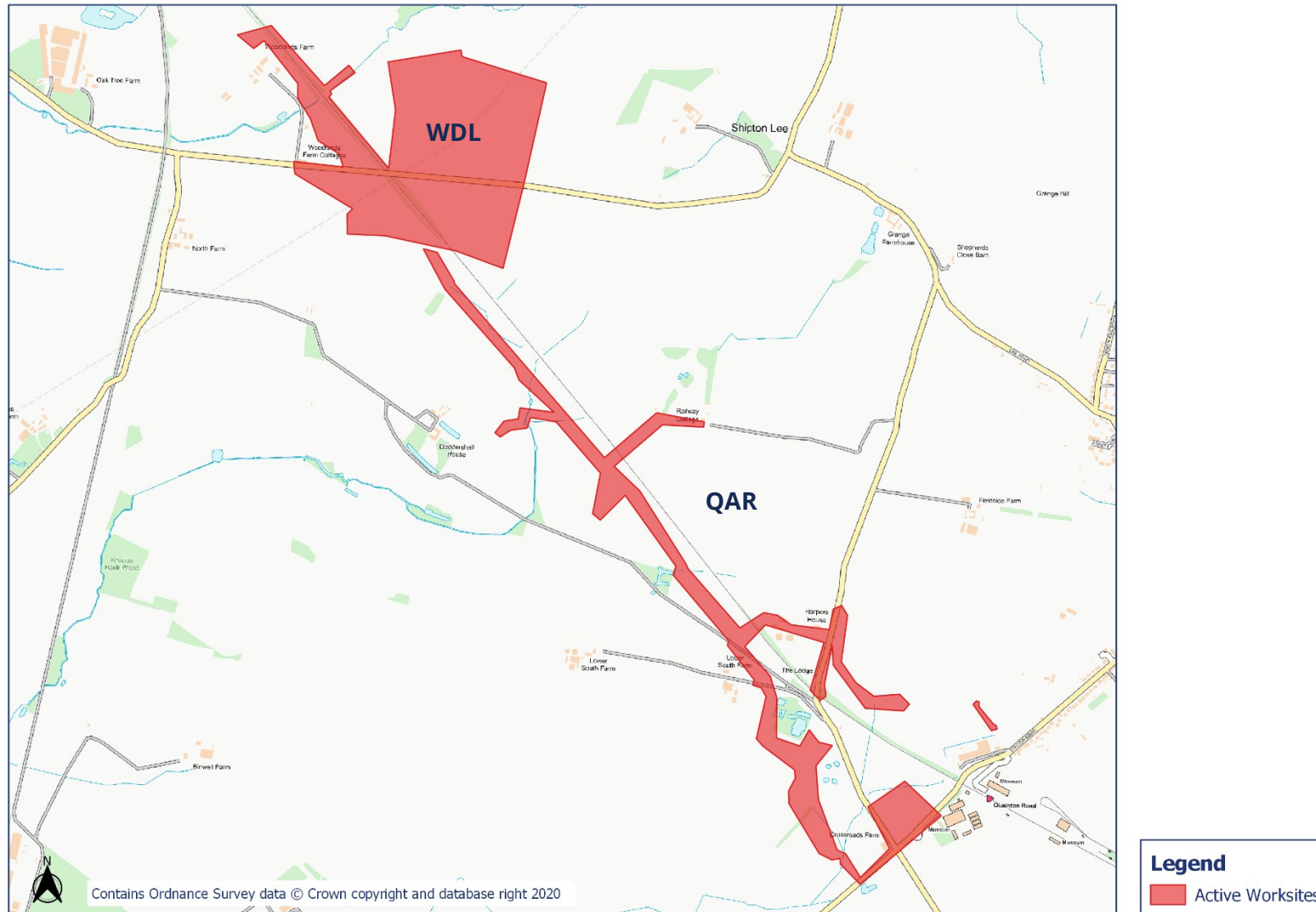


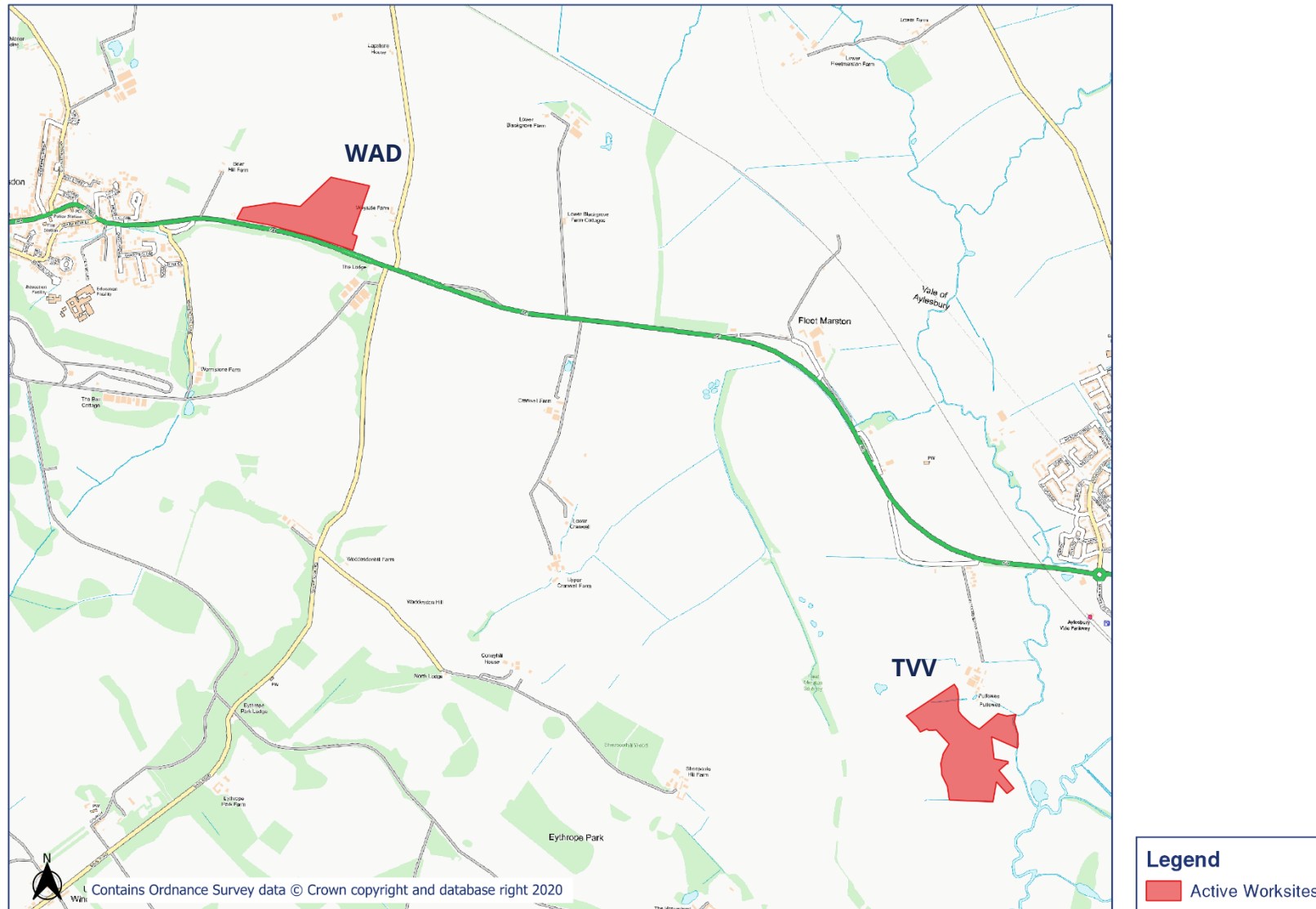
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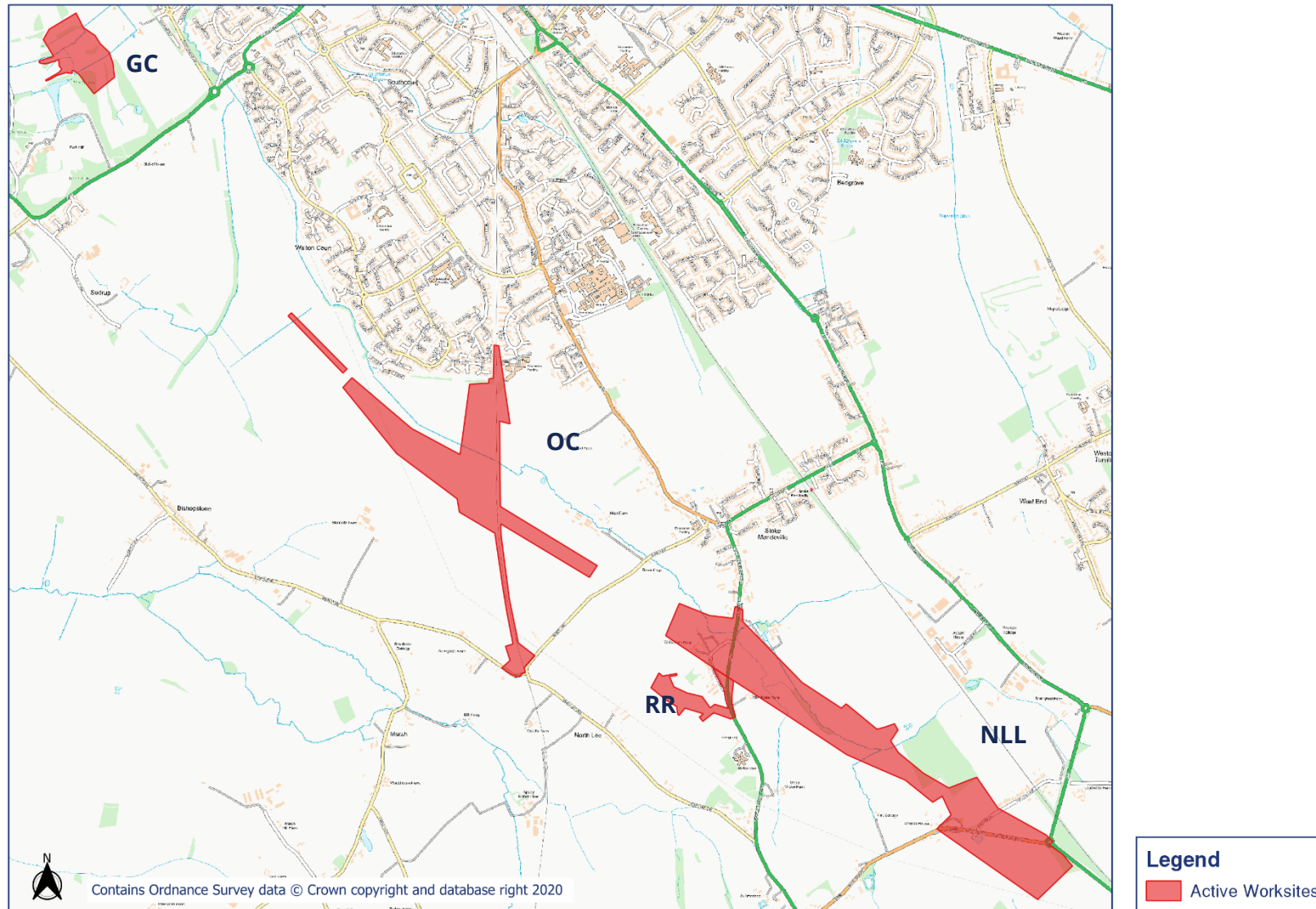


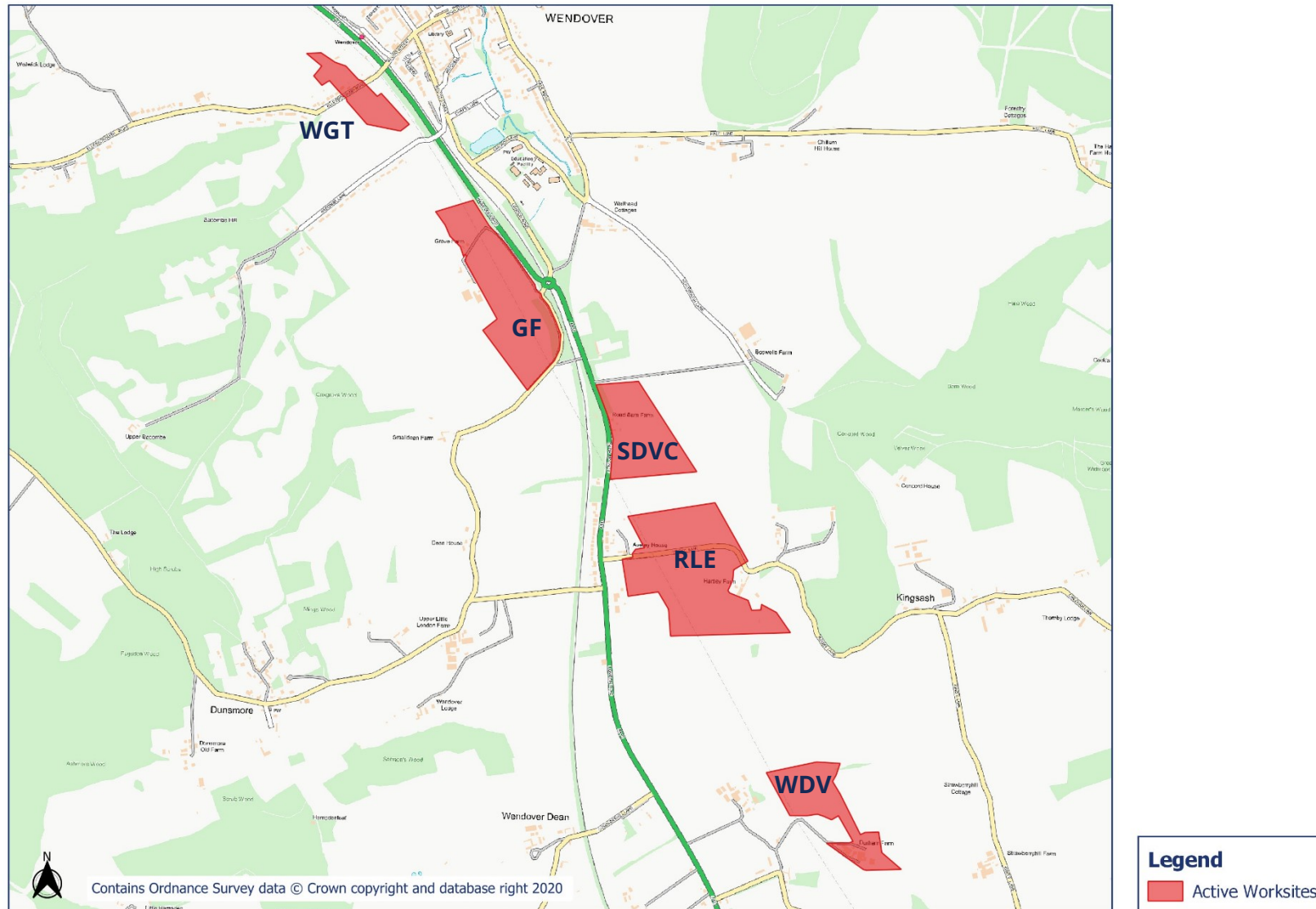


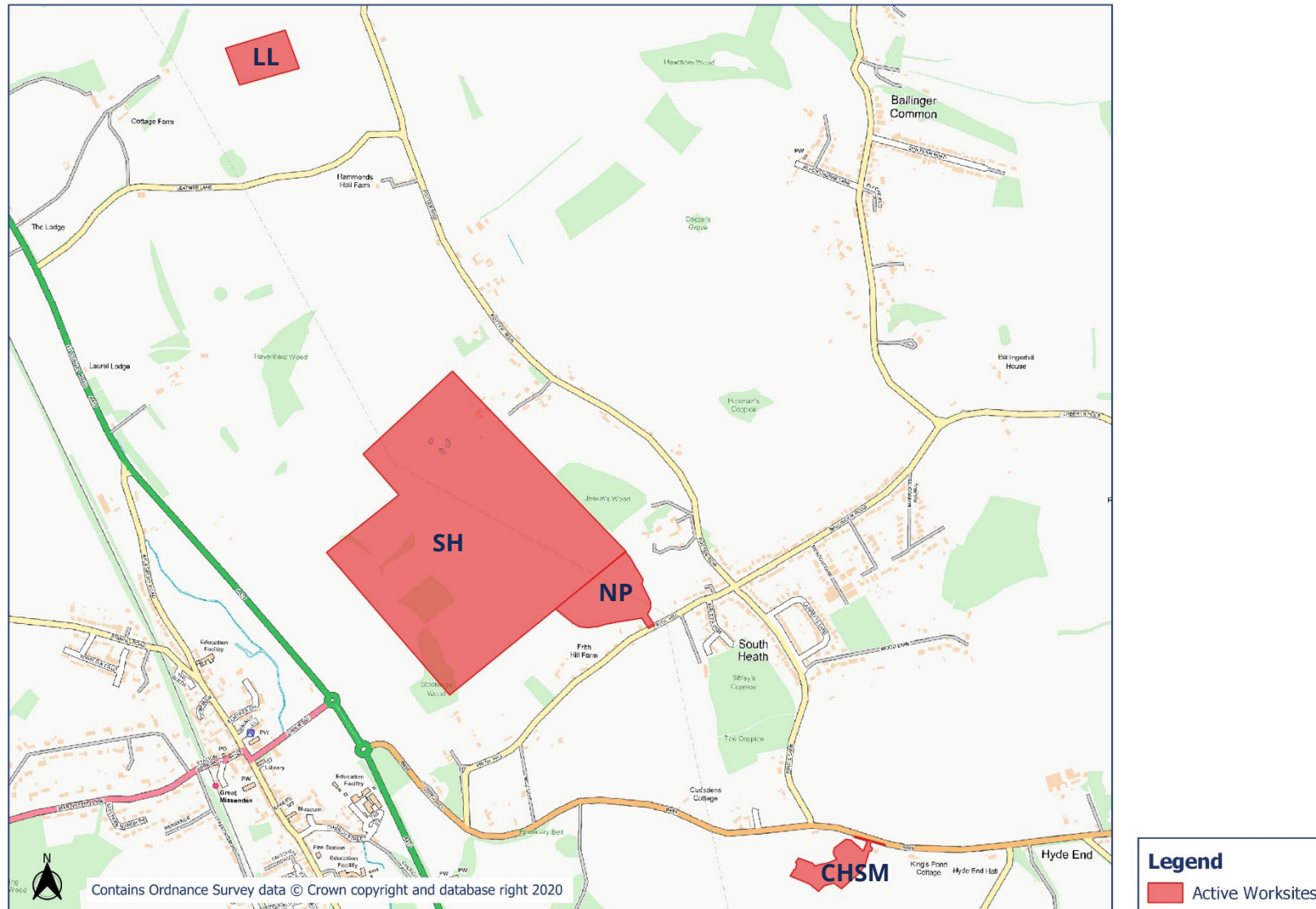








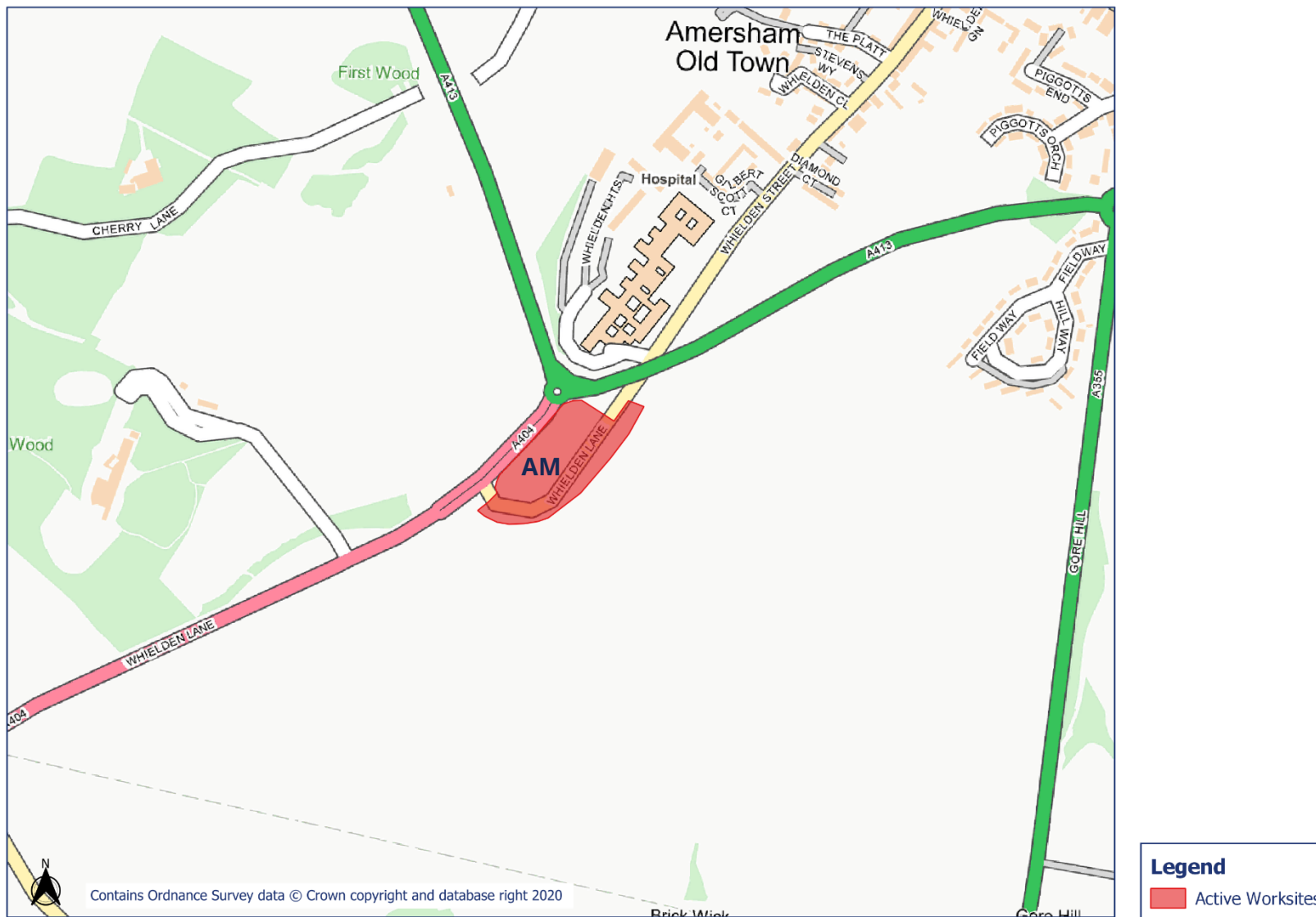




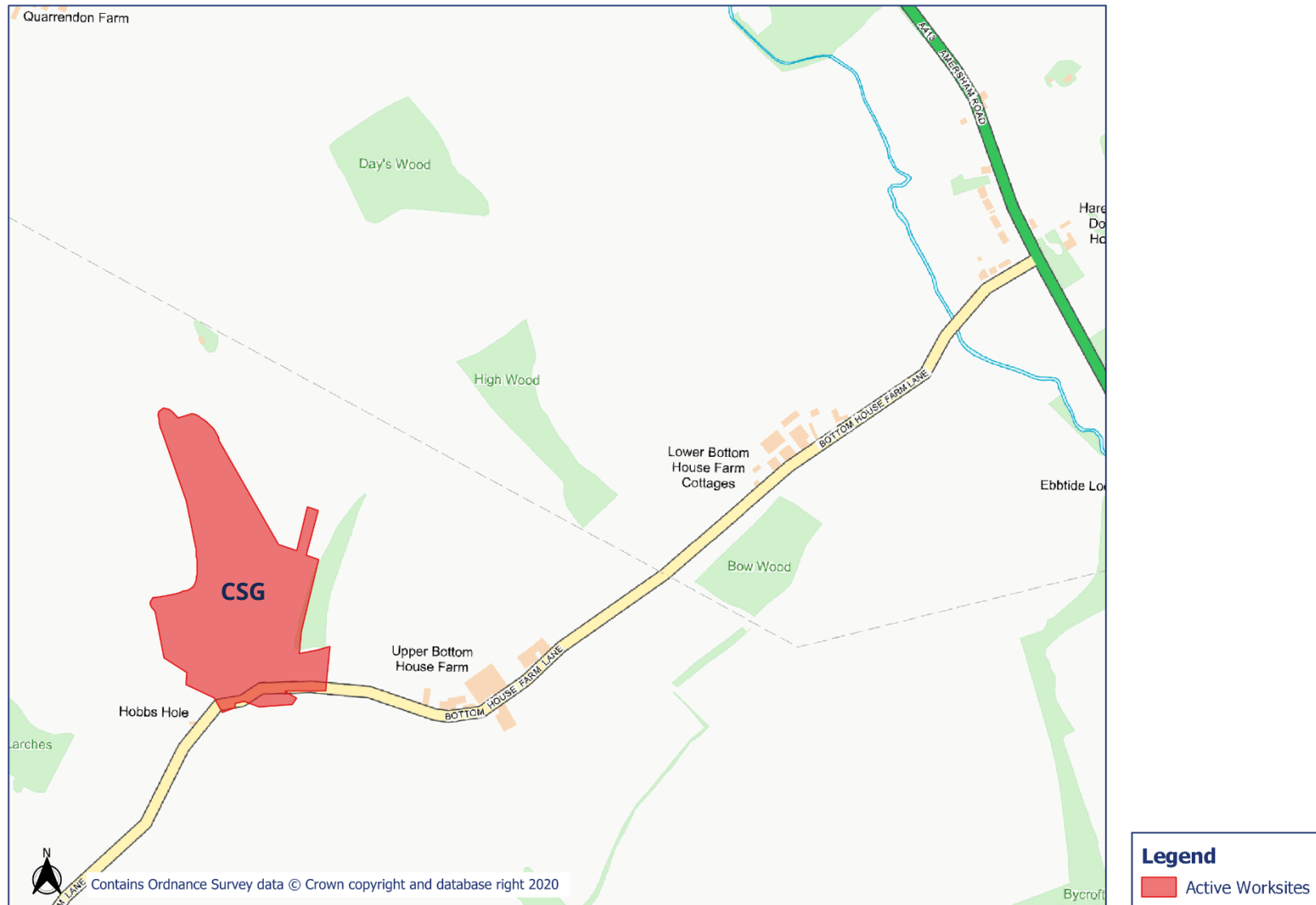


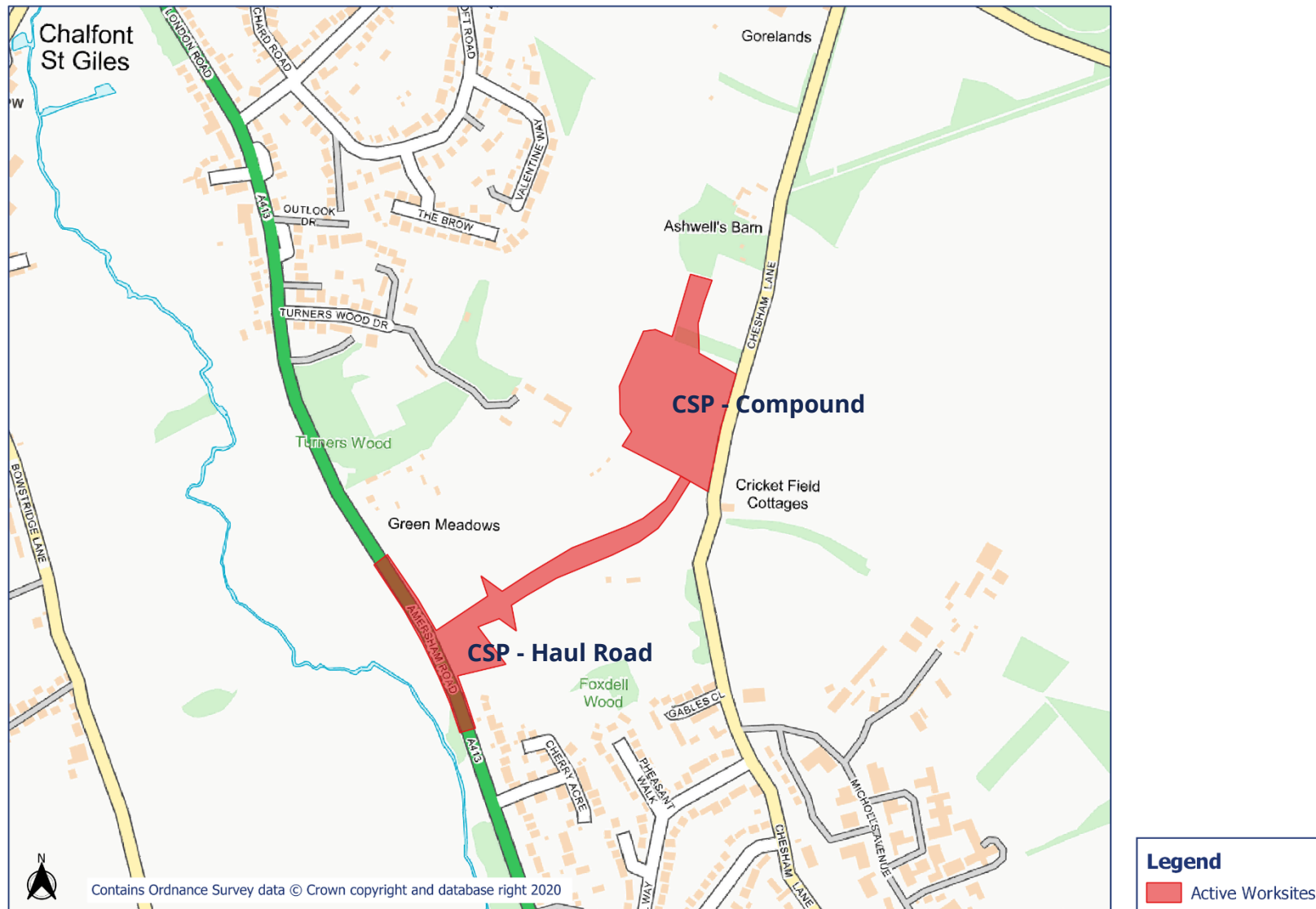
HS2

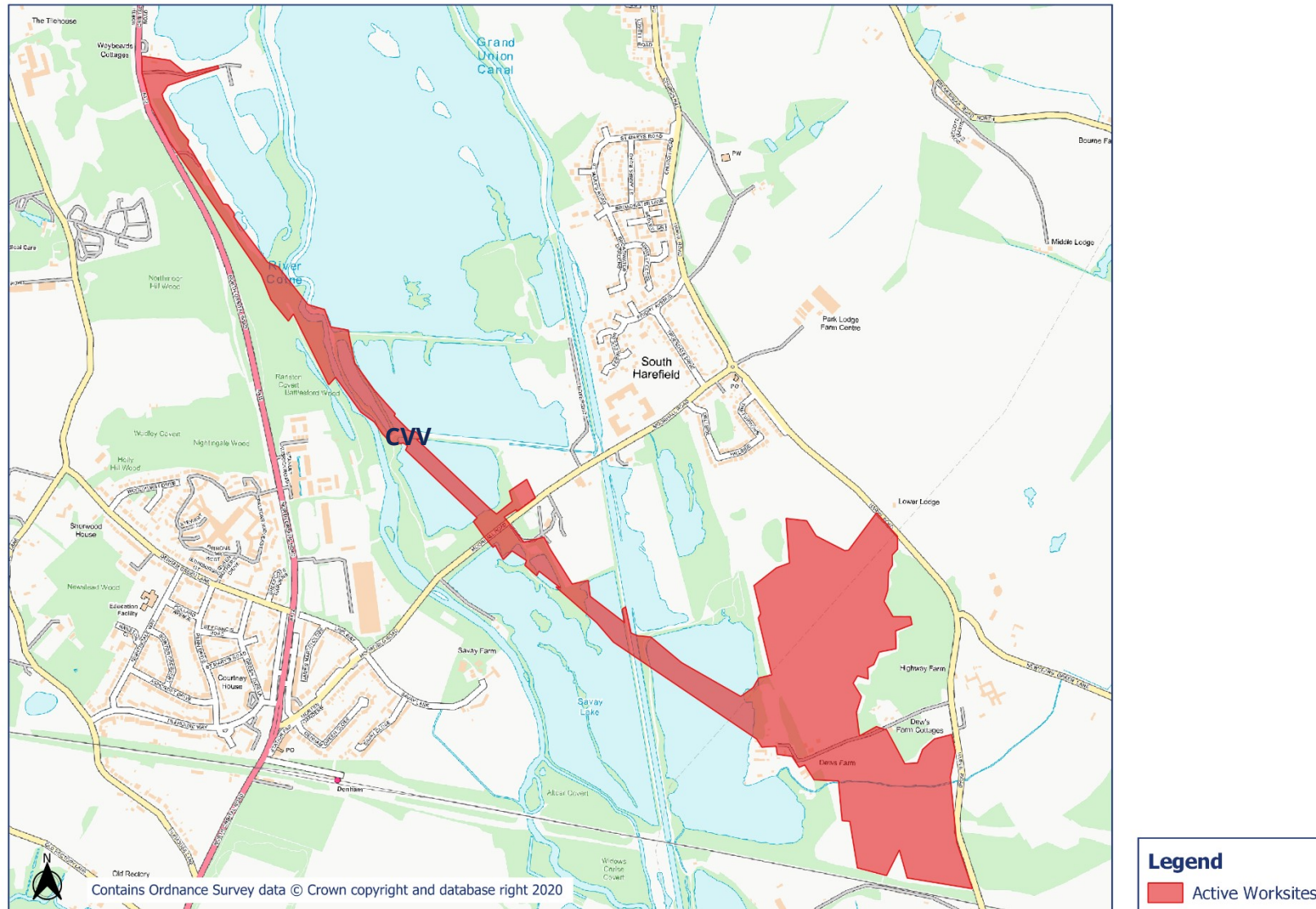
Worksite Identification Plan - 10



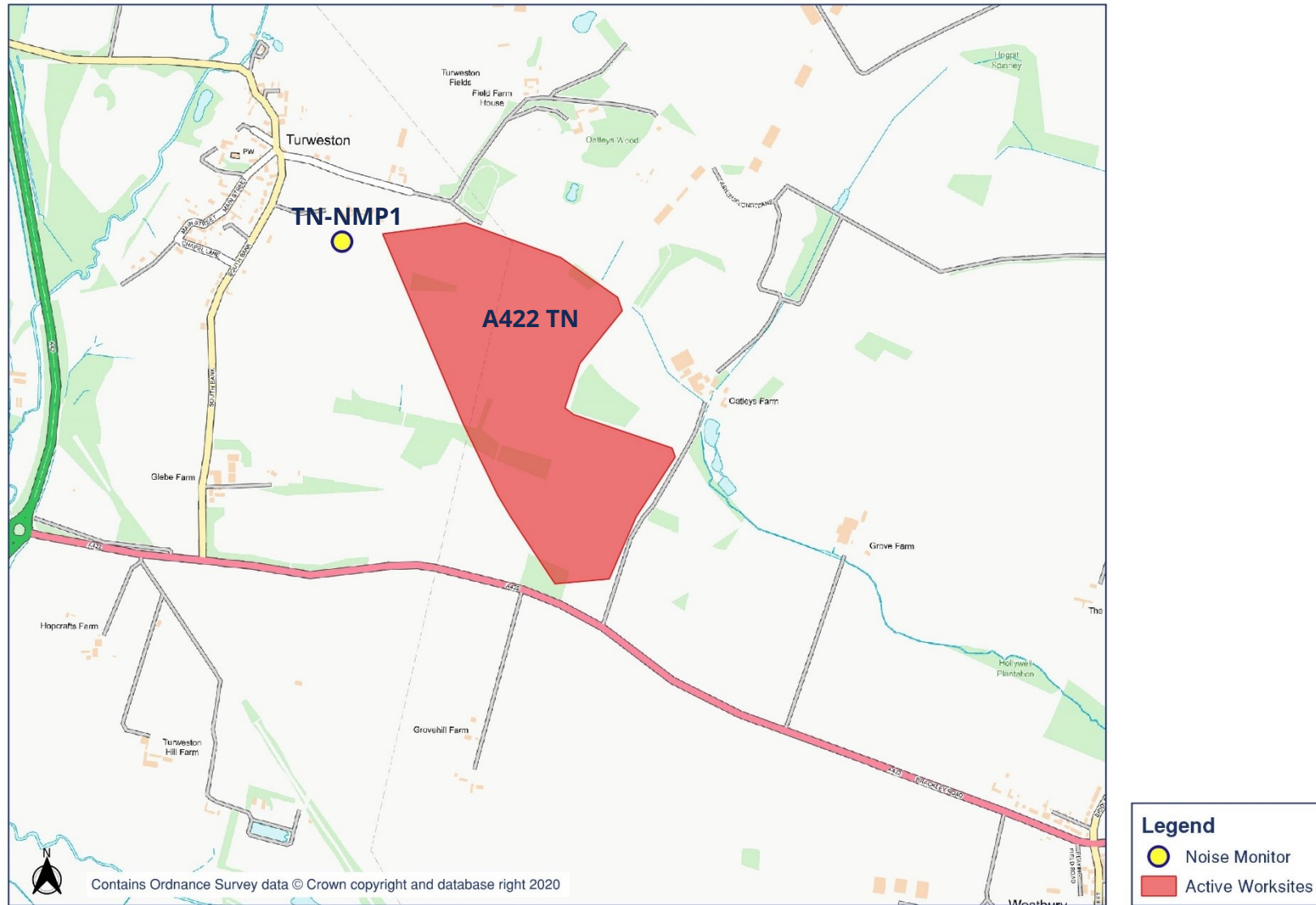
OFFICIAL

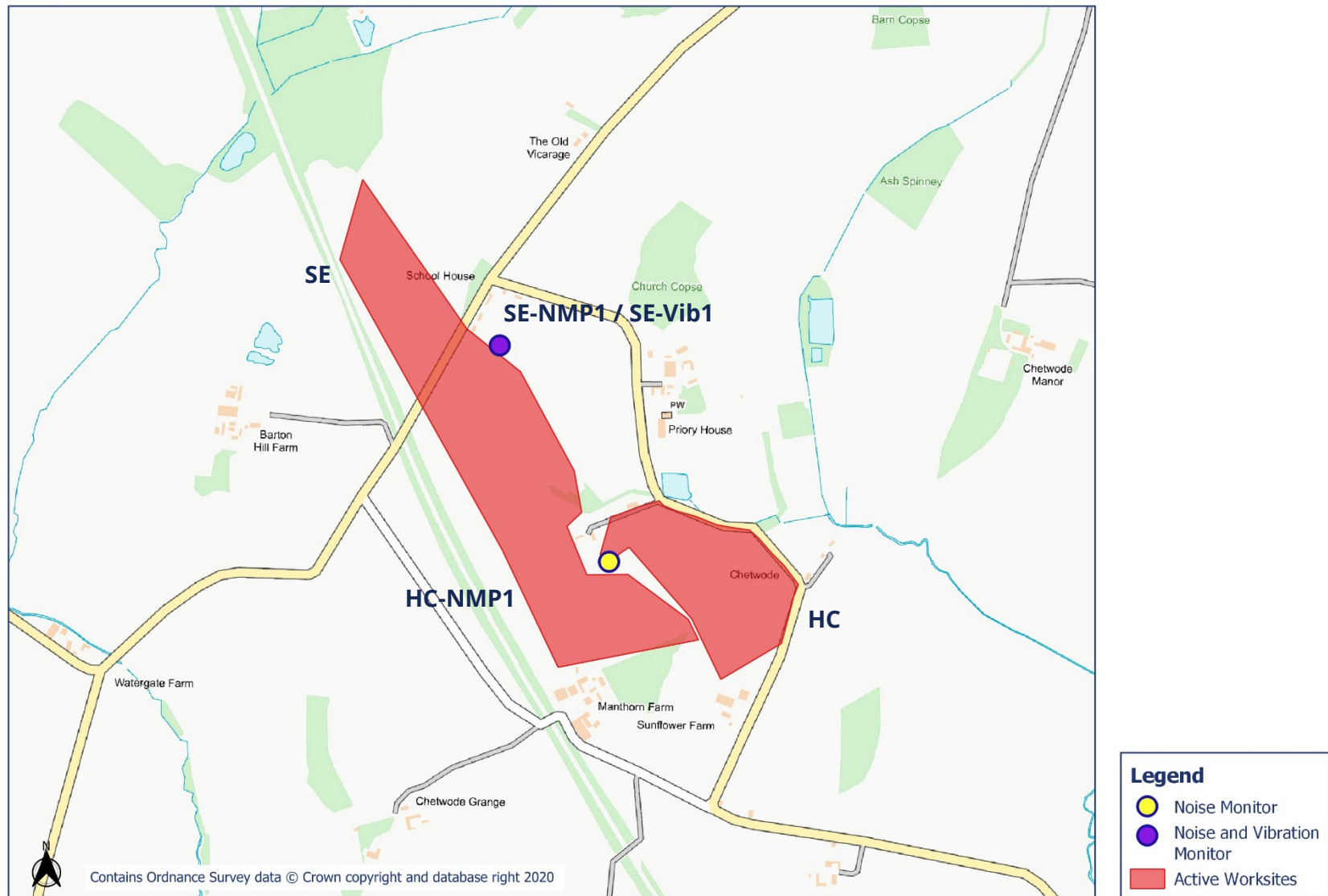


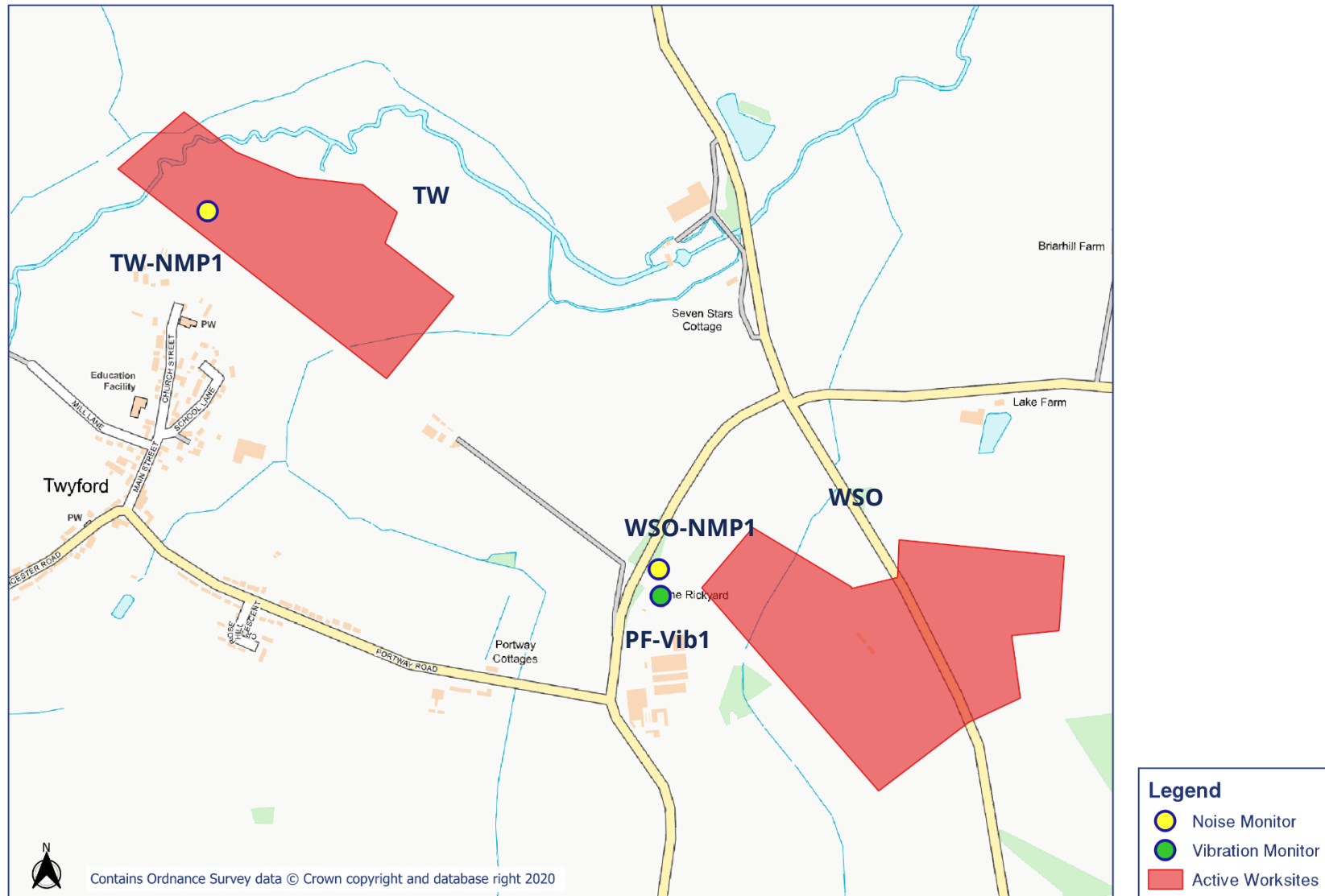


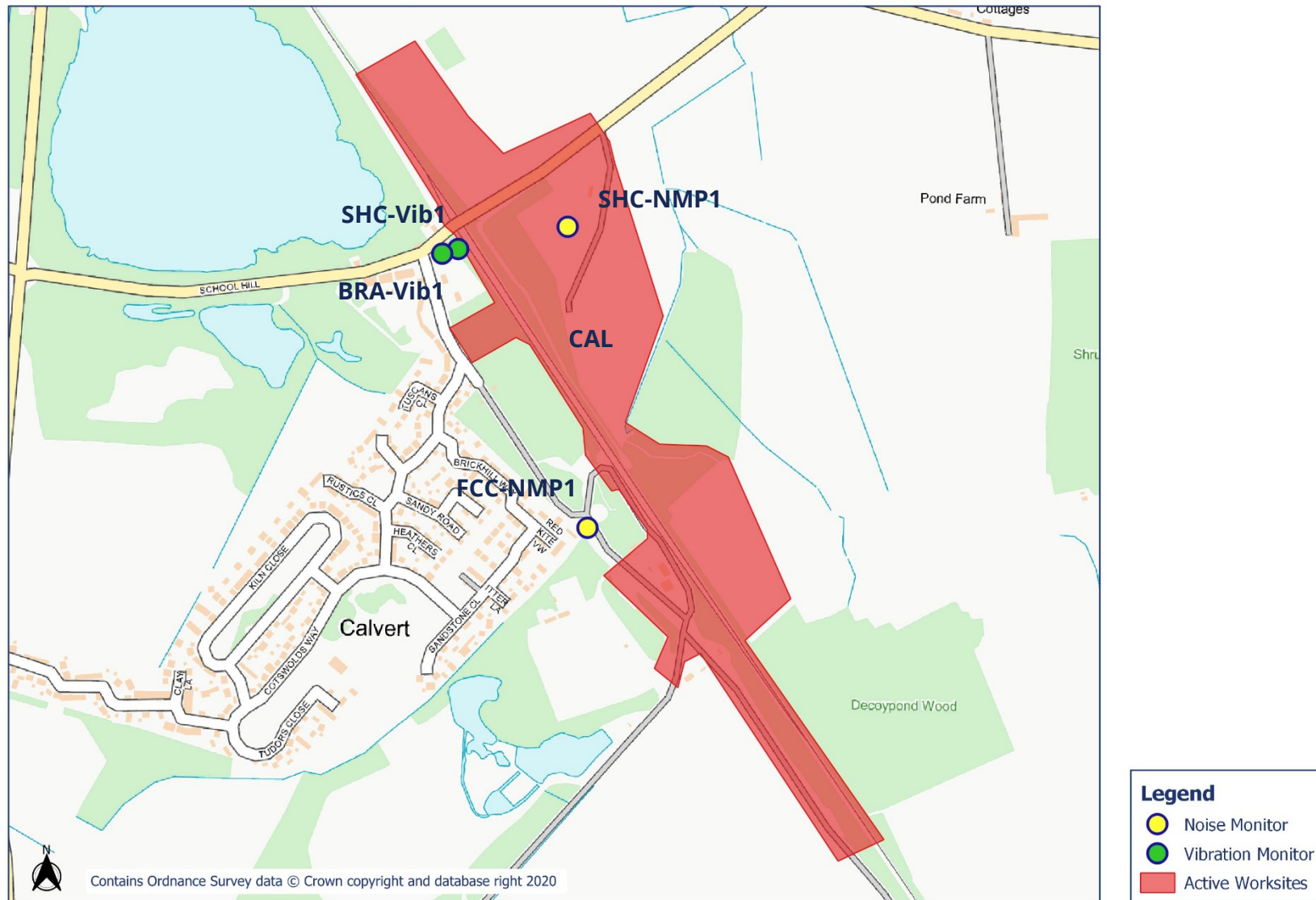


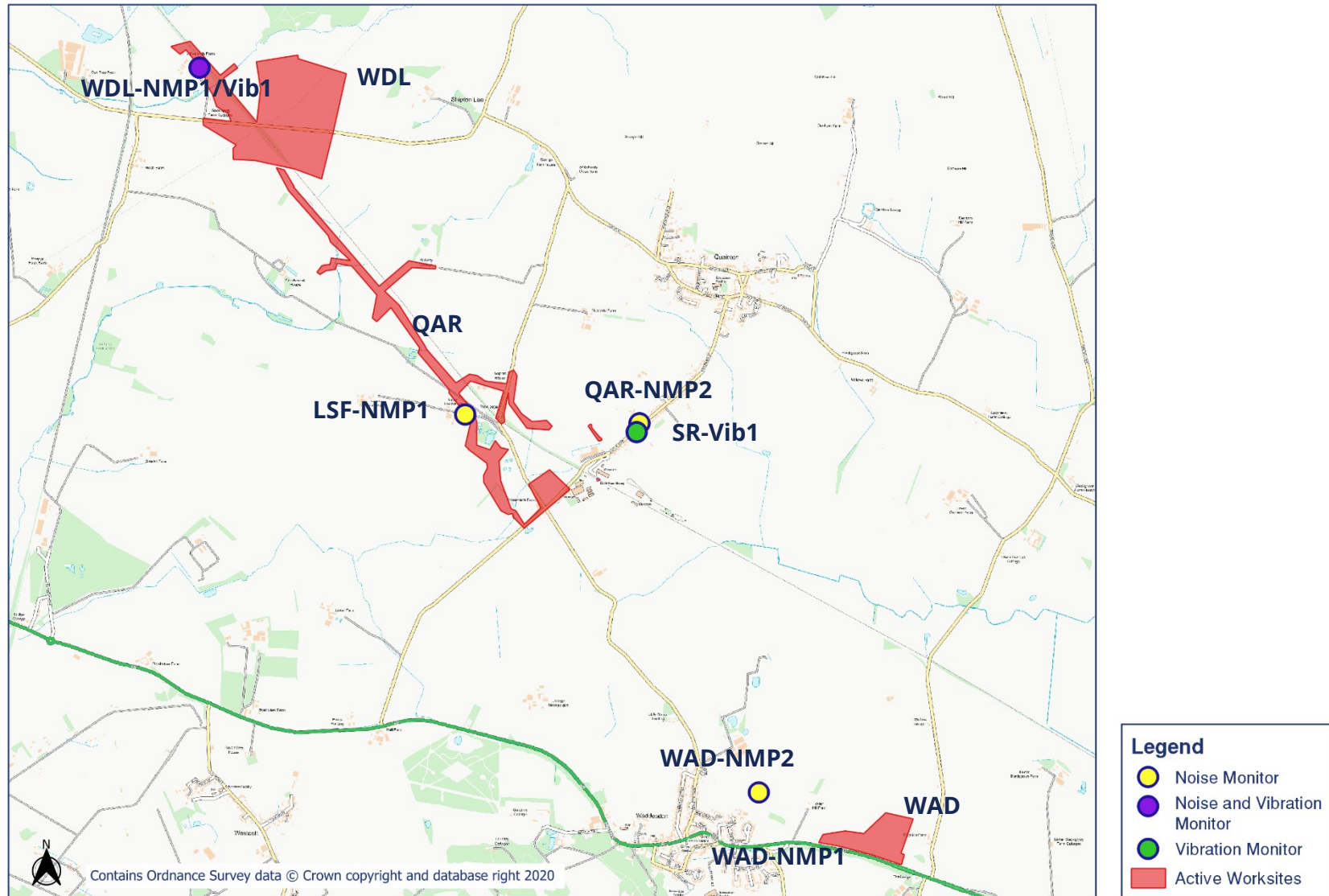
Appendix B Monitoring Locations

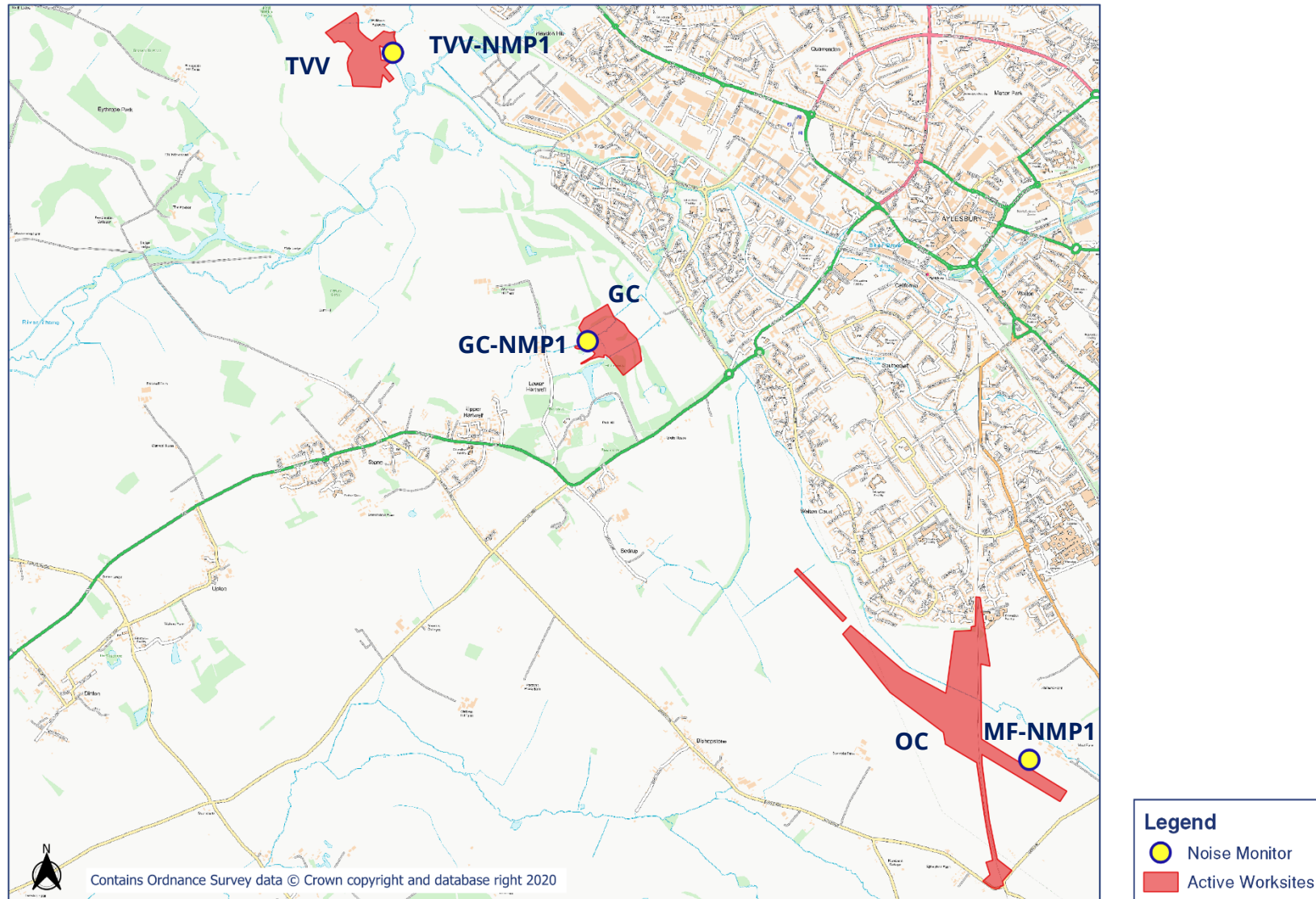


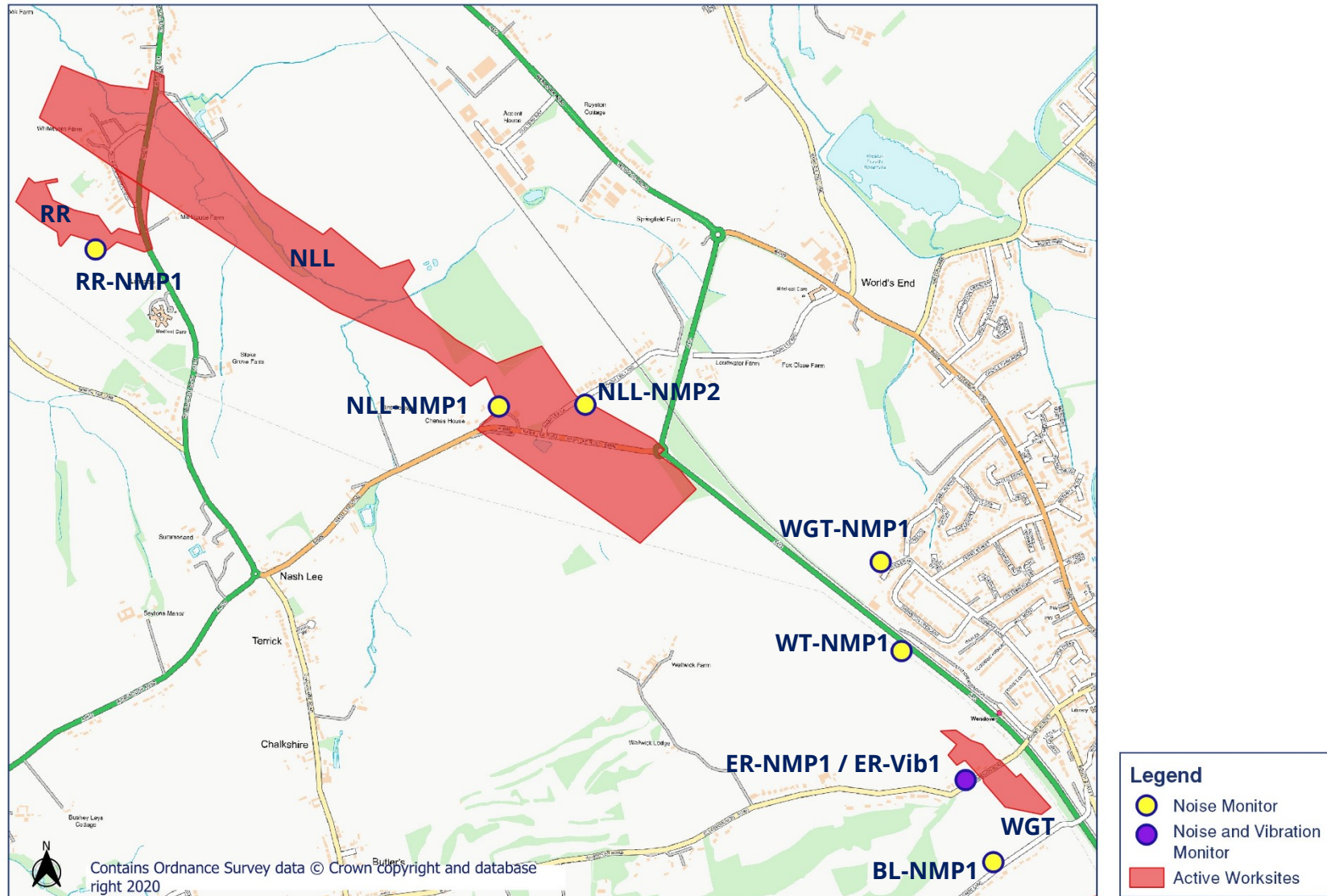


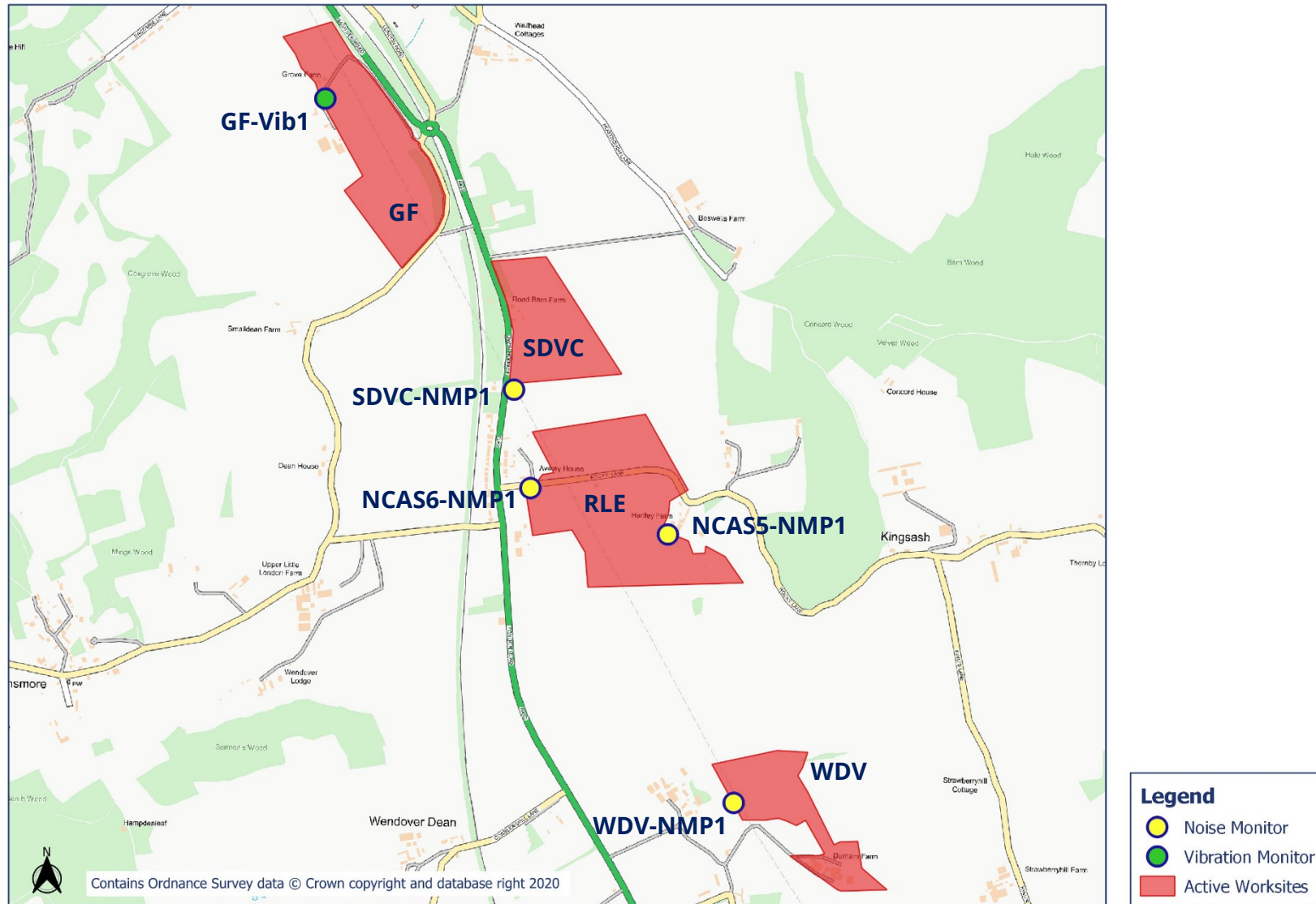








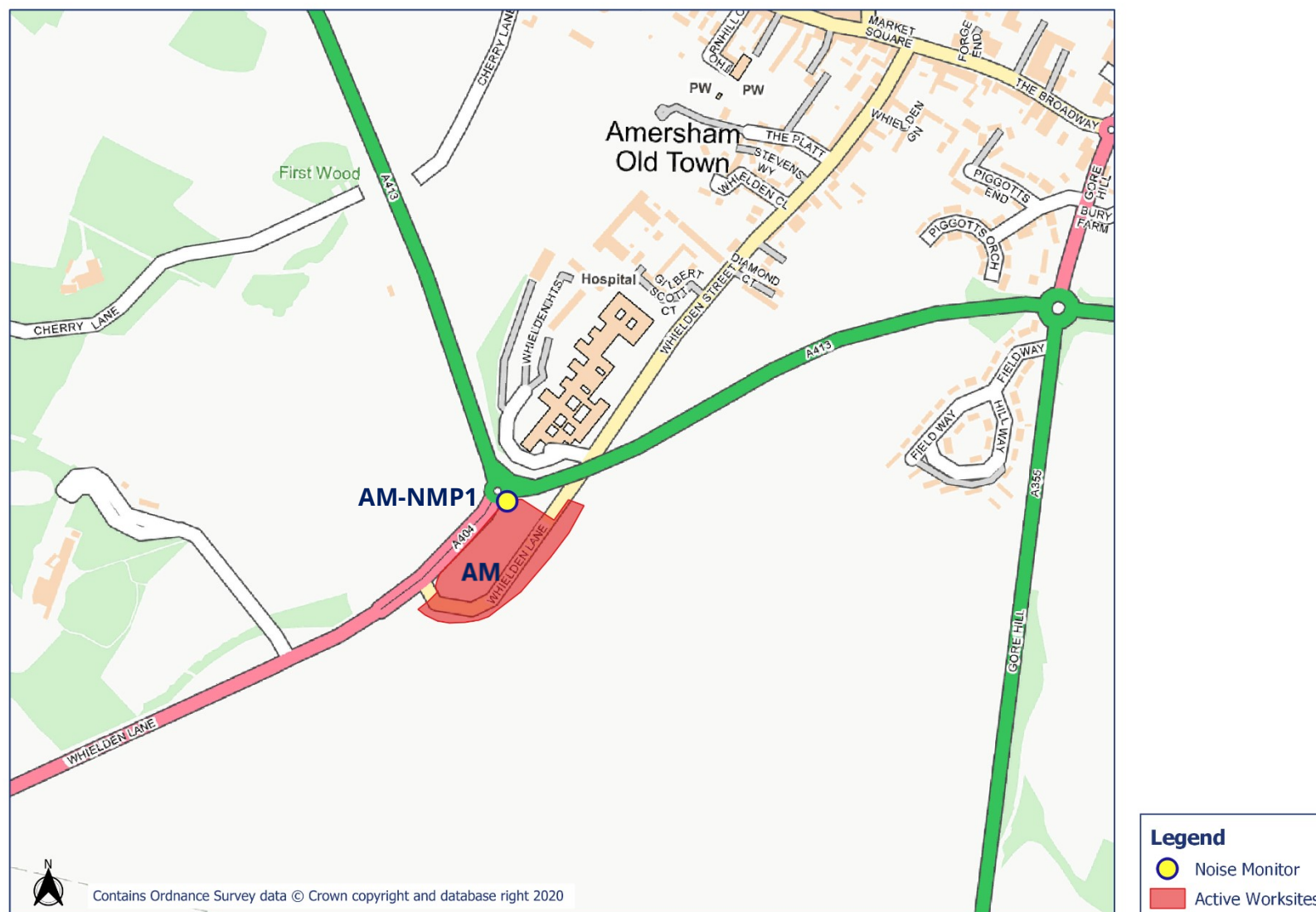




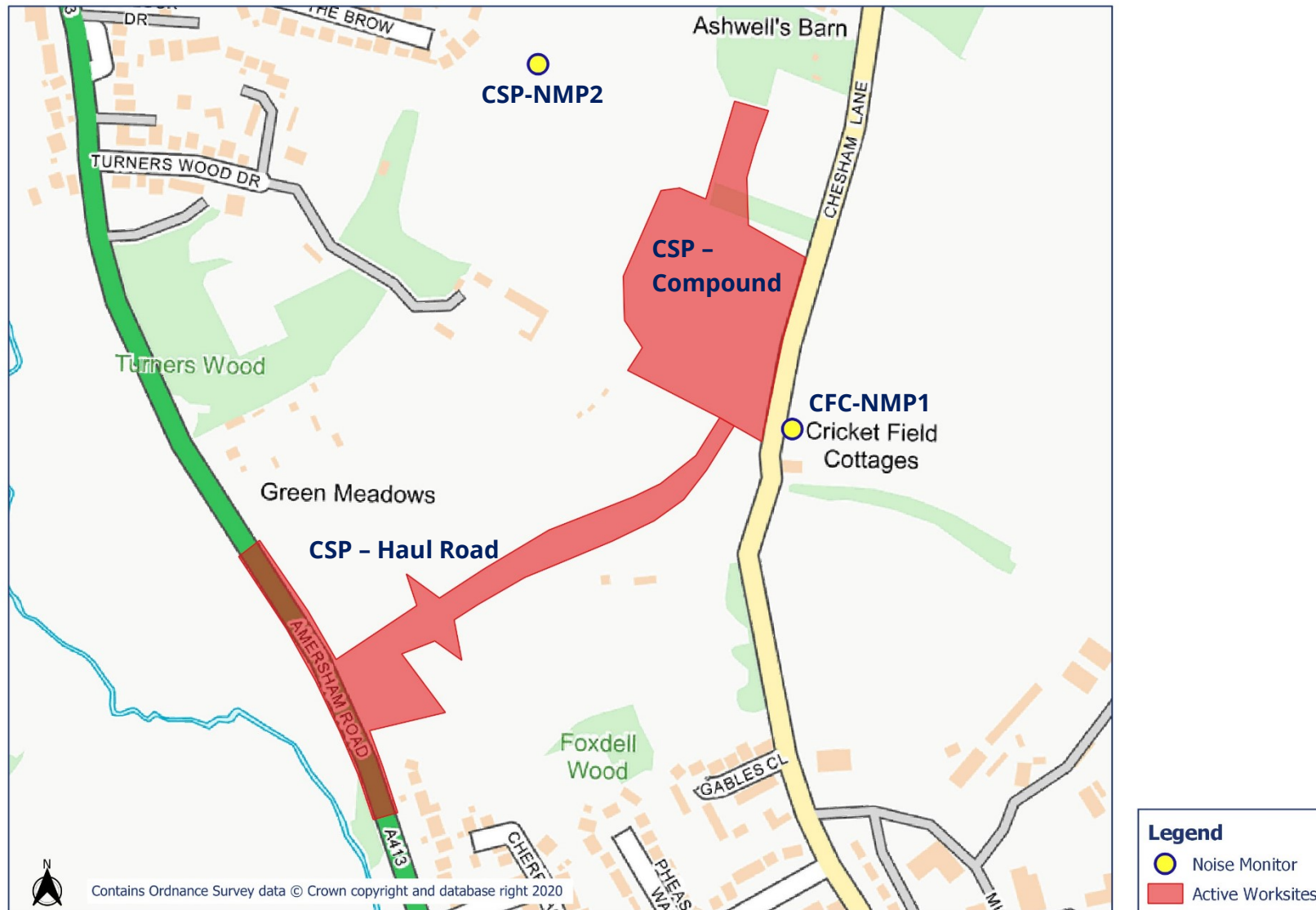
Noise and Vibration Monitoring Plan - 9

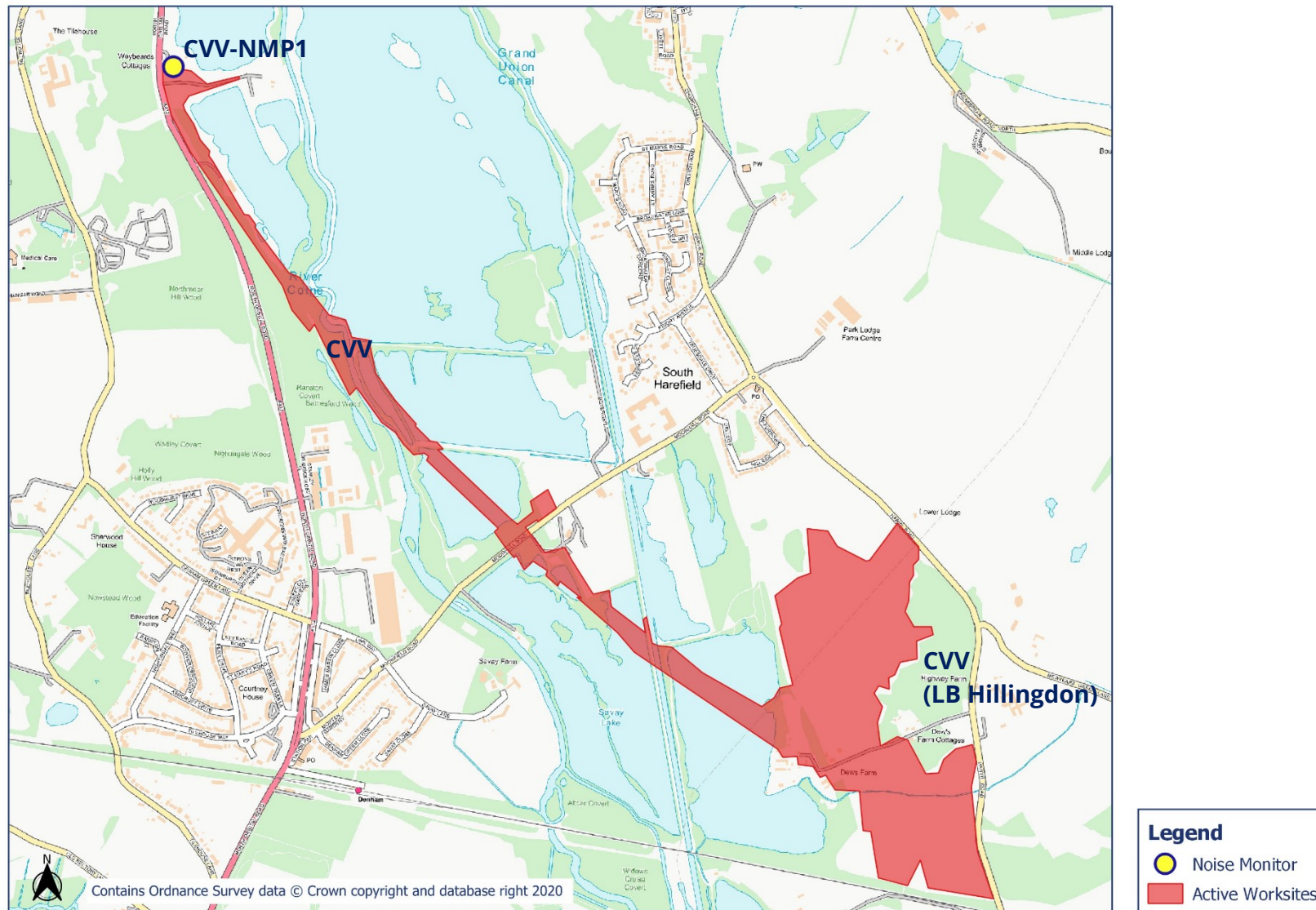










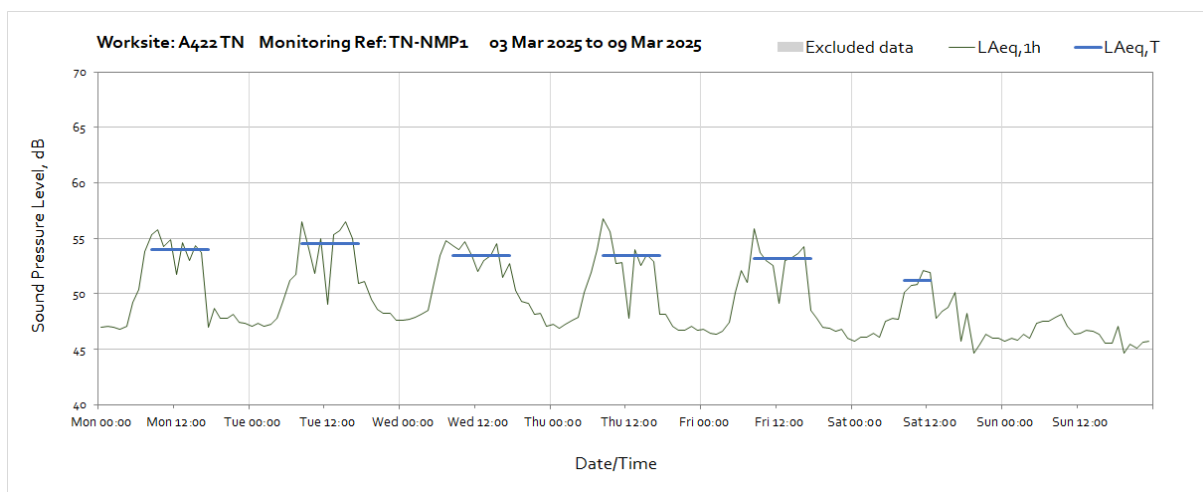
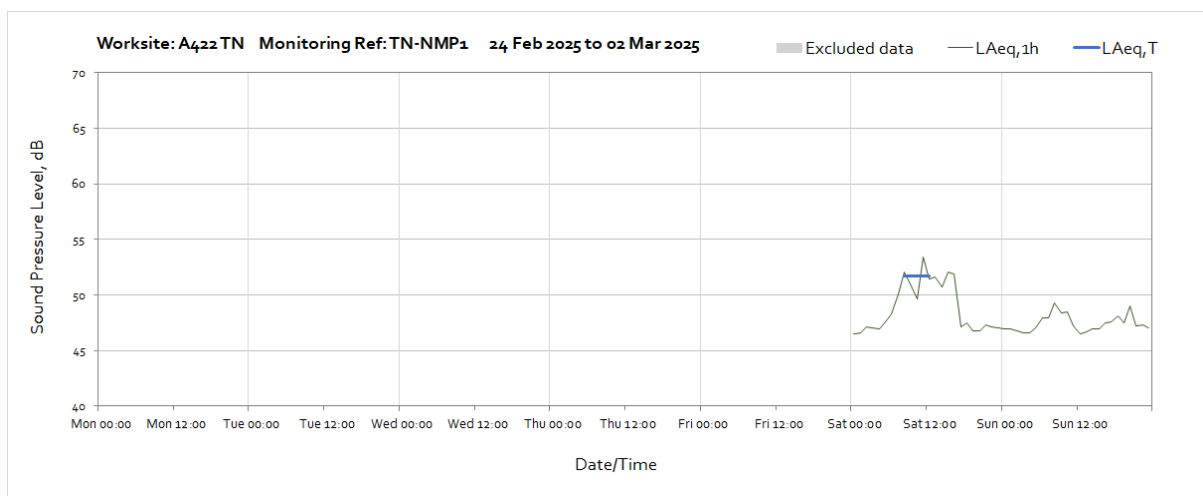


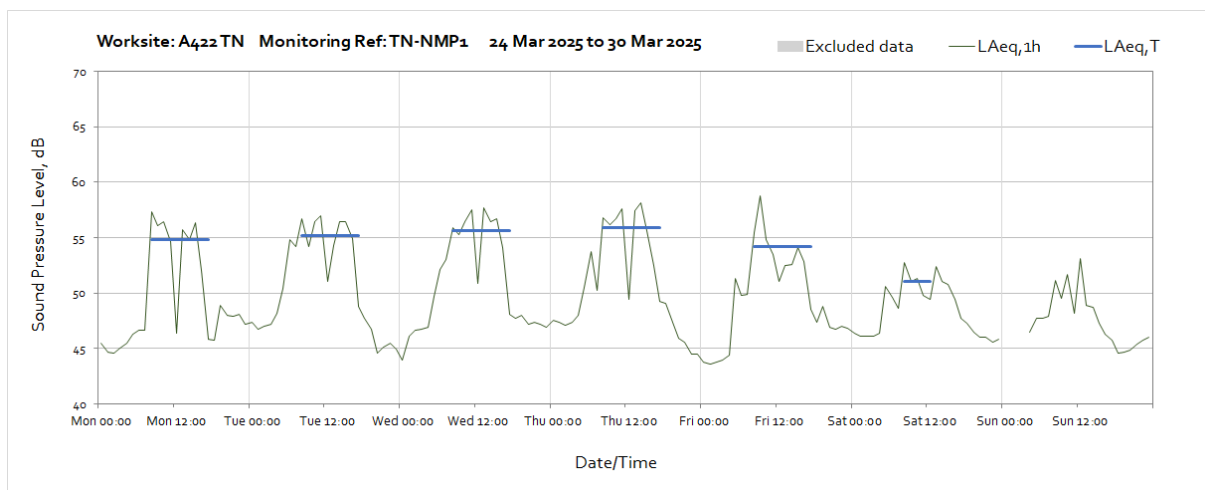
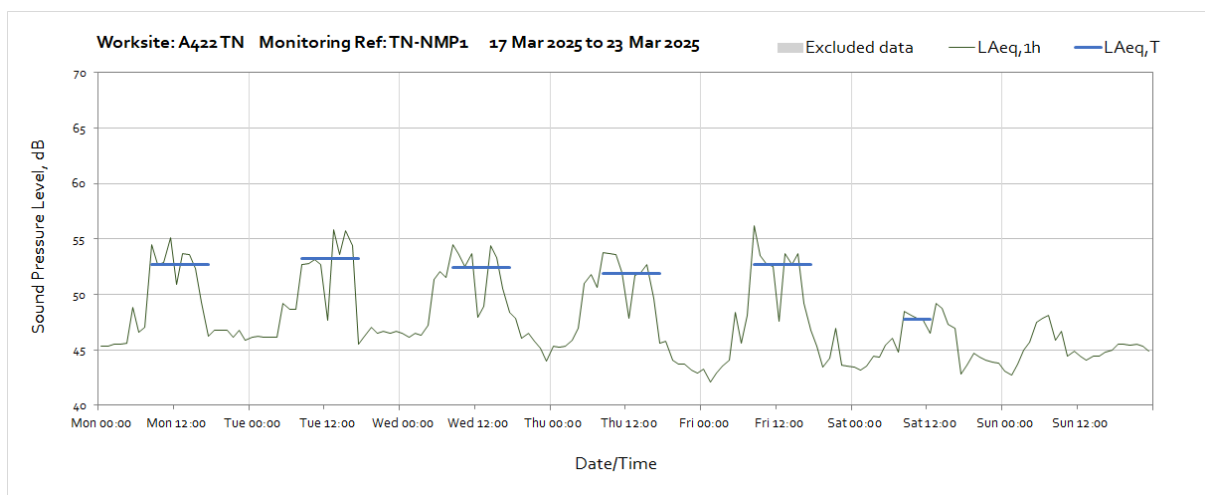
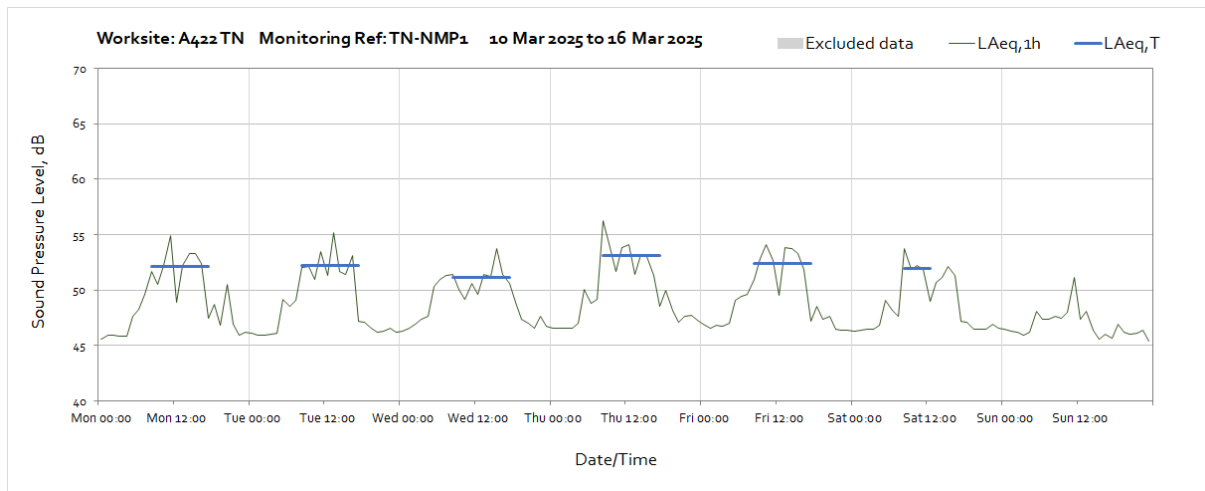
Appendix C Data

Noise

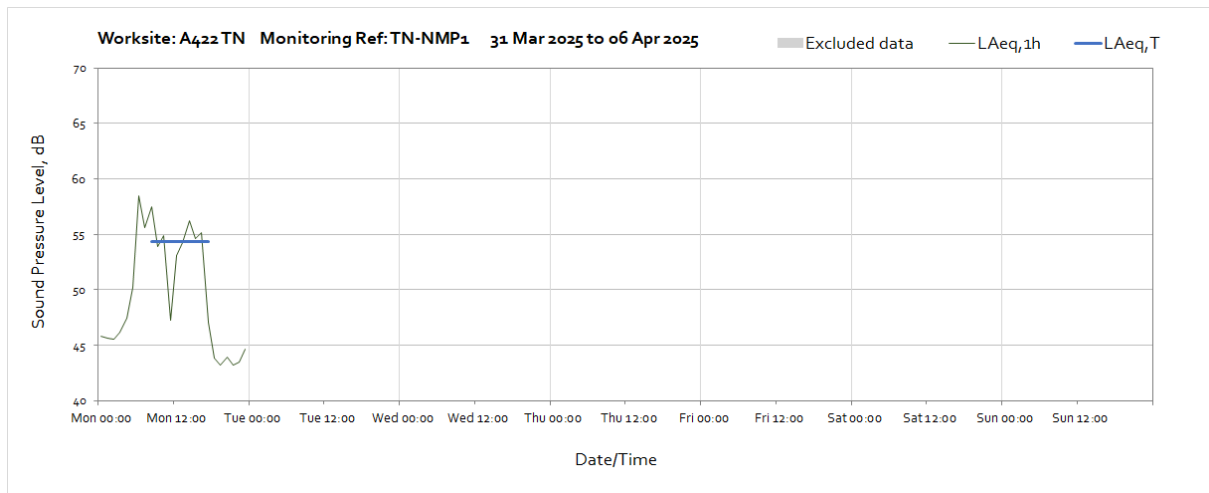
The following graphs show the hourly measured ambient noise level $L_{Aeq,1h}$ and, where relevant, the averaged noise level $L_{Aeq,T}$ values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods where noise levels are adversely affected by weather or only measured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

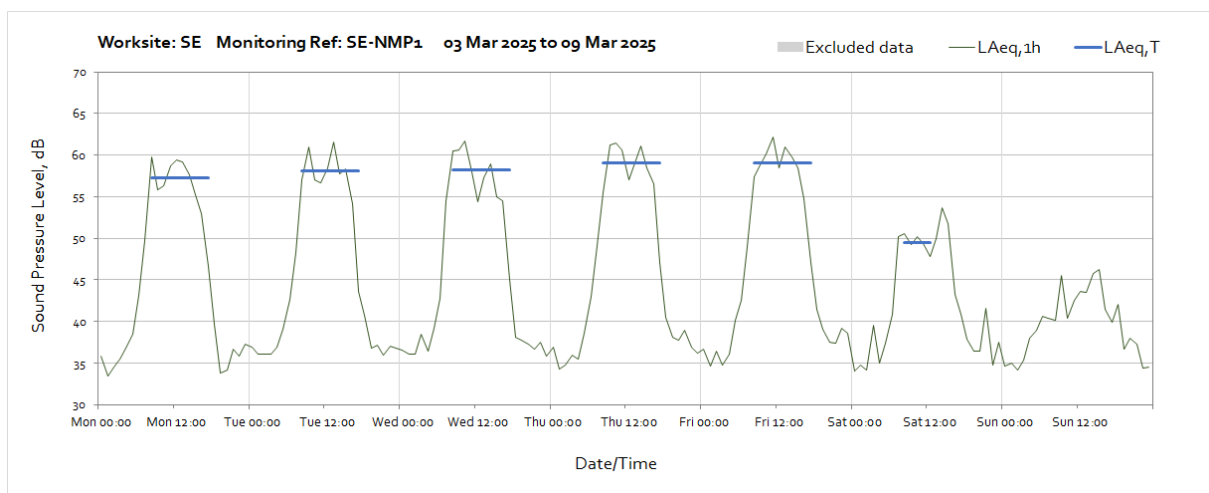
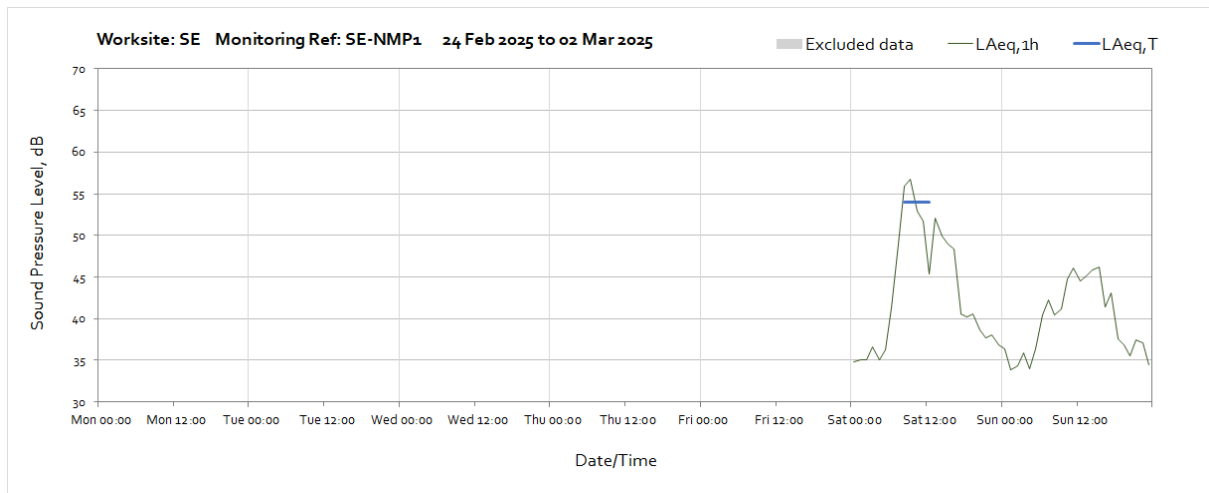




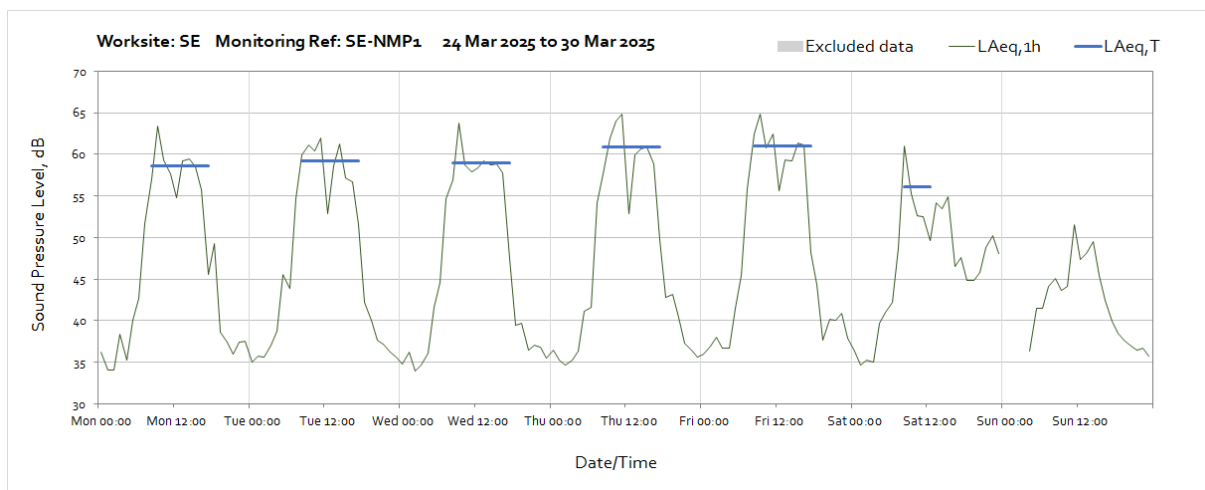
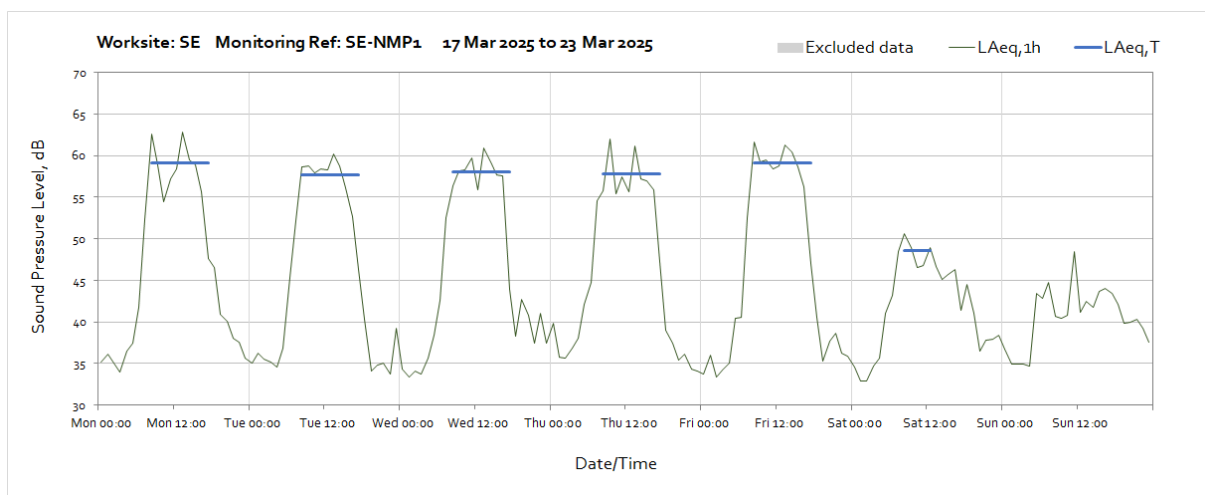
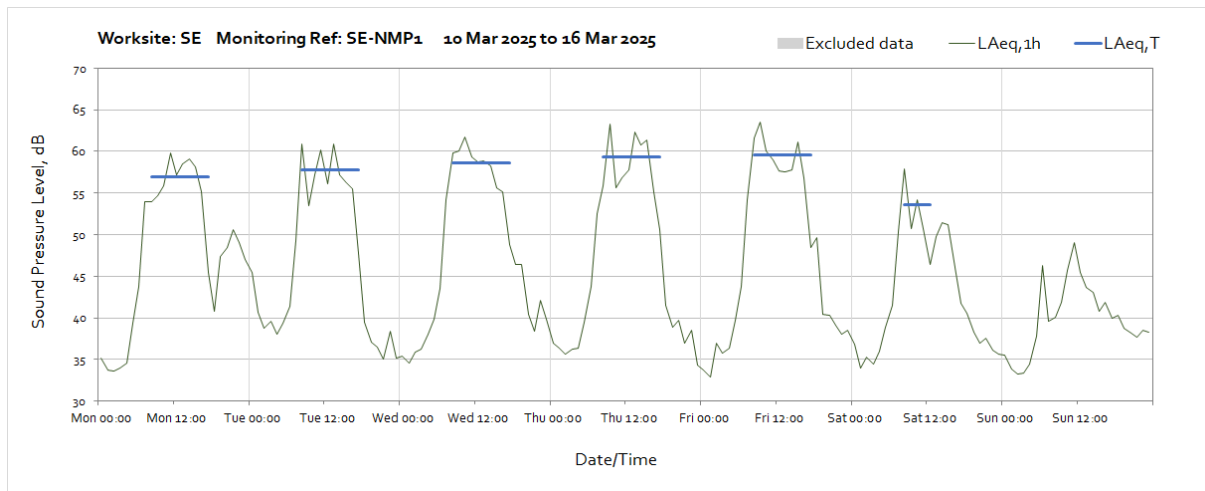
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



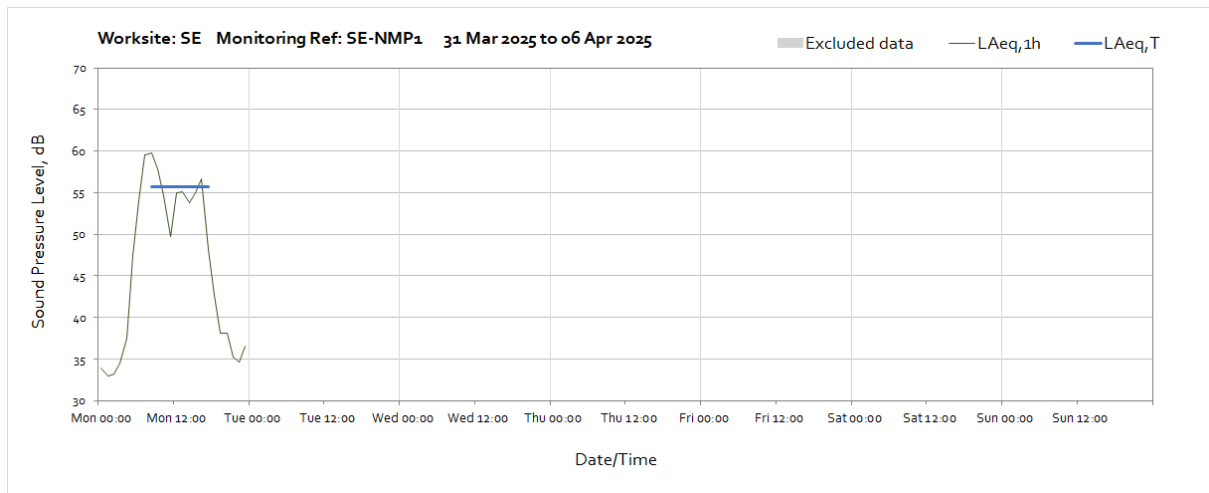
Worksite: SE – Monitoring Ref: SE-NMP1



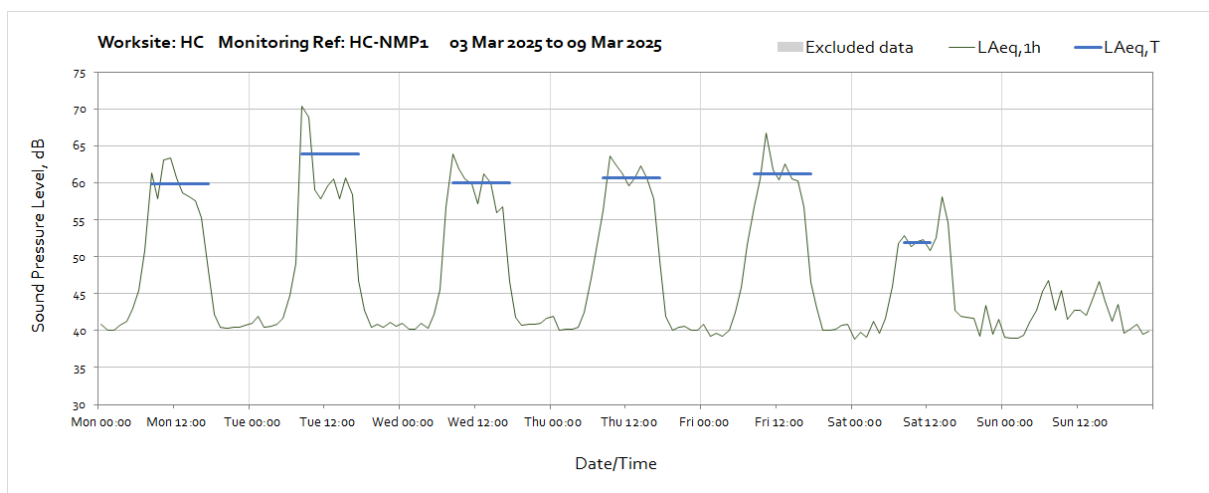
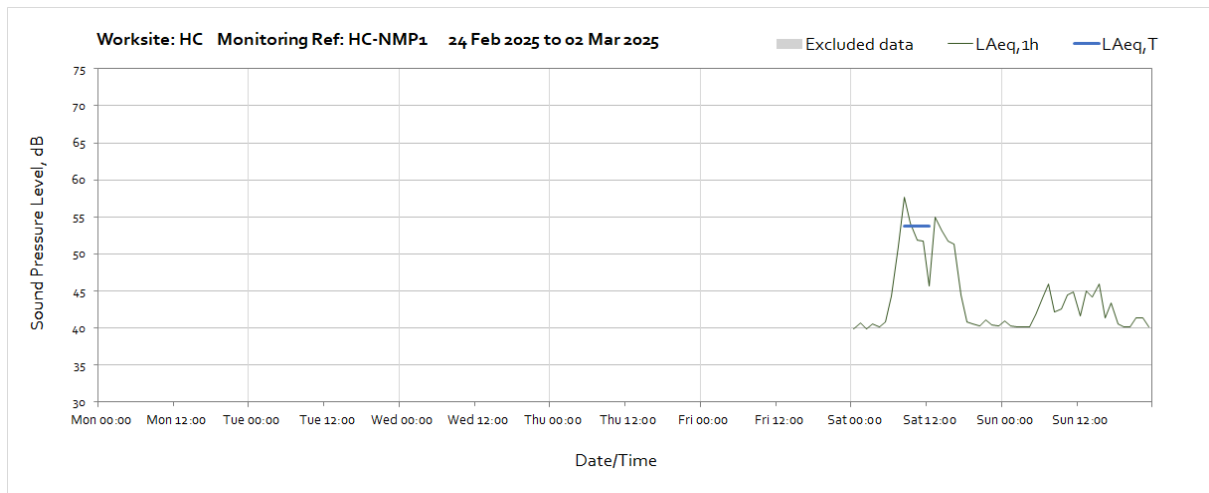
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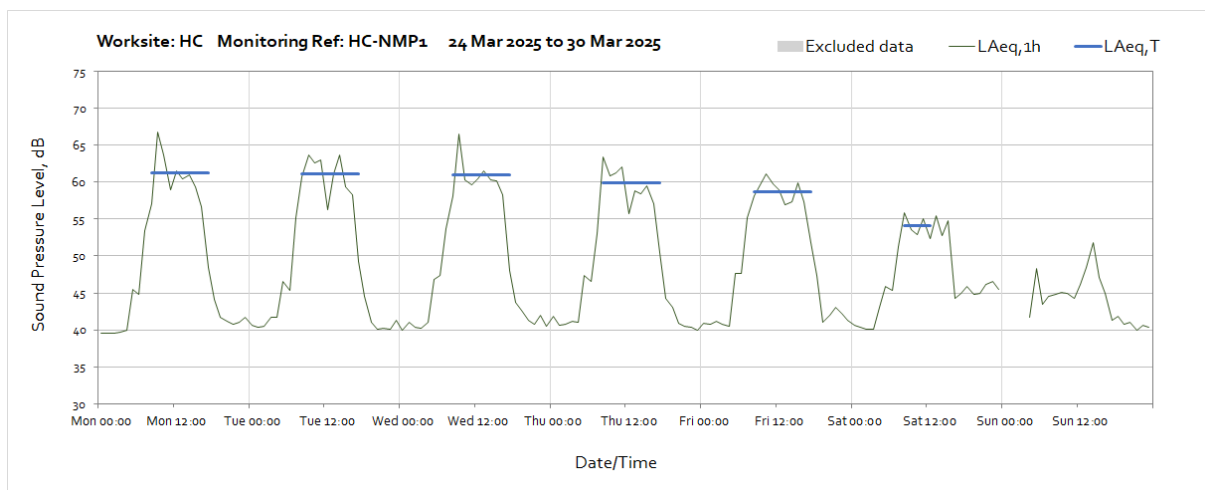
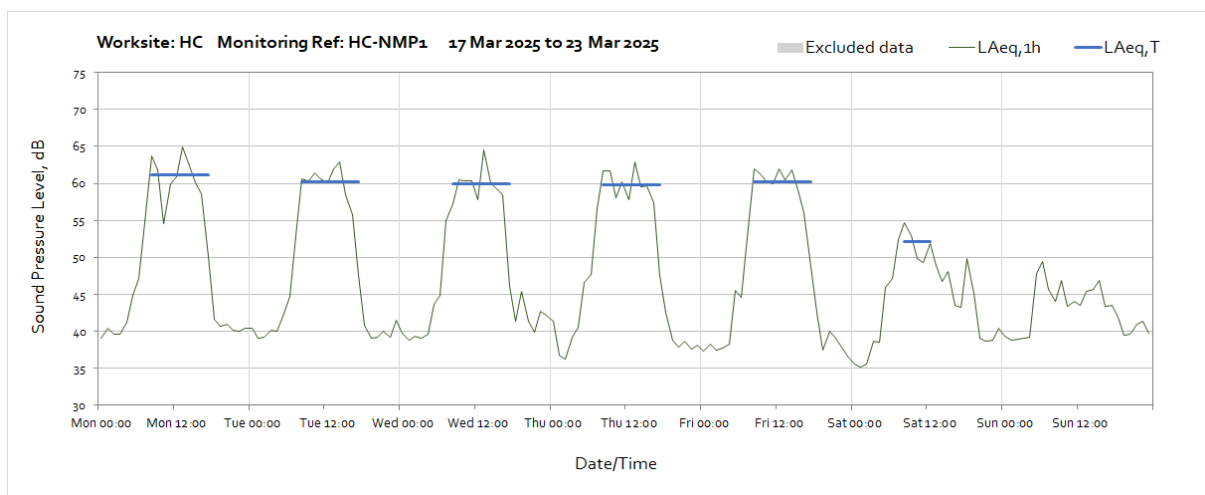
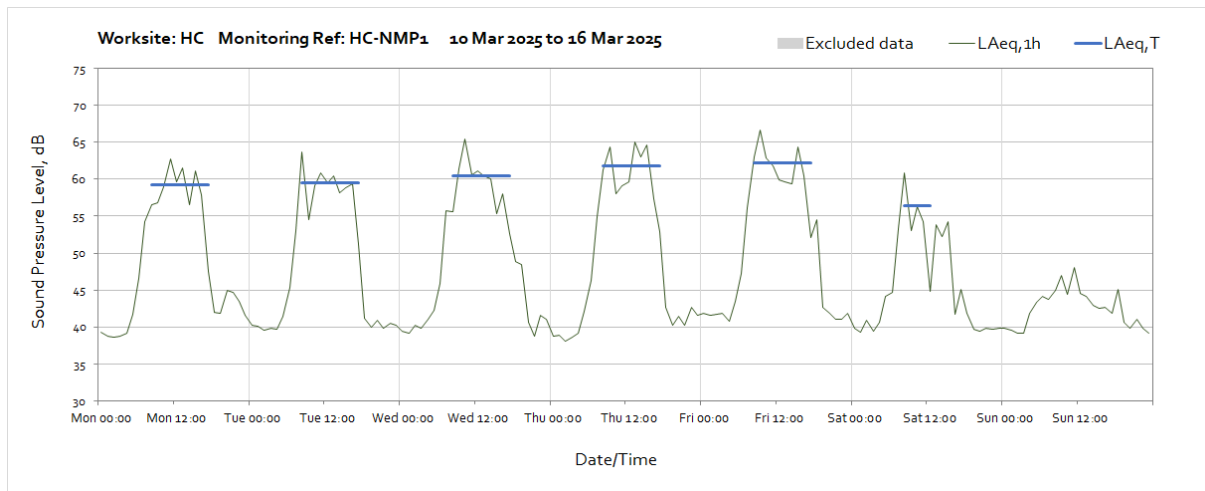


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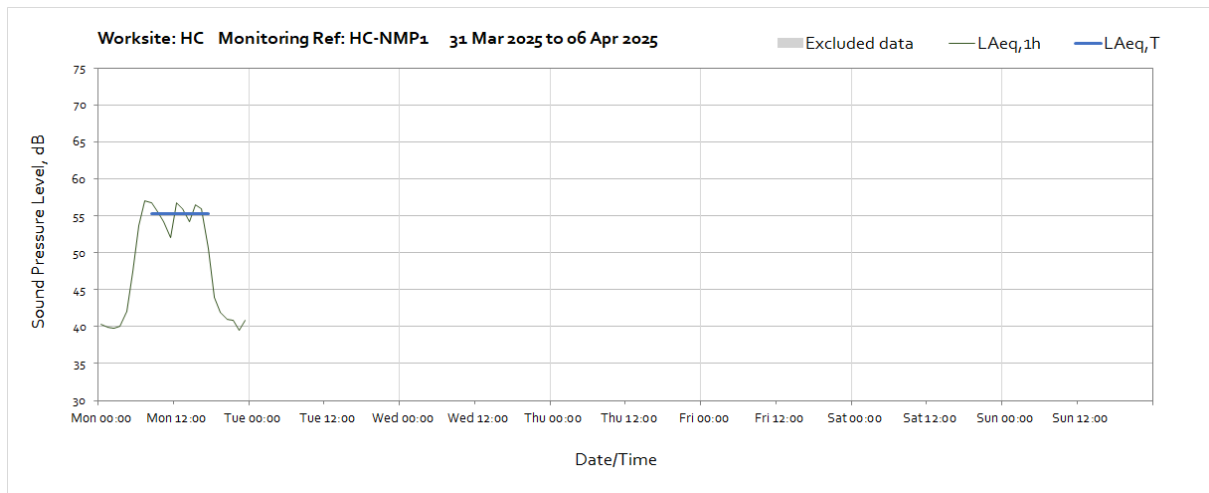
Worksite: HC – Monitoring Ref: HC-NMP1



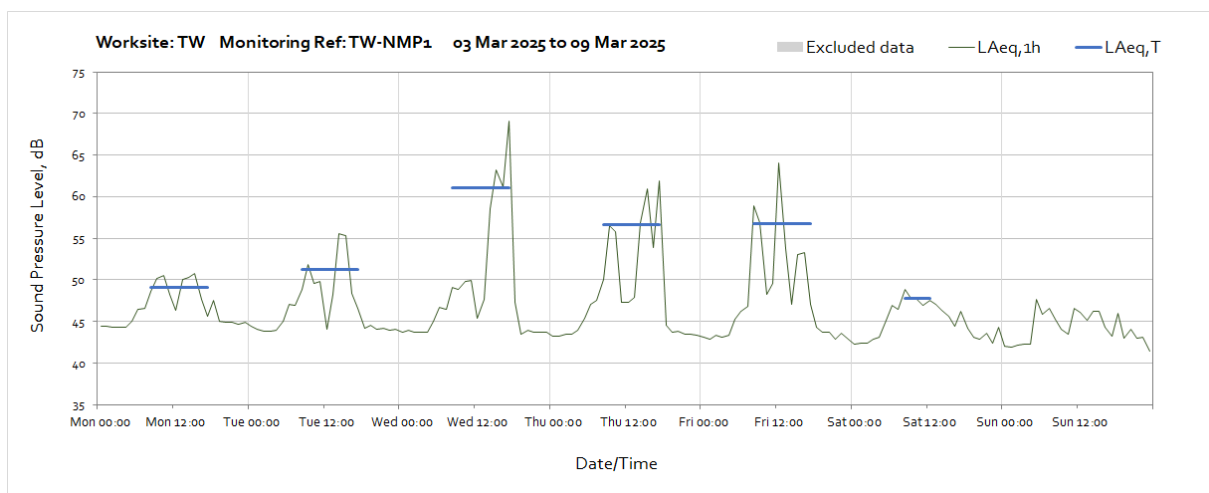
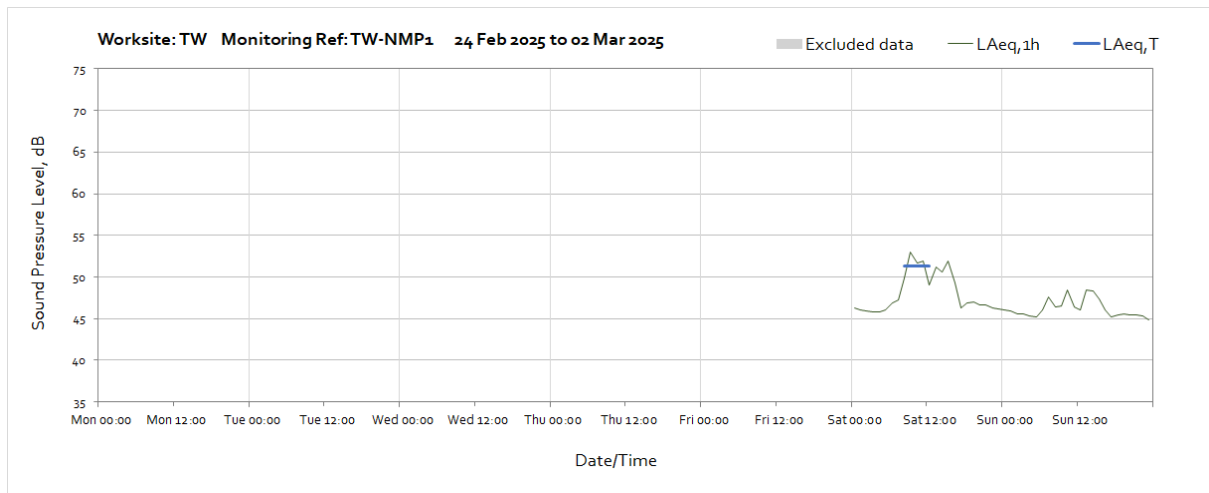


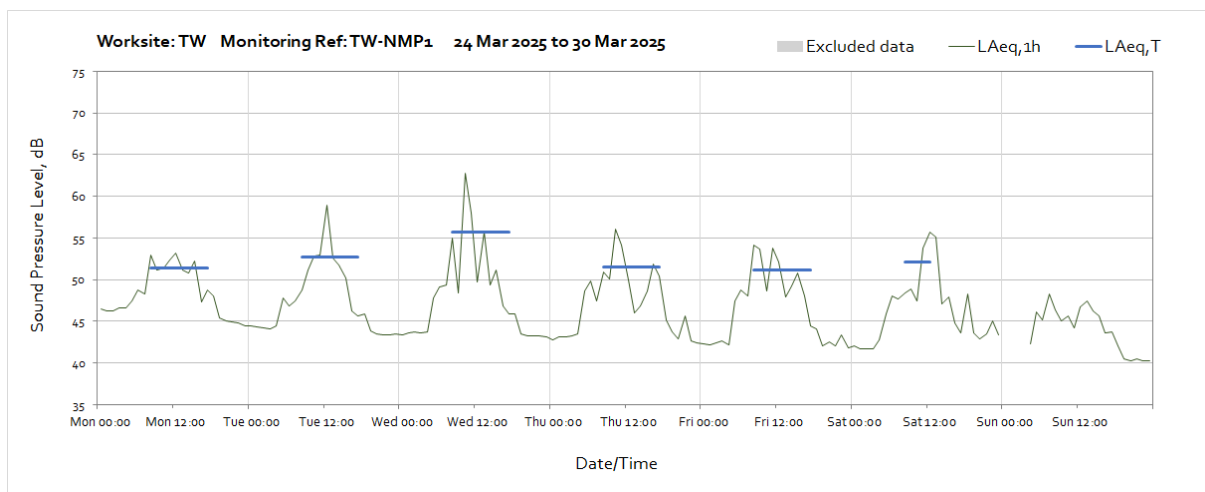
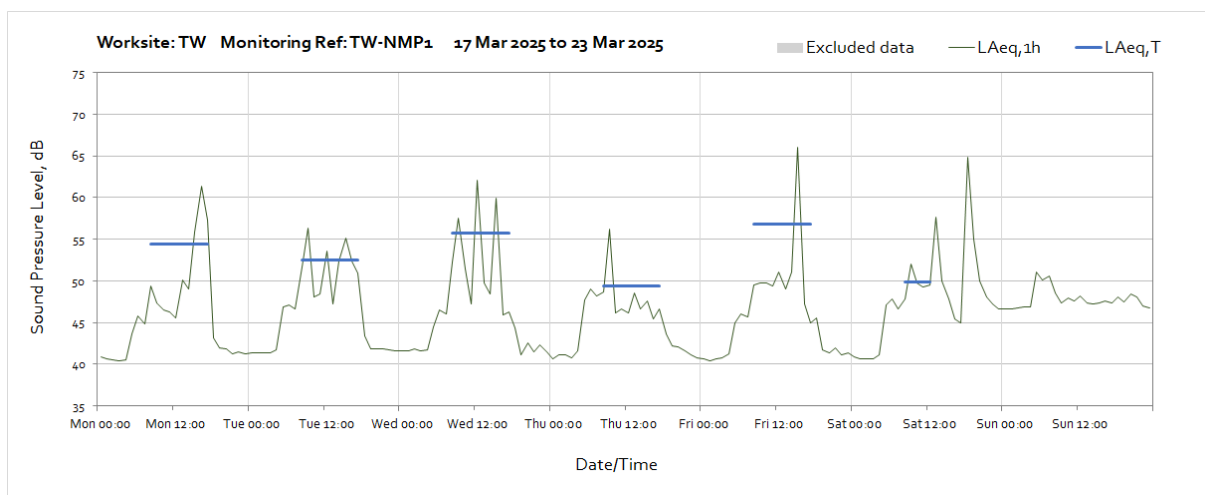
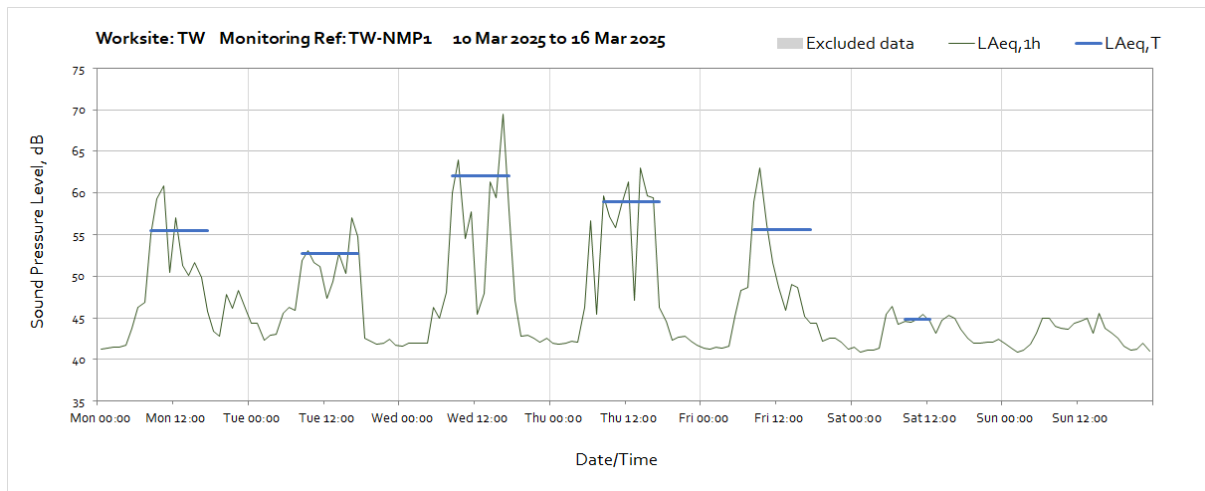
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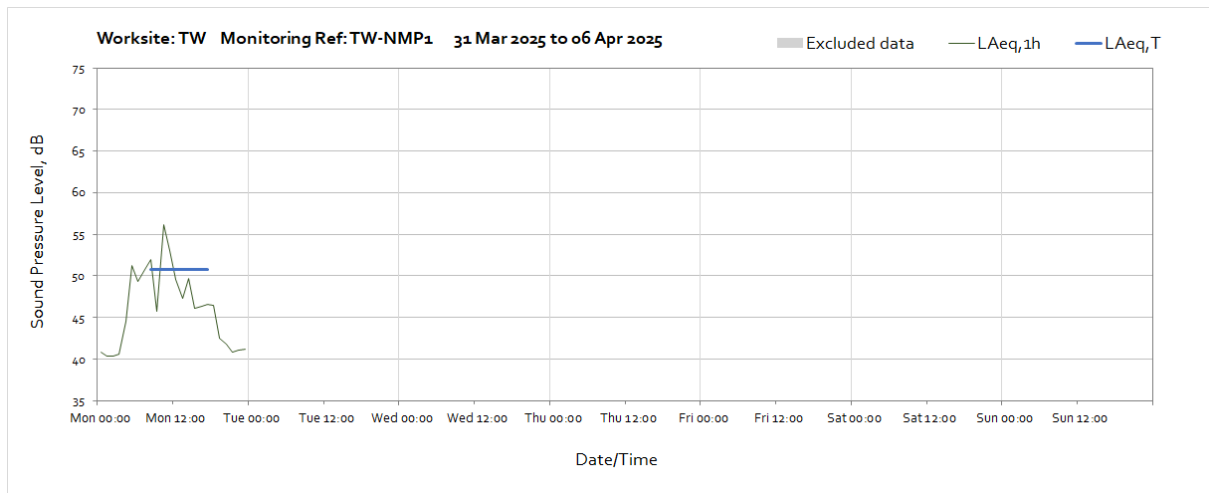


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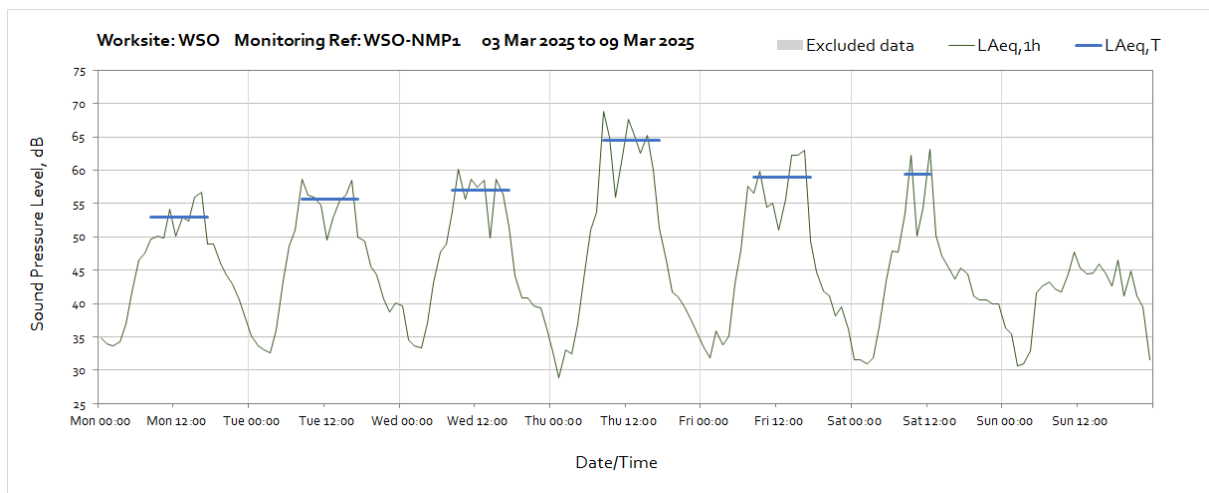
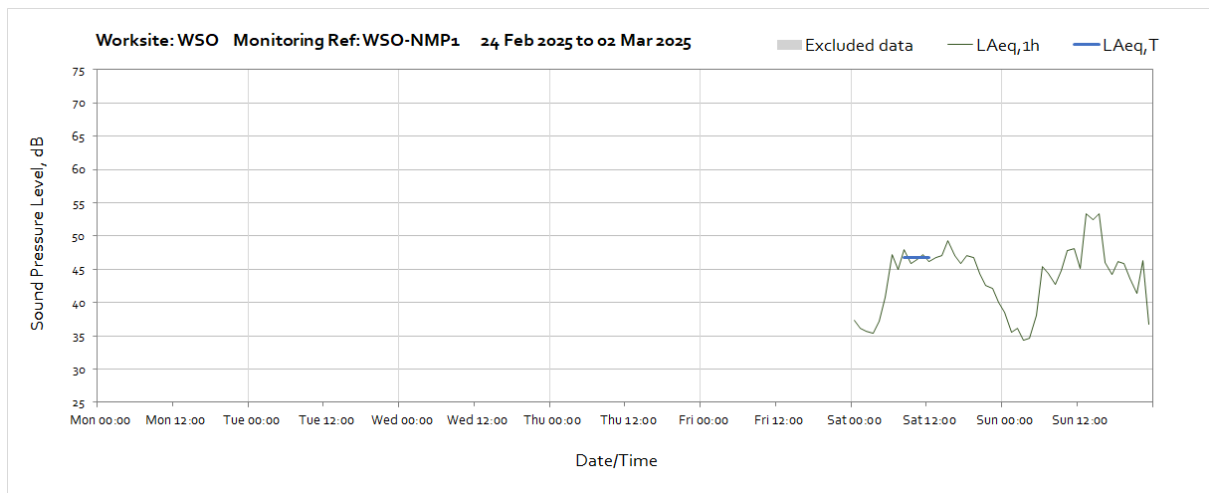


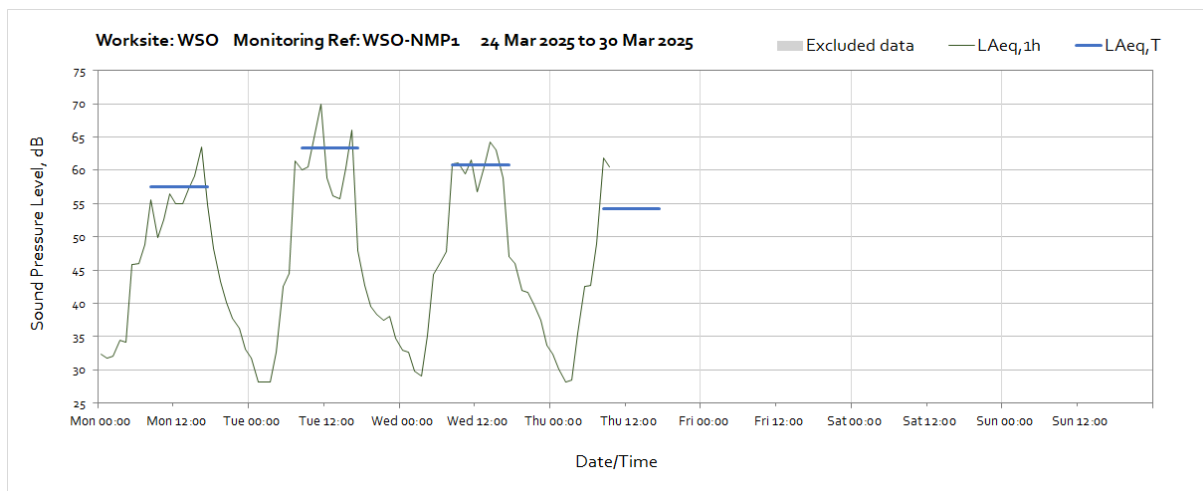
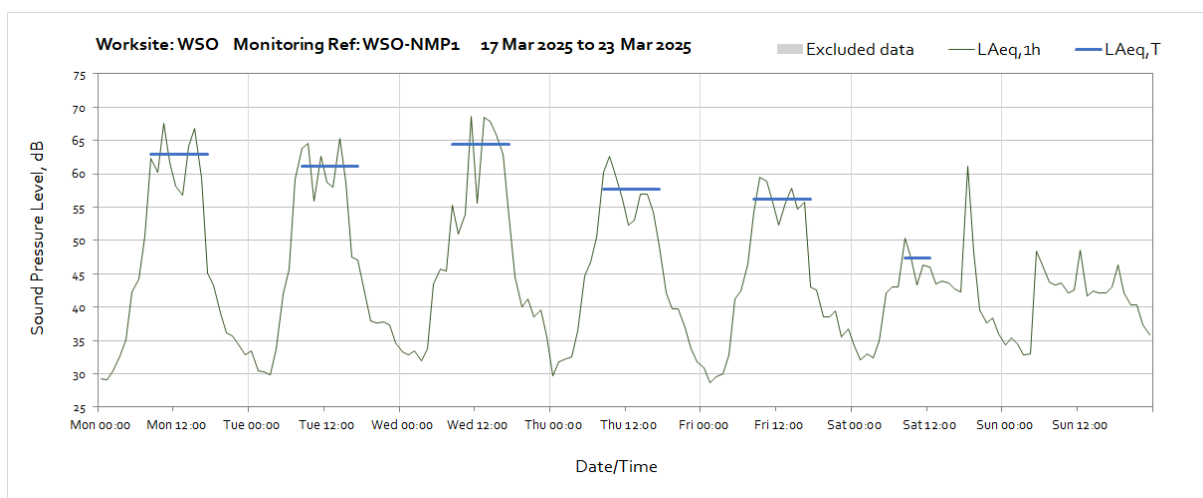
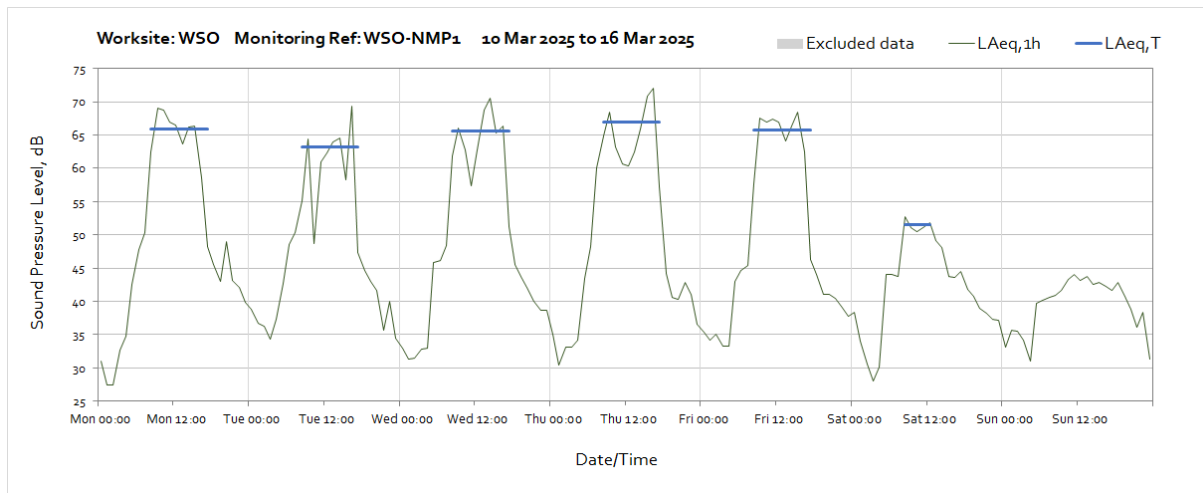


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



Worksite: WSO – Monitoring Ref: WSO-NMP1

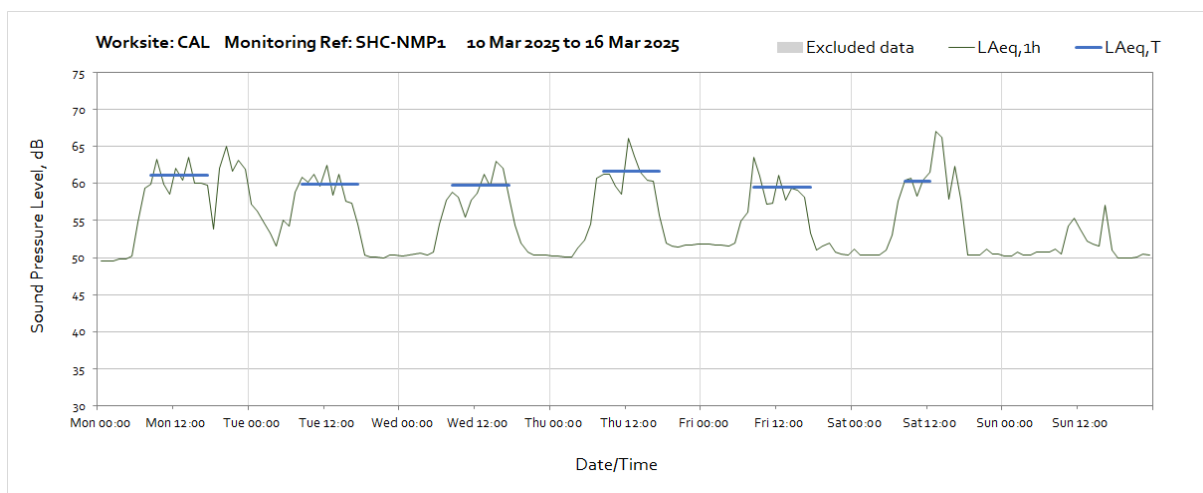
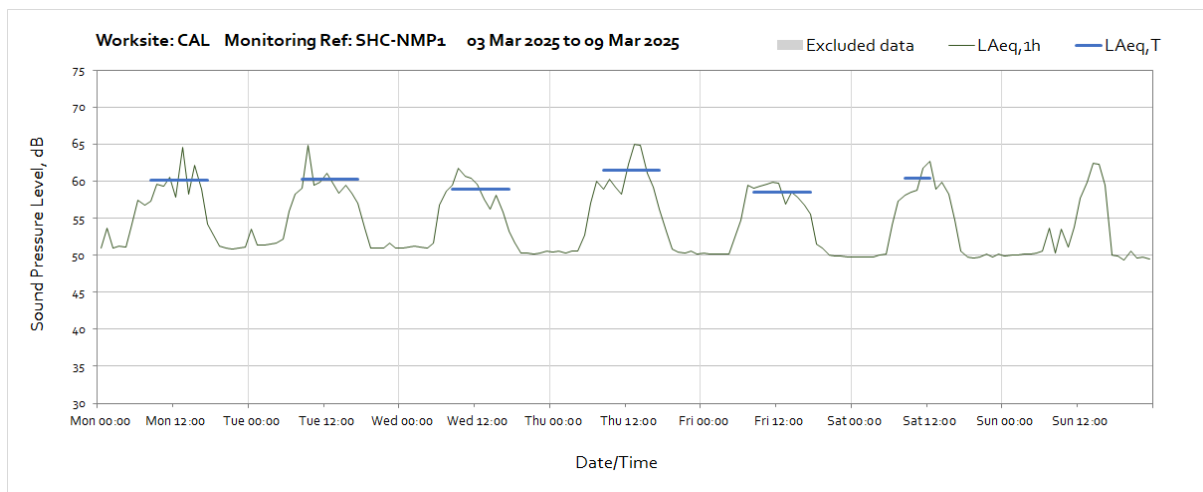
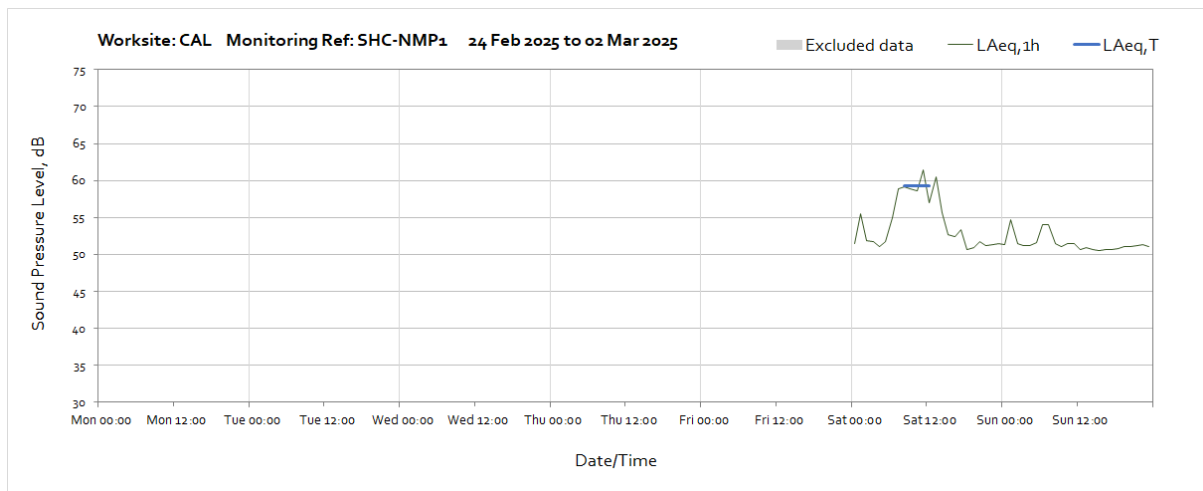




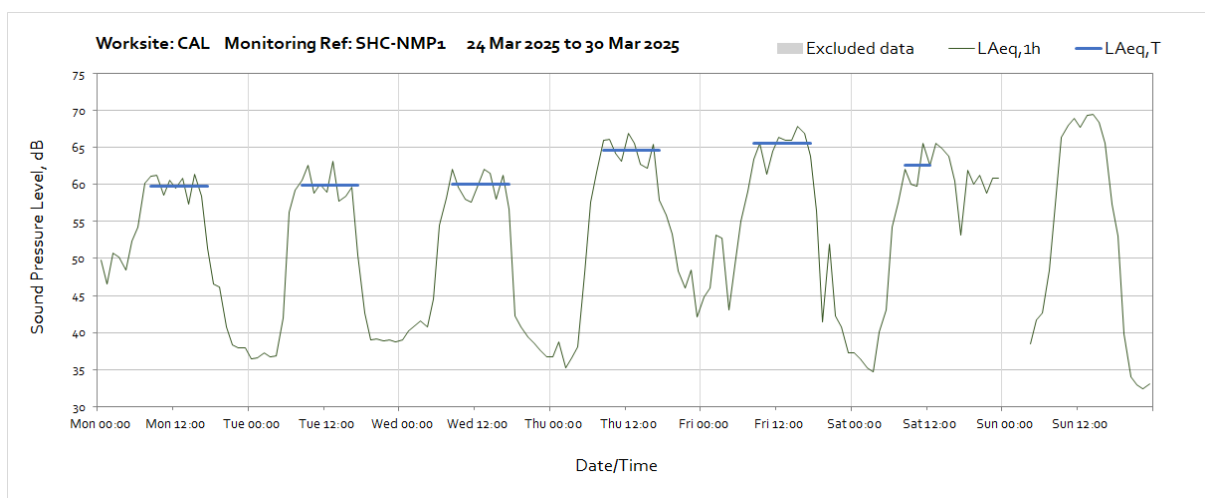
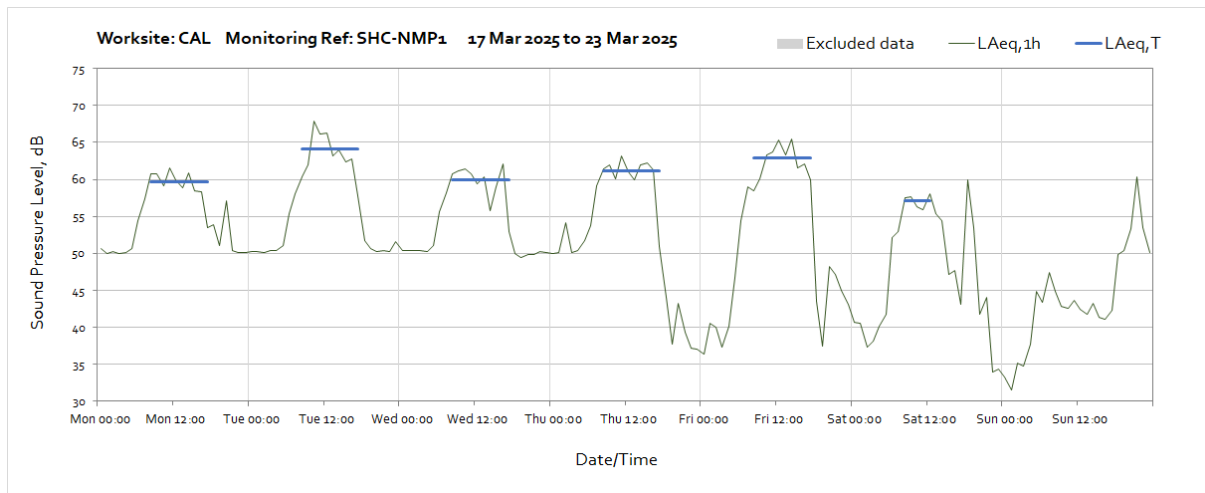
Note: Noise monitor was retrieved at 10:00 on Thursday 27th March.

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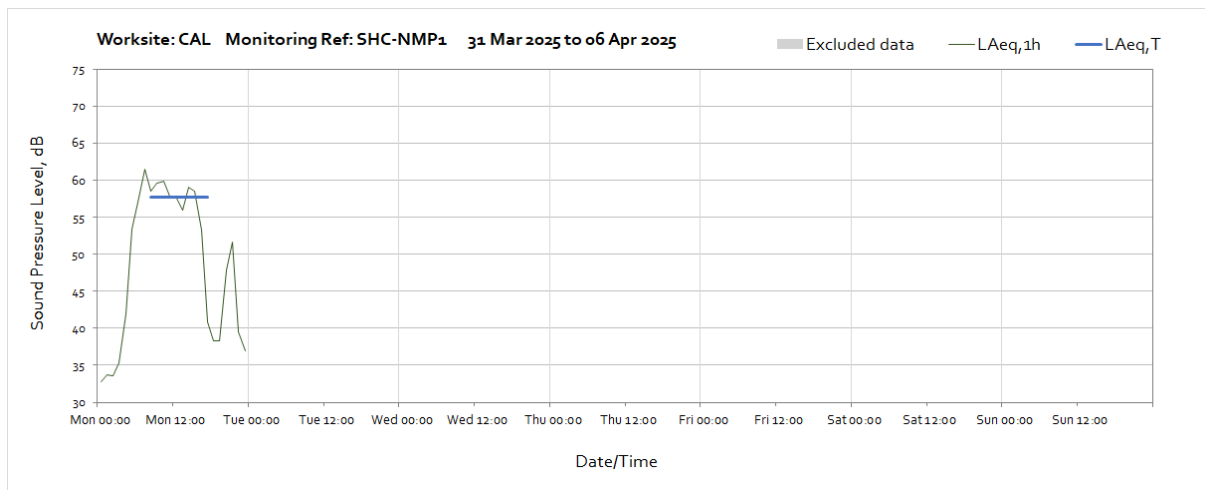
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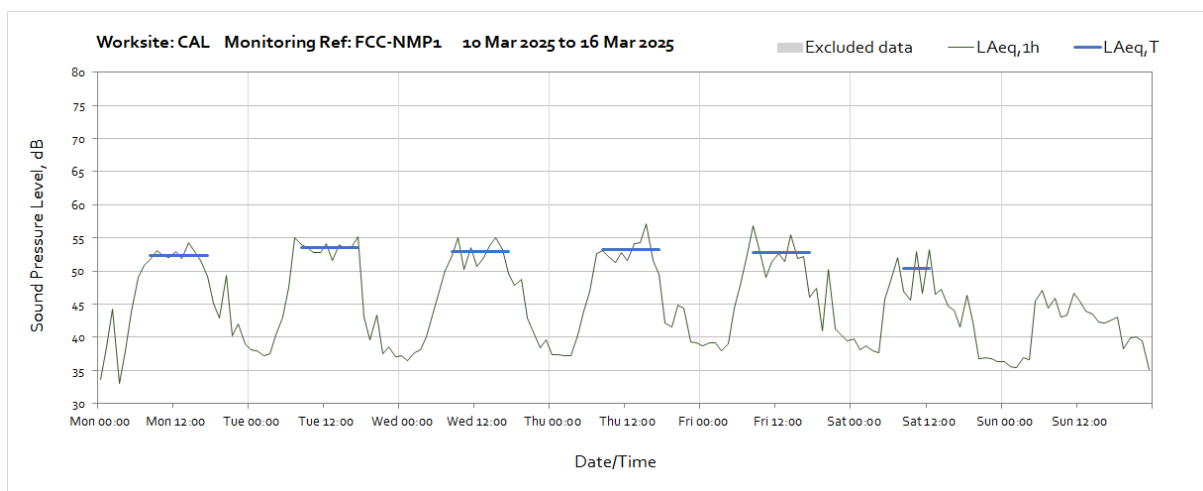
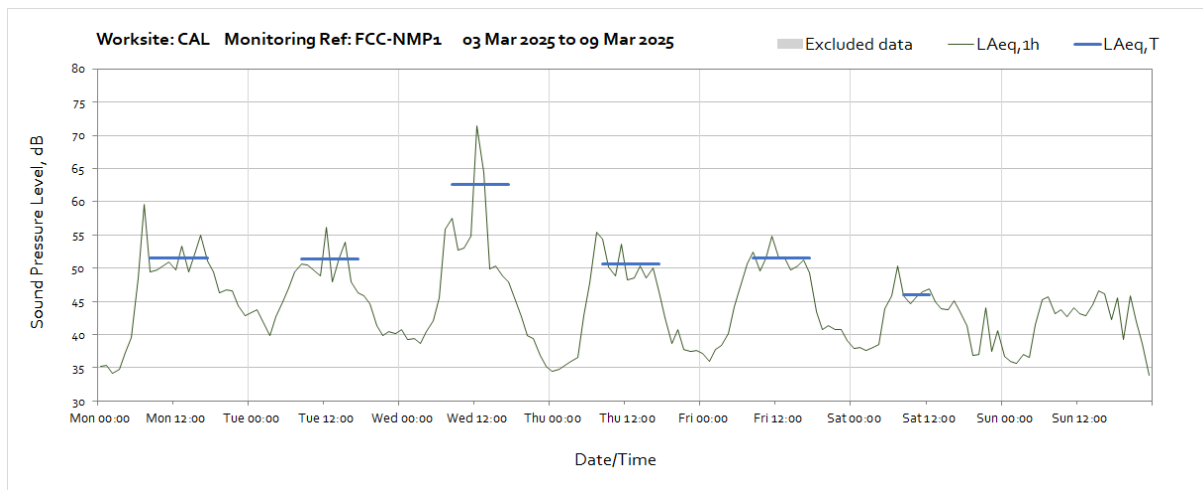
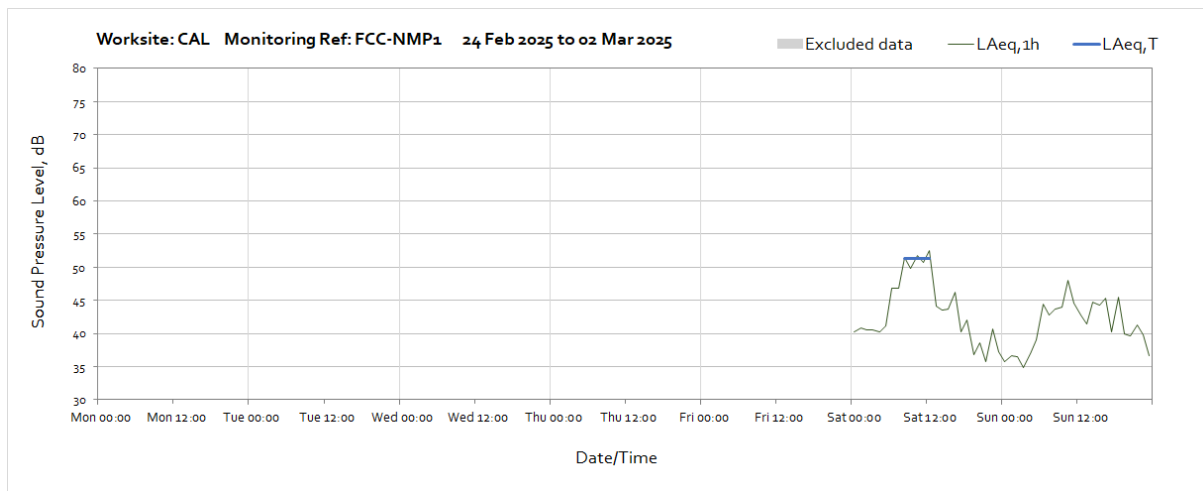
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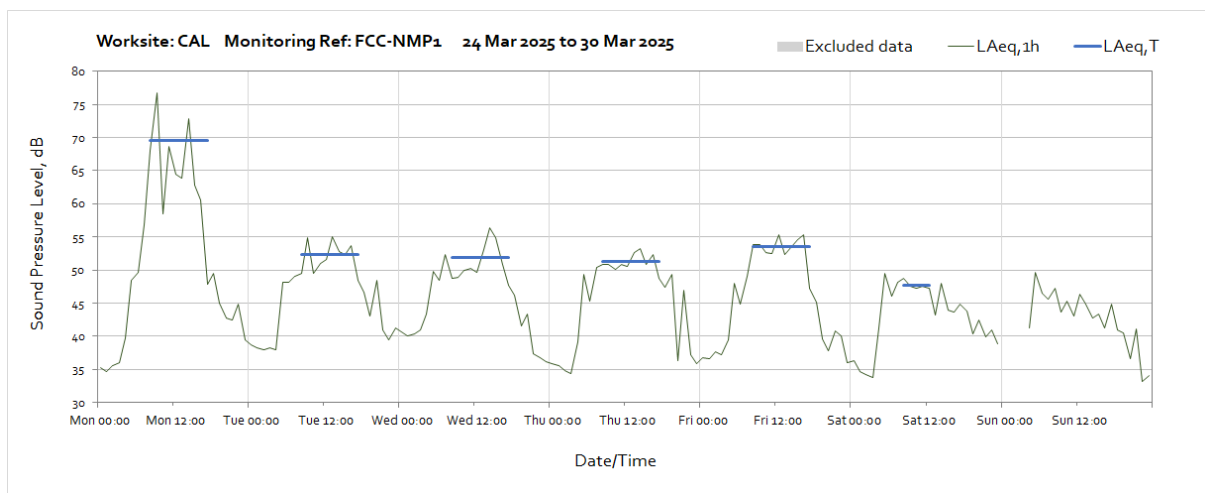
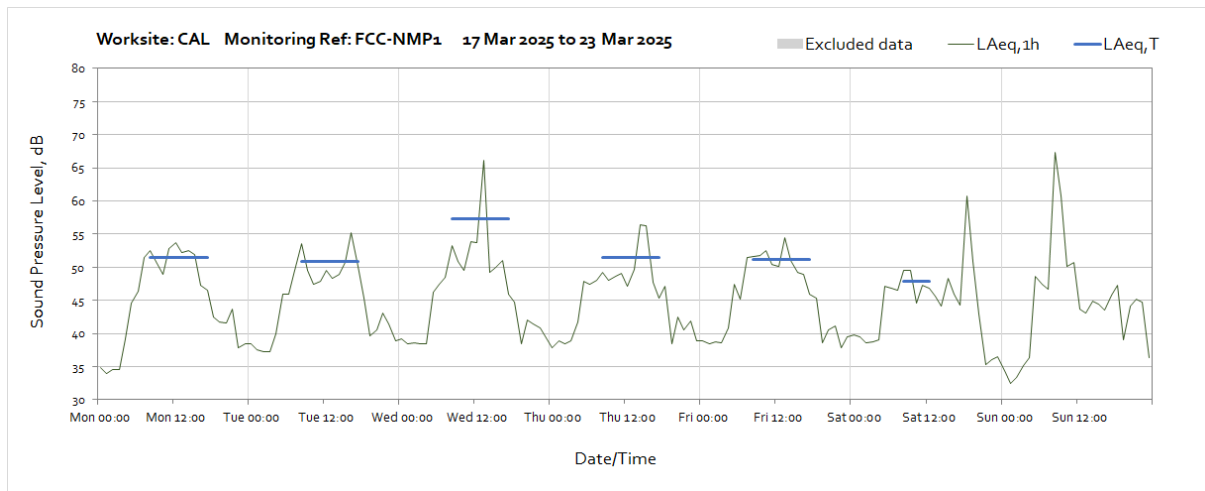
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



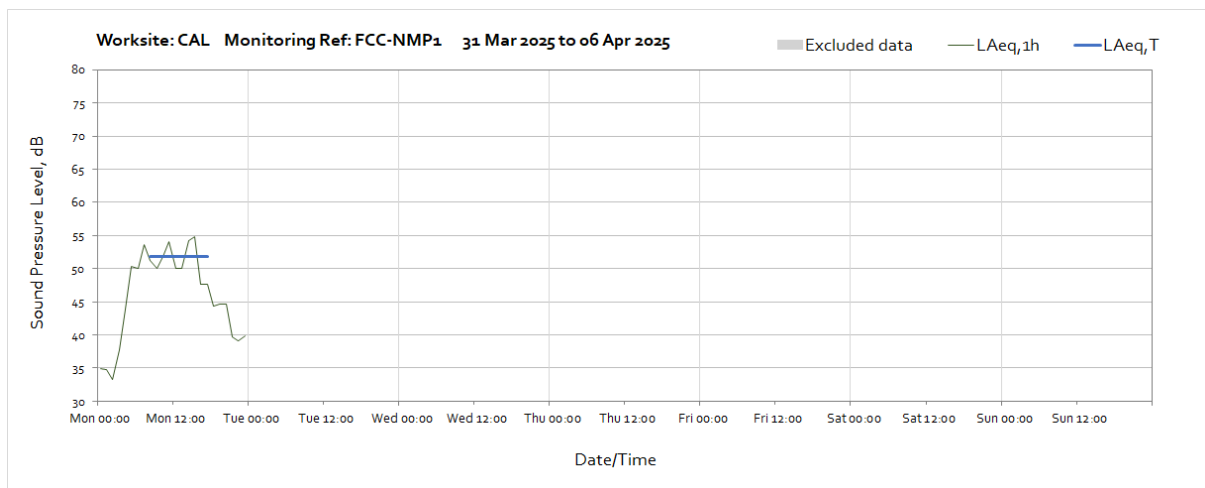
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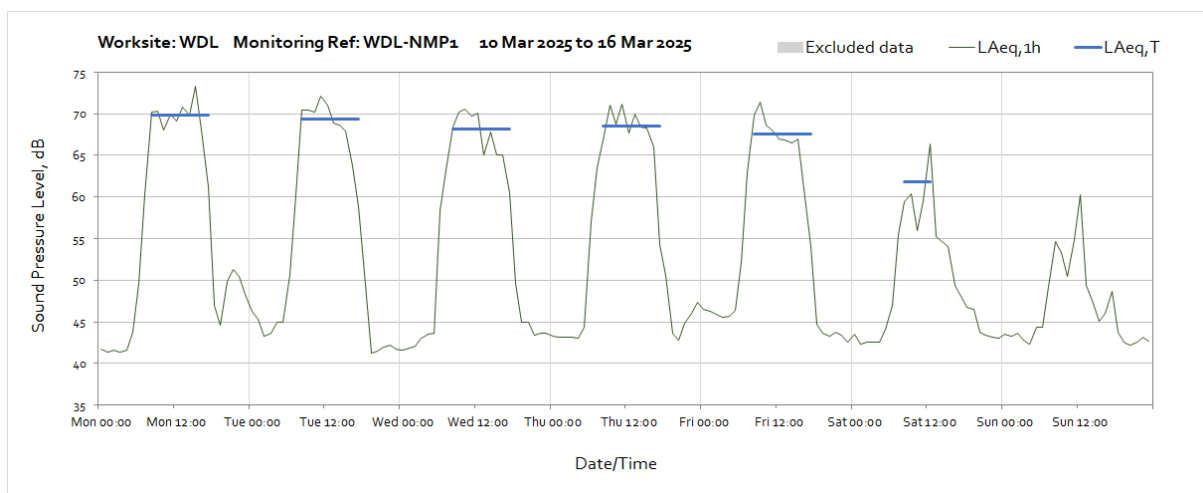
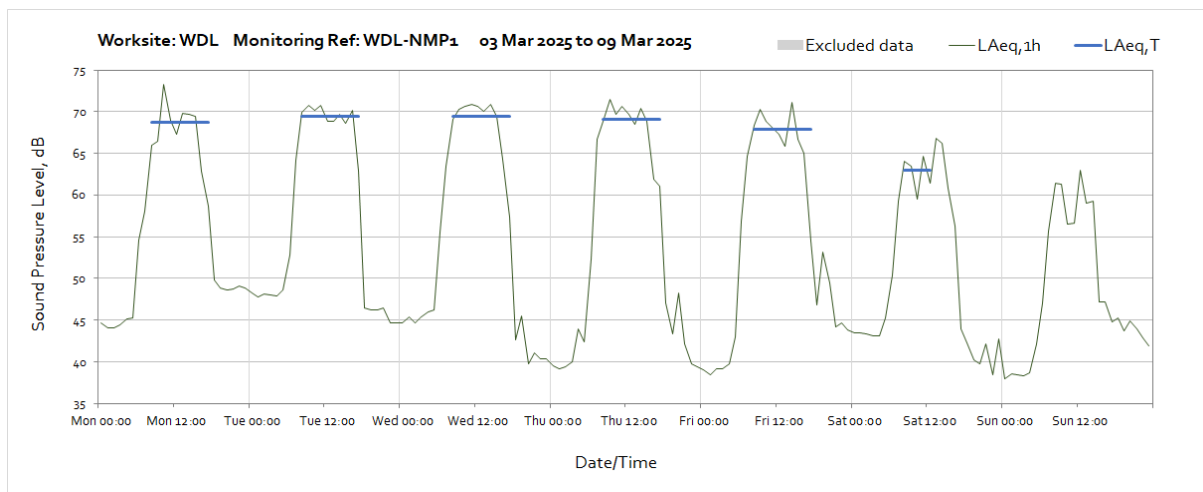
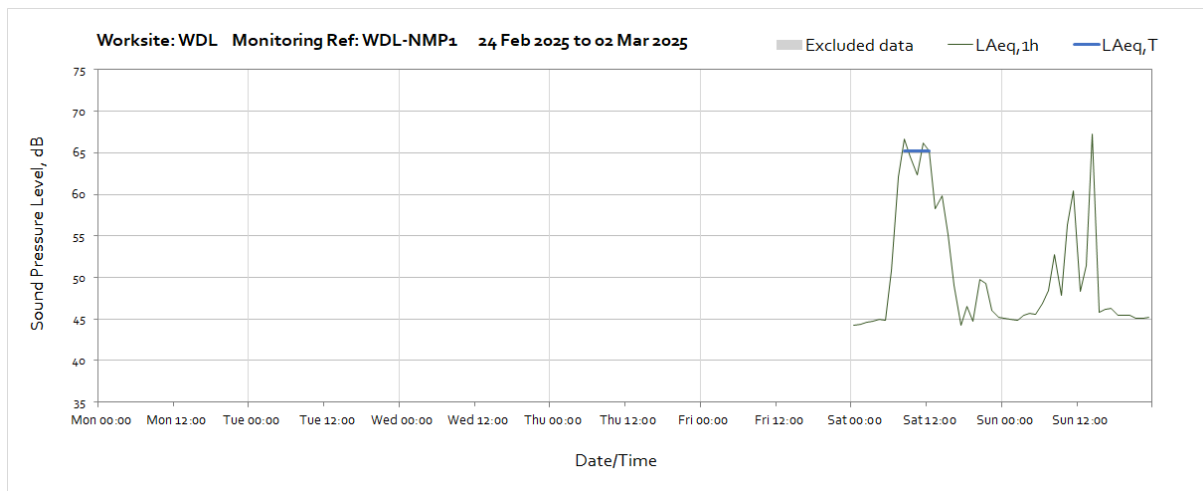
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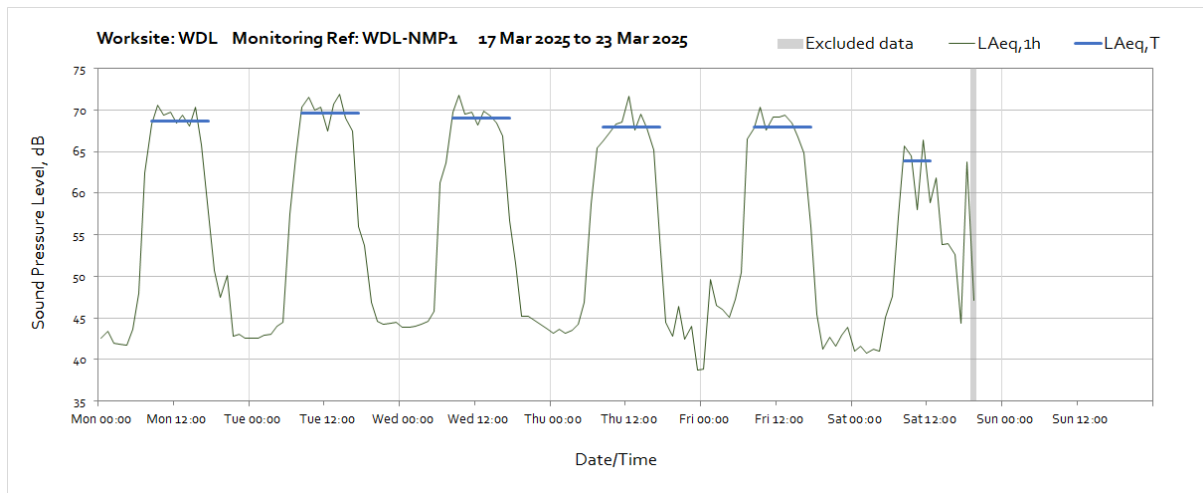
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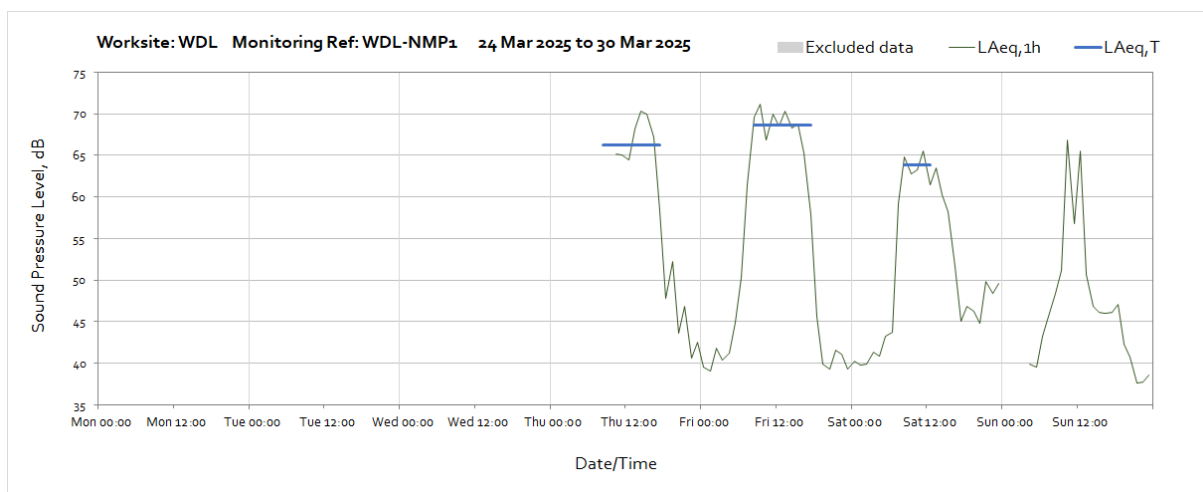
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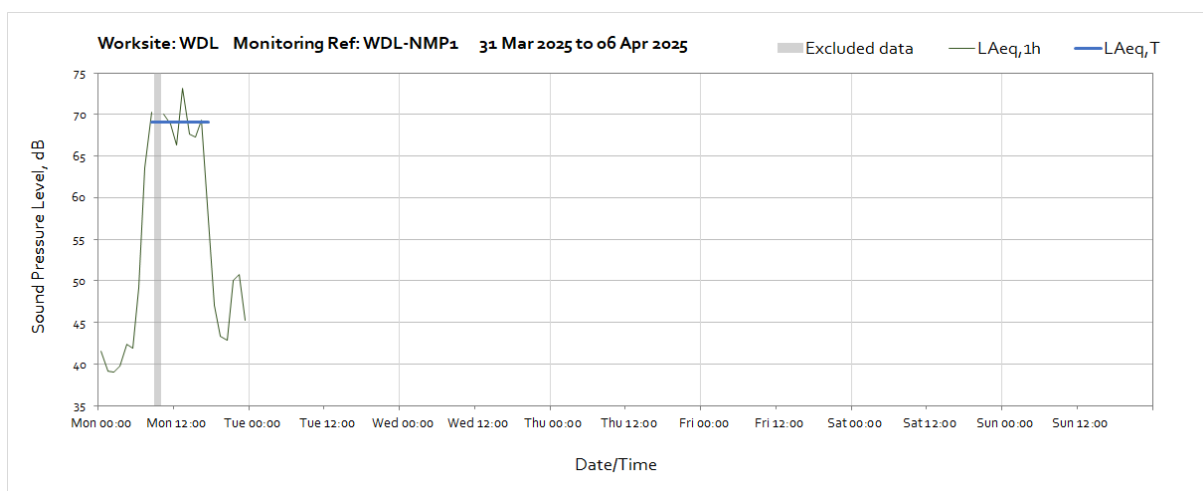
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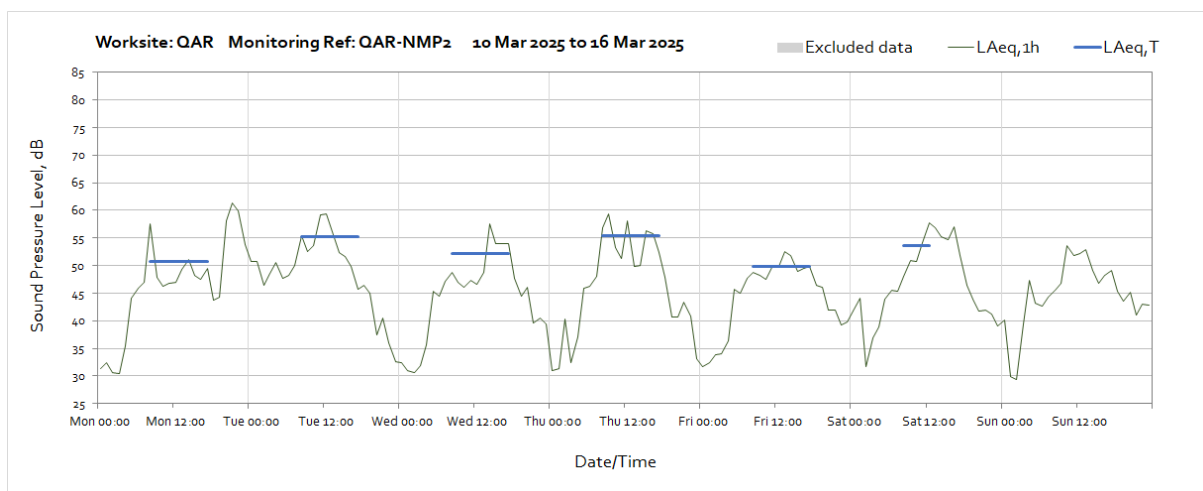
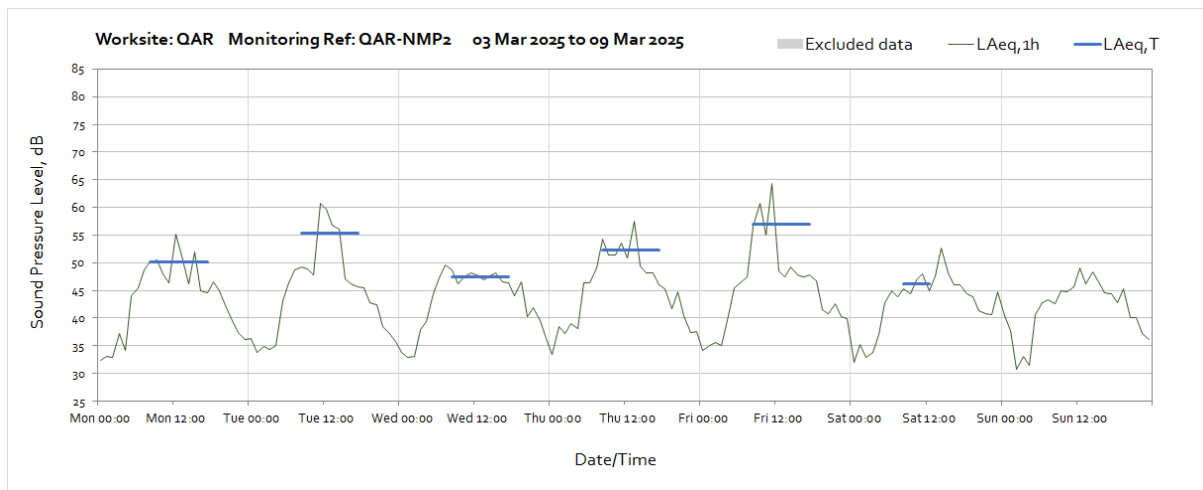
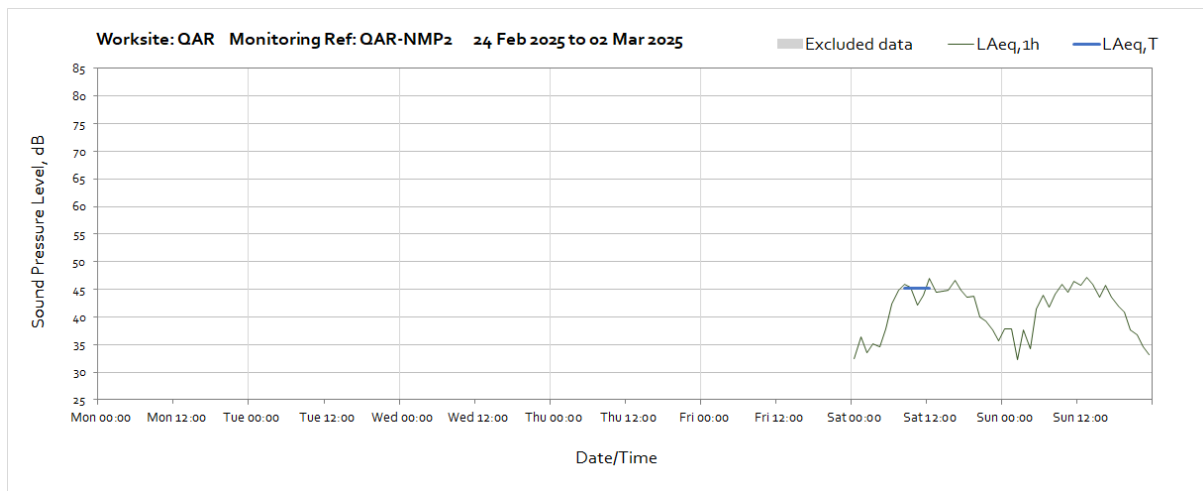
Note: Missing data between 20:00 on Saturday 22nd March and 10:00 on Thursday 27th March was due an error with the SD card within the monitoring station.



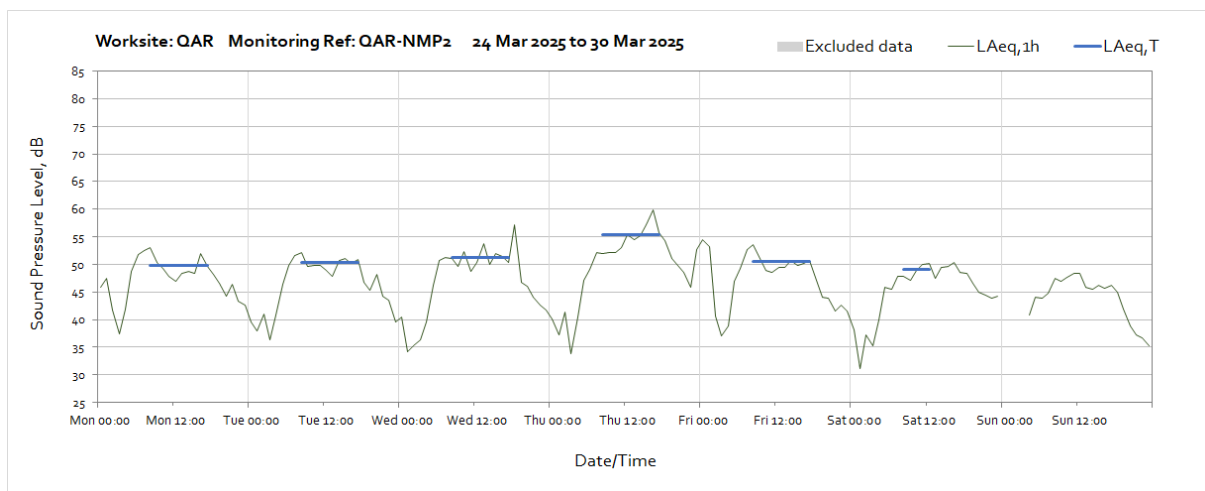
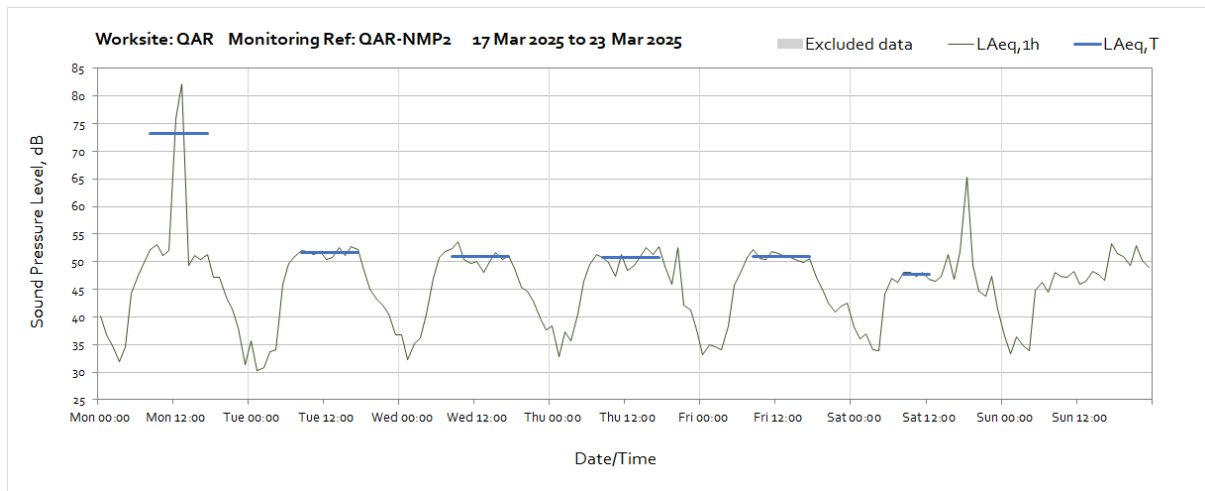
Note: Missing data between 20:00 on Saturday 22nd March and 10:00 on Thursday 27th March was due an error with the SD card within the monitoring station. Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



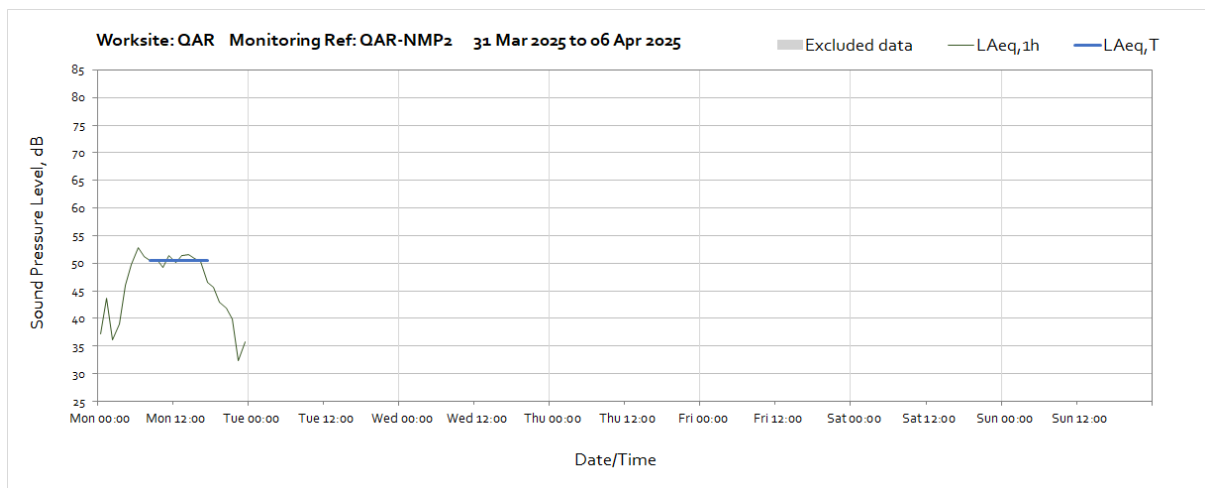
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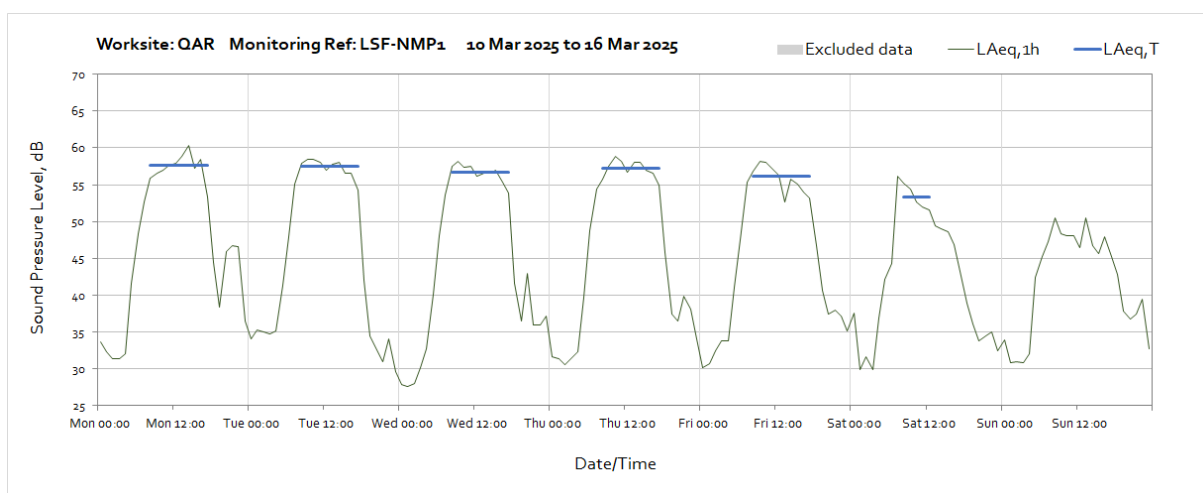
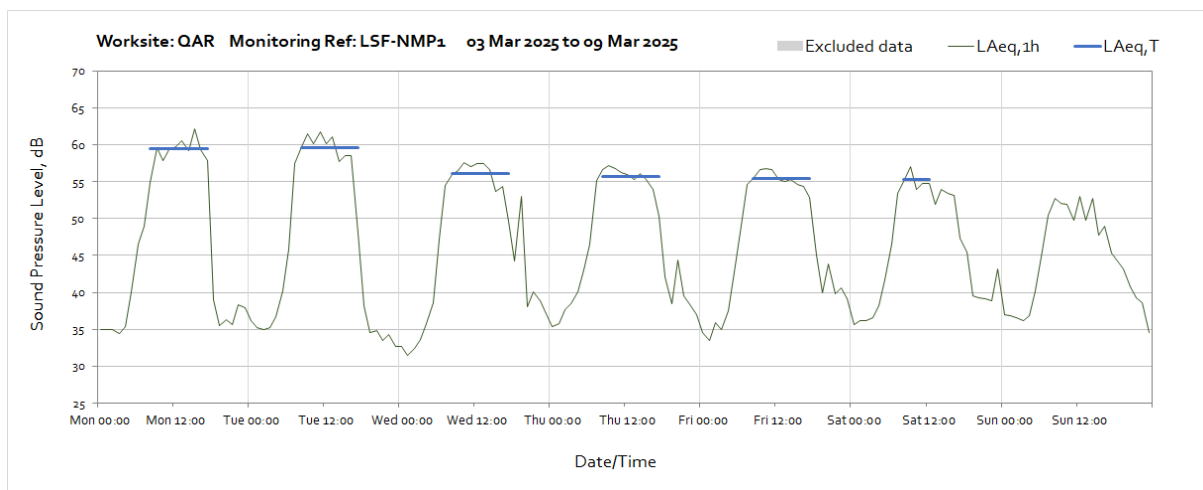
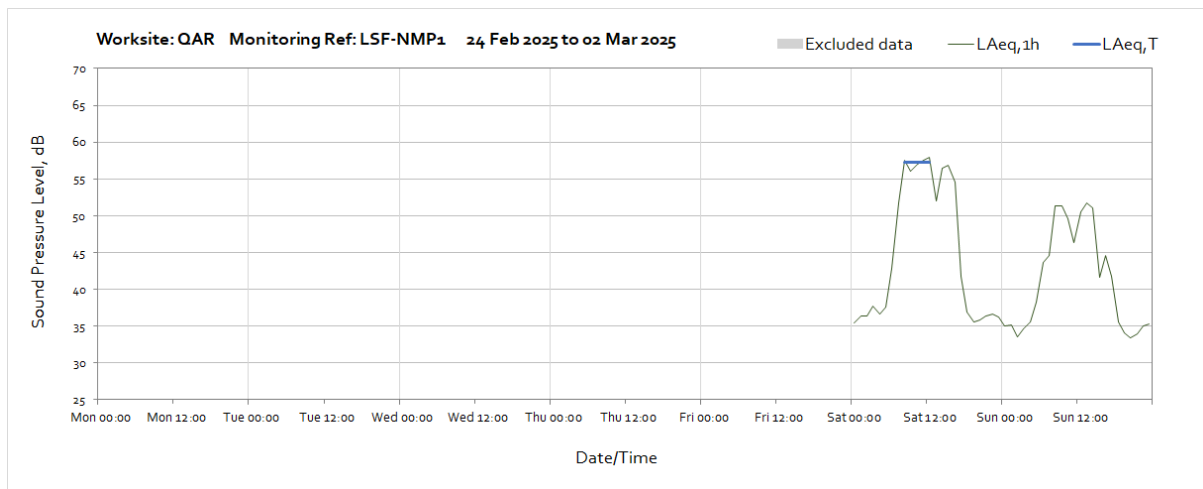
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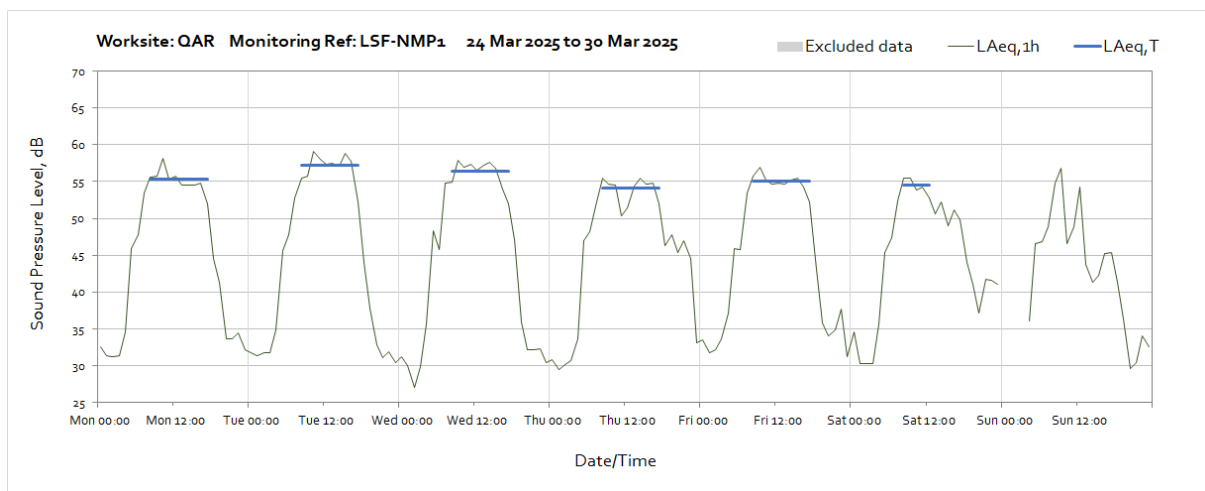
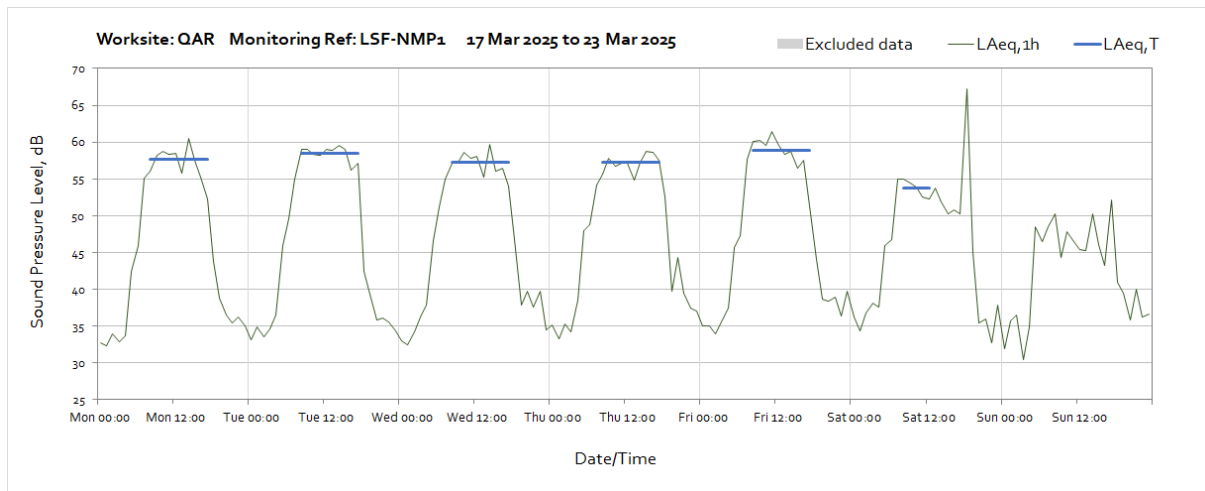
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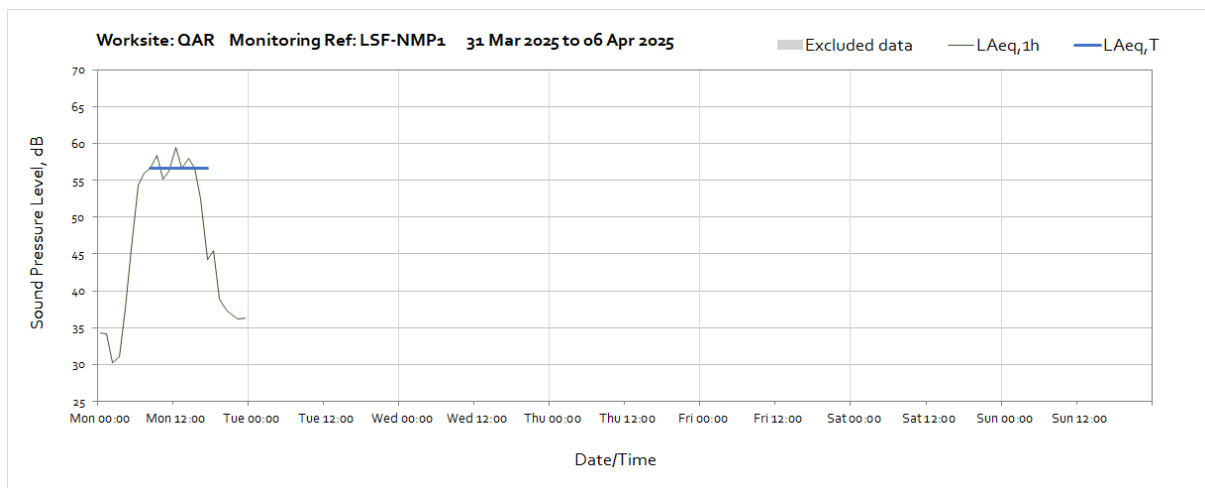
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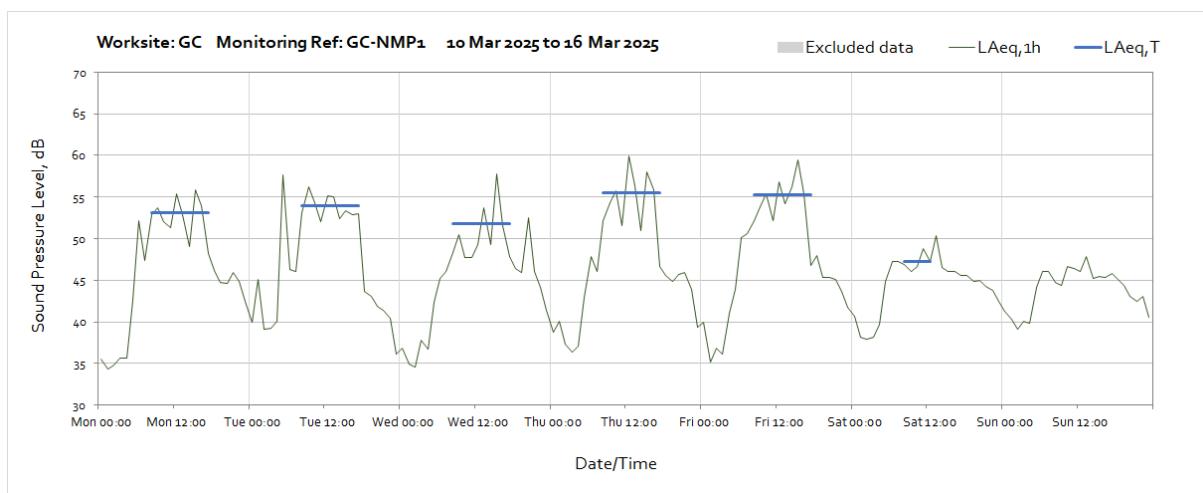
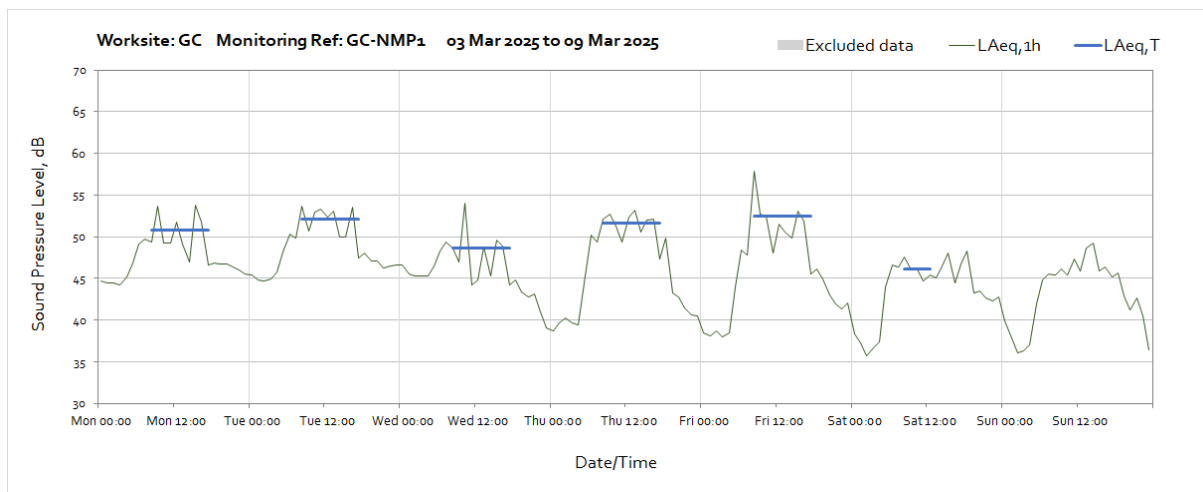
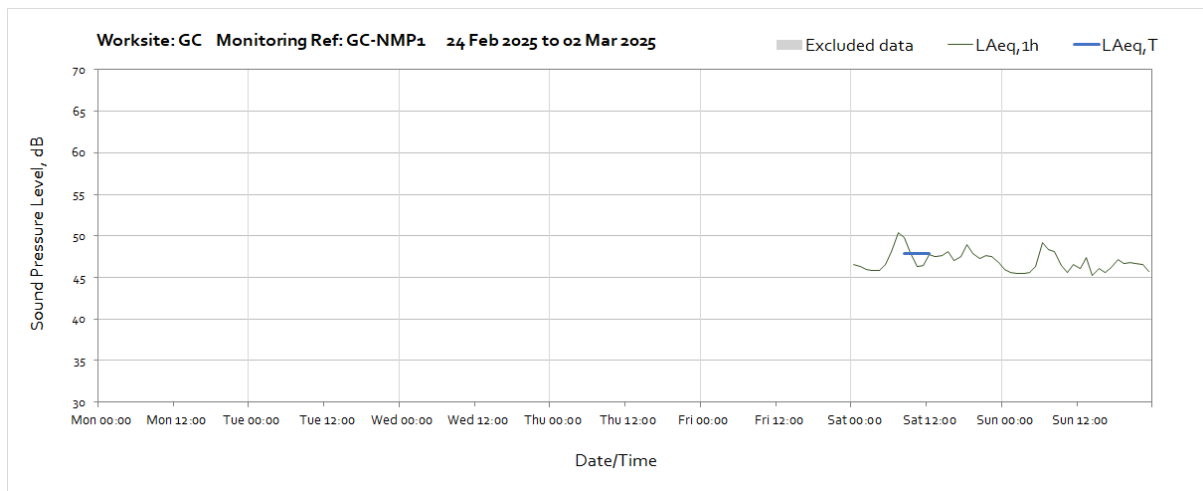
OFFICIAL

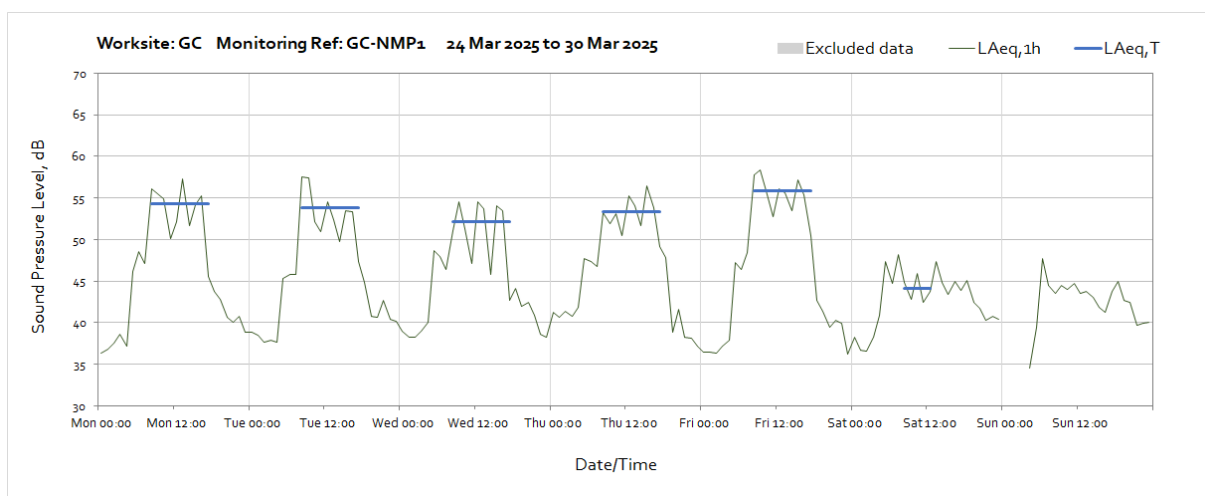
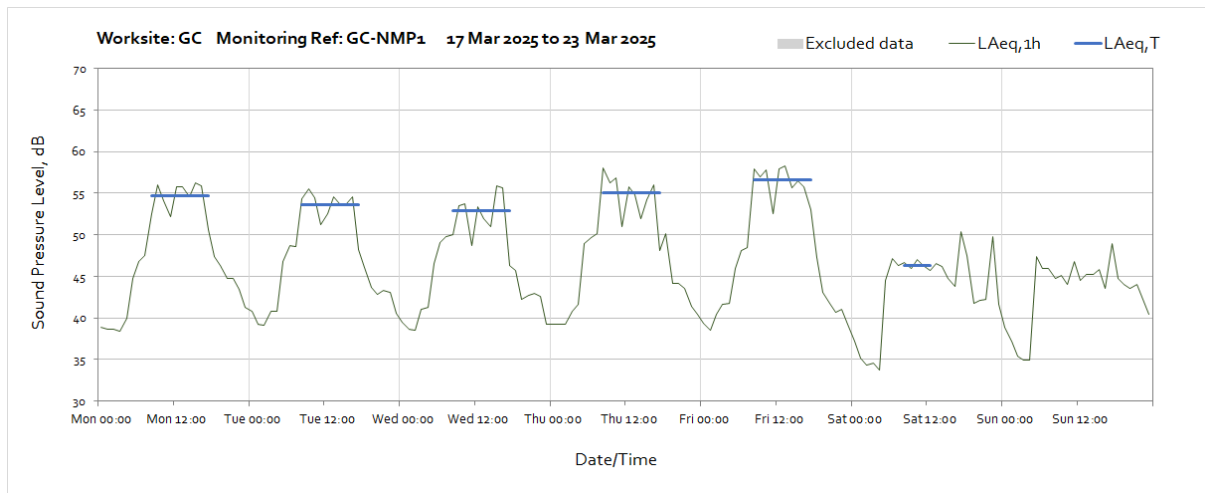


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

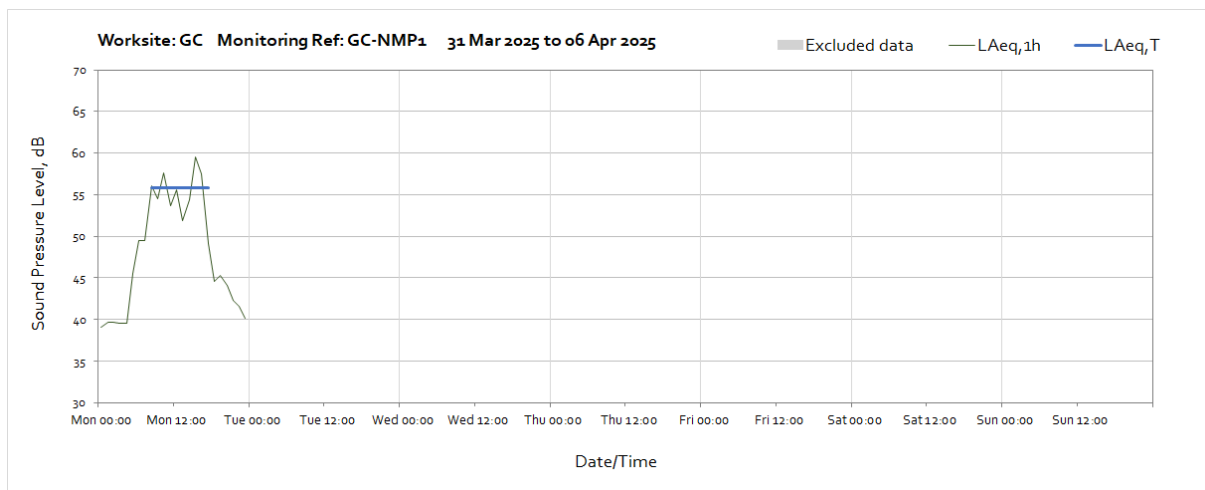


Worksite: GC – Monitoring Ref: GC-NMP1

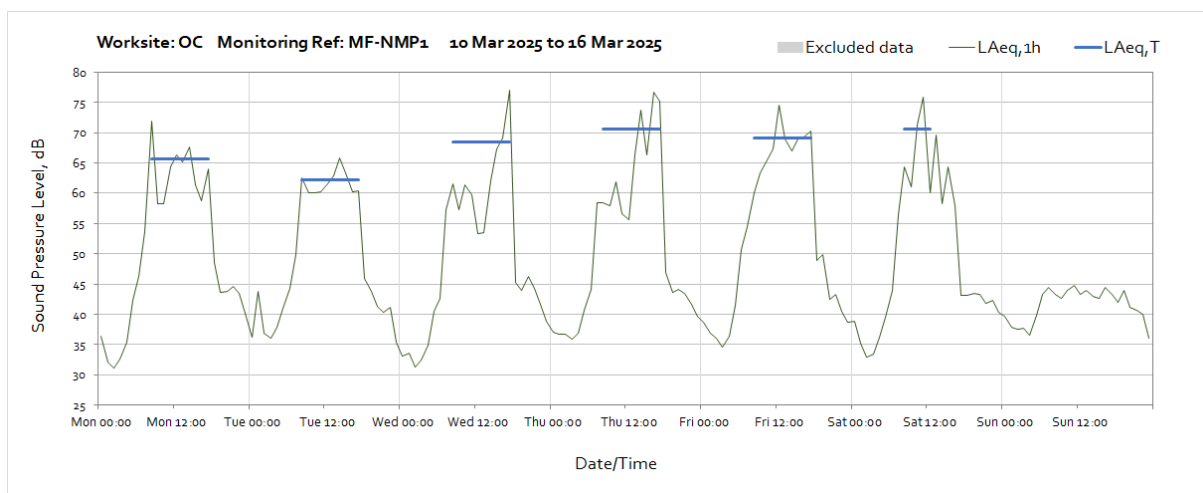
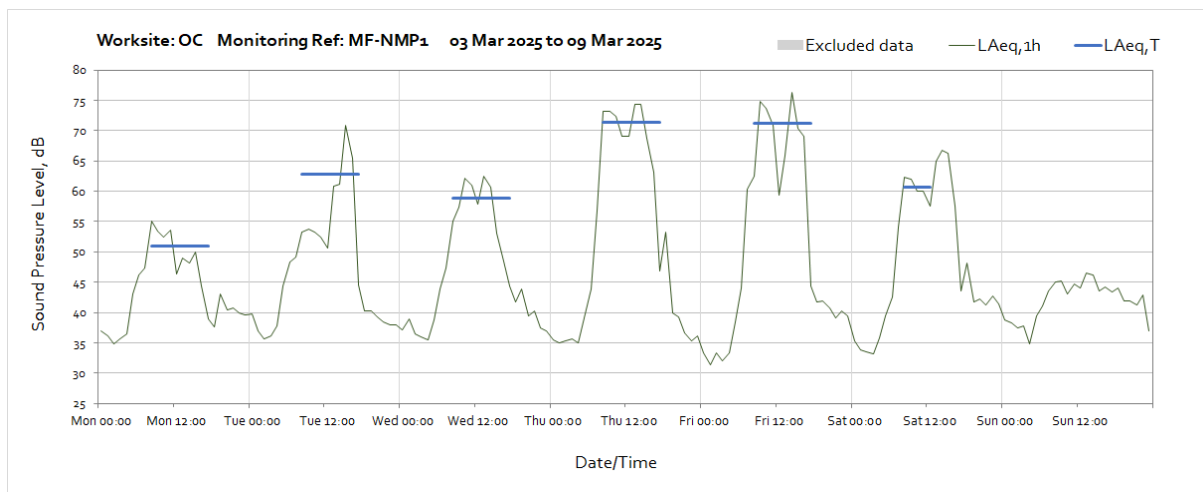
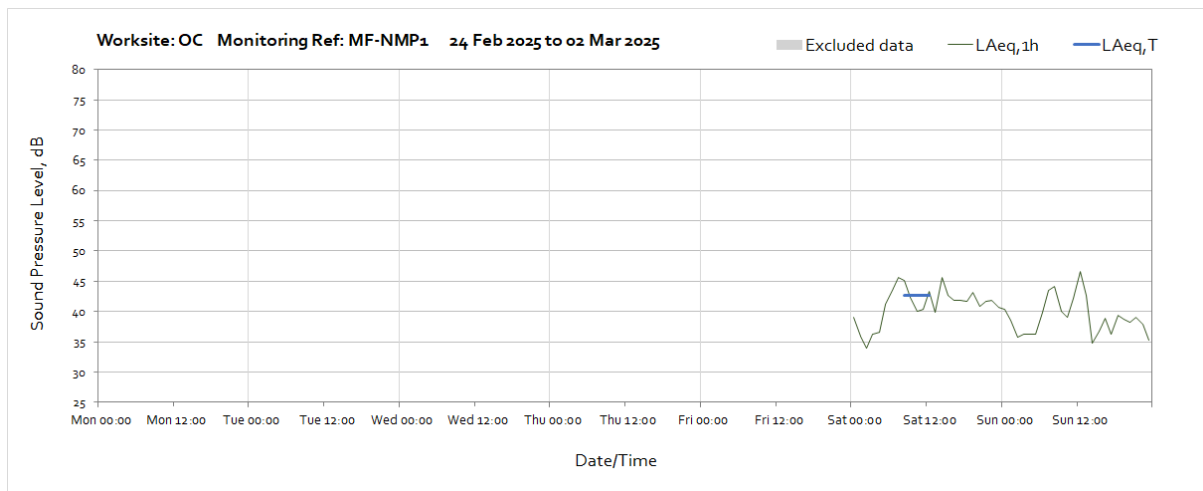




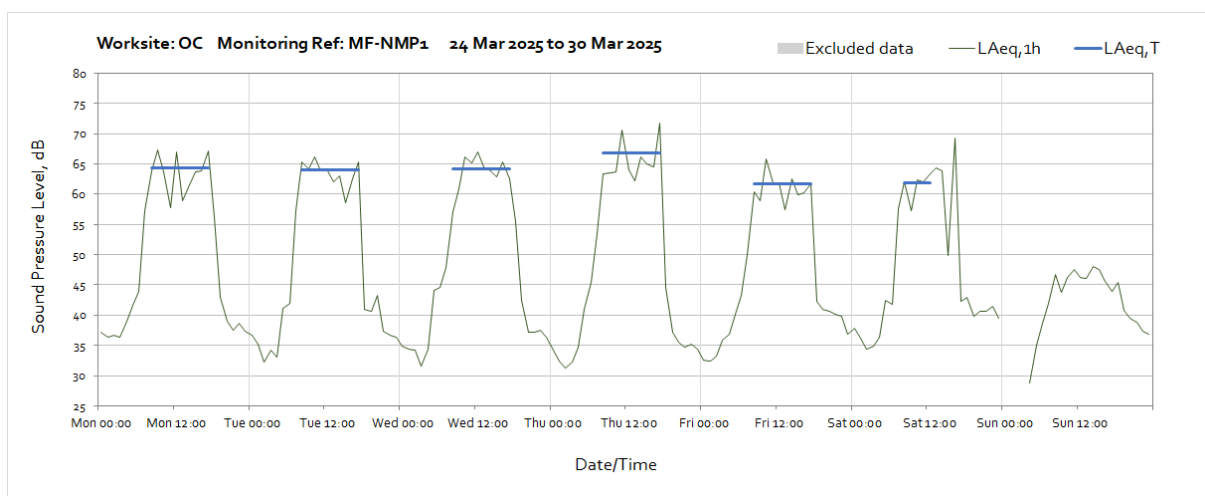
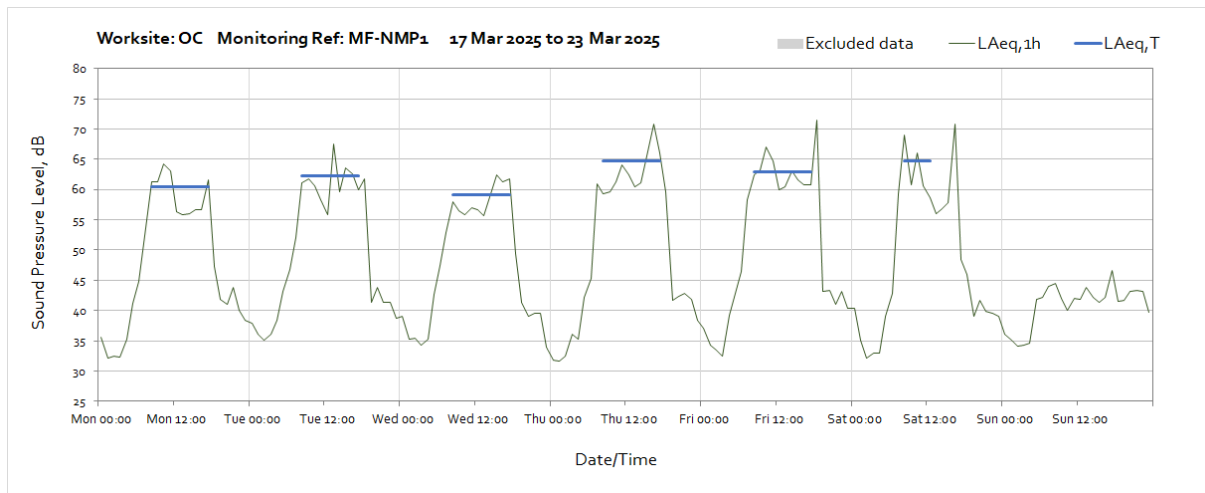
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



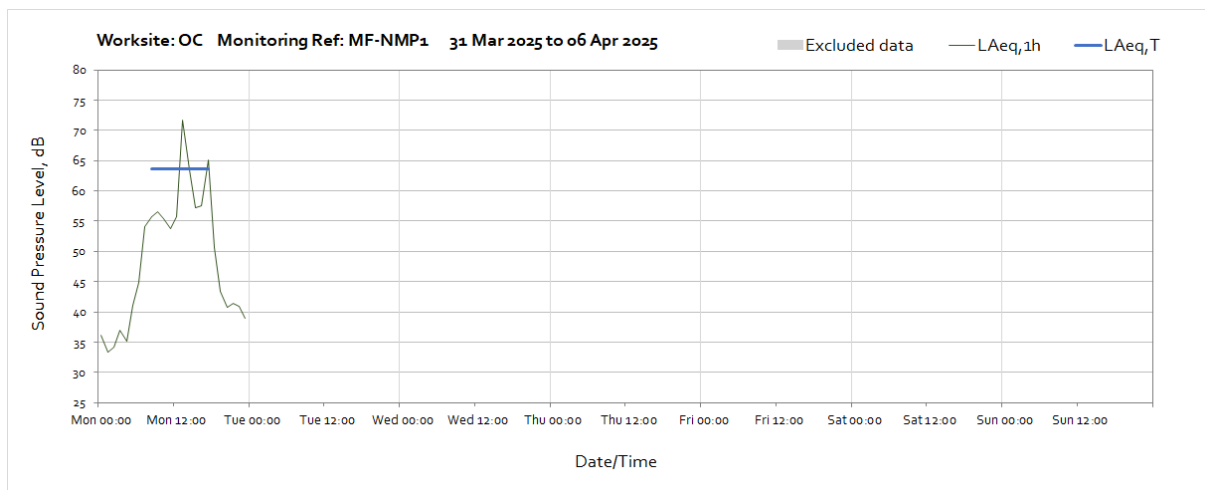
Worksite: OC – Monitoring Ref: MF-NMP1



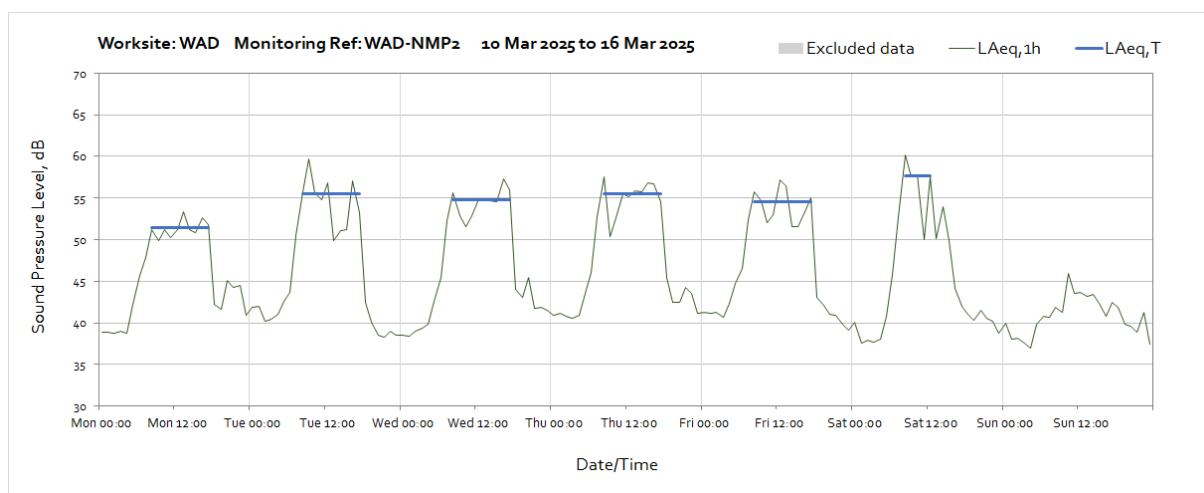
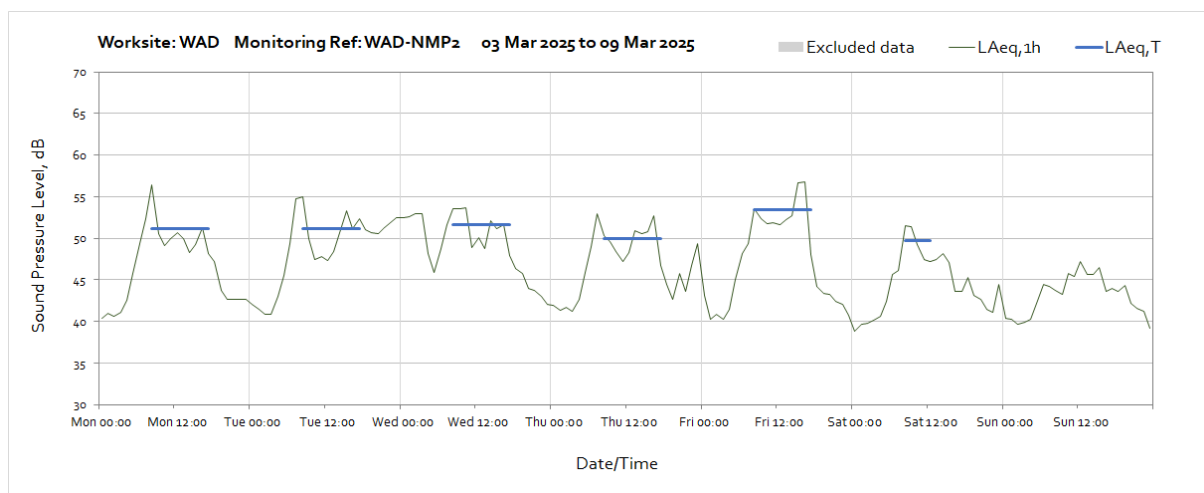
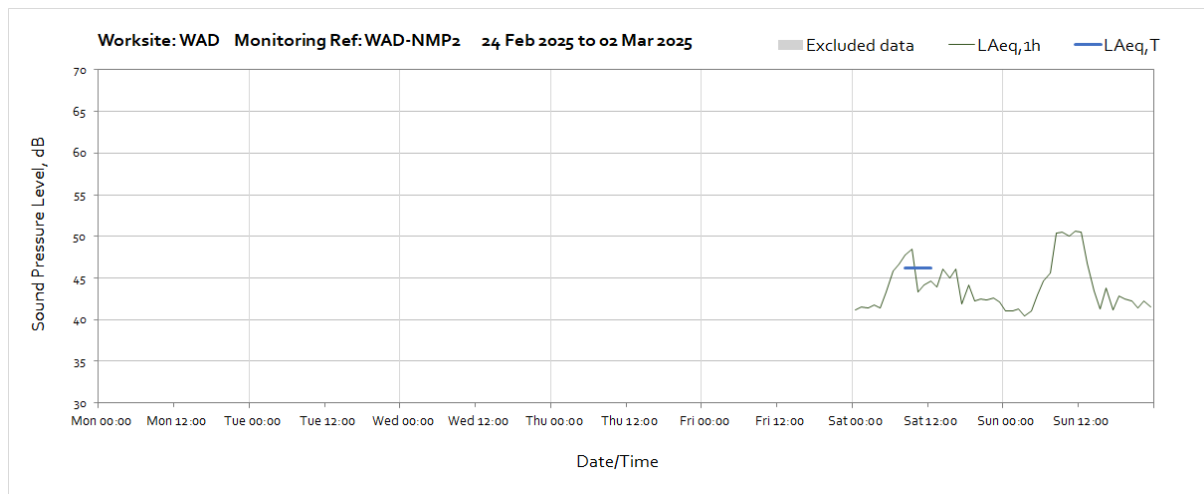
OFFICIAL



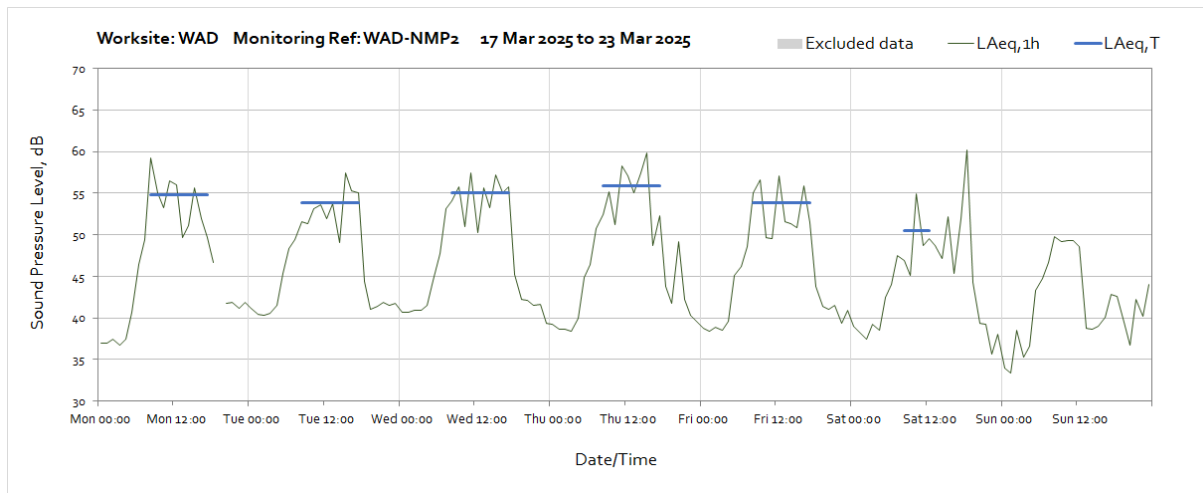
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



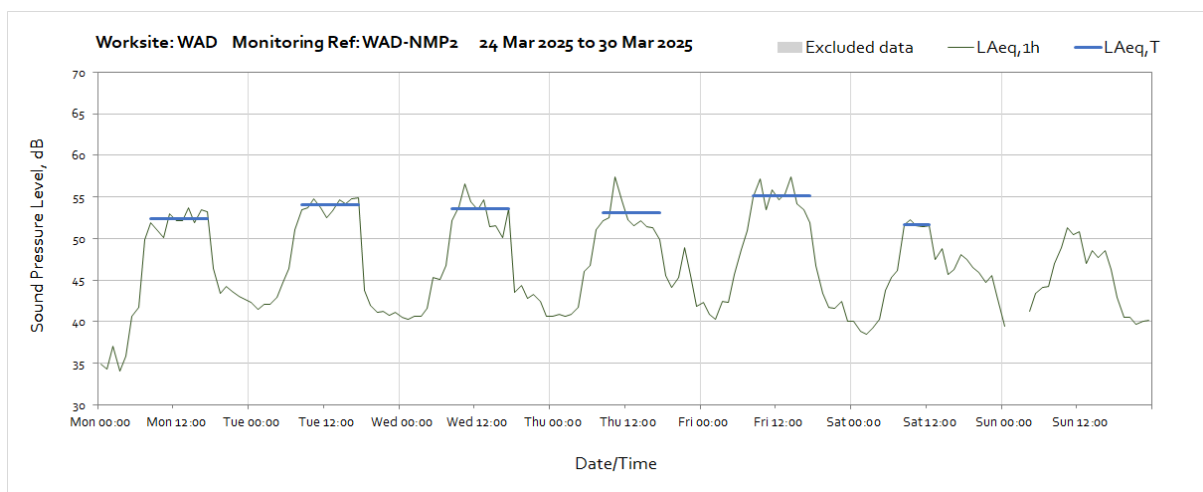
Worksite: WAD – Monitoring Ref: WAD-NMP2



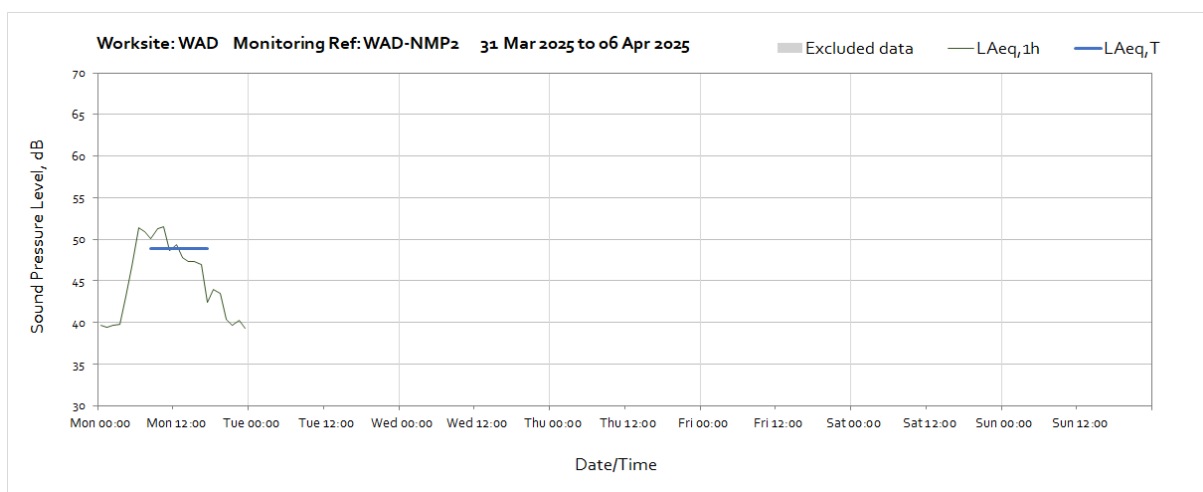
OFFICIAL



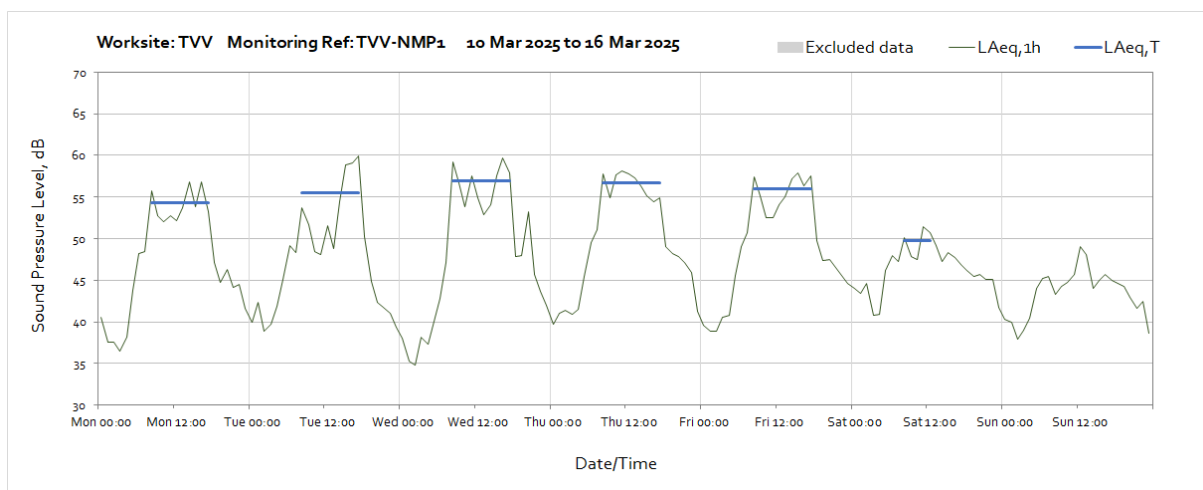
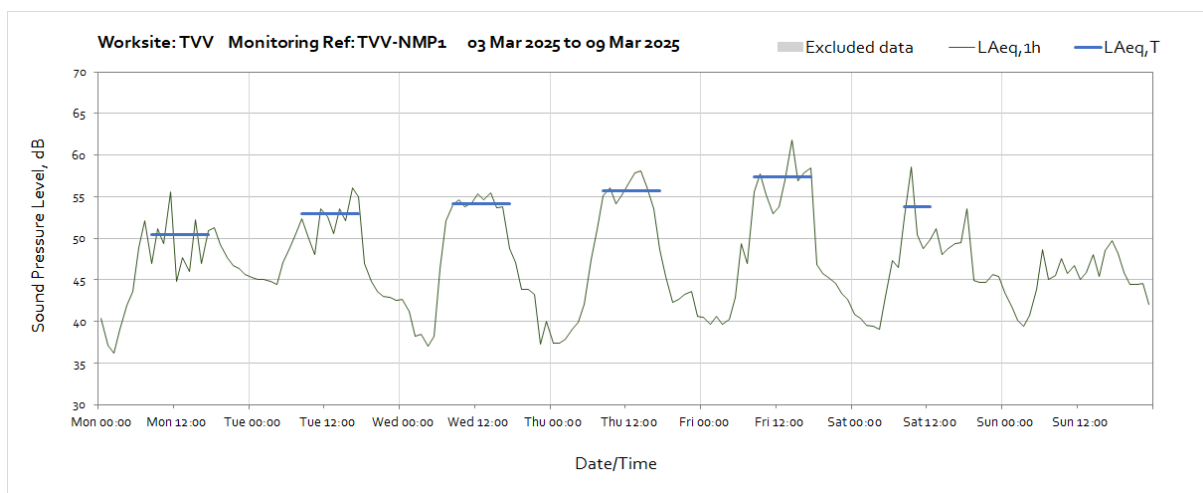
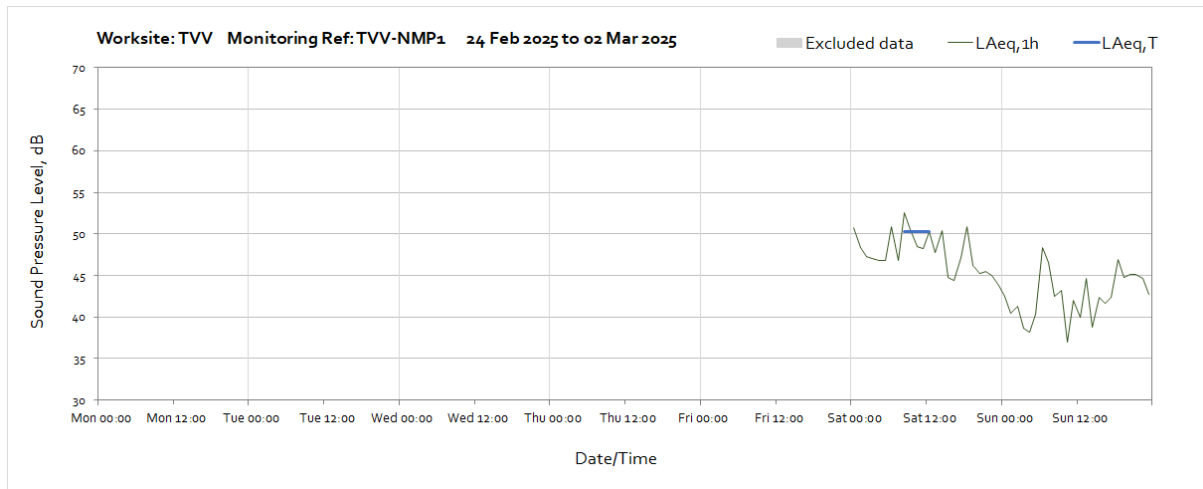
Note: Missing data between 19:00 and 18:00 on Monday 17th March was due to a communication issue between the monitoring station and server.



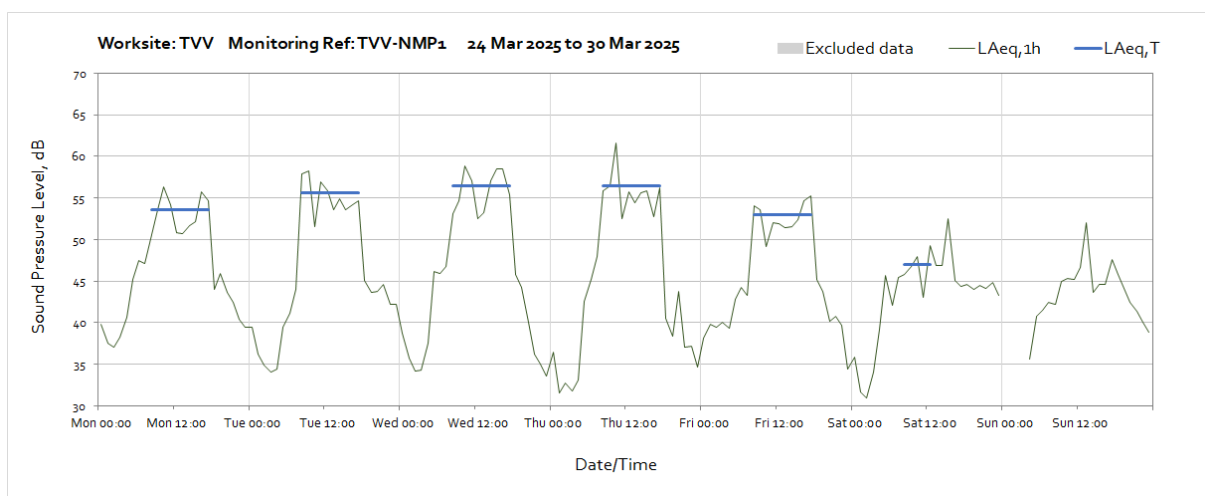
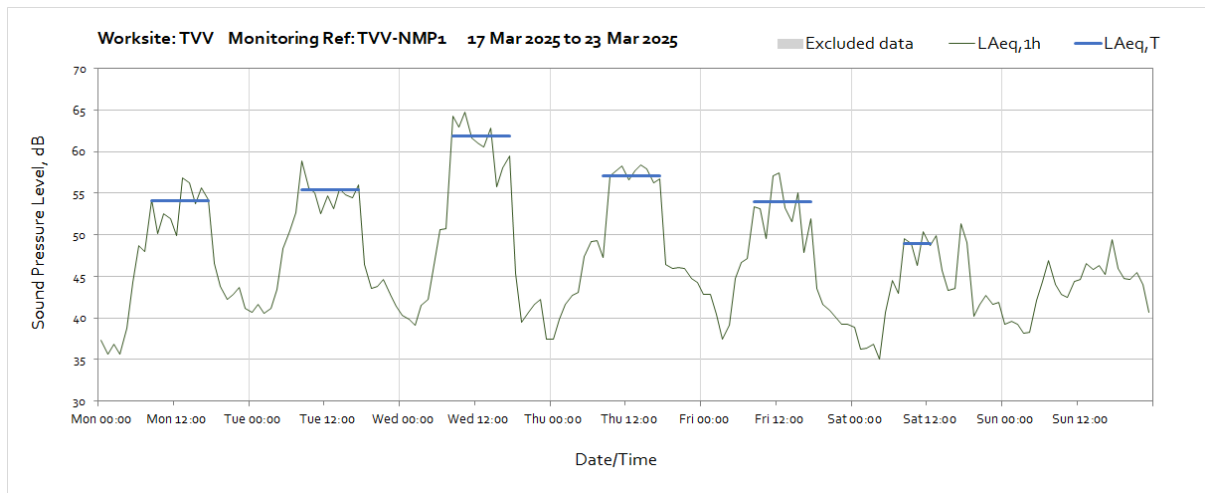
Note: Missing data between 01:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



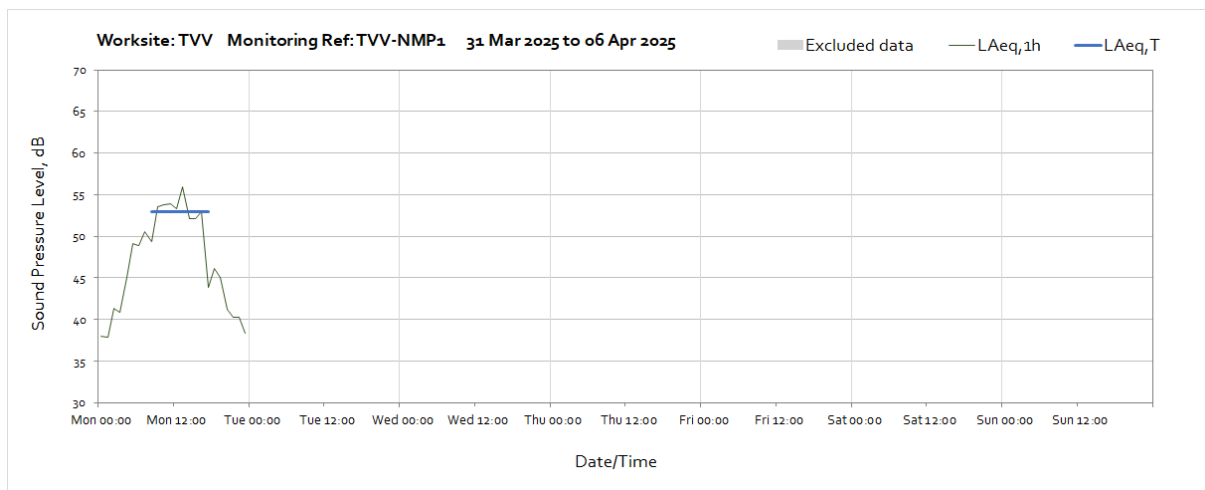
Worksite: TVV – Monitoring Ref: TVV-NMP1



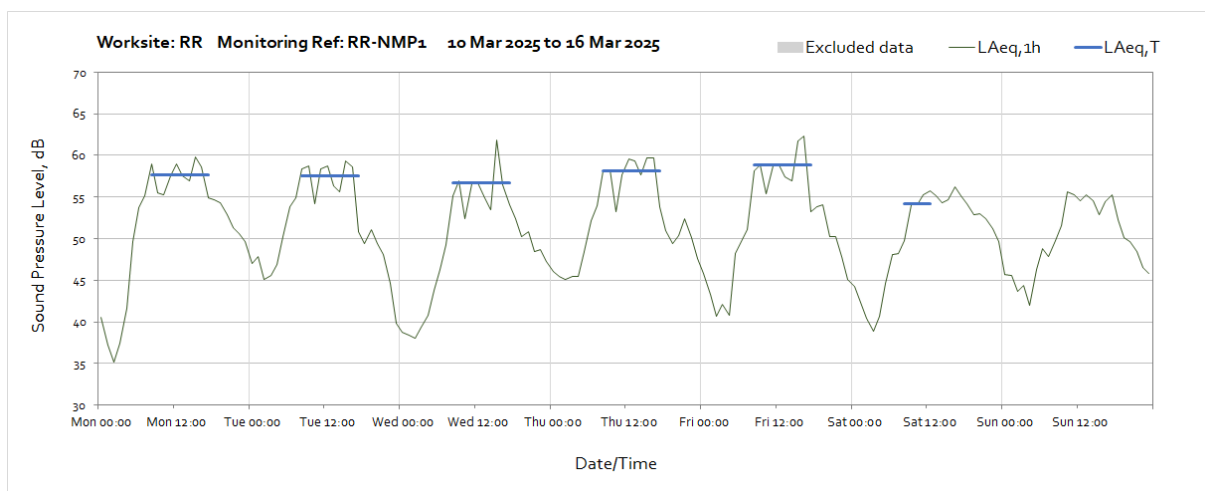
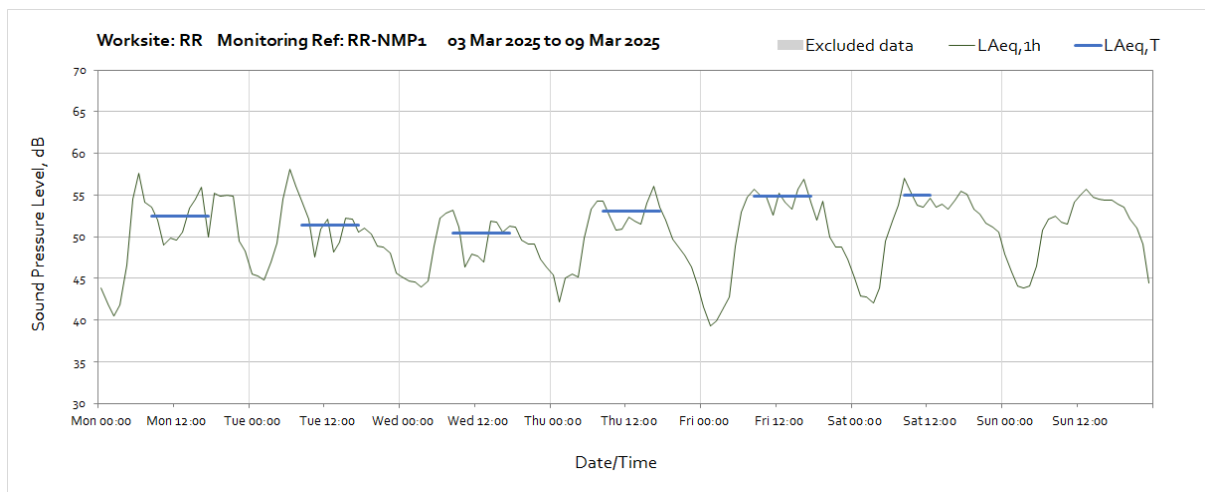
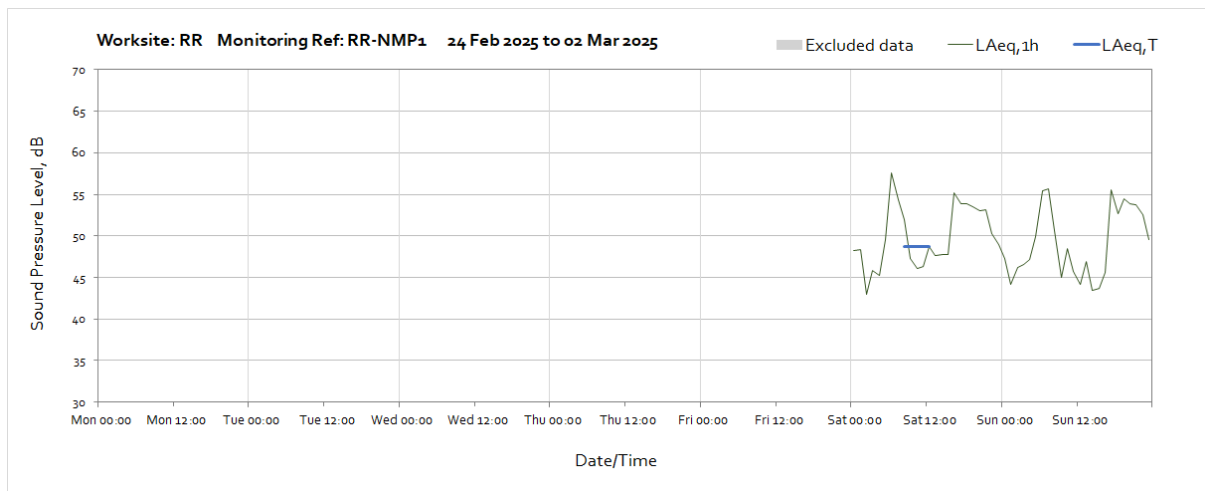
OFFICIAL



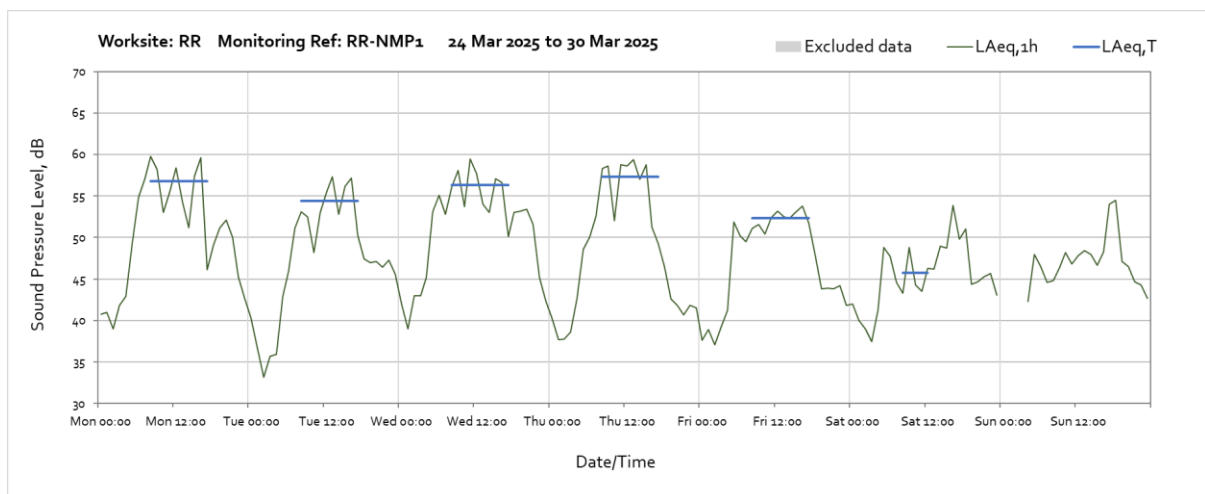
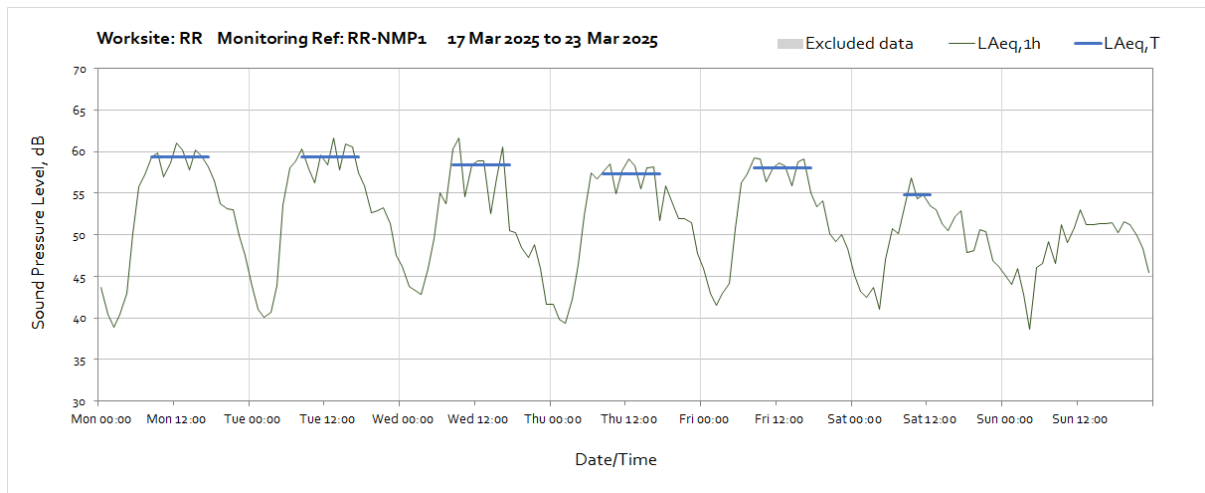
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



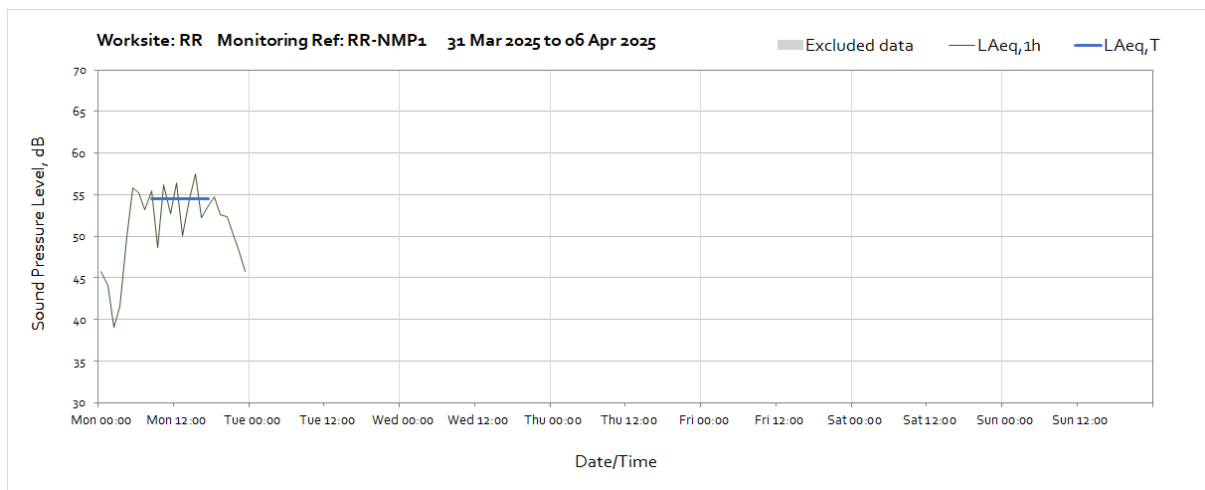
Worksite: RR – Monitoring Ref: RR-NMP1



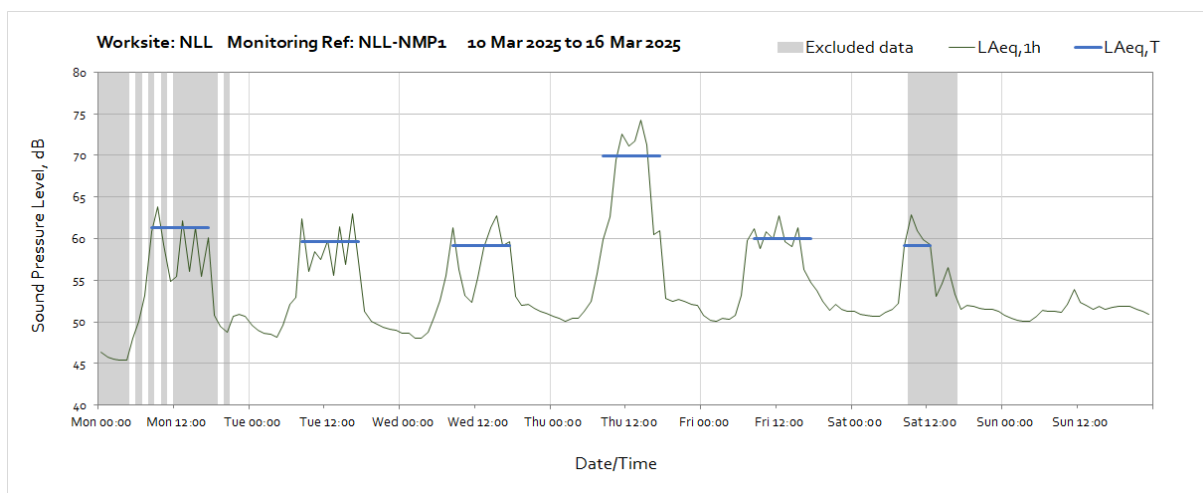
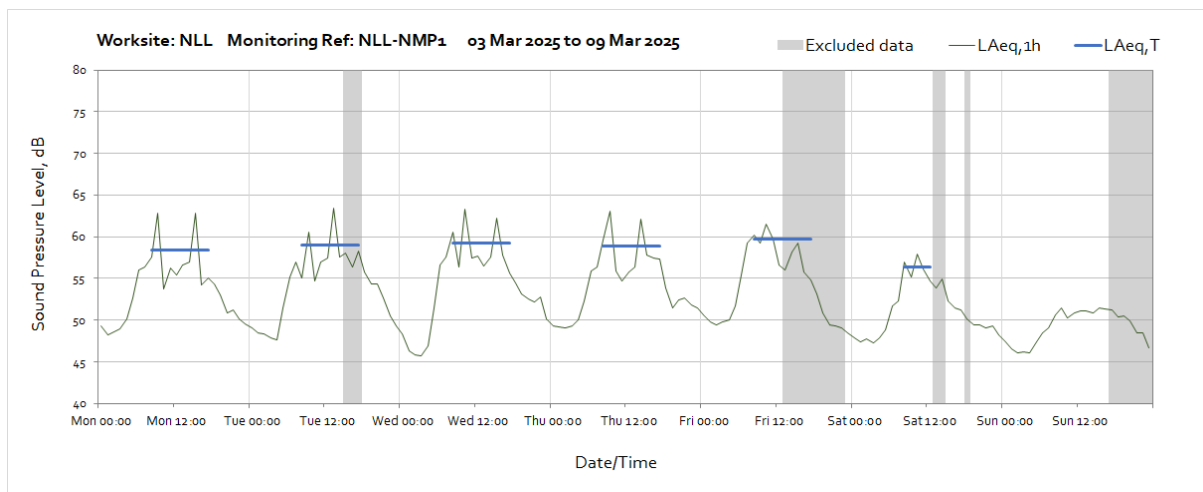
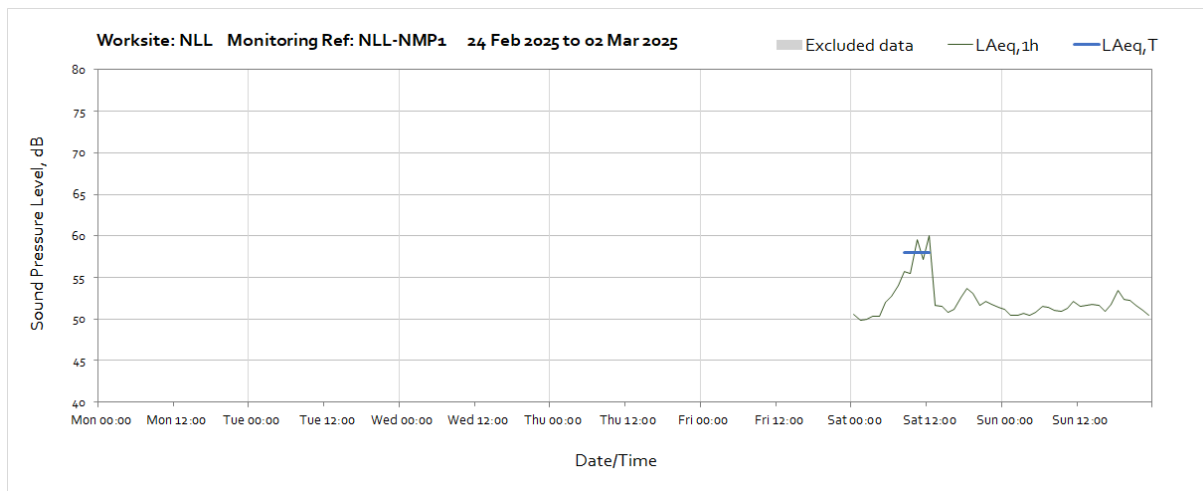
OFFICIAL



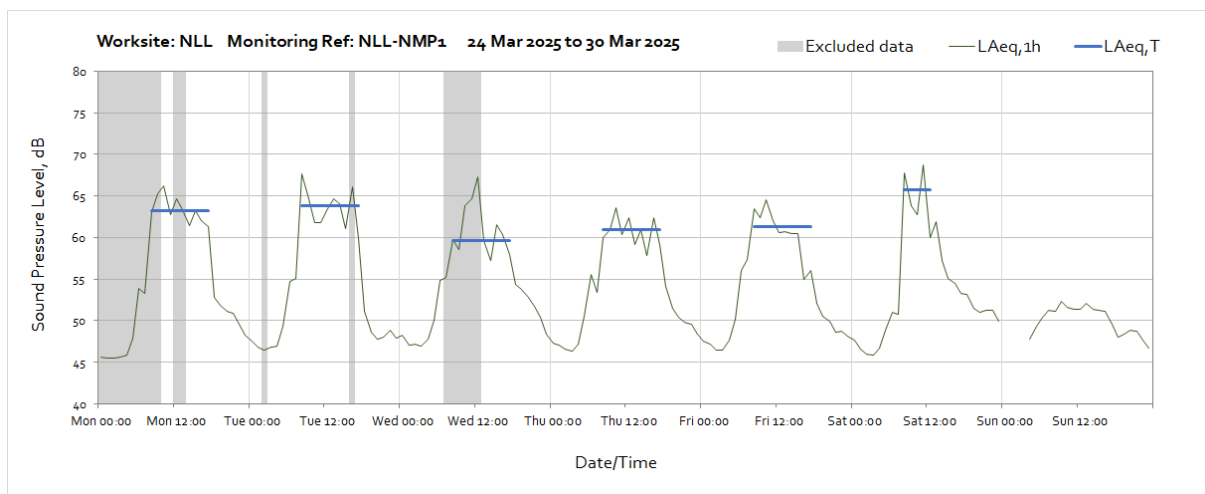
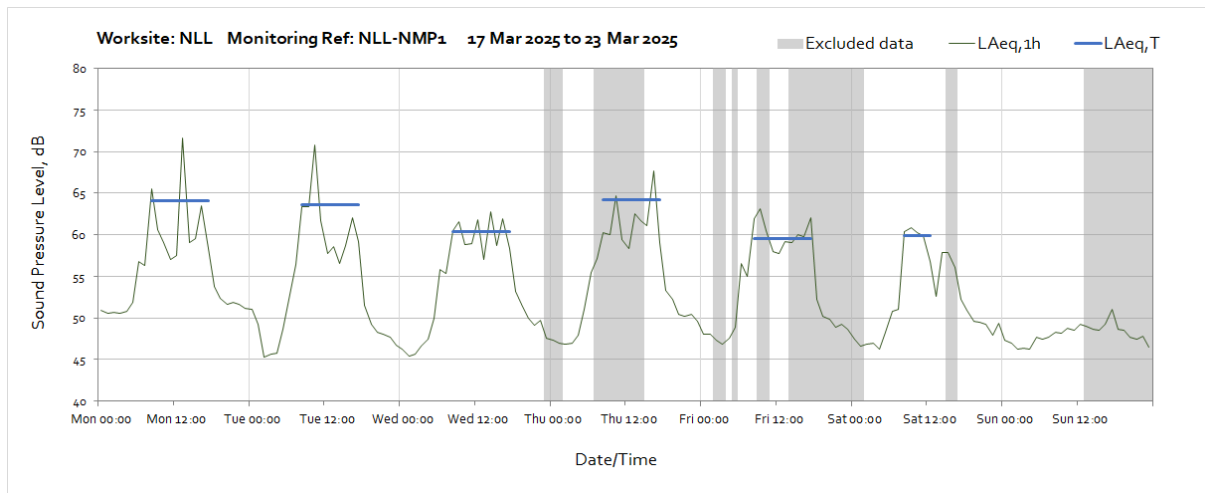
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



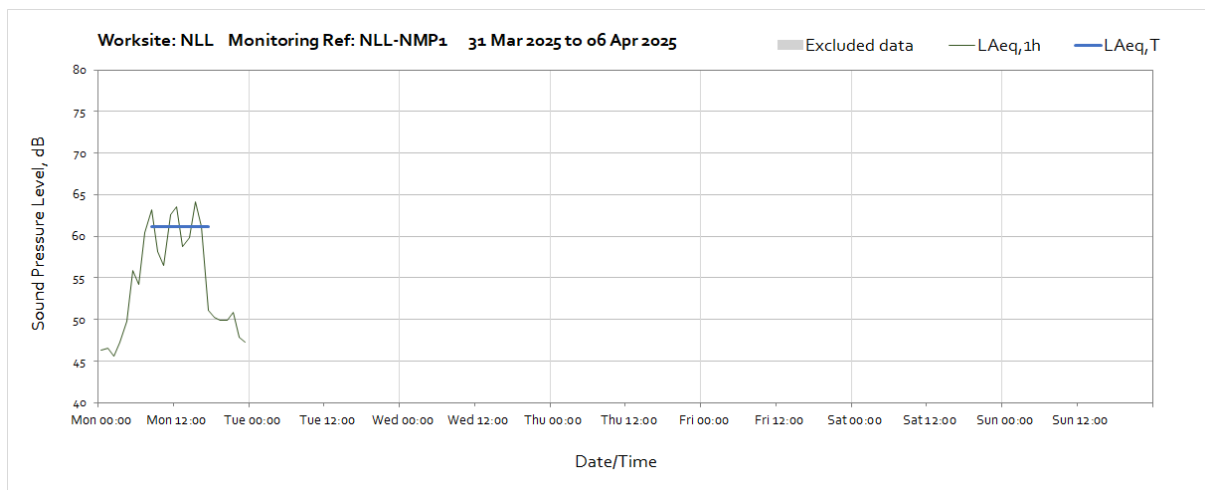
Worksite: NLL – Monitoring Ref: NLL-NMP1



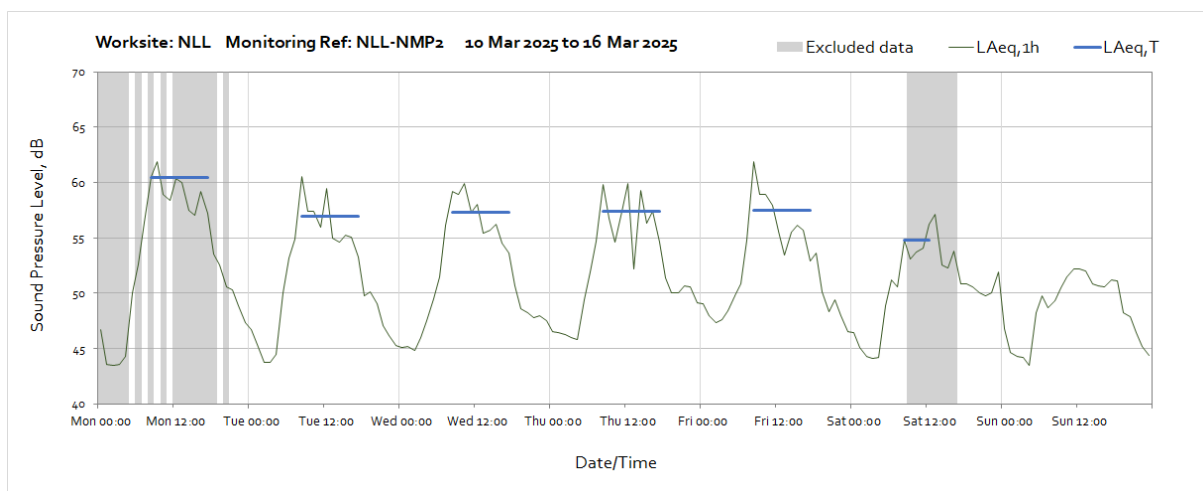
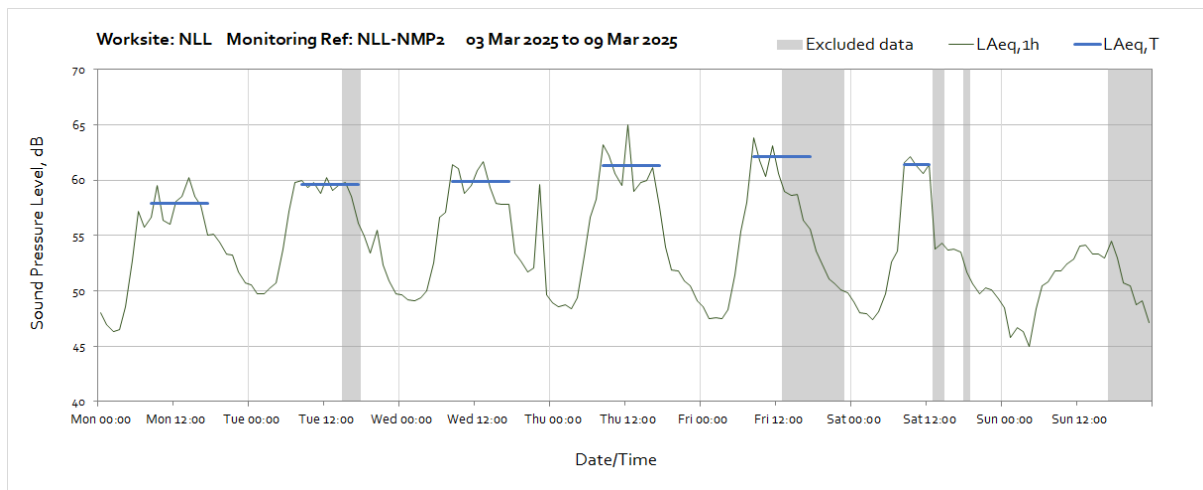
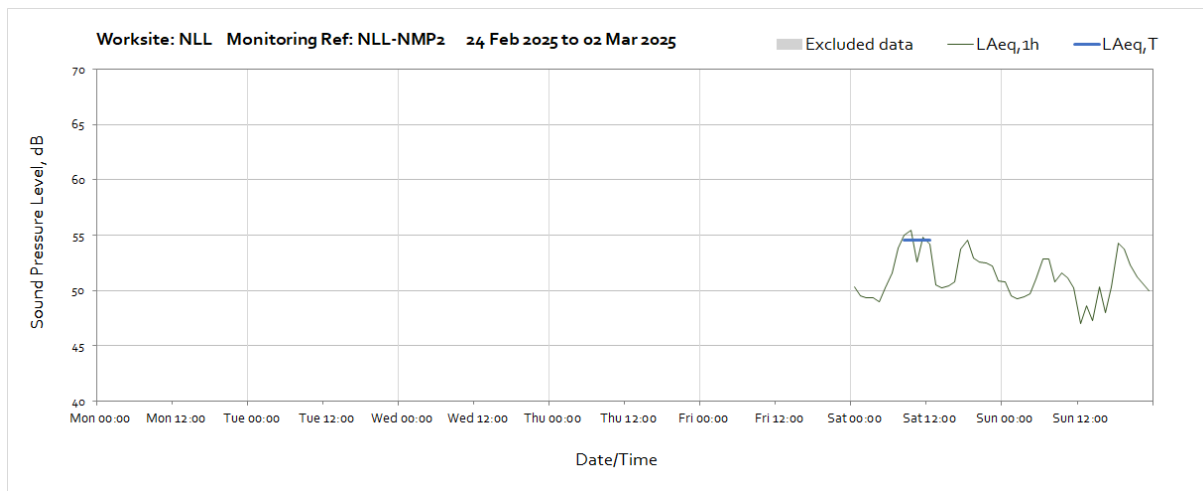
OFFICIAL

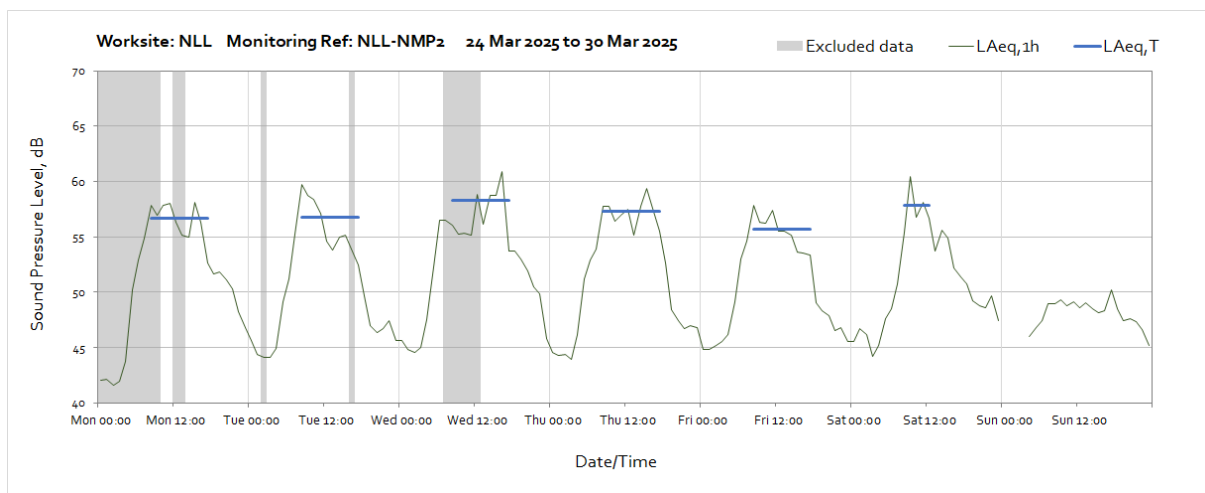
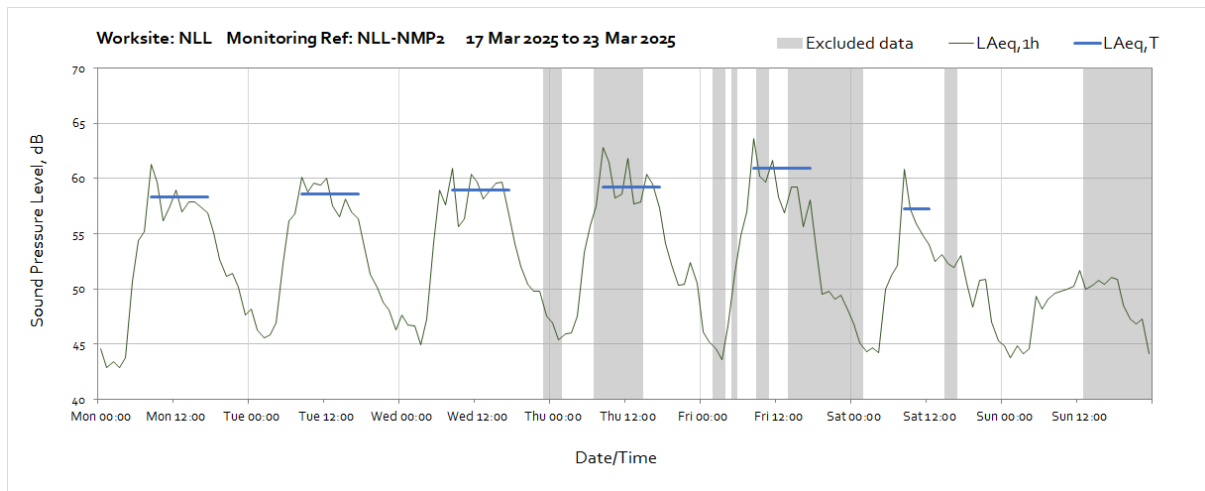


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

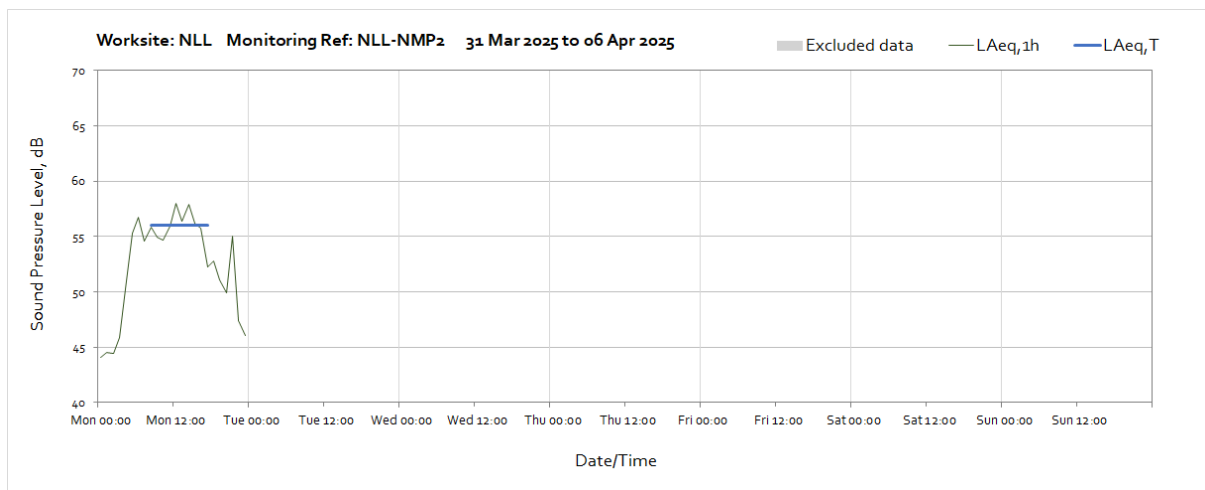


Worksite: NLL – Monitoring Ref: NLL-NMP2

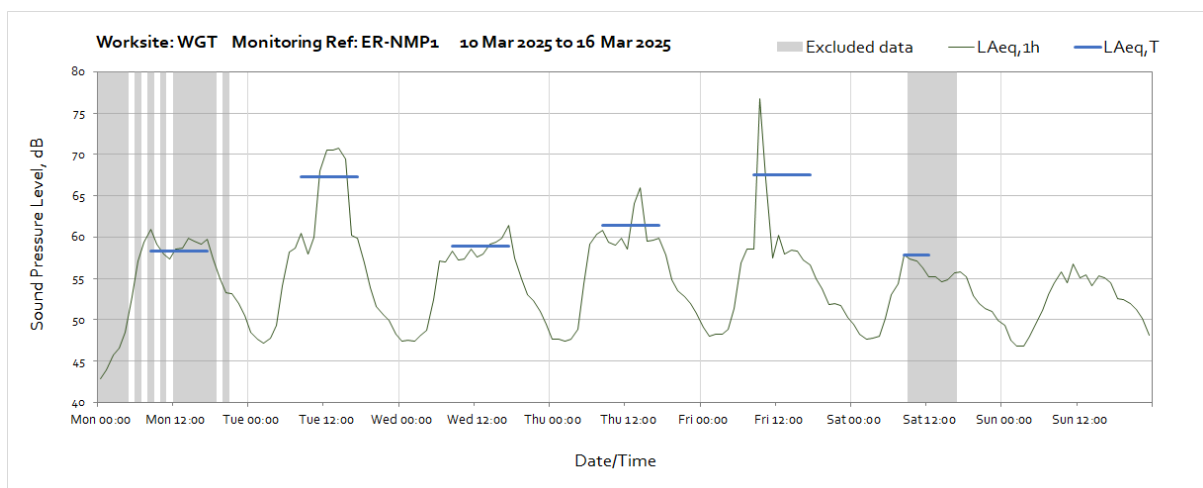
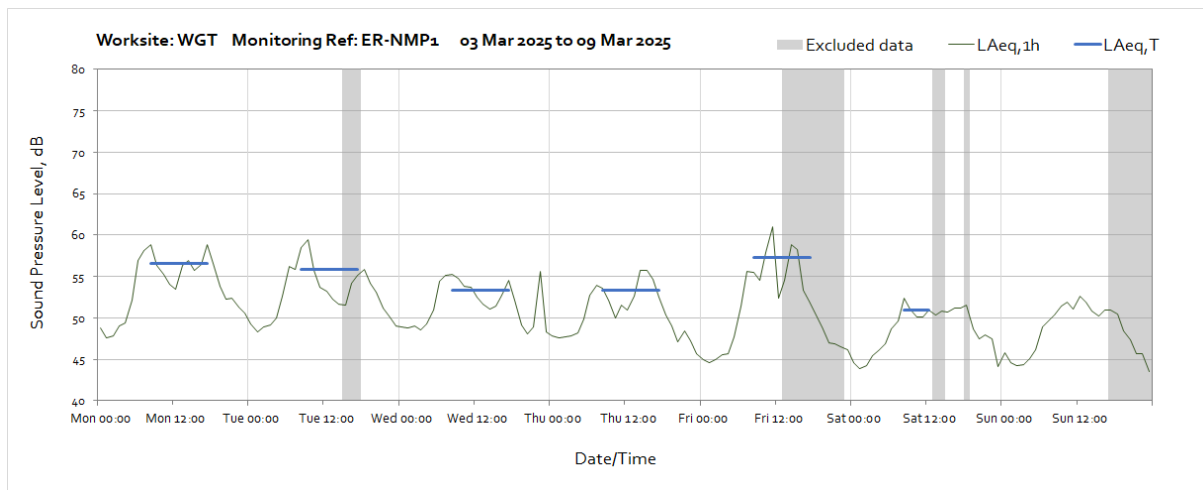
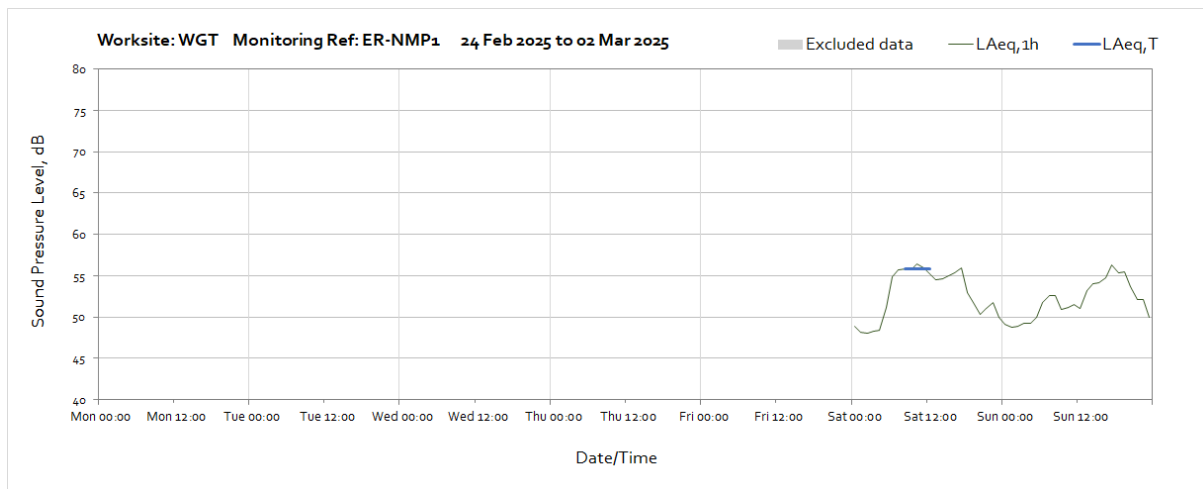




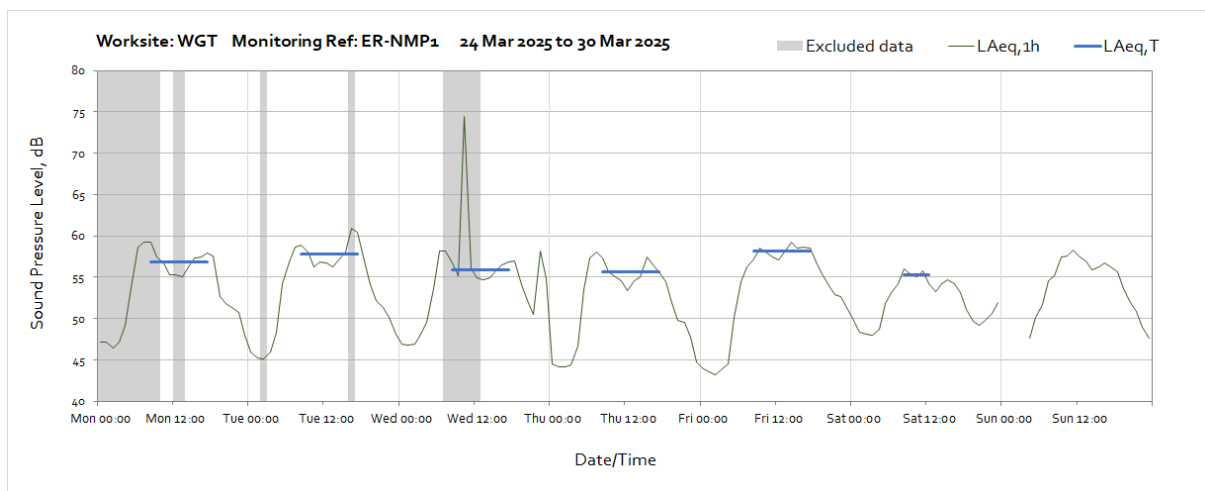
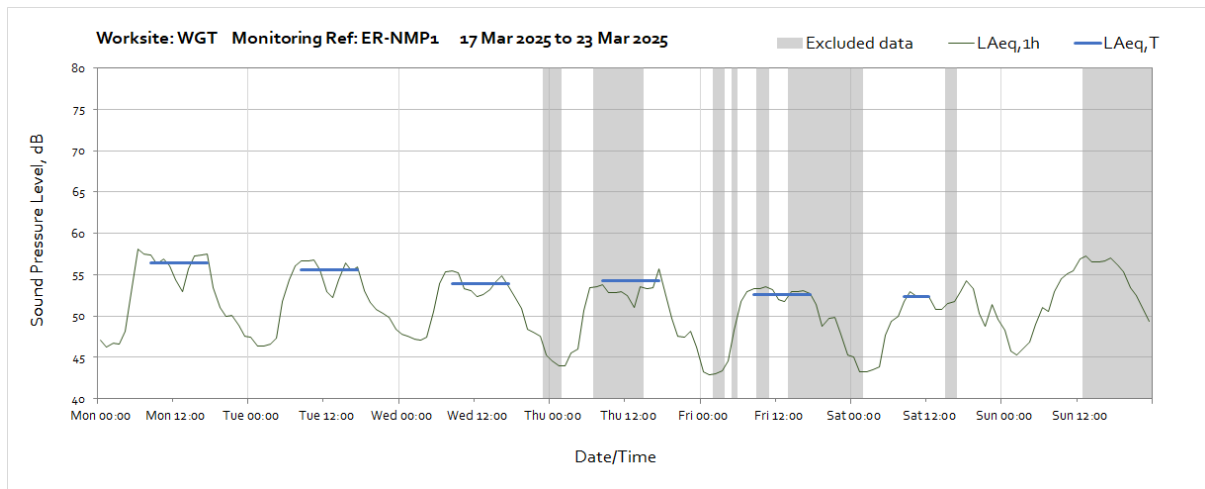
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



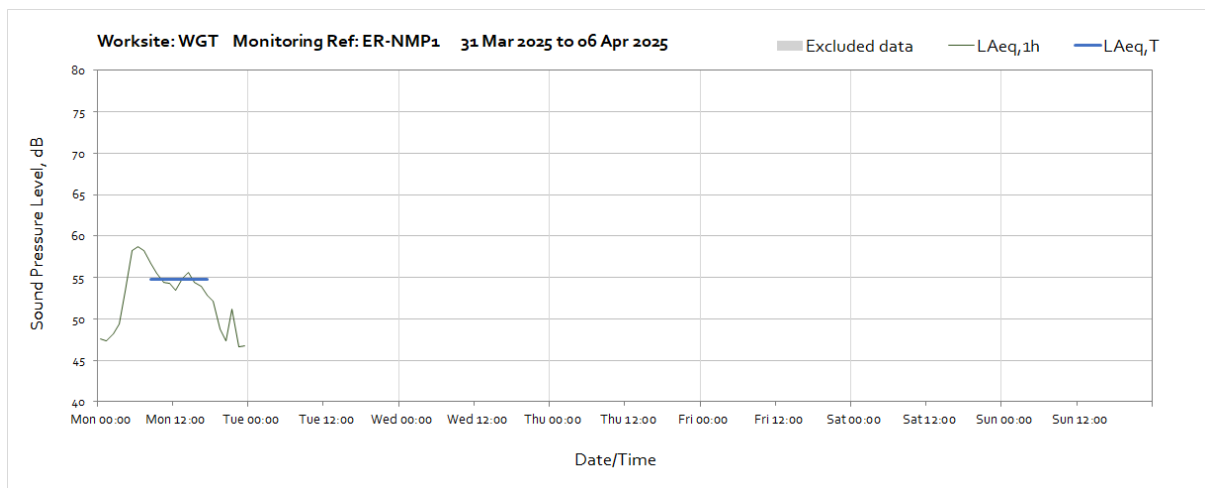
Worksite: WGT – Monitoring Ref: ER-NMP1



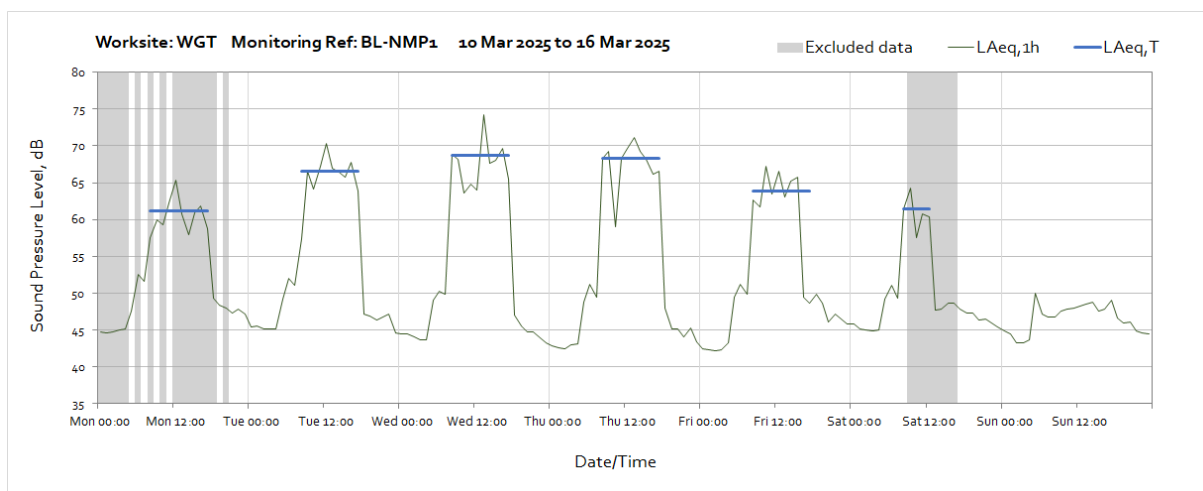
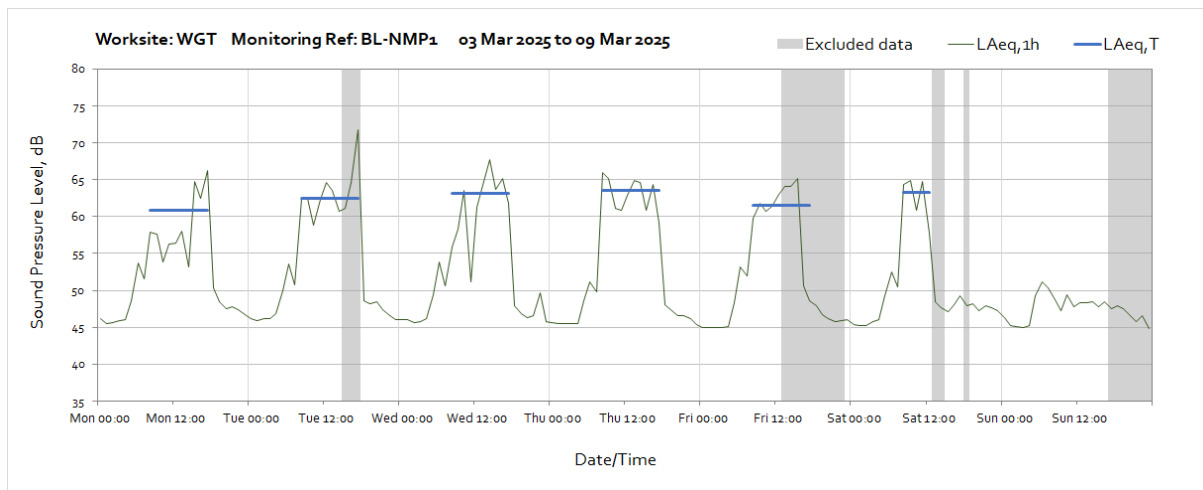
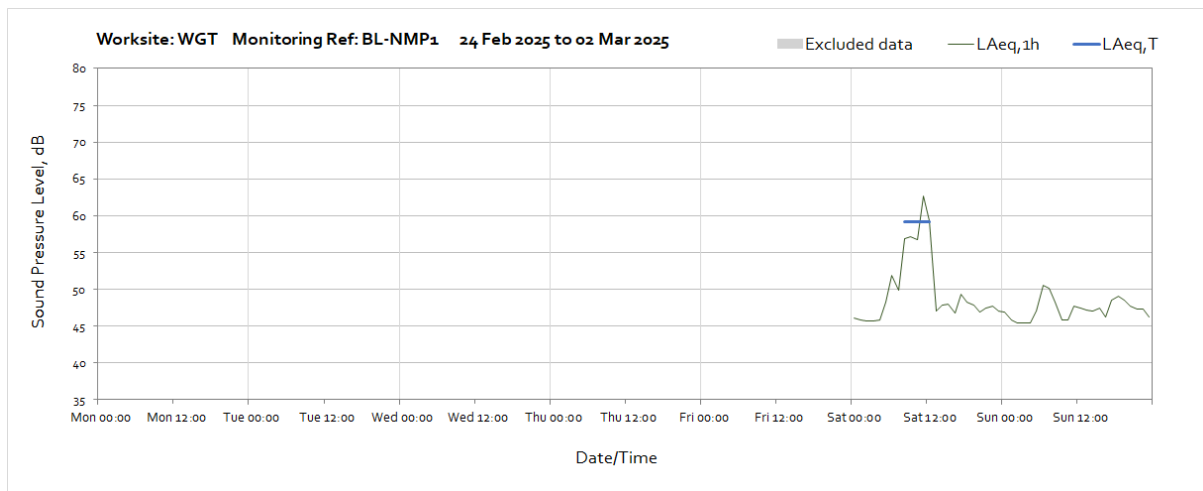
OFFICIAL



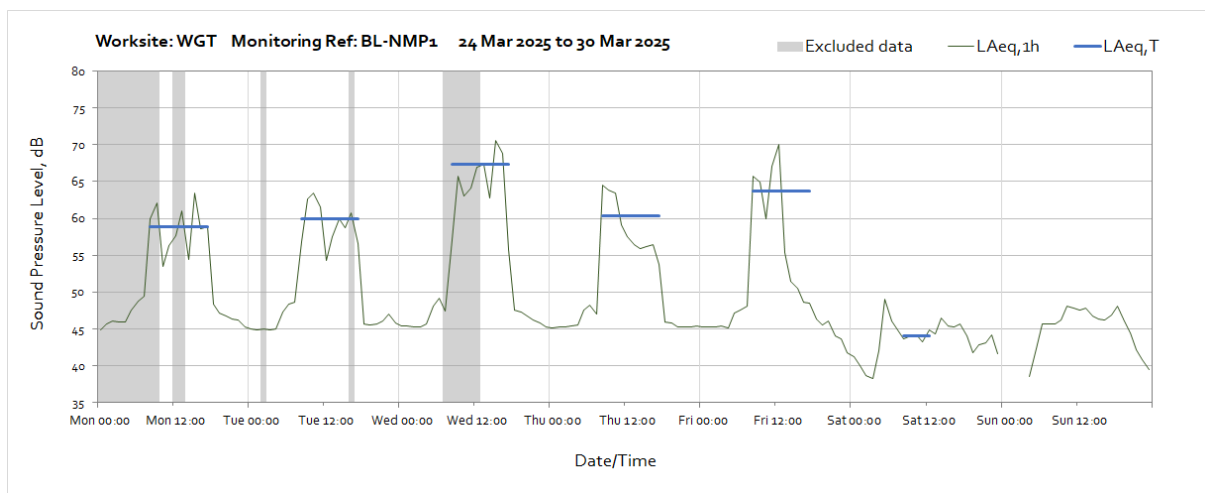
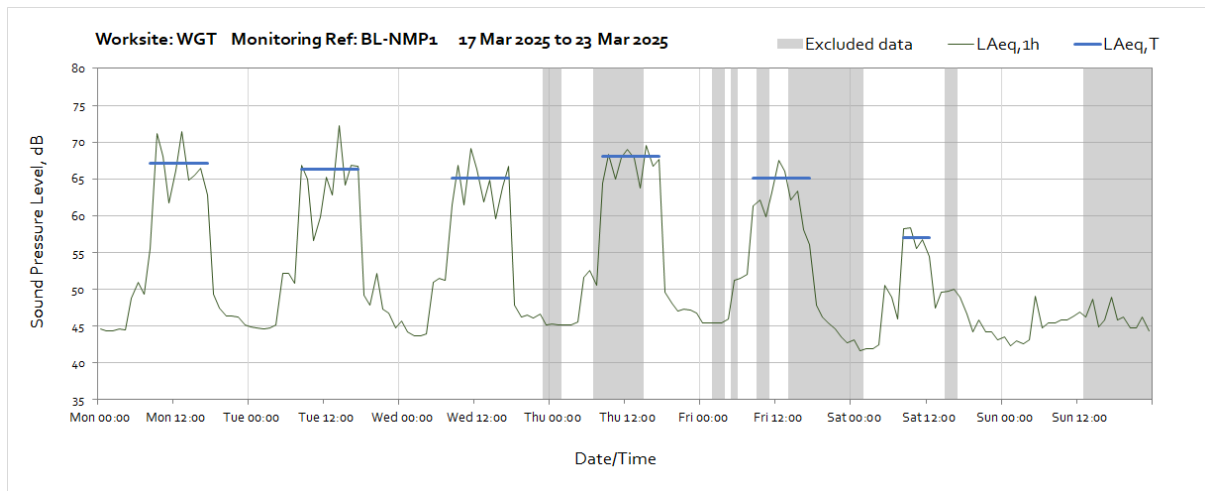
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



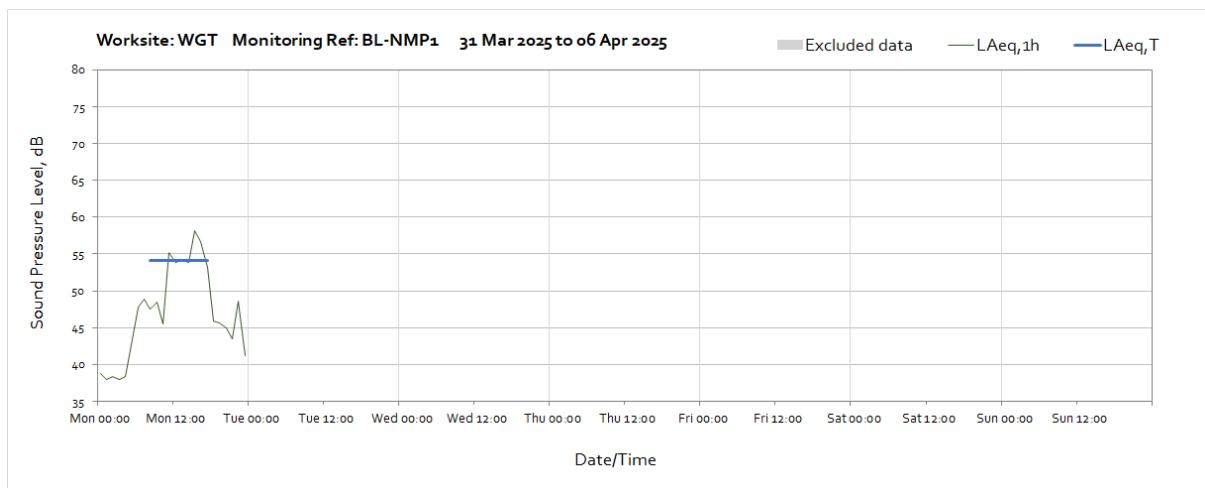
Worksite: WGT – Monitoring Ref: BL-NMP1



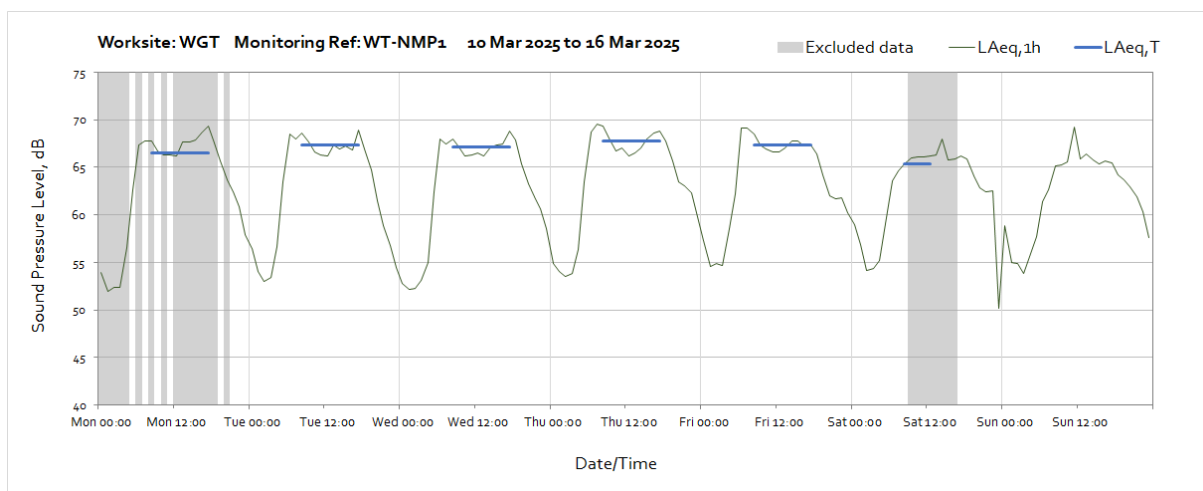
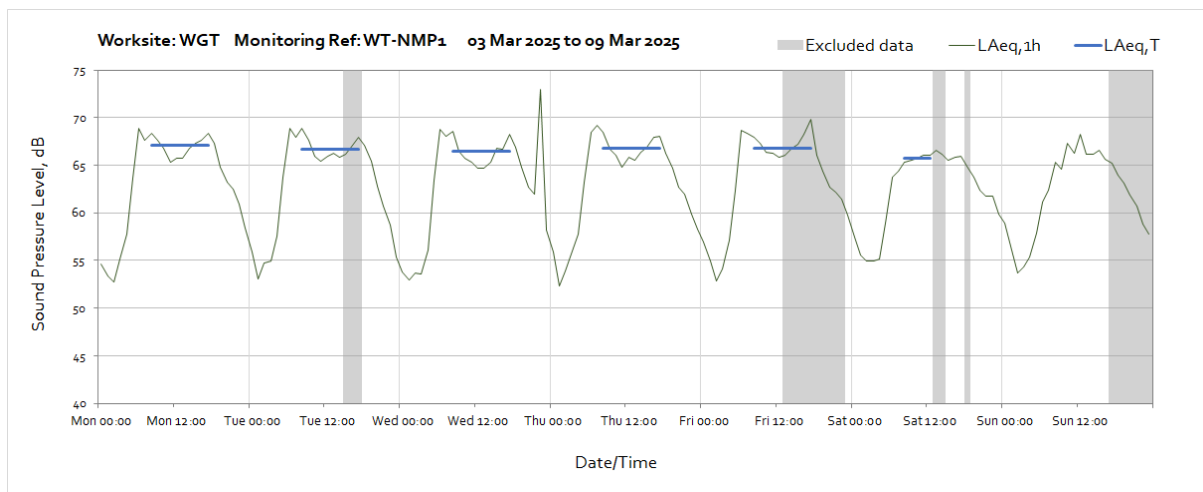
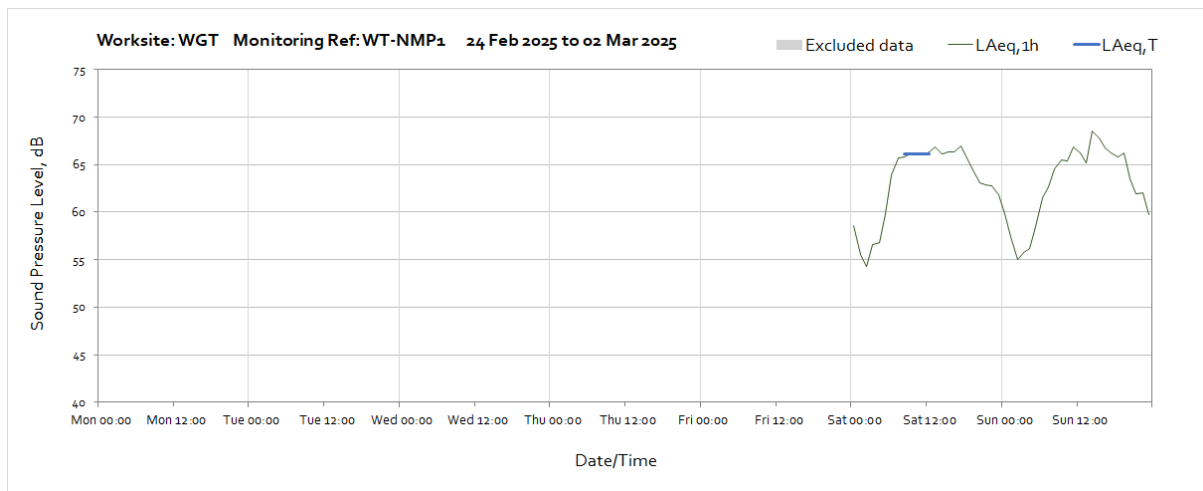
OFFICIAL



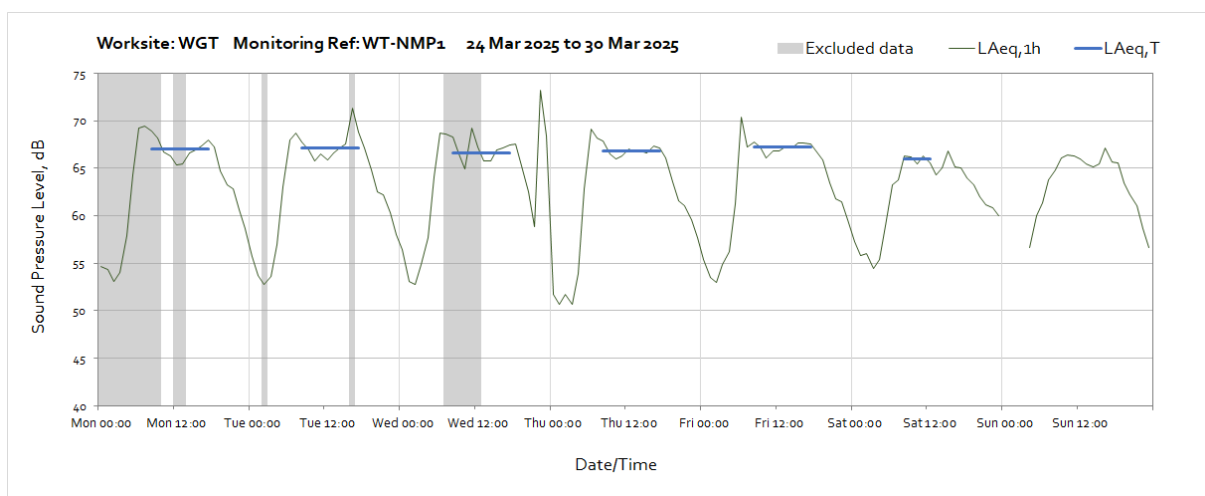
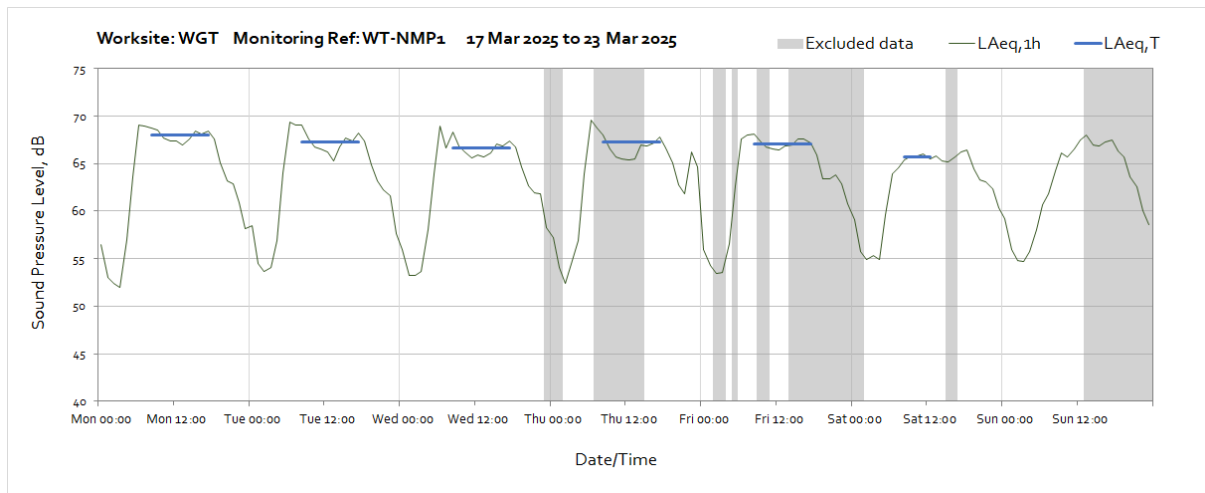
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



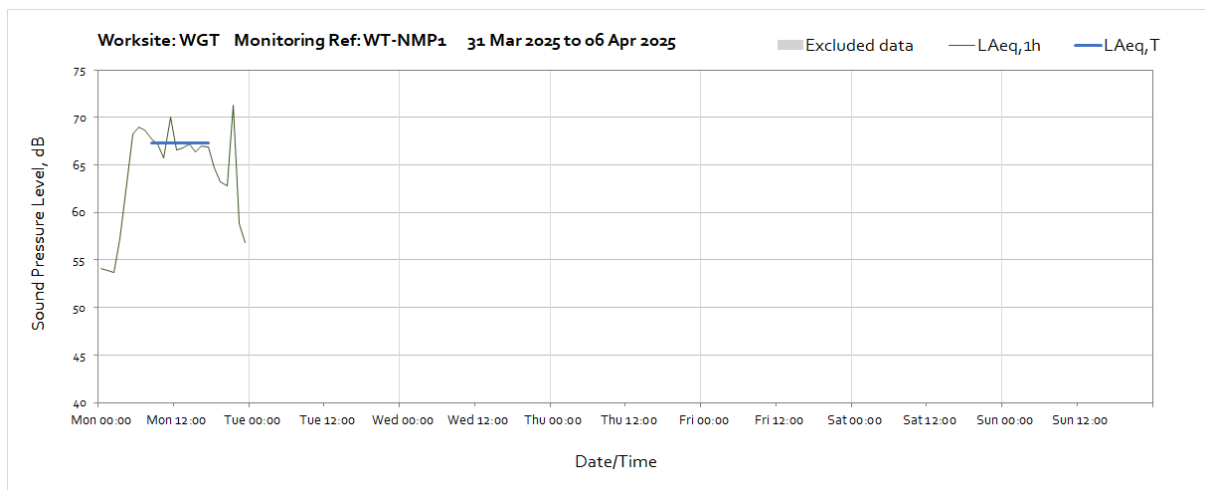
Worksite: WGT – Monitoring Ref: WT-NMP1



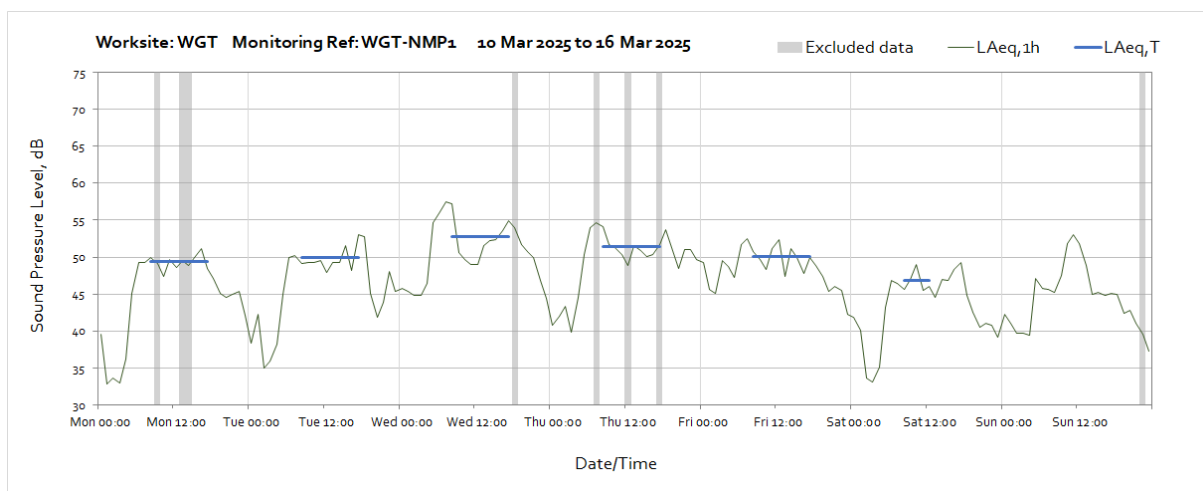
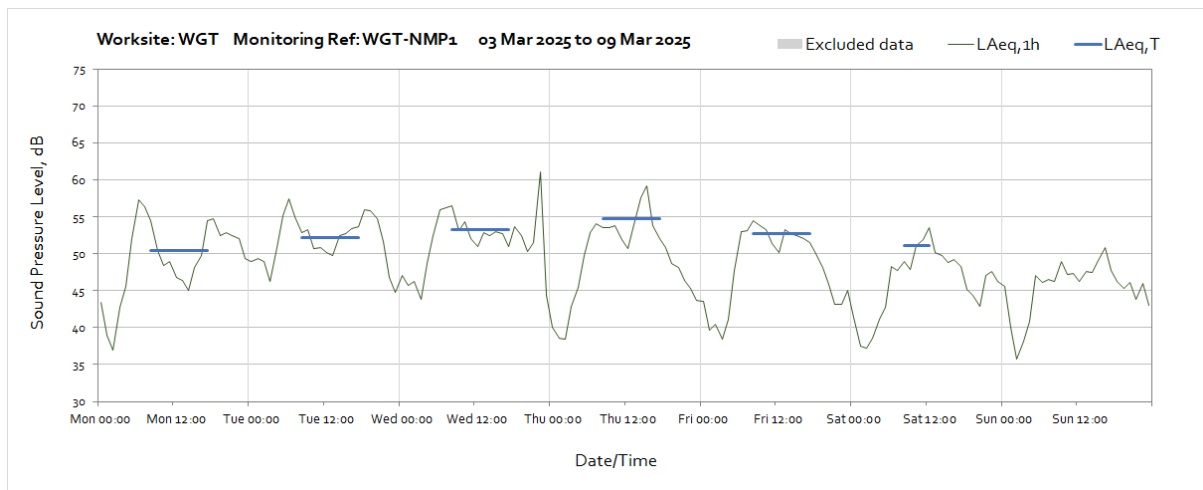
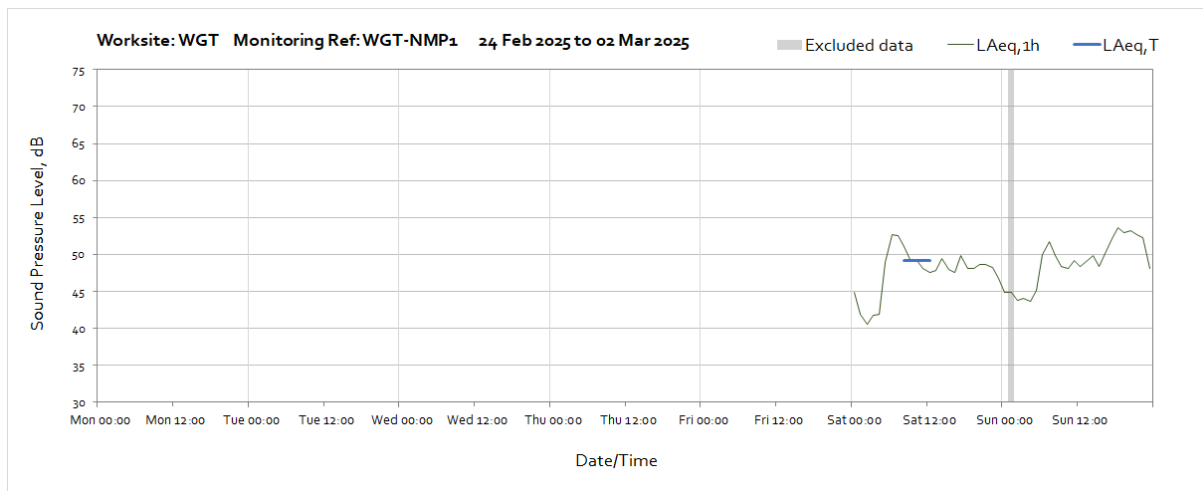
OFFICIAL



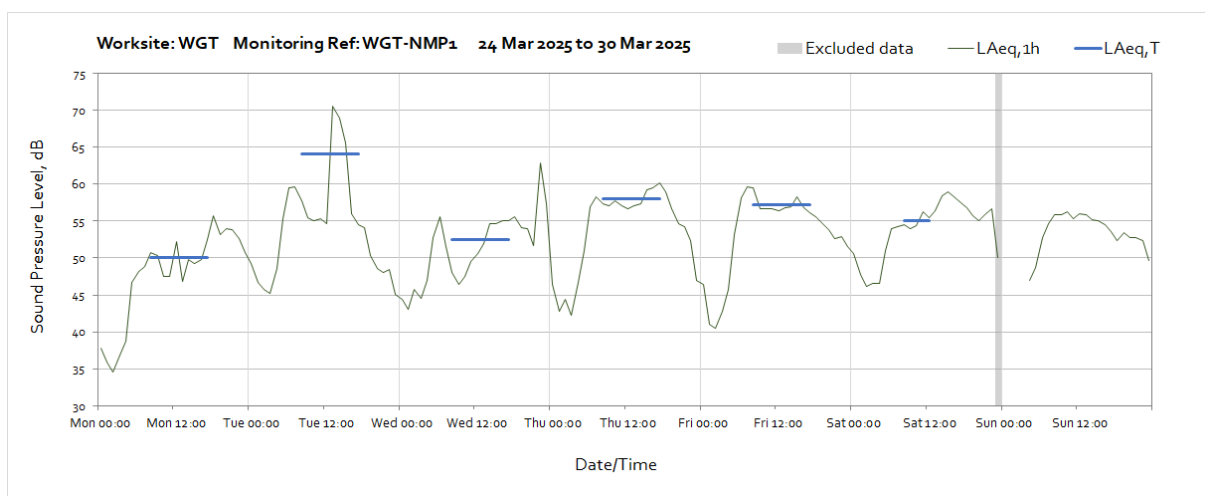
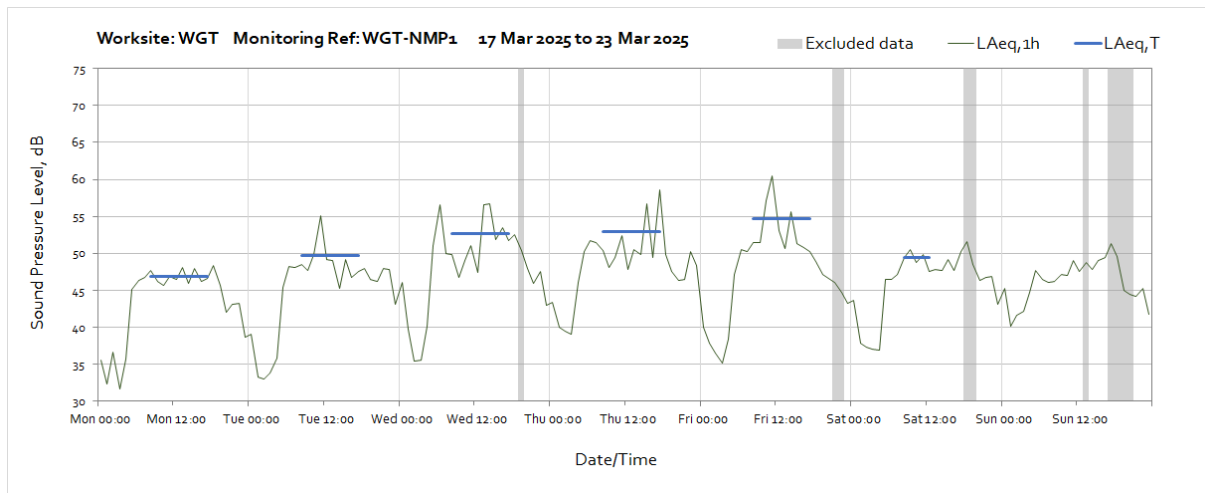
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



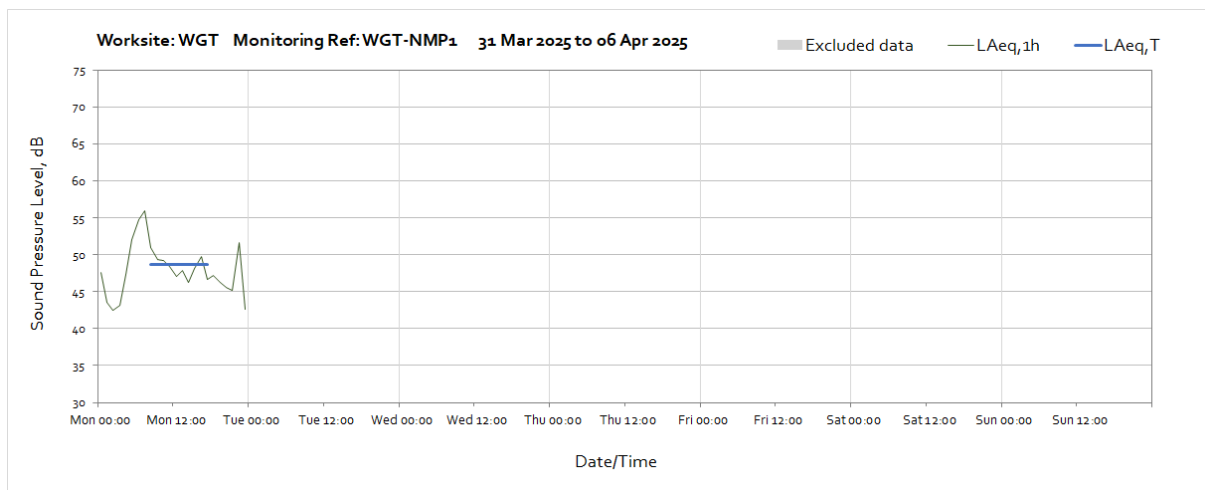
Worksite: WGT – Monitoring Ref: WGT-NMP1



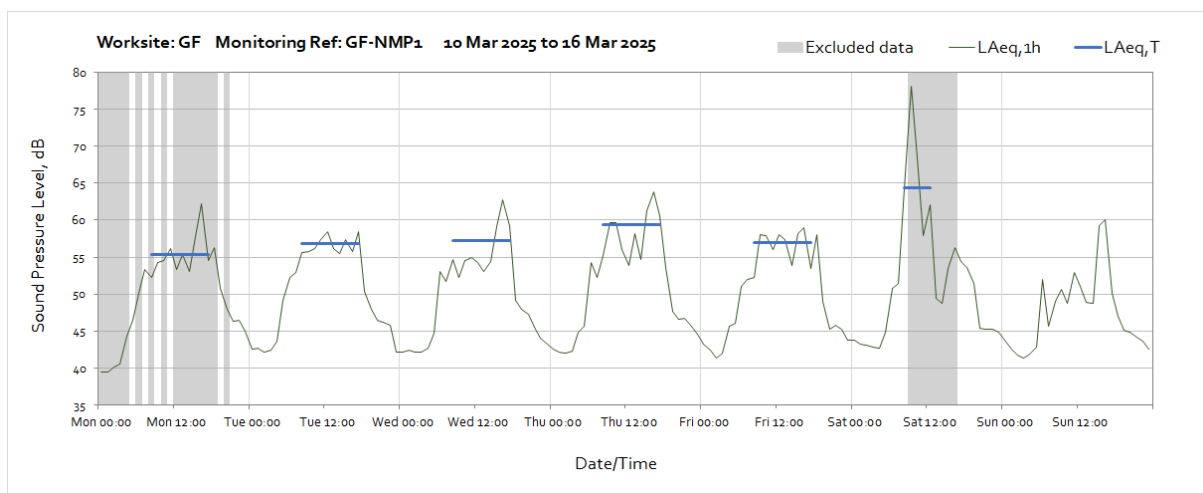
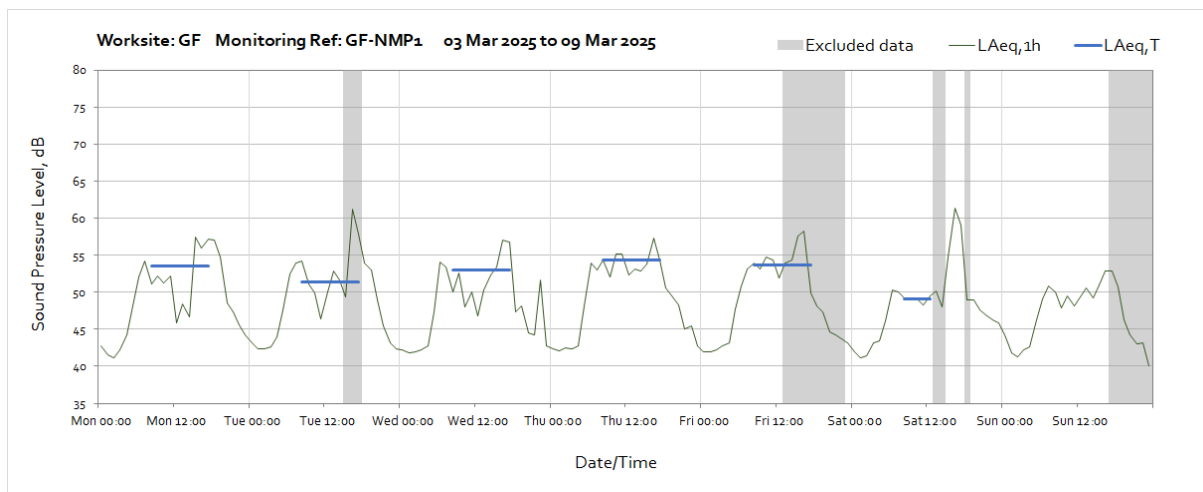
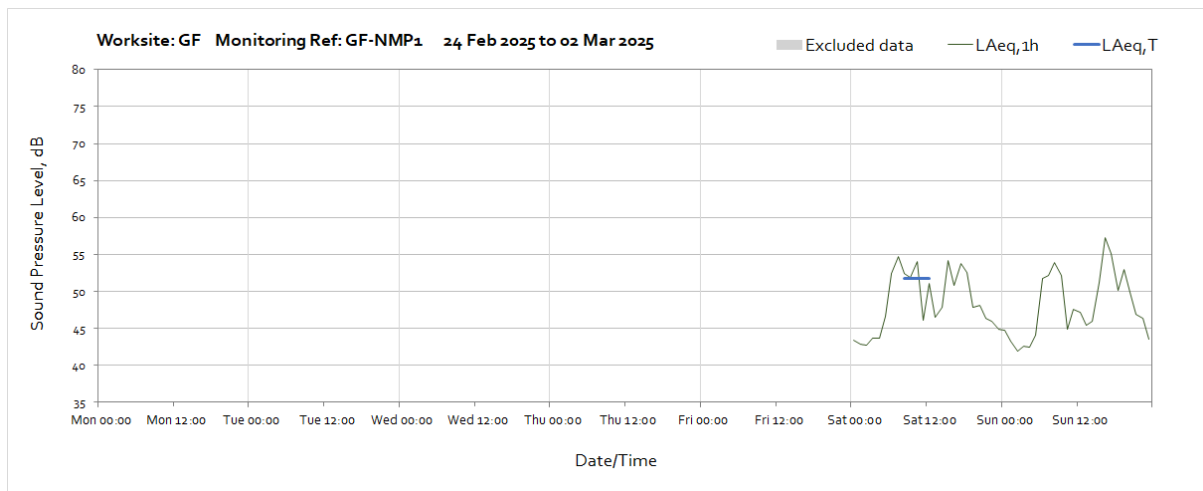
OFFICIAL

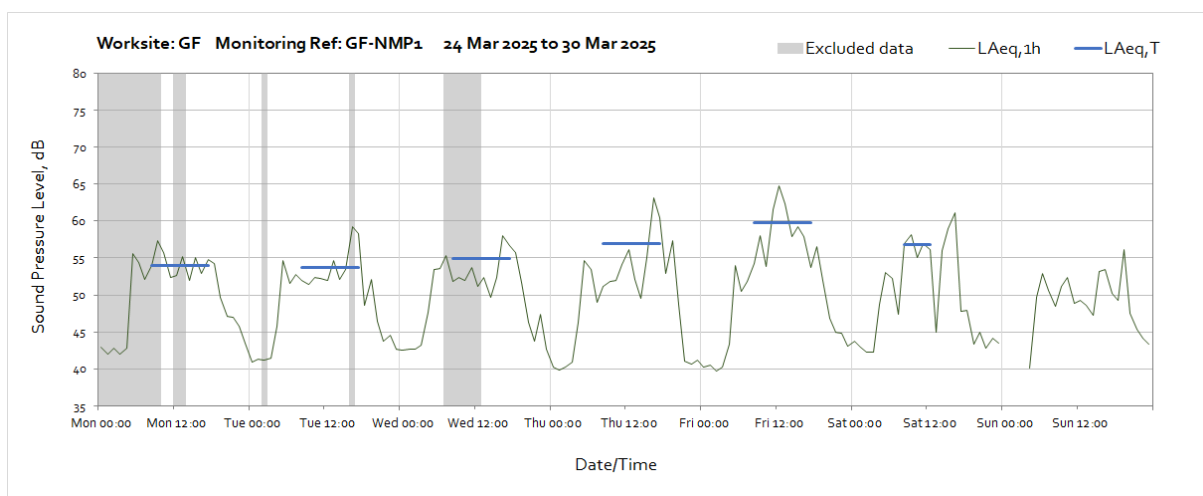
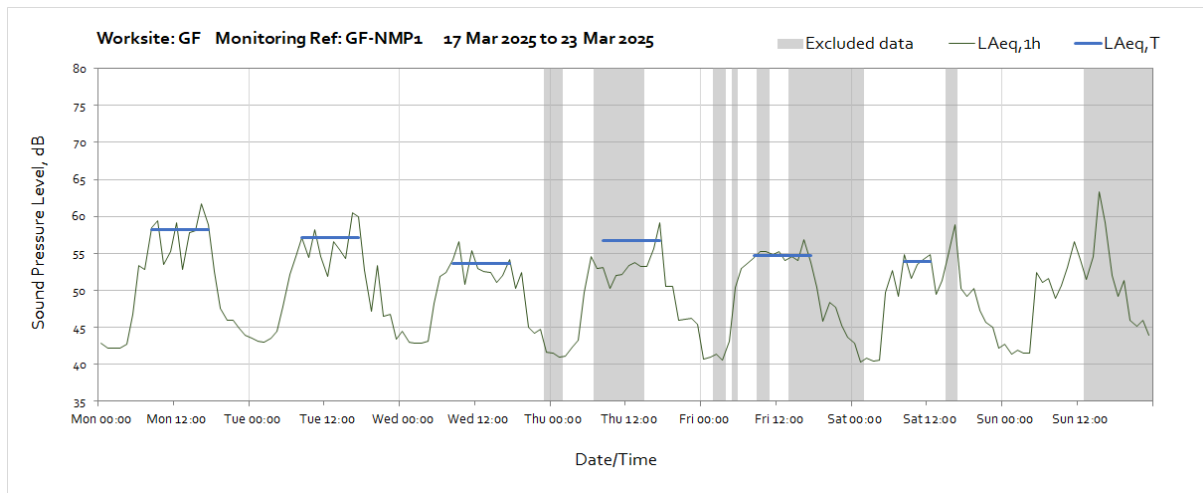


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

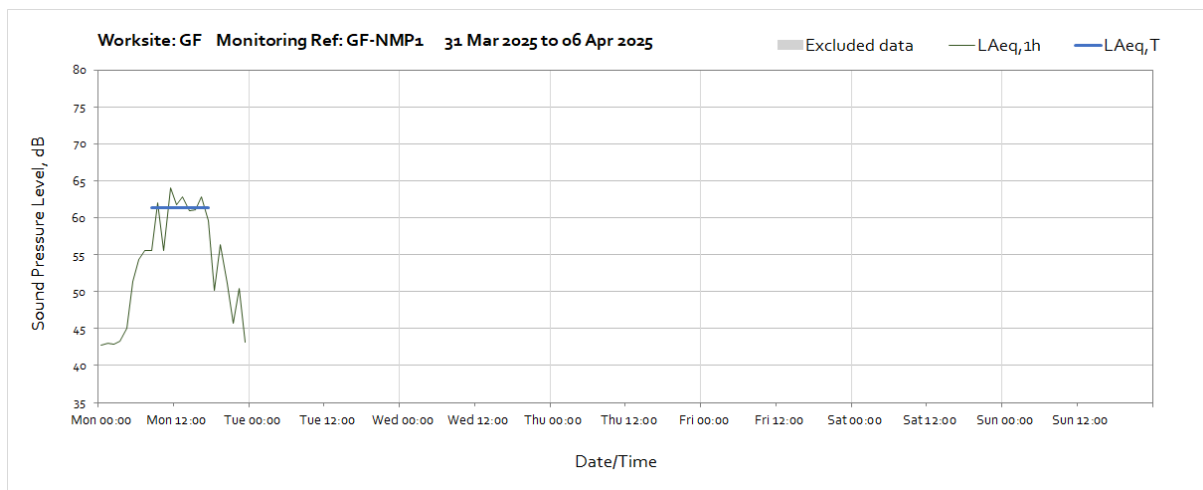


Worksite: GF – Monitoring Ref: GF-NMP1

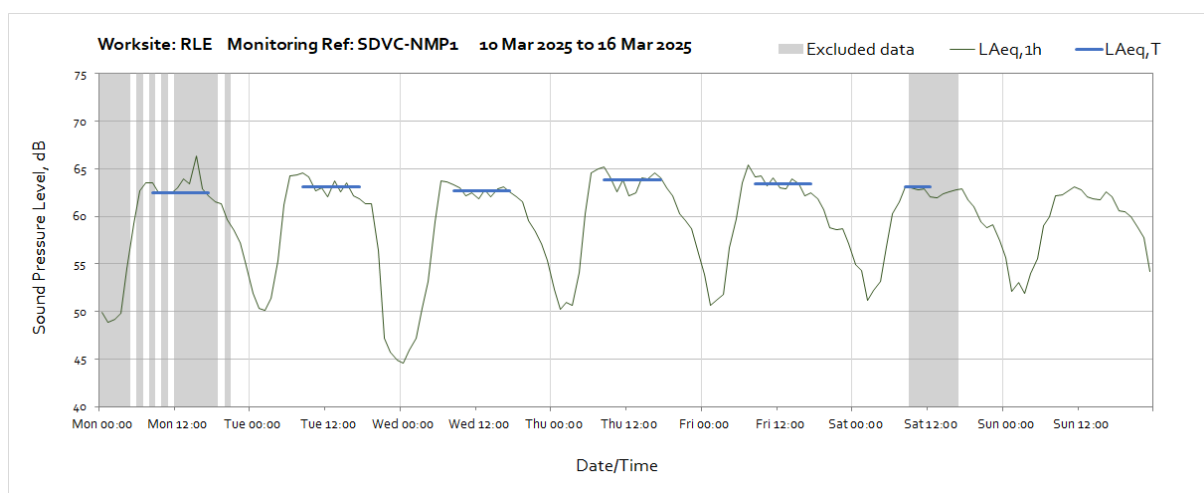
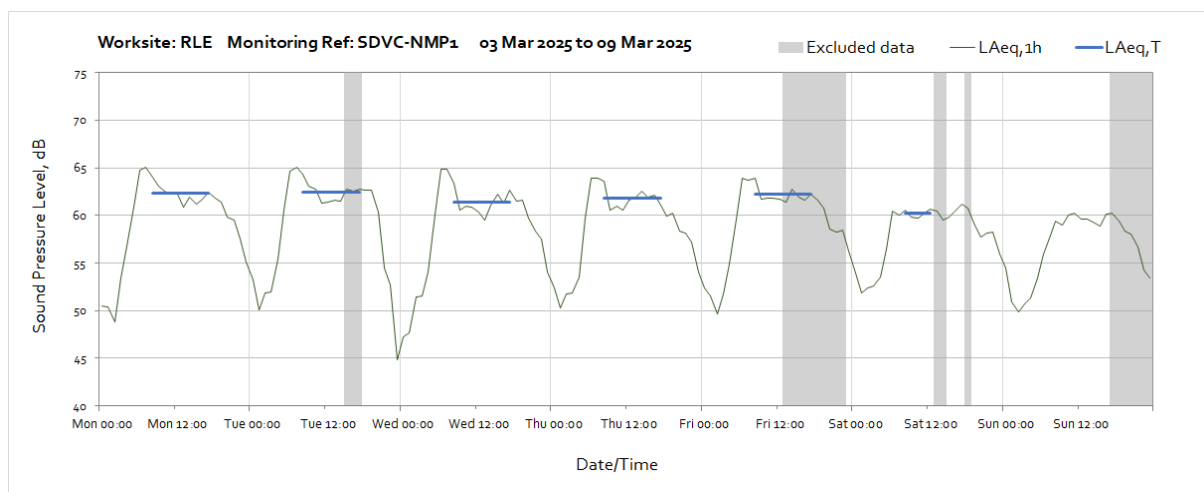
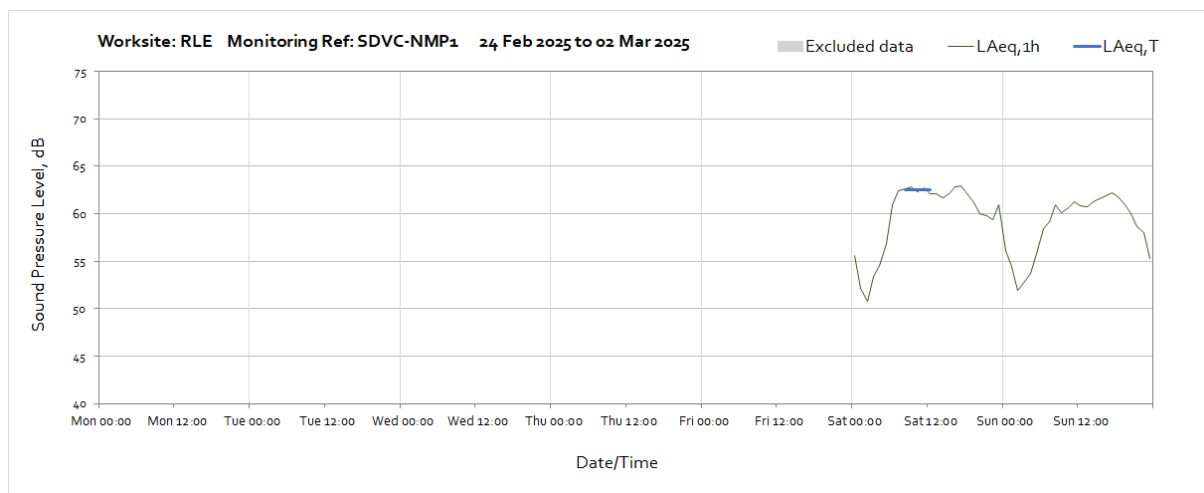




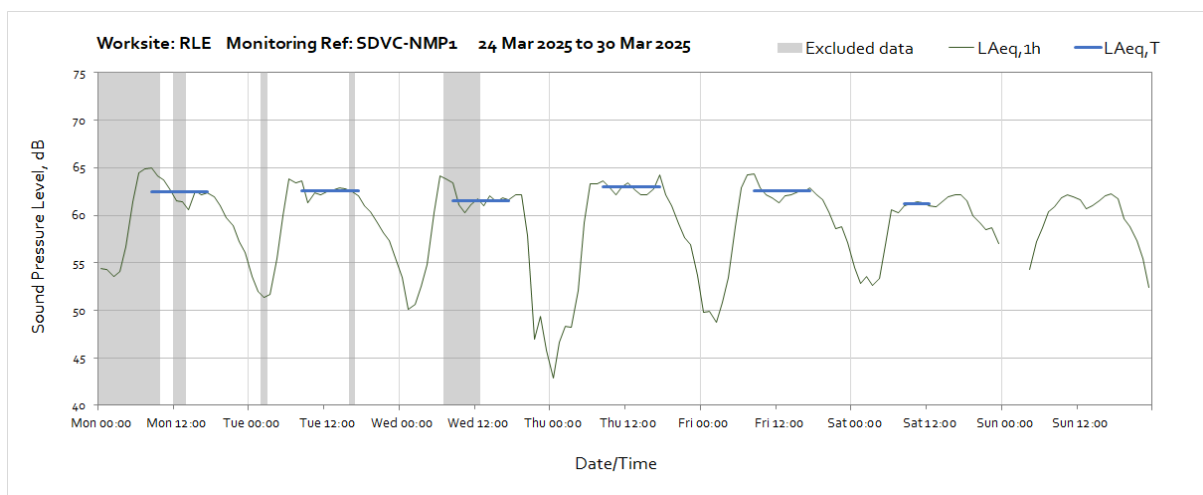
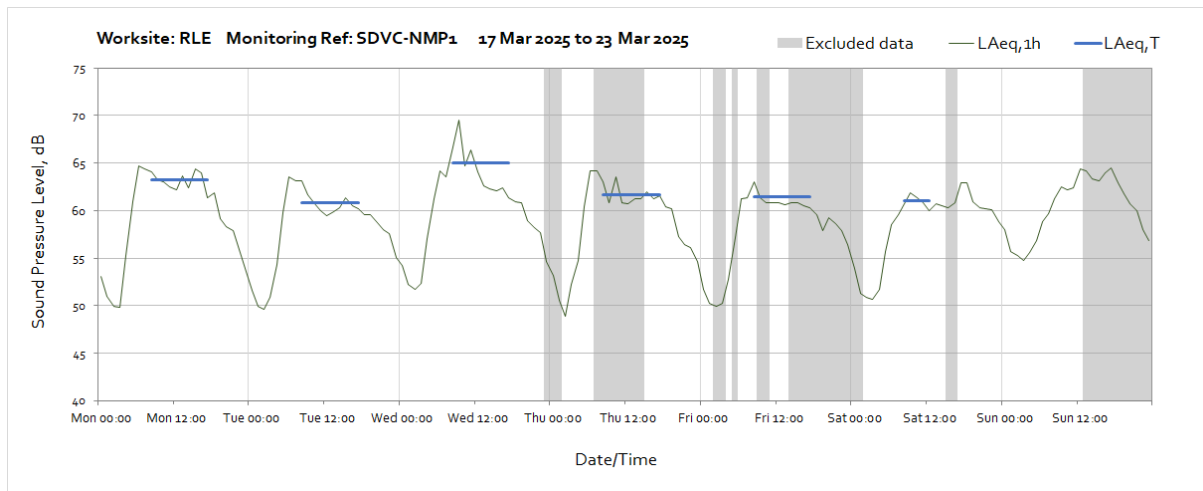
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



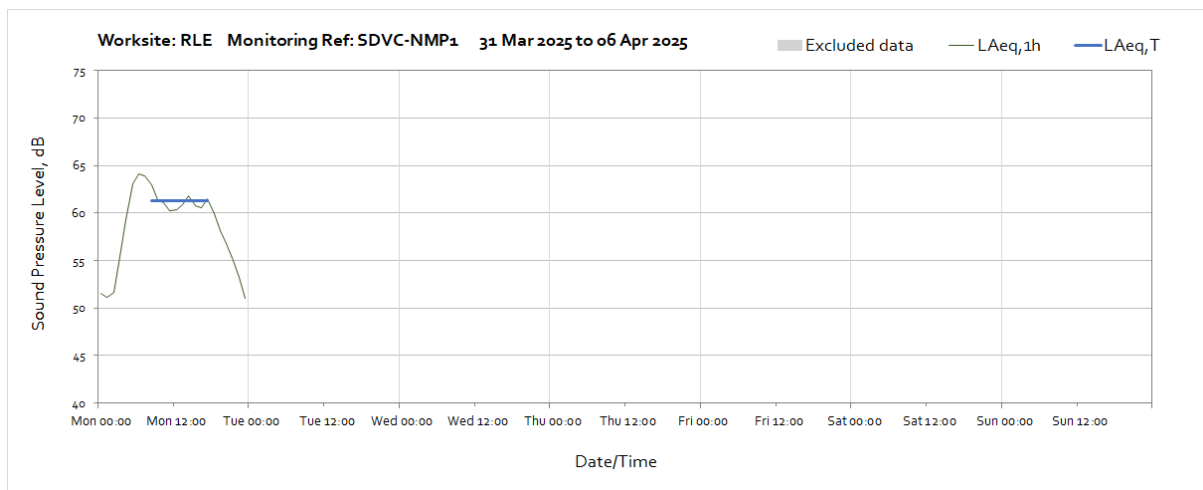
Worksite: RLE – Monitoring Ref: SDVC-NMP1



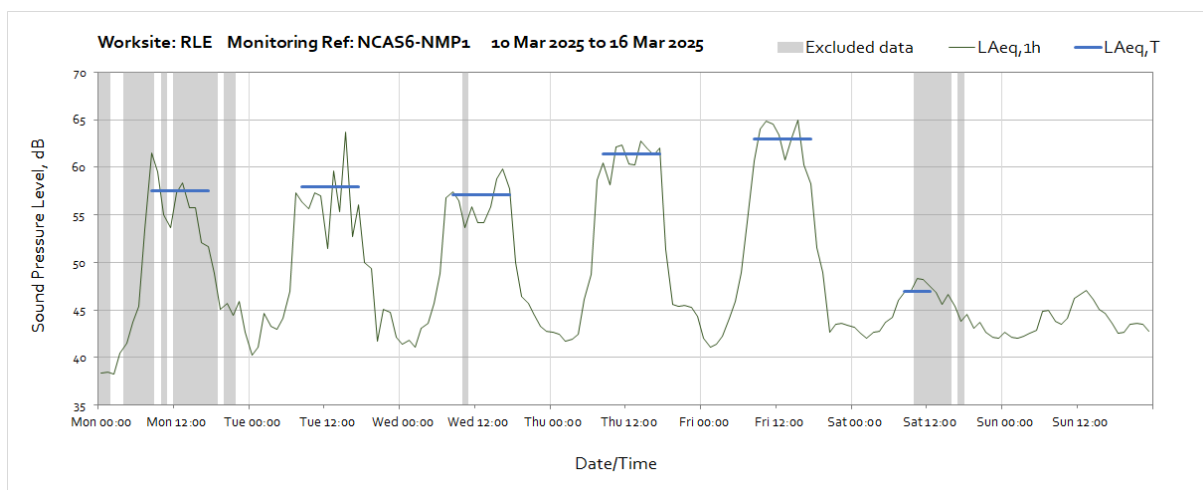
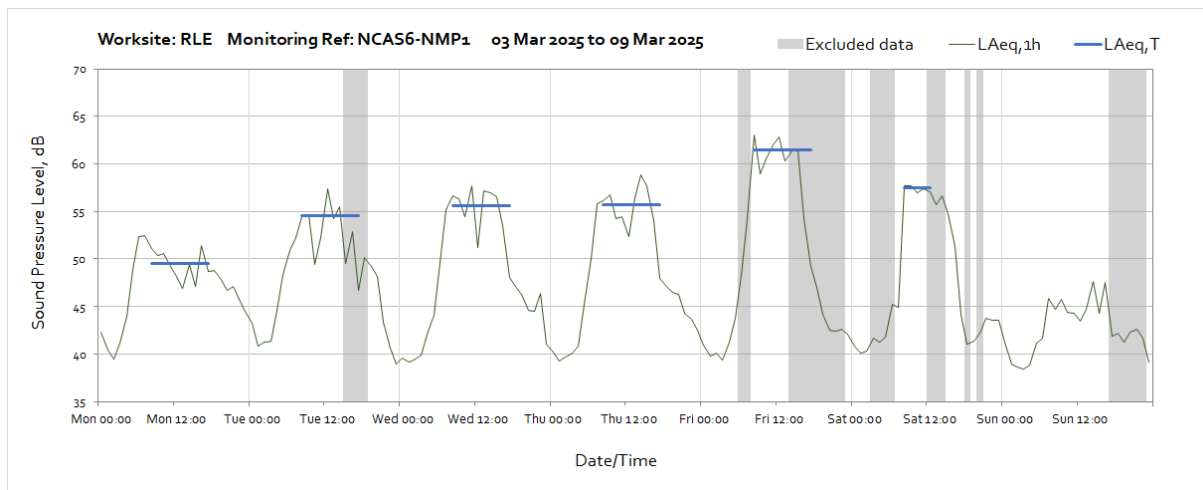
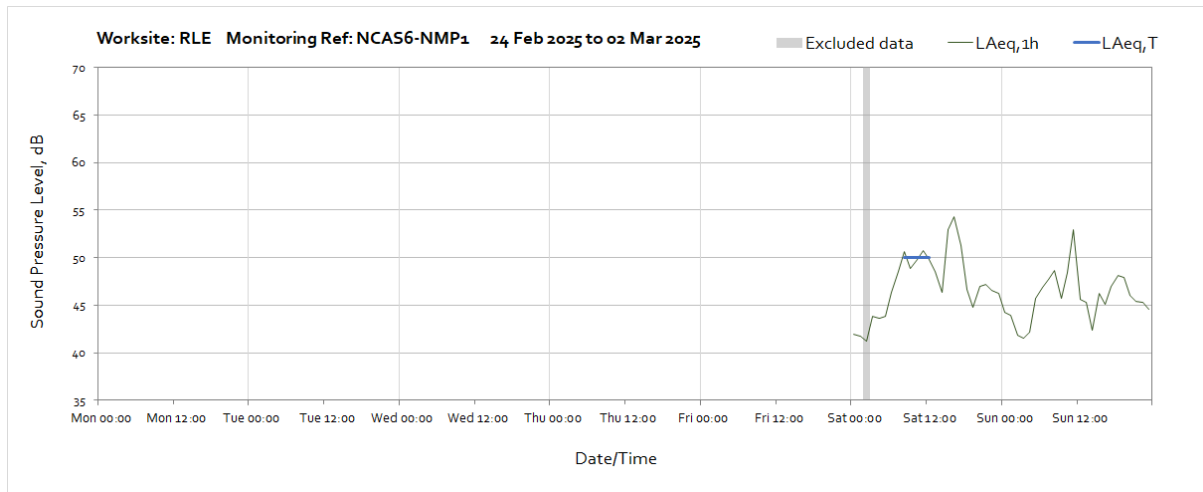
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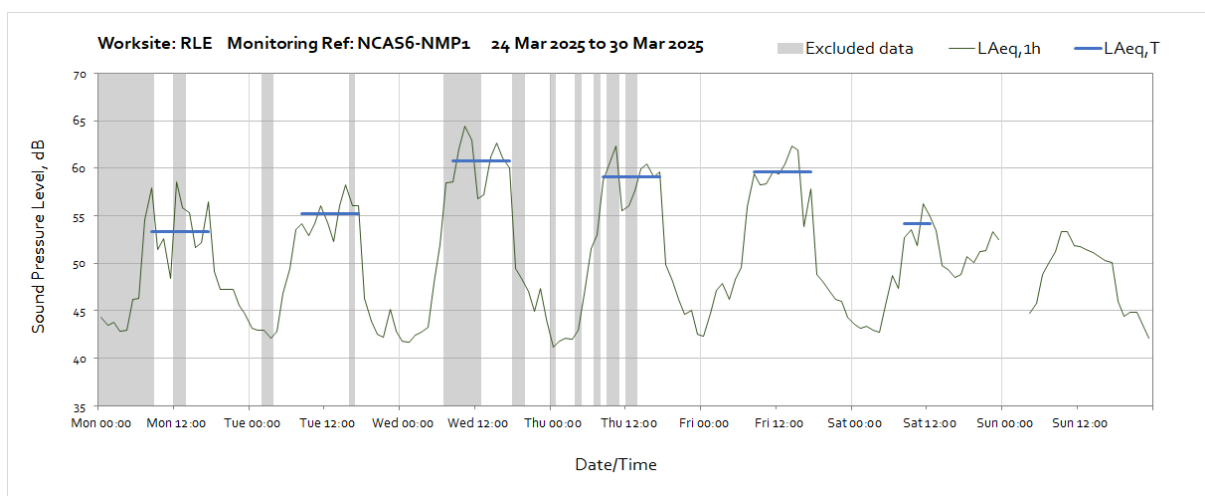
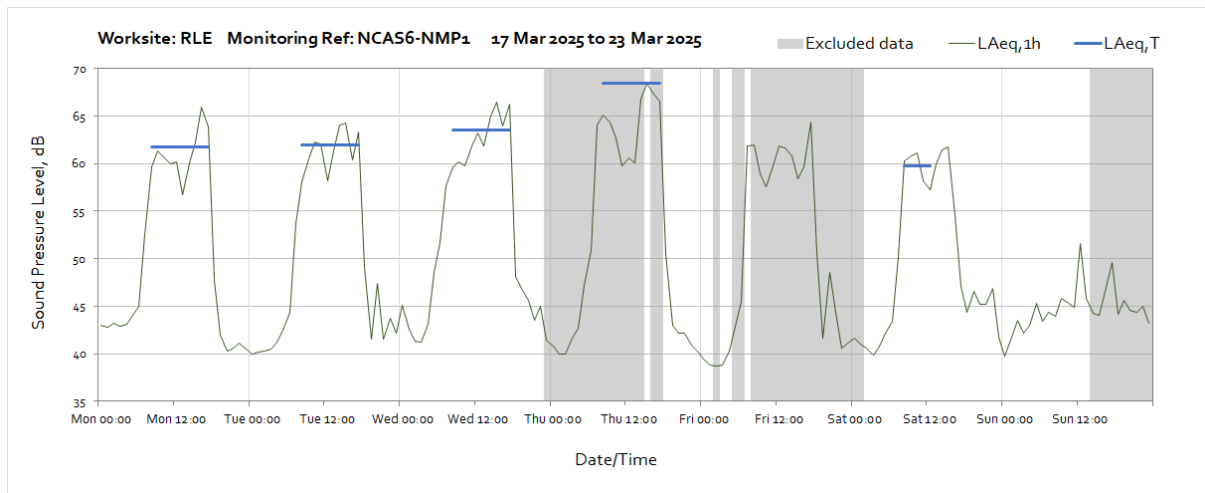
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



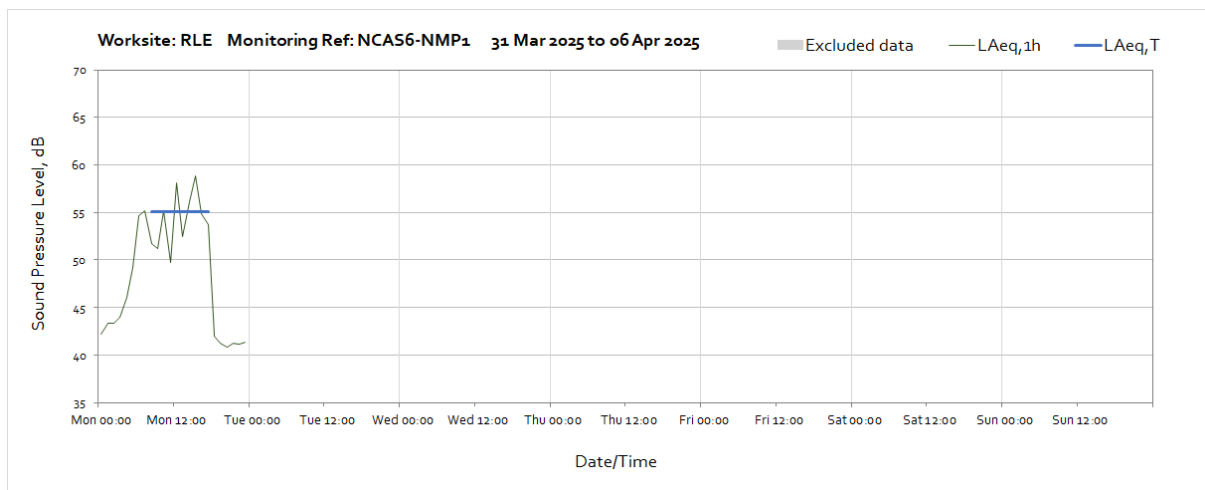
Worksite: RLE – Monitoring Ref: NCAS6-NMP1



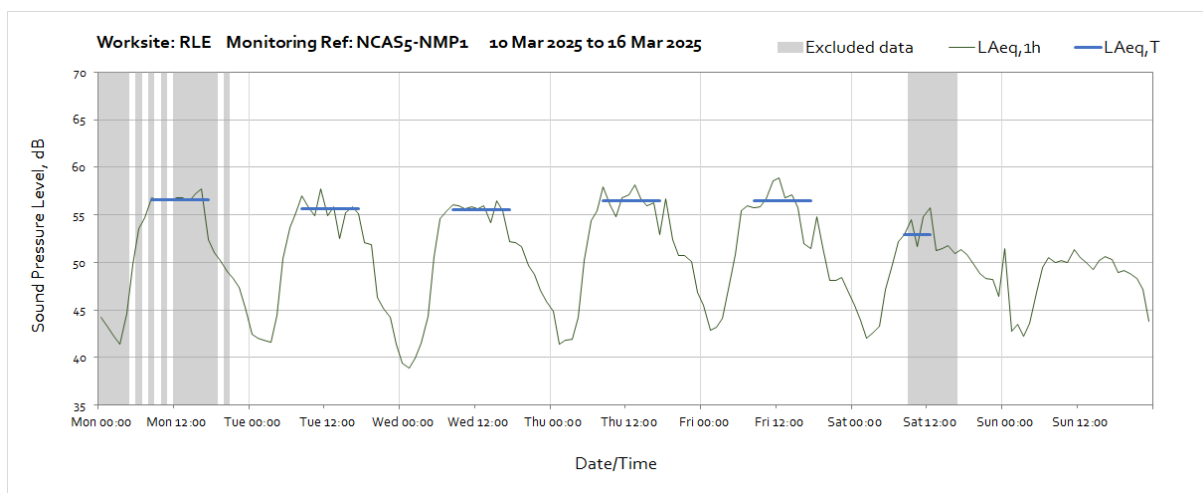
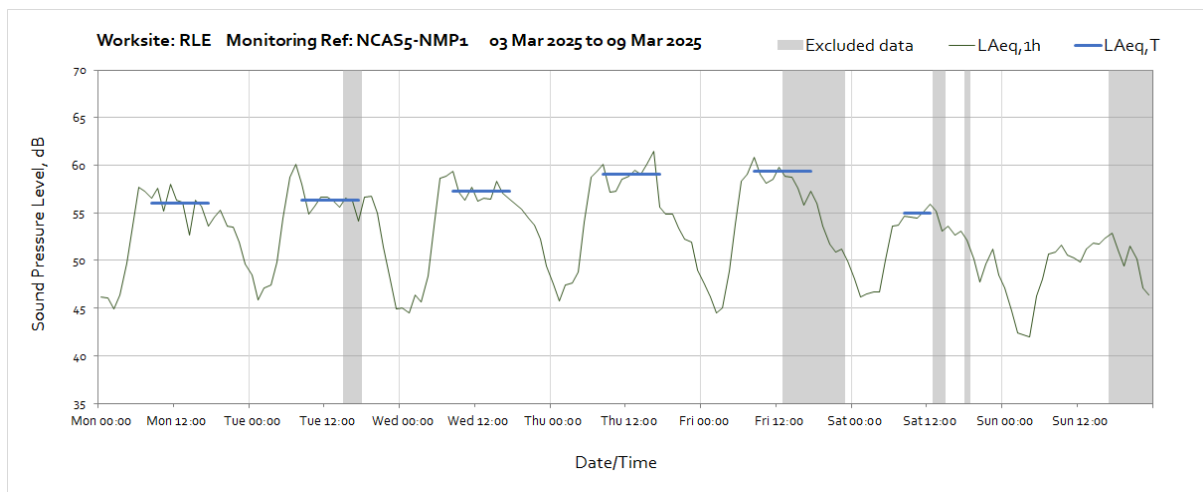
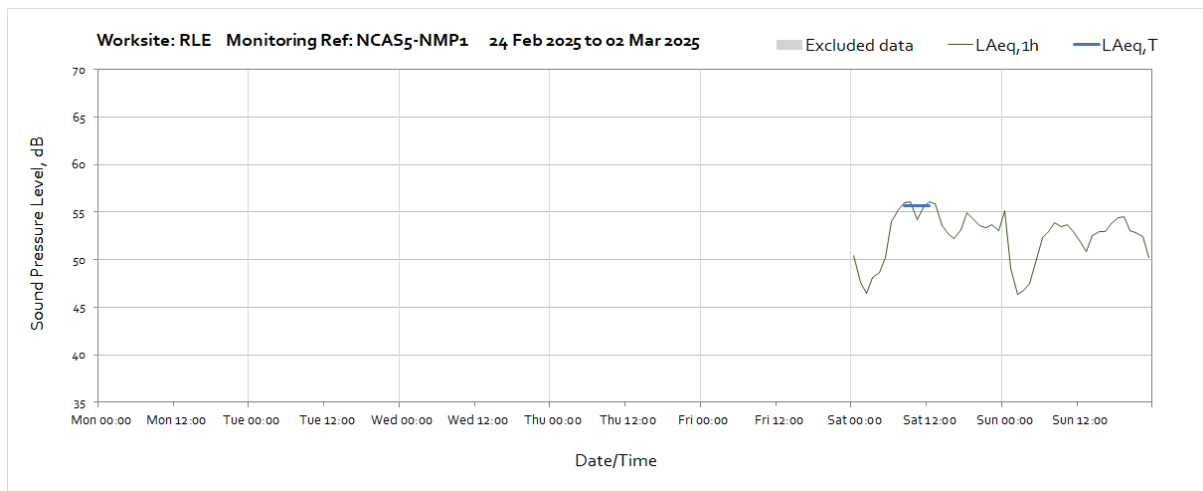
OFFICIAL



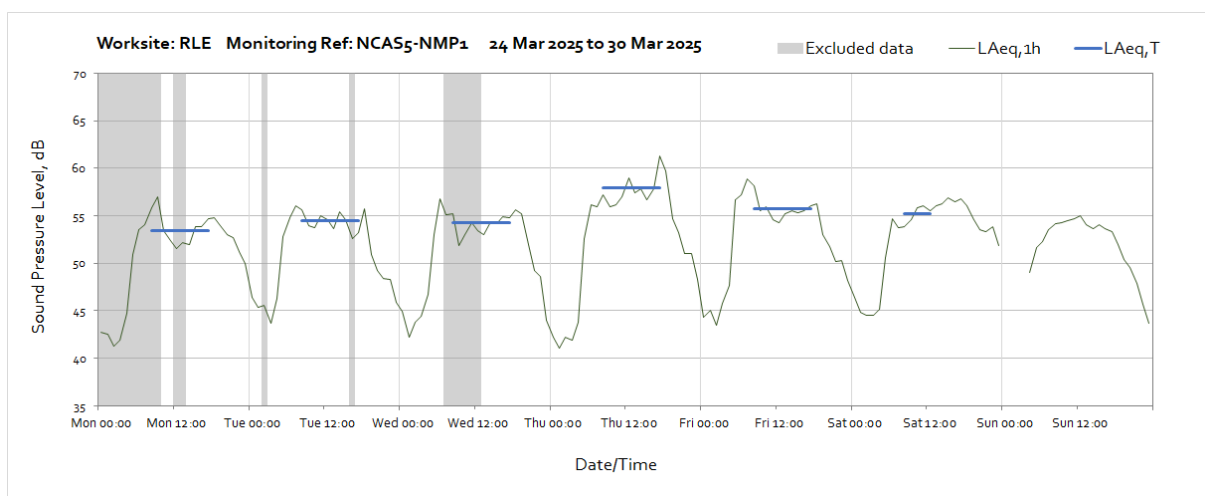
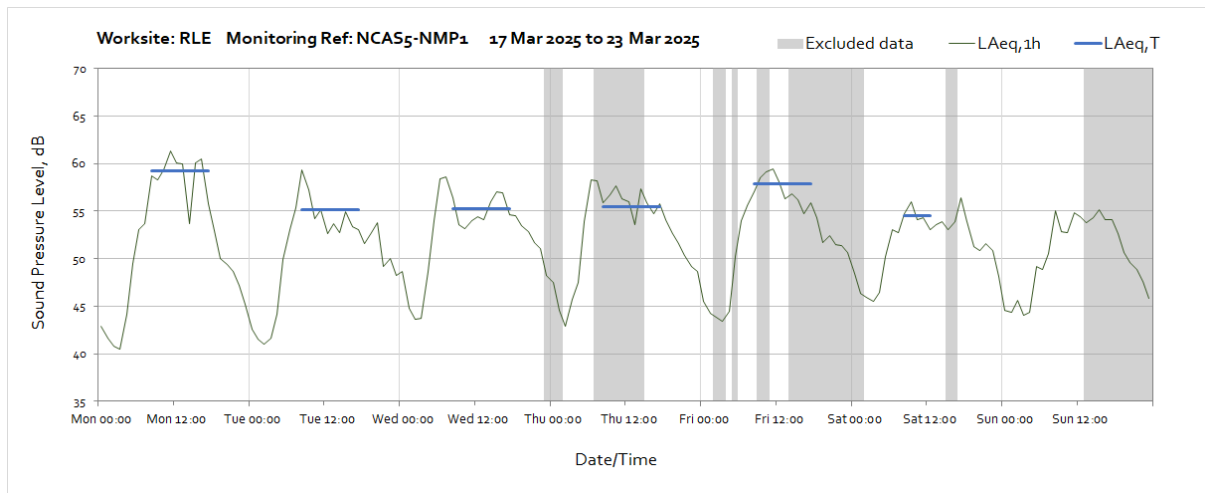
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



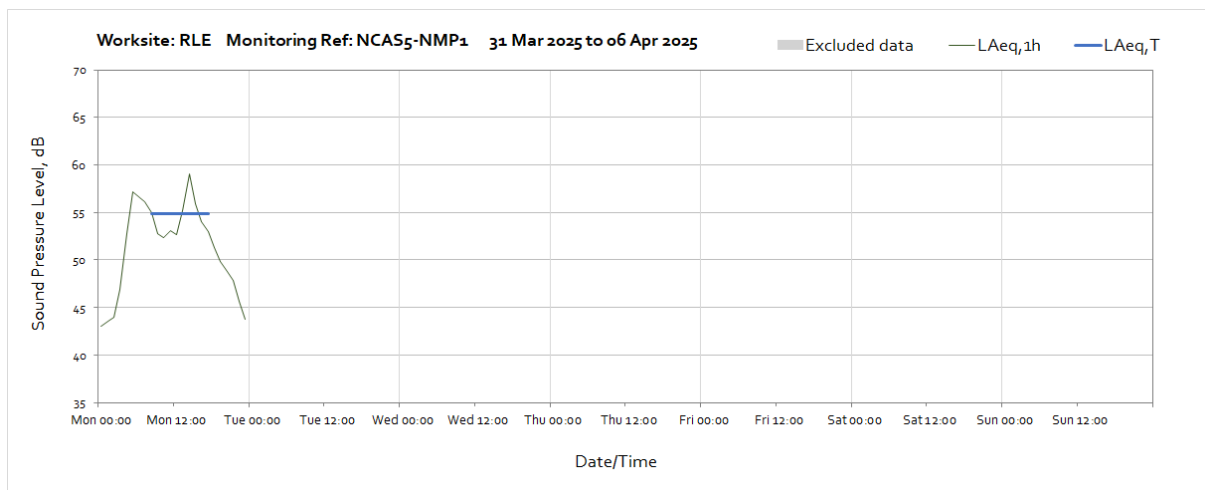
Worksite: RLE – Monitoring Ref: NCAS5-NMP1



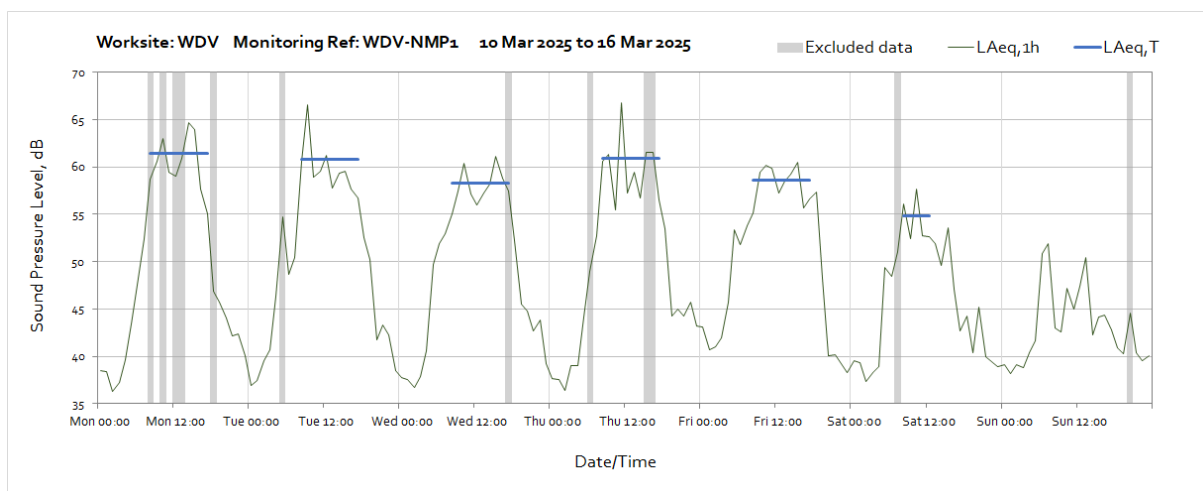
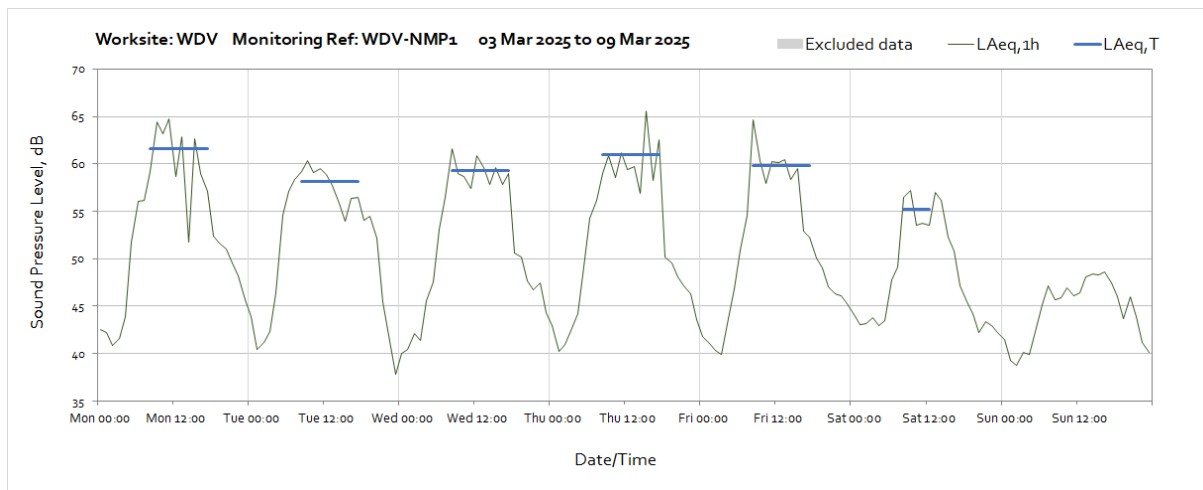
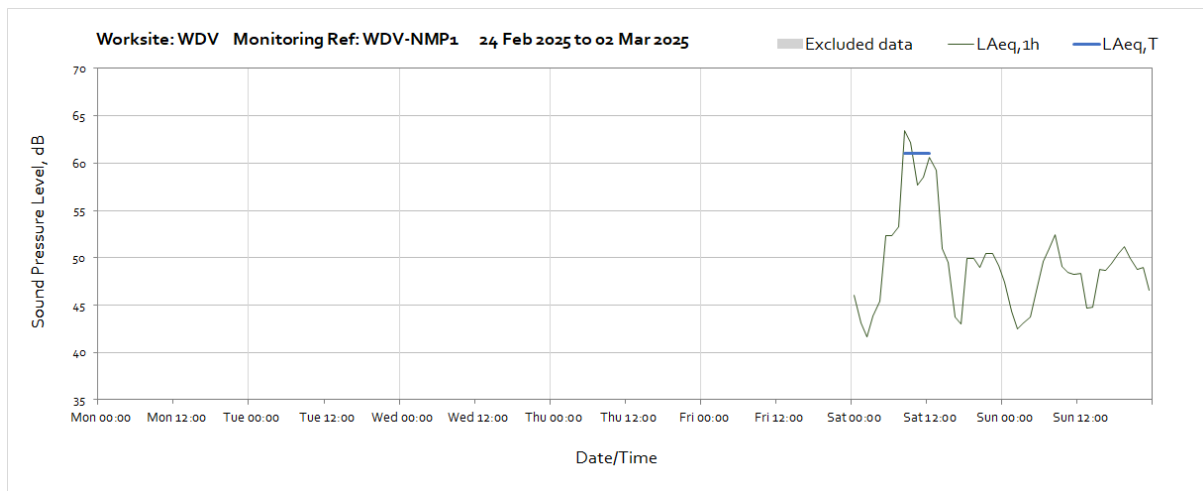
OFFICIAL



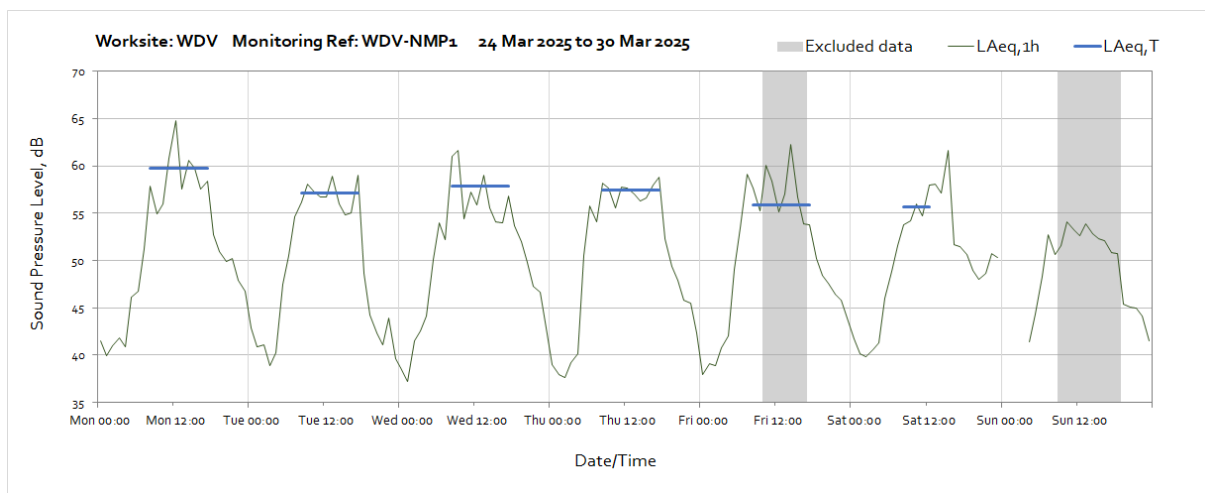
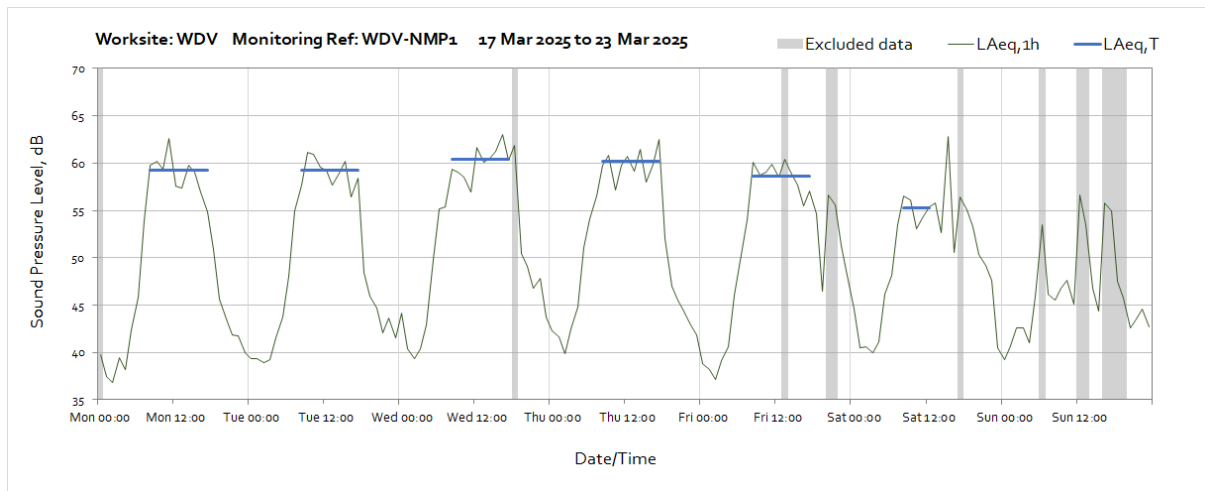
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



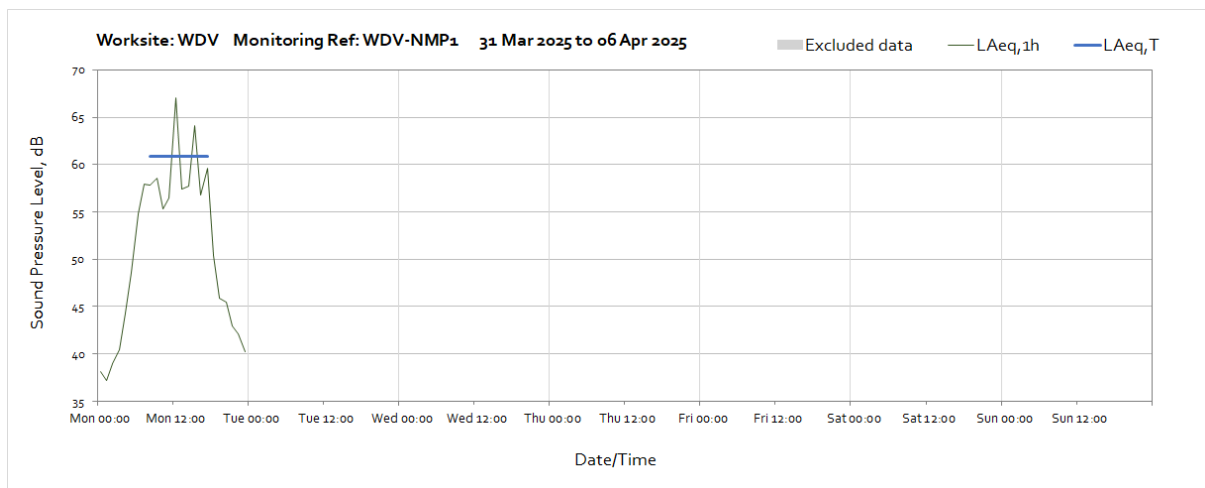
Worksite: WDV – Monitoring Ref: WDV-NMP1



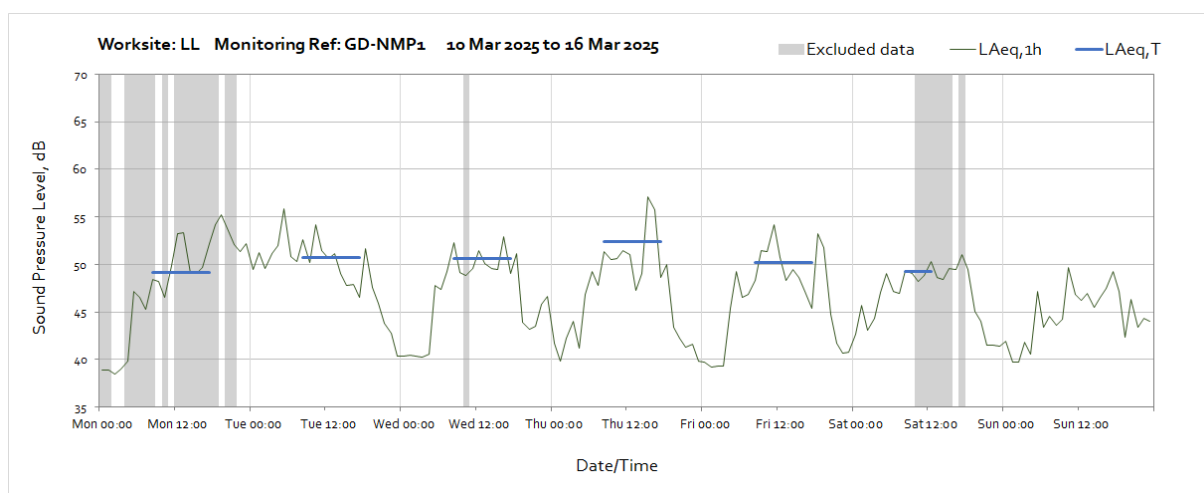
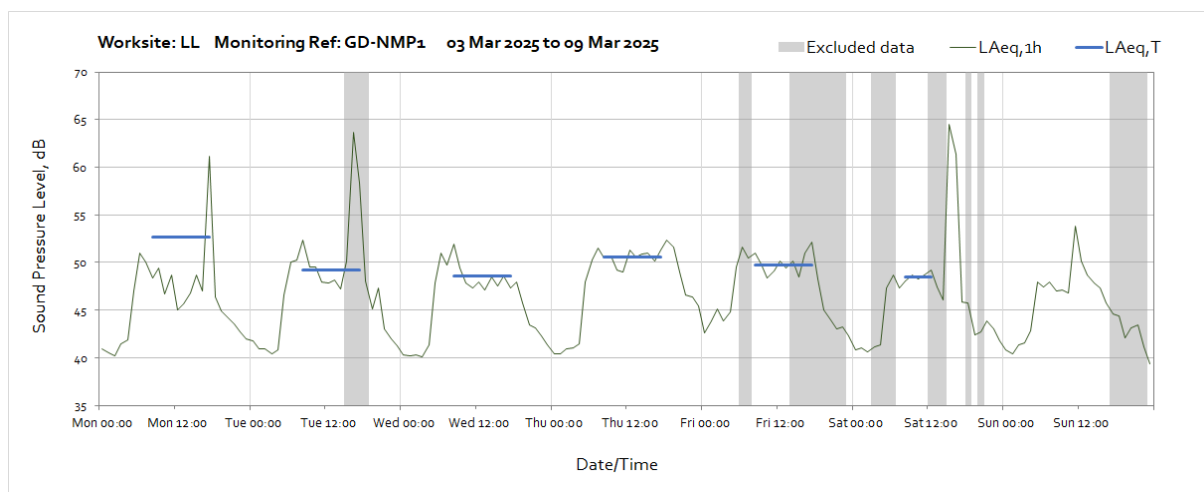
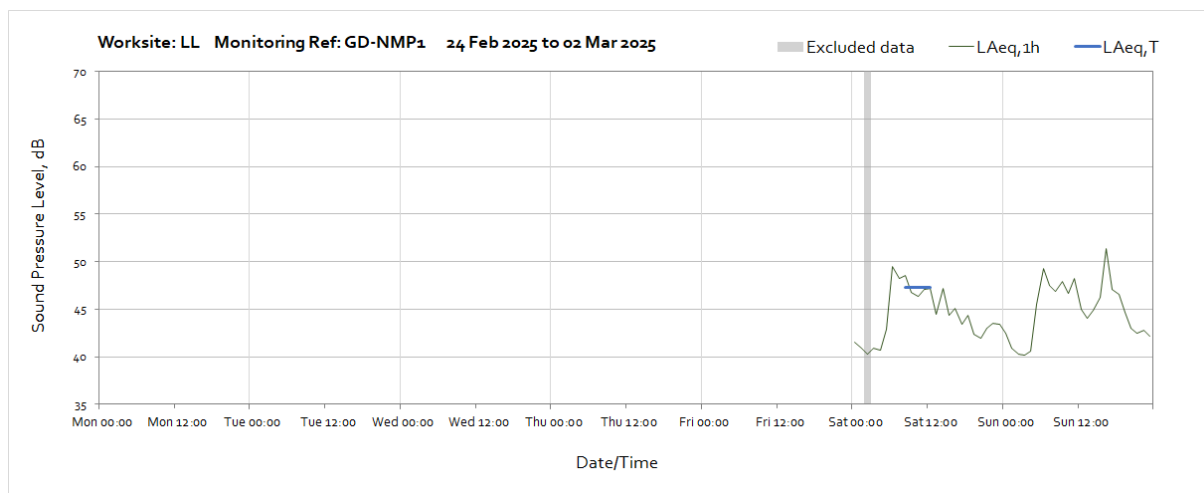
OFFICIAL



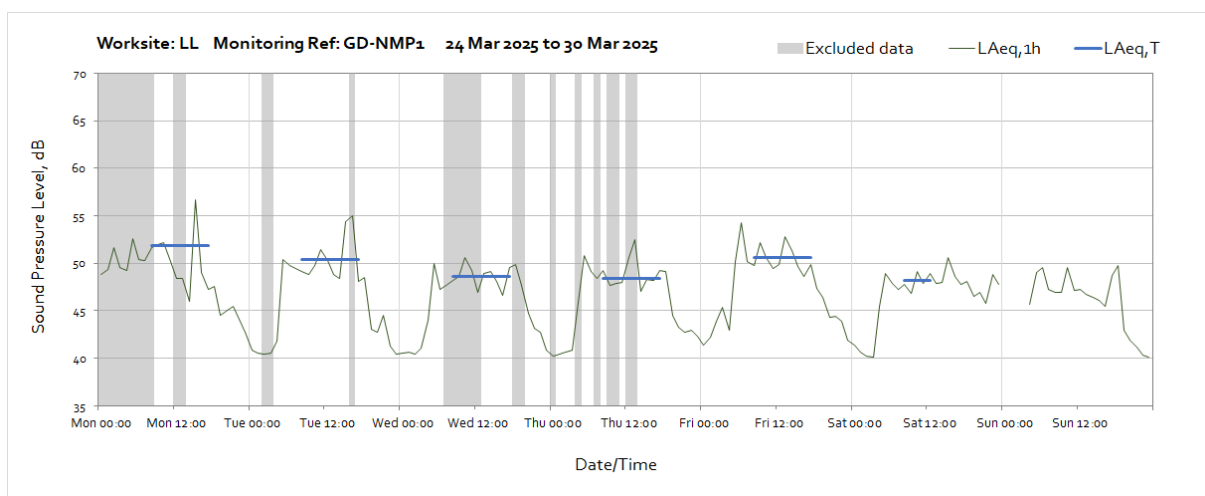
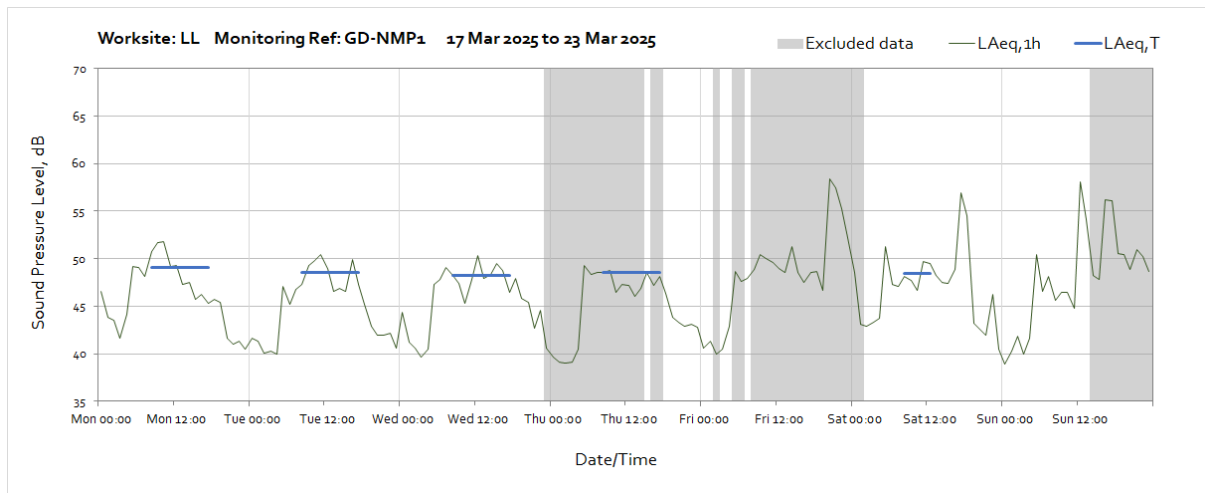
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



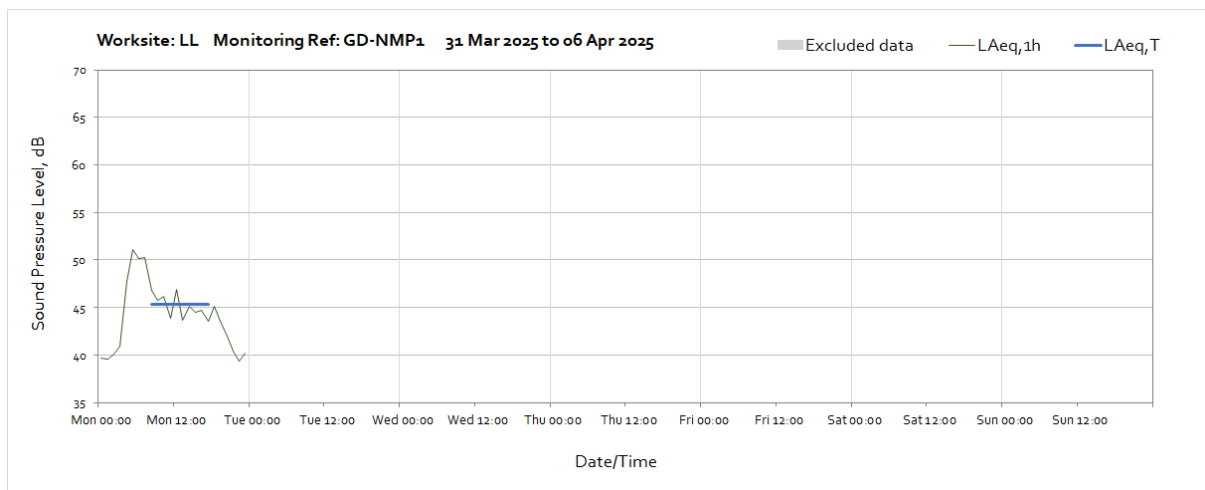
Worksite: LL – Monitoring Ref: GD-NMP1



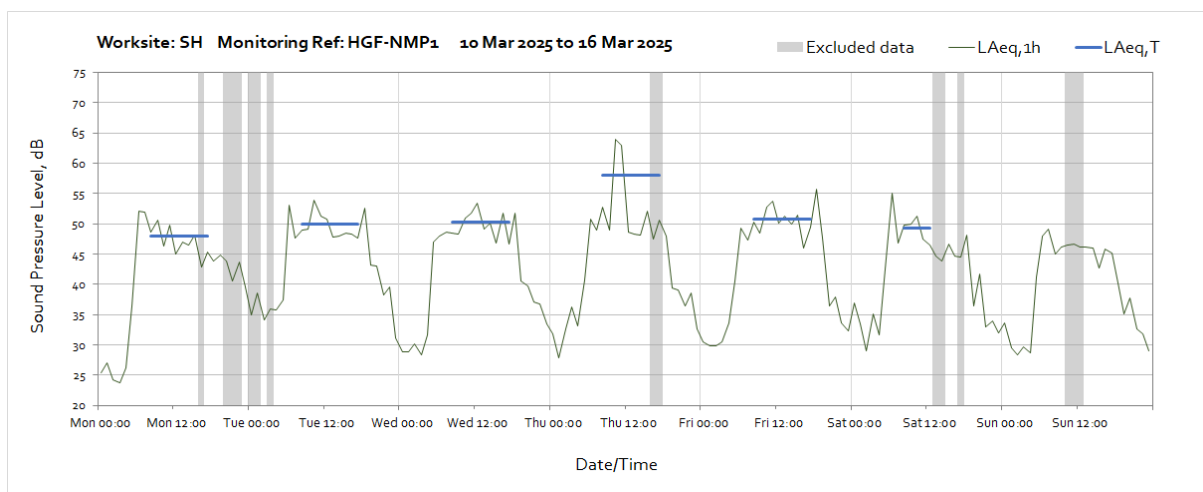
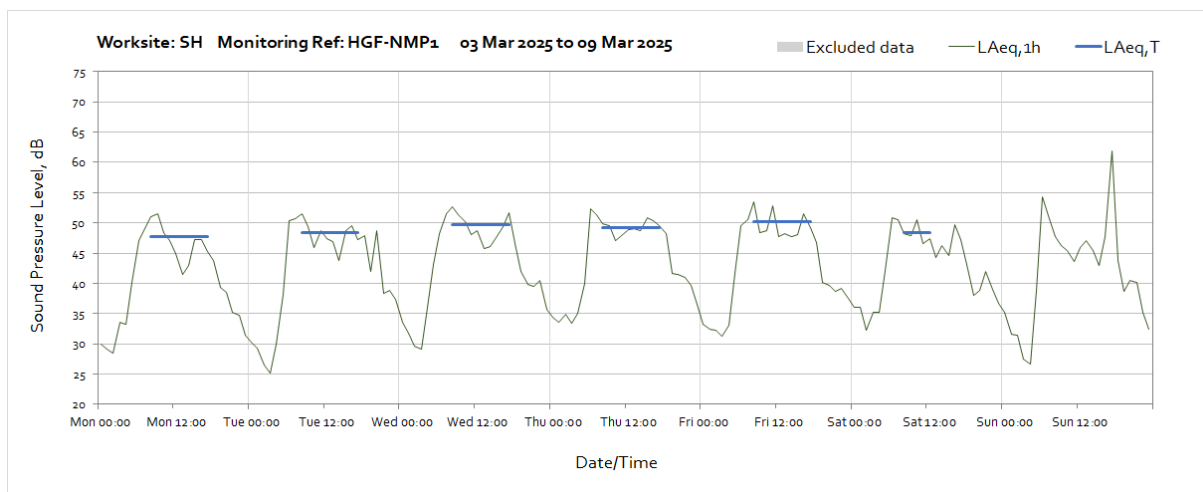
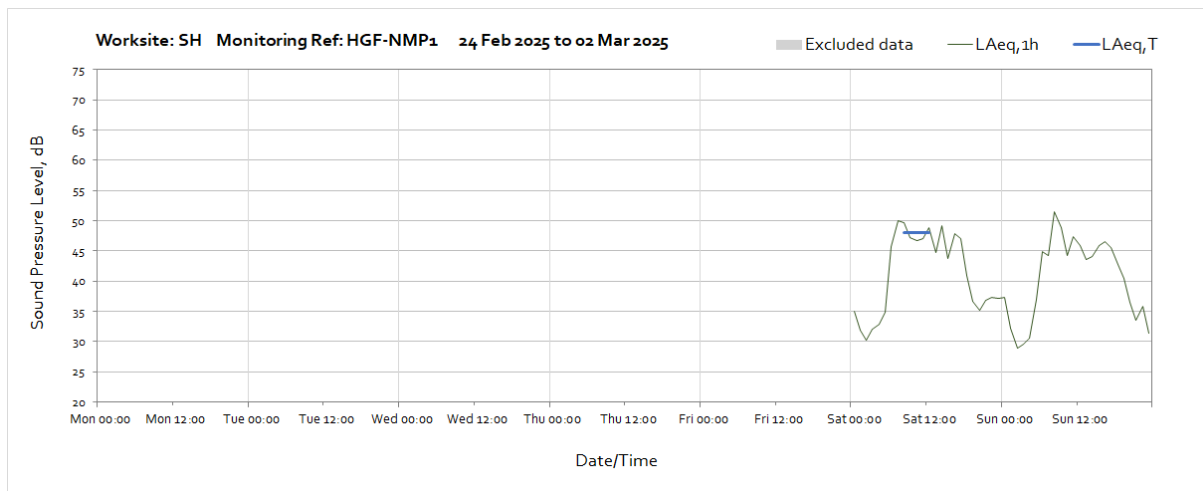
OFFICIAL



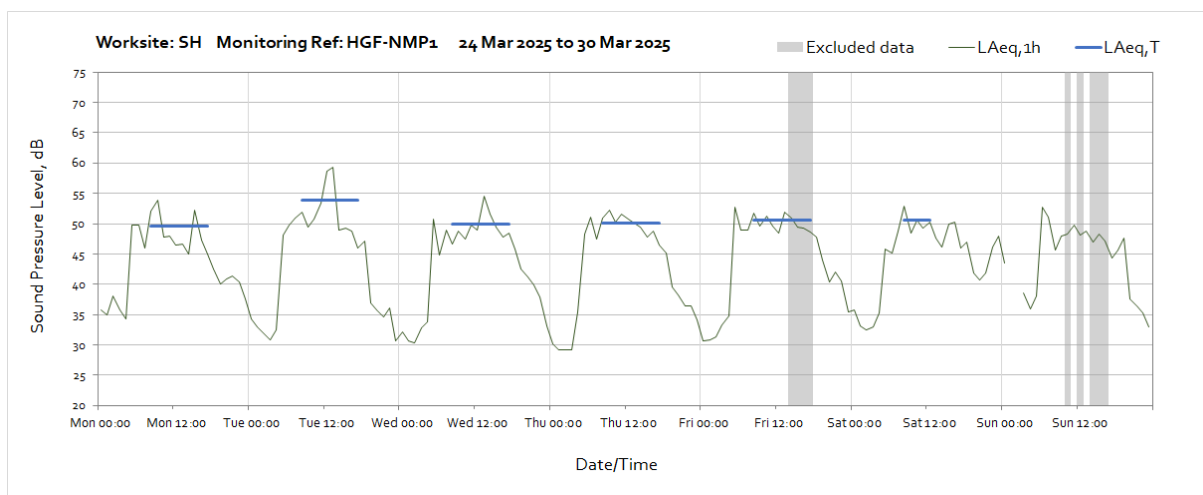
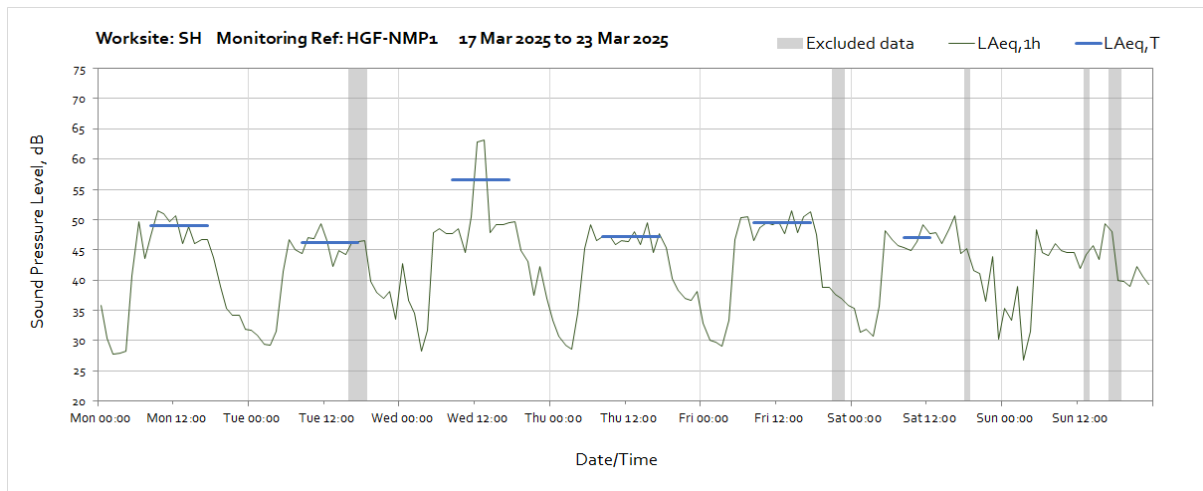
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



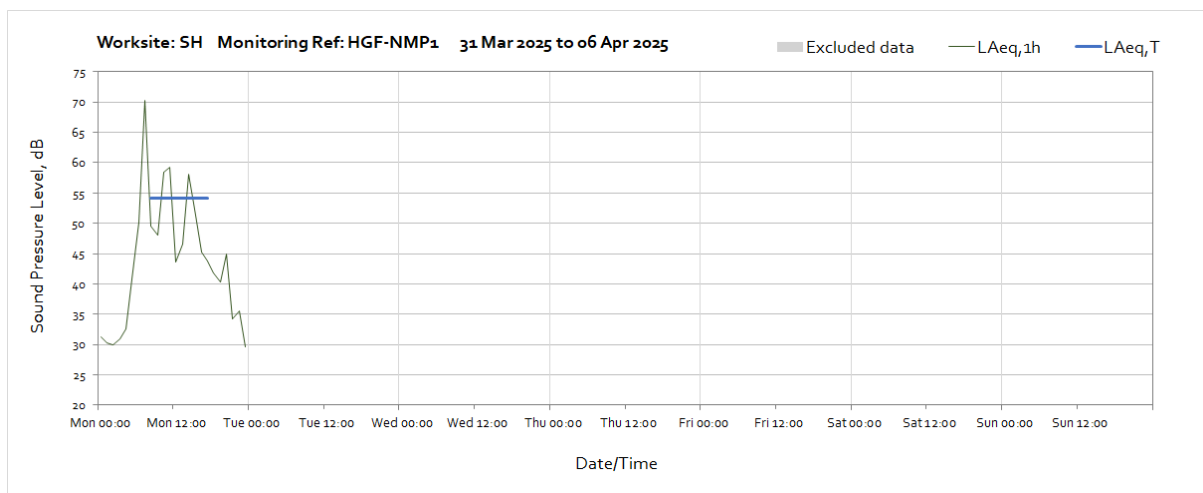
Worksite: SH – Monitoring Ref: HGF-NMP1



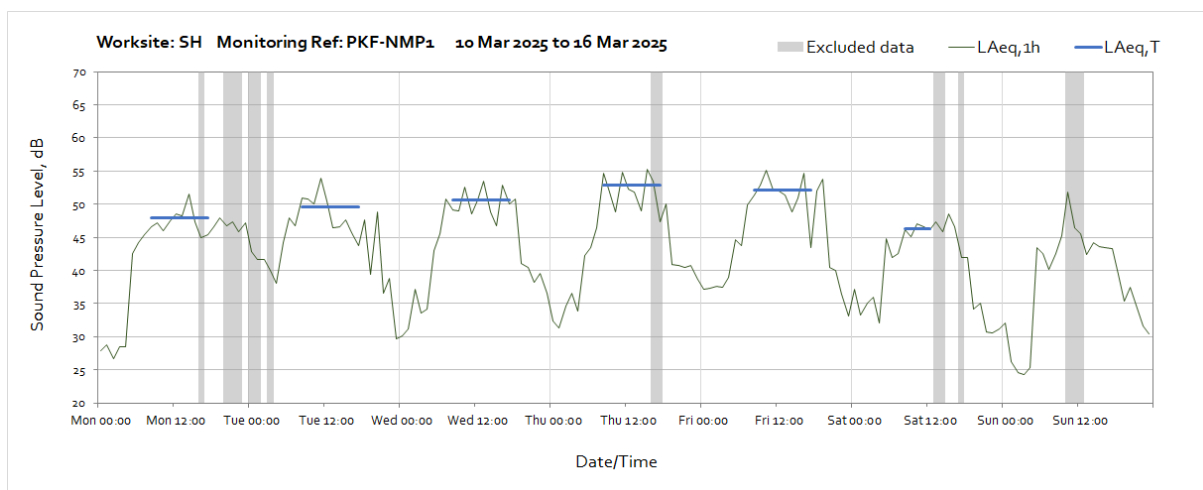
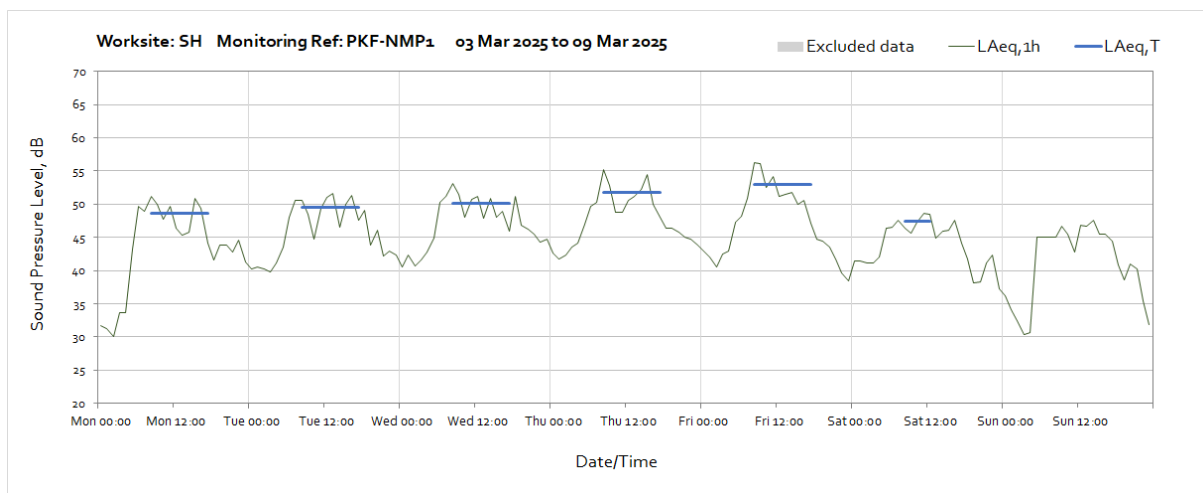
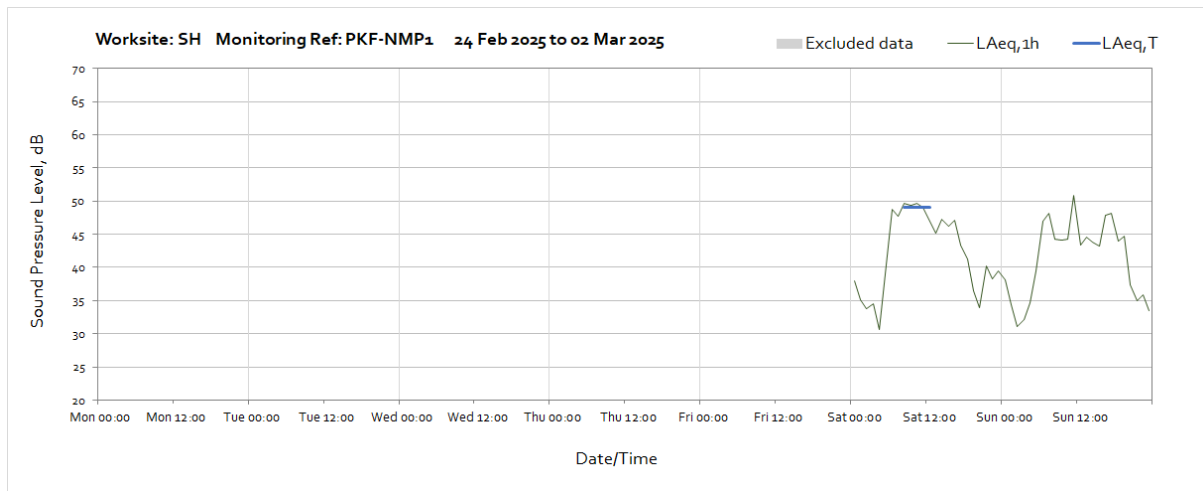
OFFICIAL



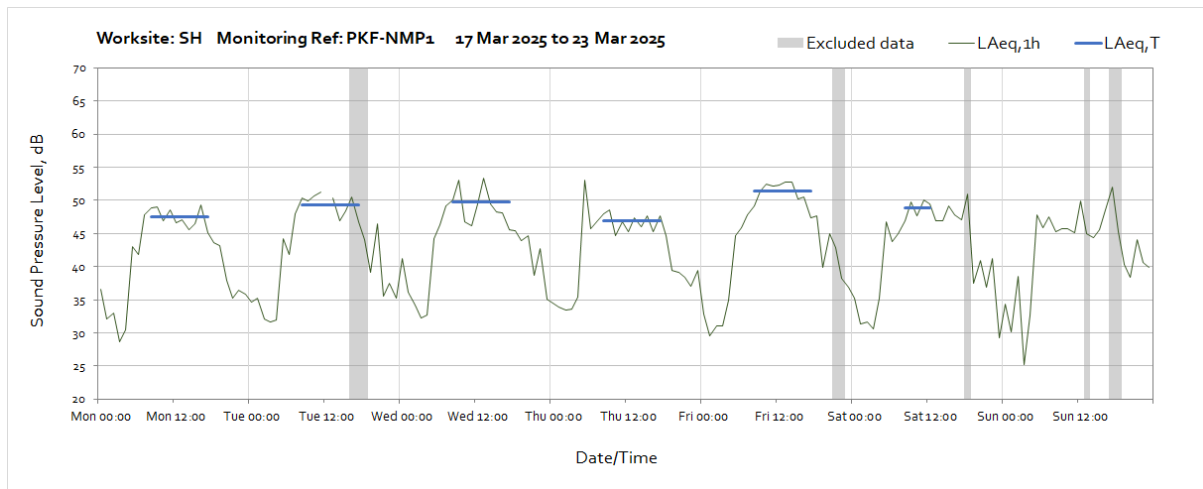
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



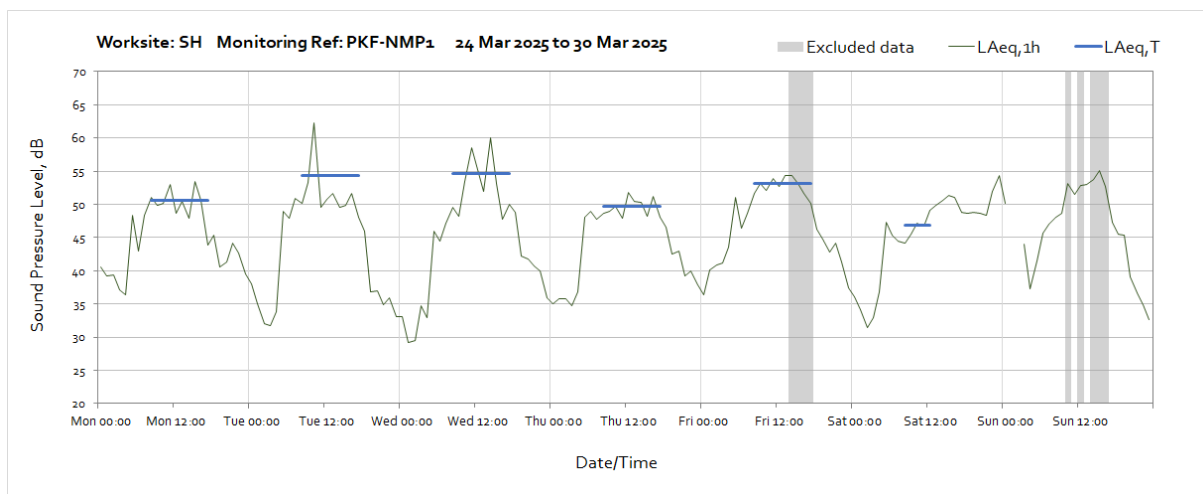
Worksite: SH – Monitoring Ref: PKF-NMP1



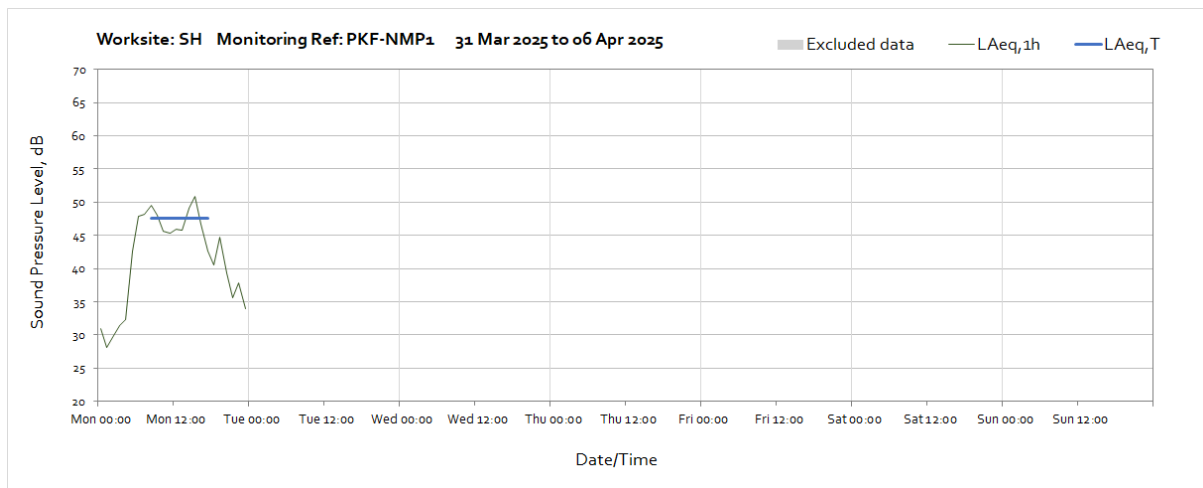
OFFICIAL



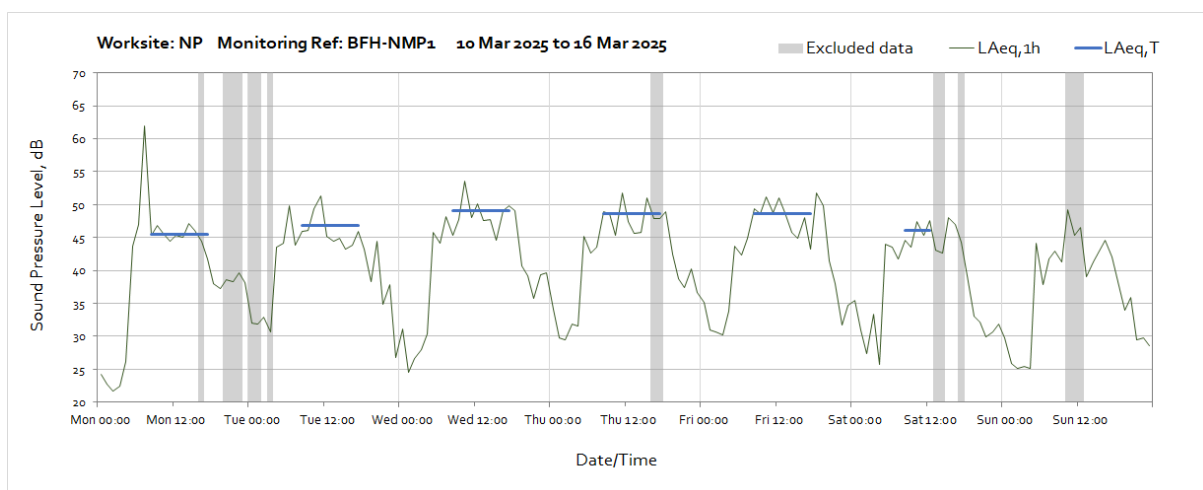
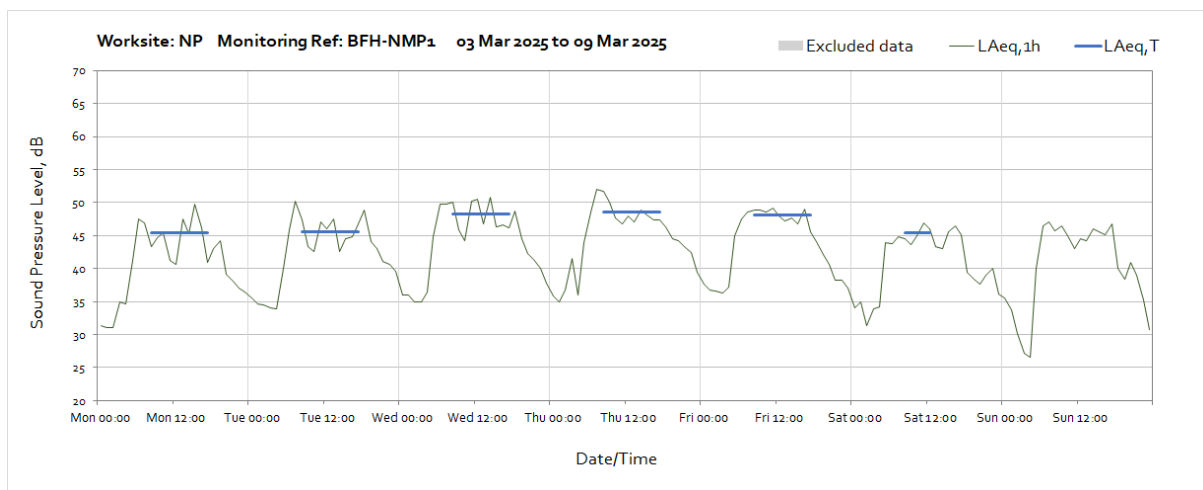
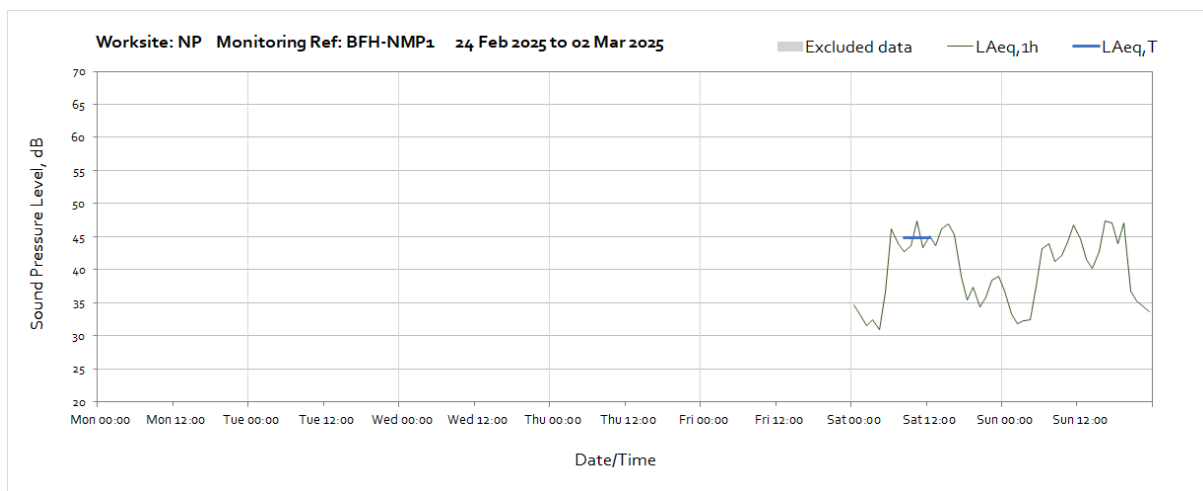
Note: Missing data between 12:00 and 13:00 on Tuesday 18th March was due to monitor field calibration.



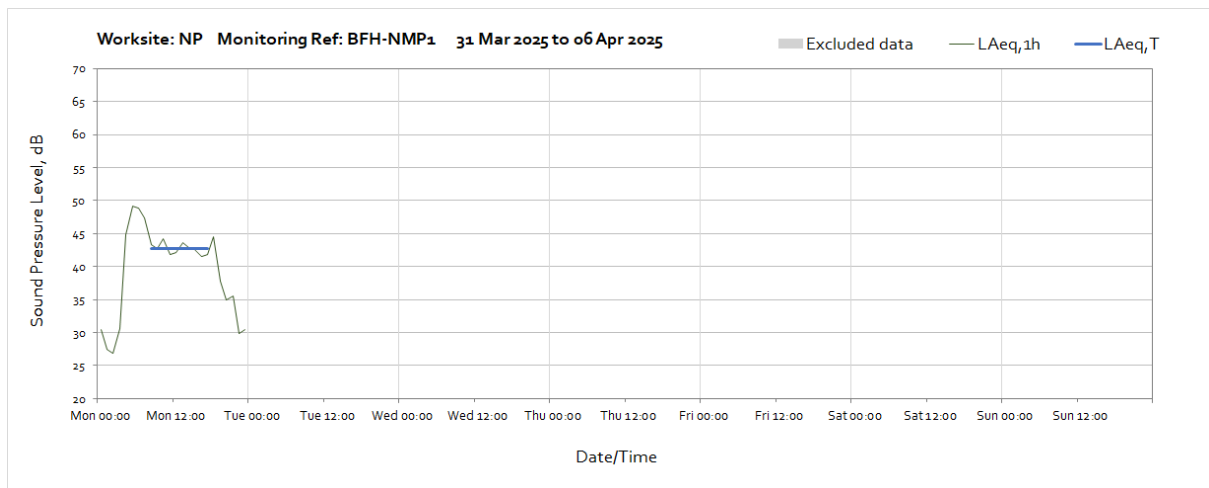
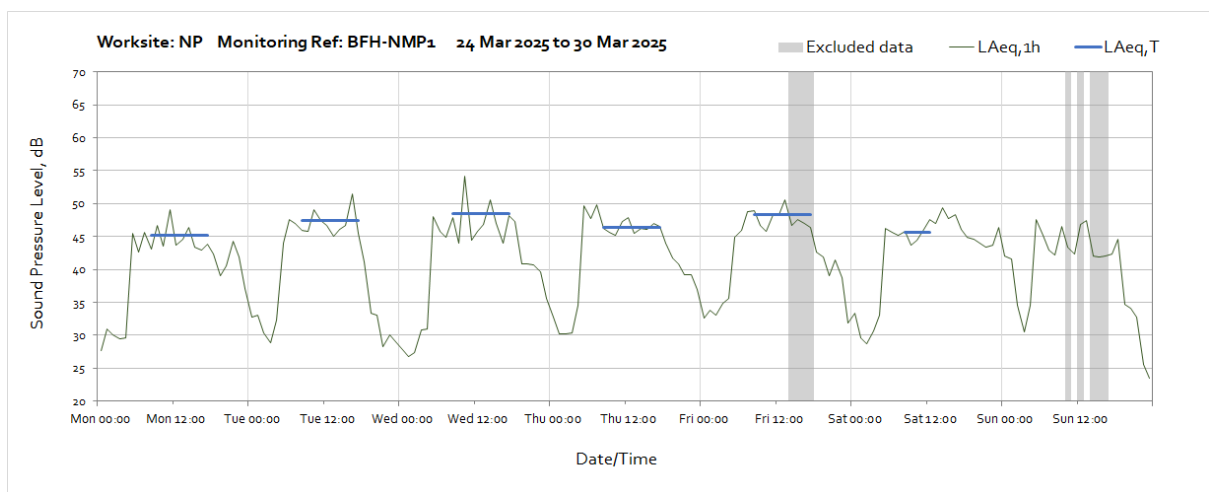
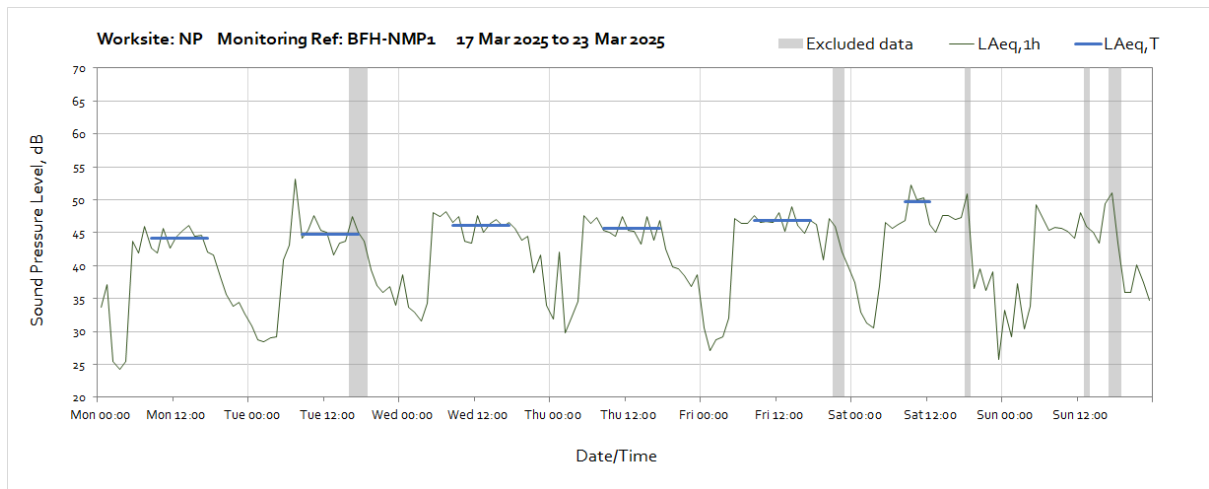
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



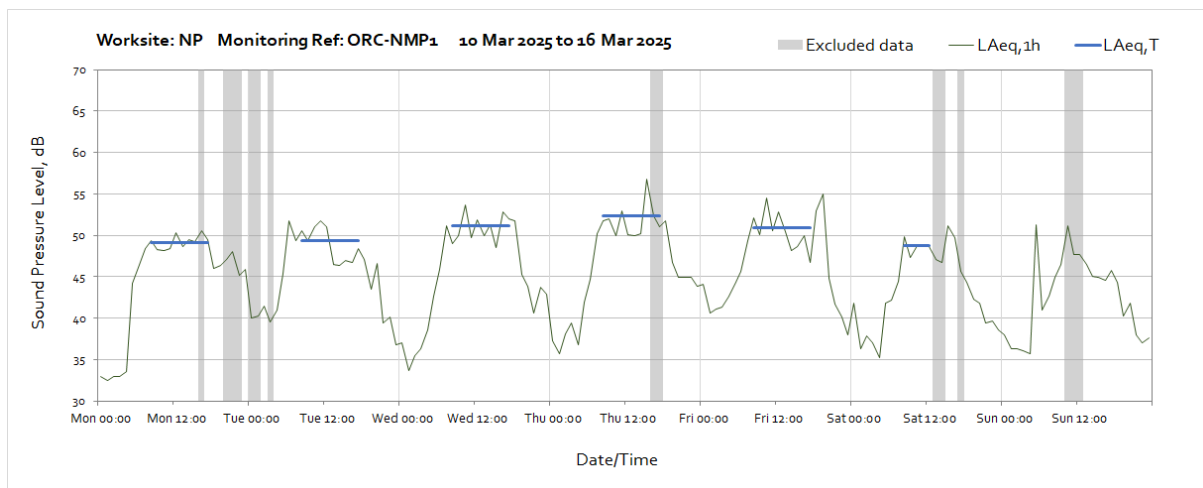
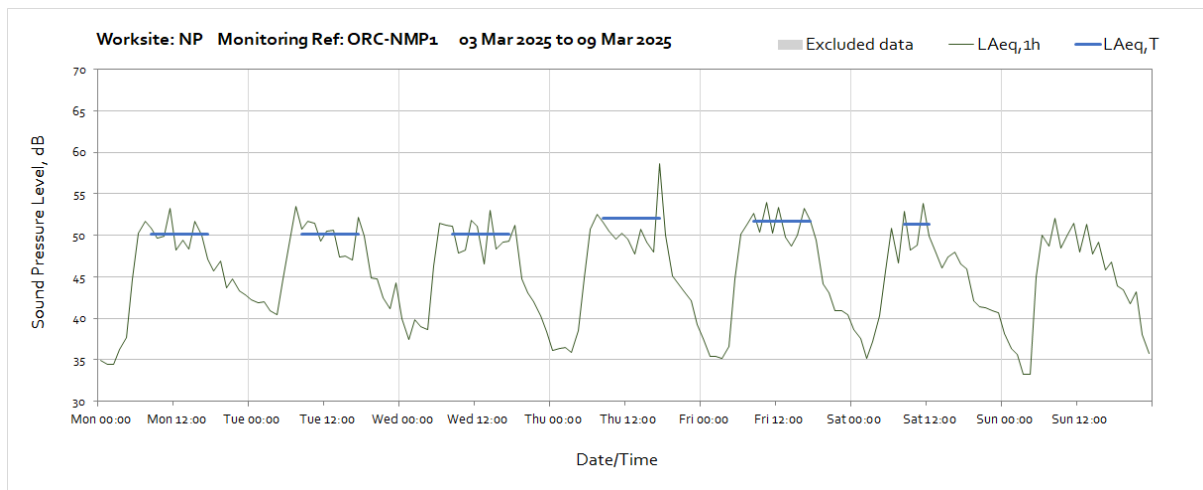
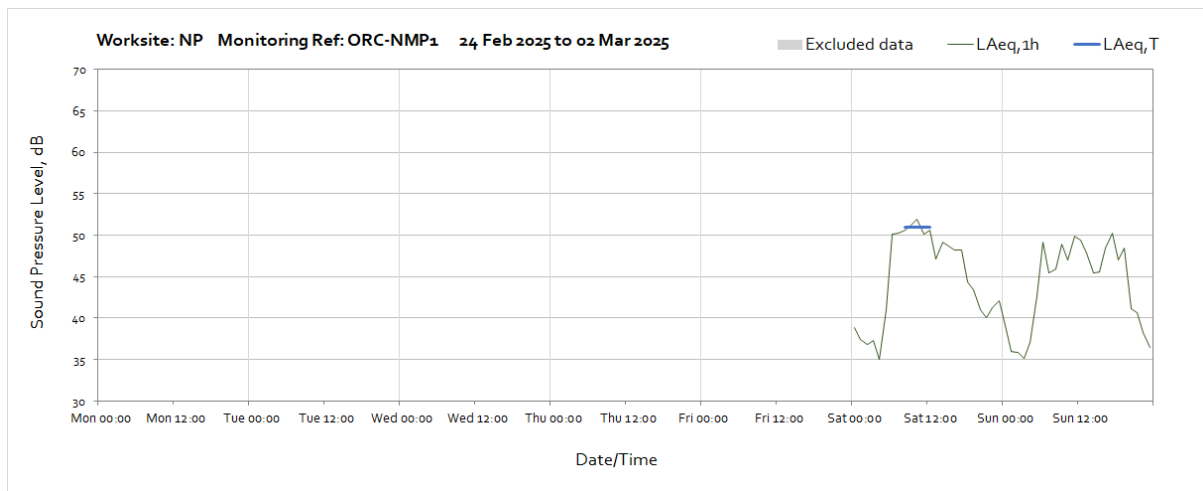
Worksite: NP – Monitoring Ref: BFH-NMP1

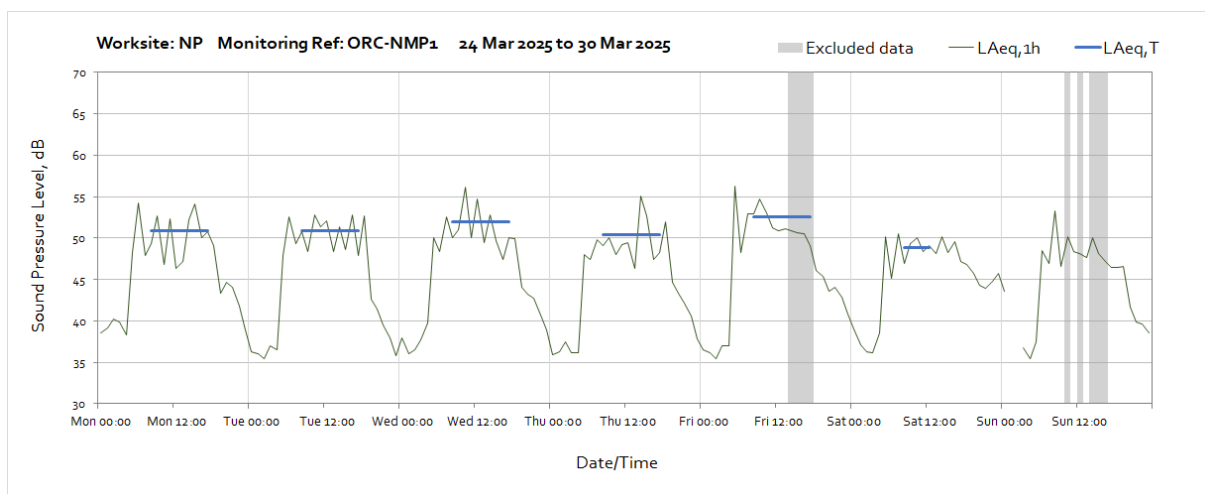
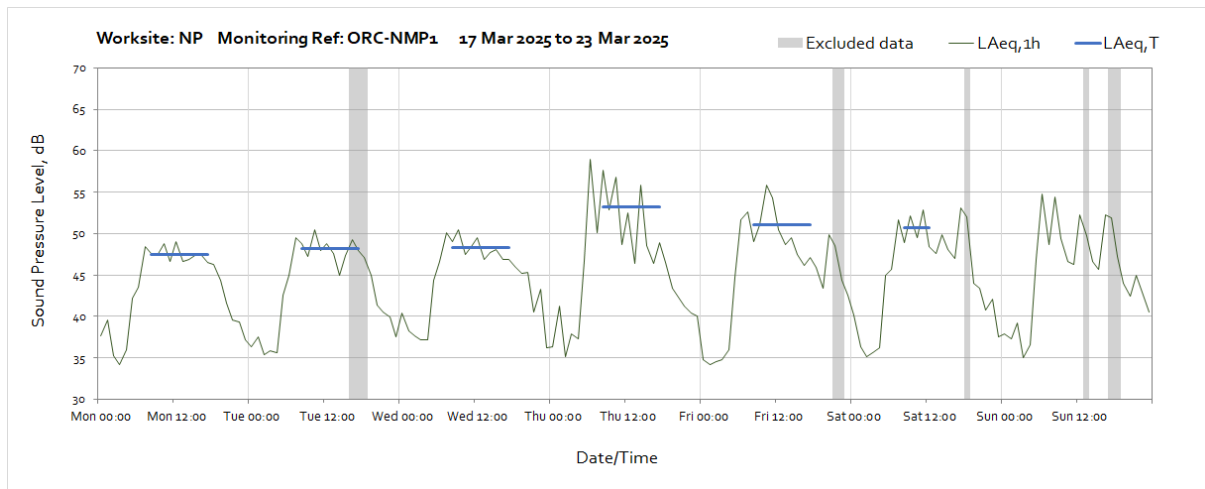


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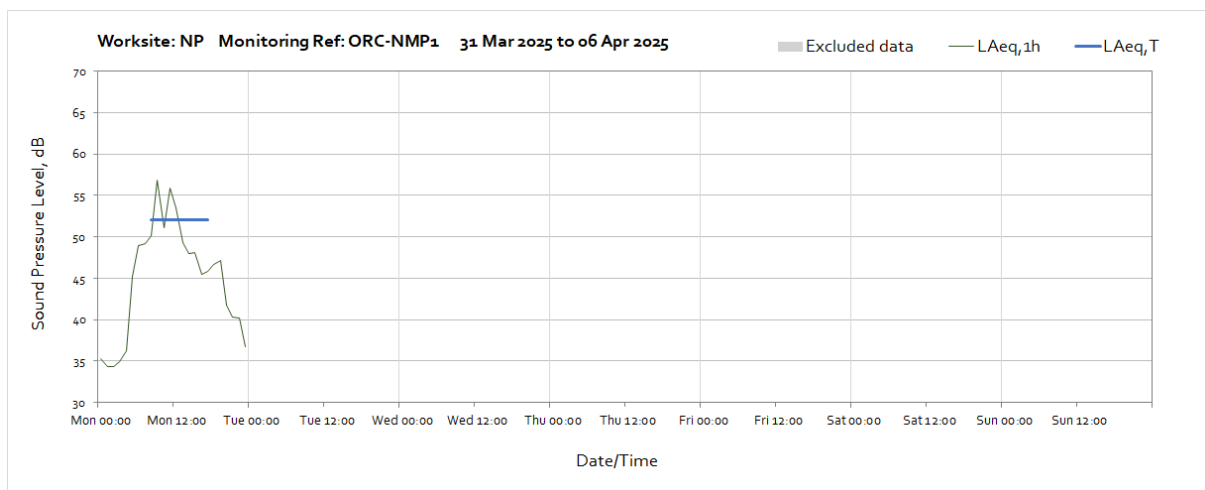


Worksite: NP – Monitoring Ref: ORC-NMP1

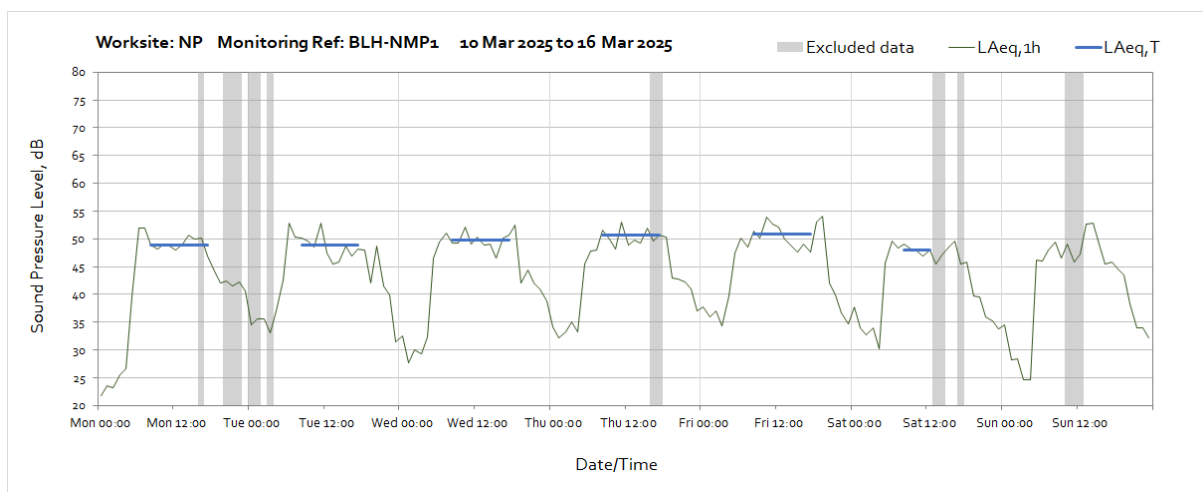
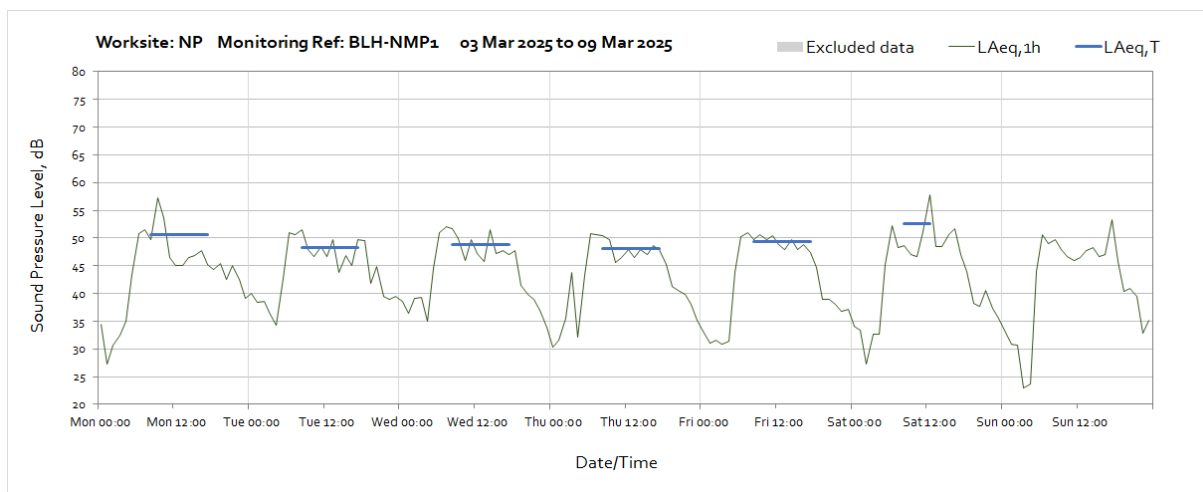
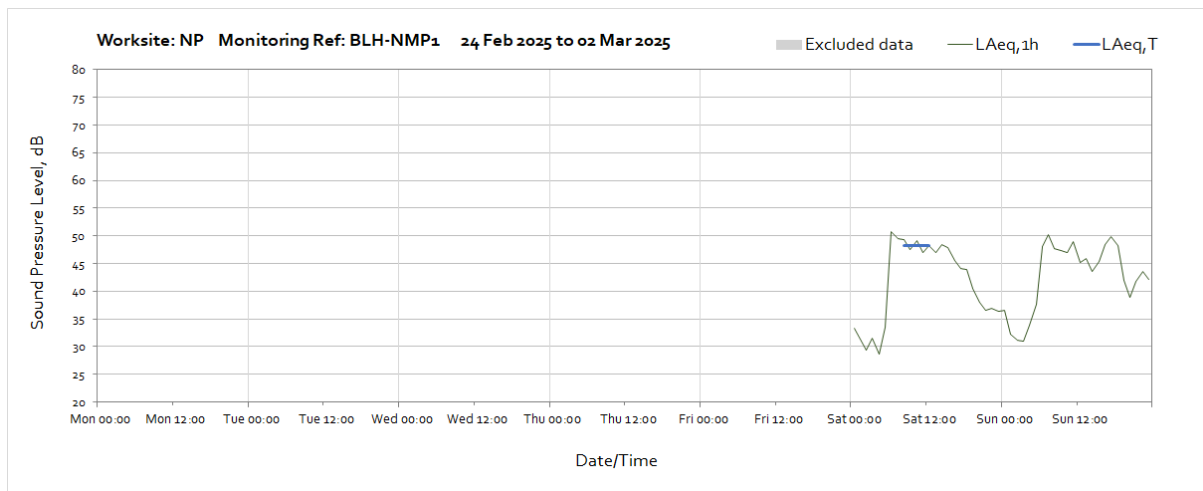




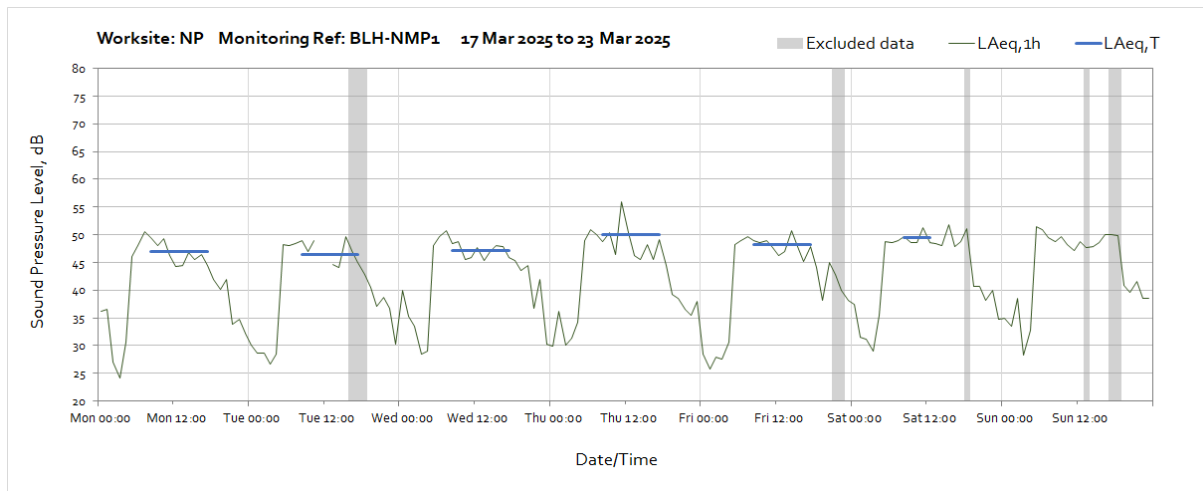
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



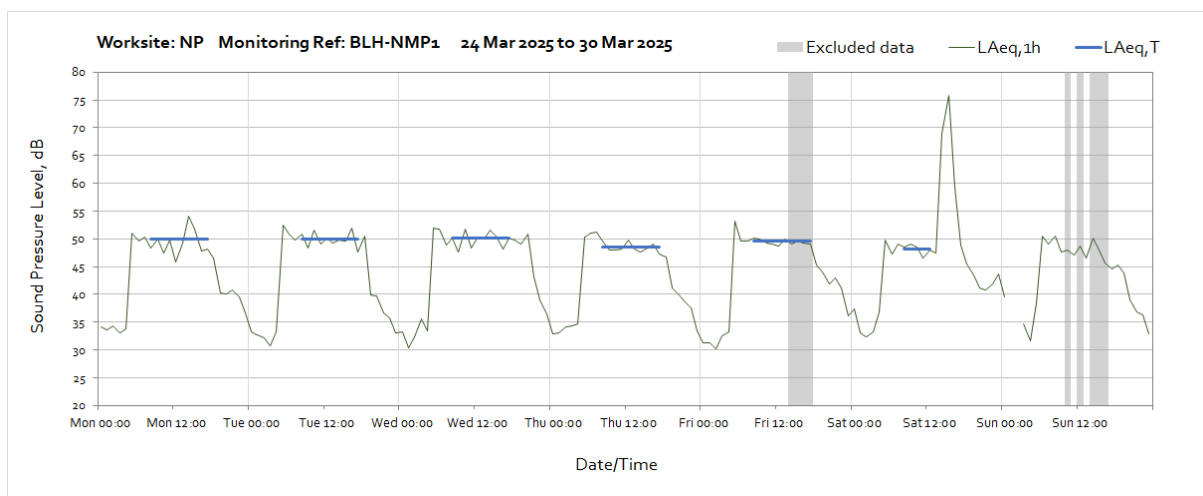
Worksite: NP – Monitoring Ref: BLH-NMP1



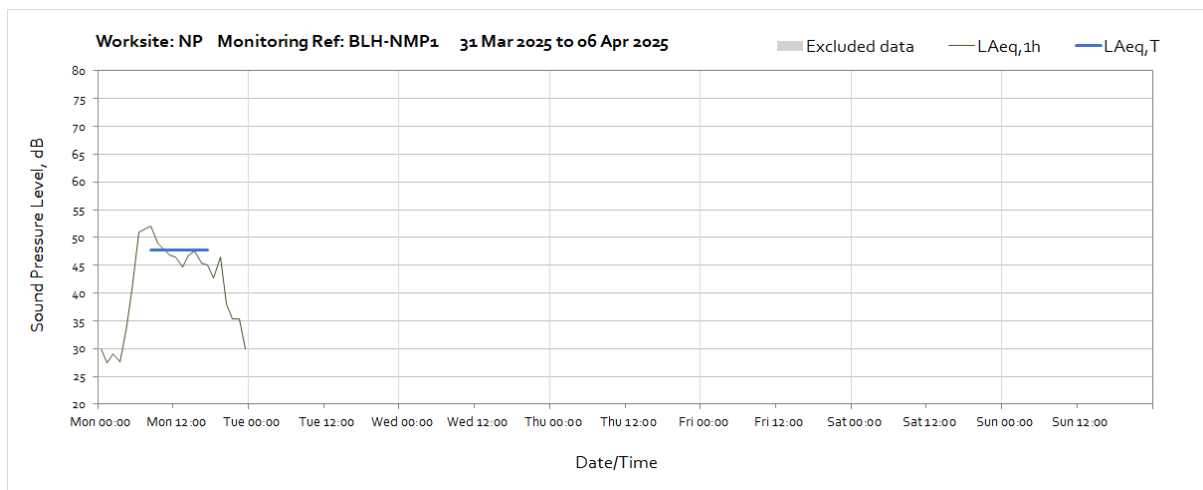
OFFICIAL



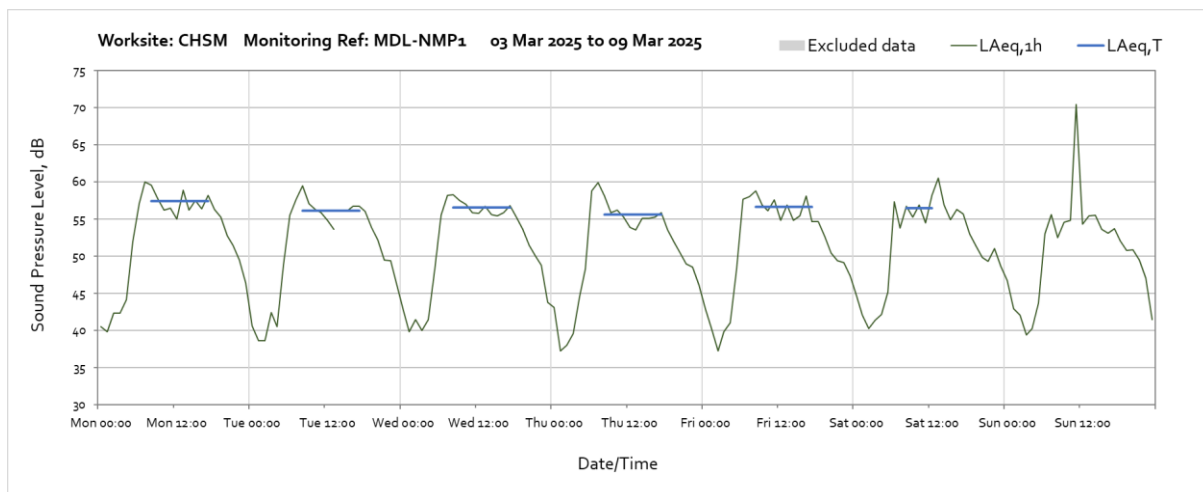
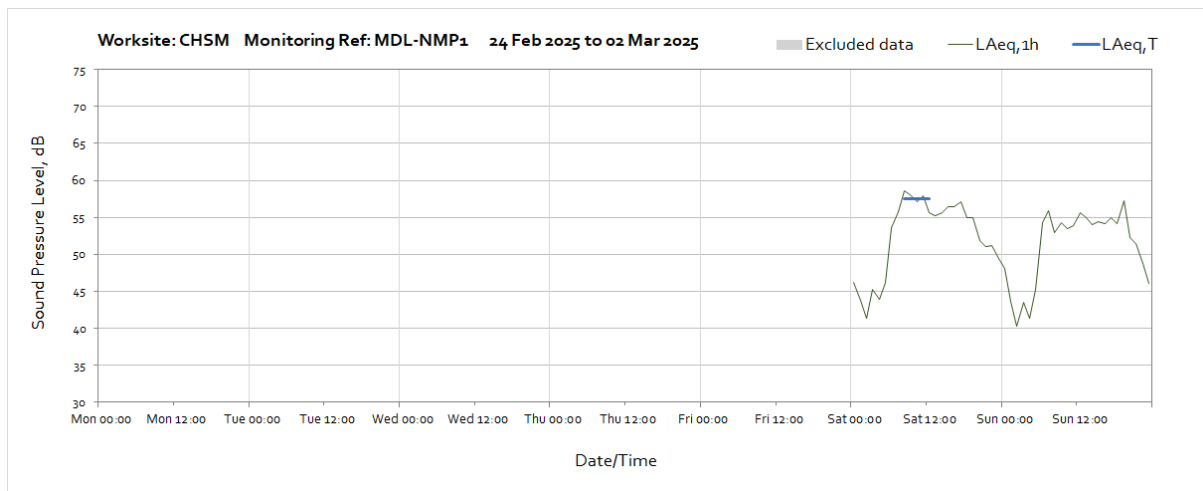
Note: Missing data between 11:00 and 13:00 on Tuesday 18th March was due to monitor field calibration.



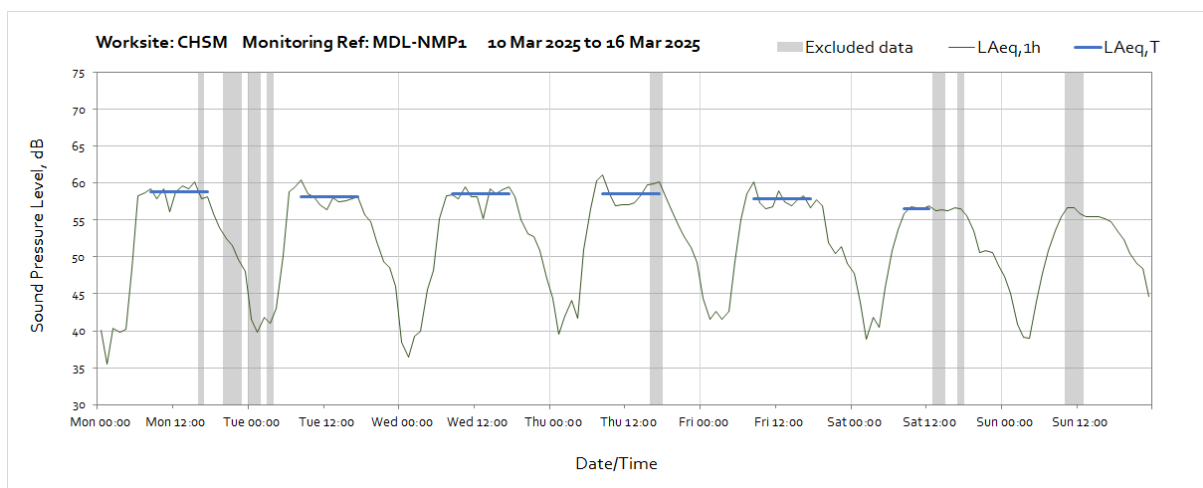
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



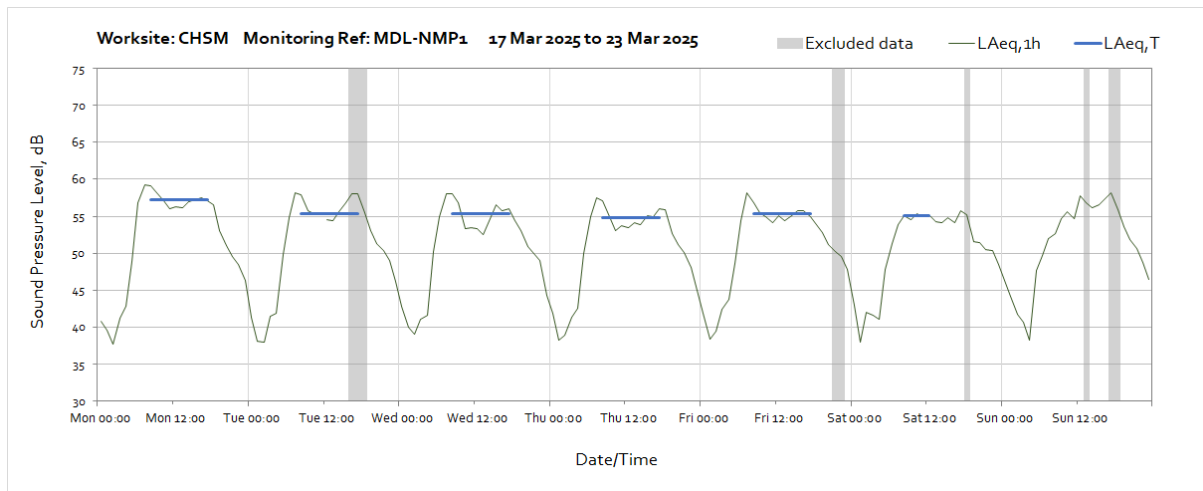
Worksite: CHSM – Monitoring Ref: MDL-NMP1



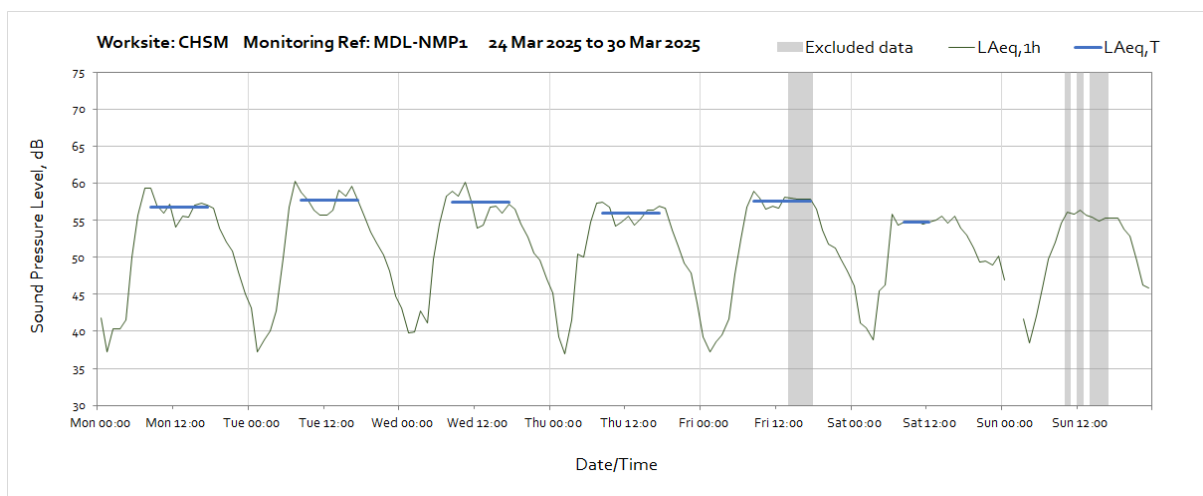
Note: Missing data between 14:00 and 15:00 on Tuesday 4th March was due to monitor maintenance.



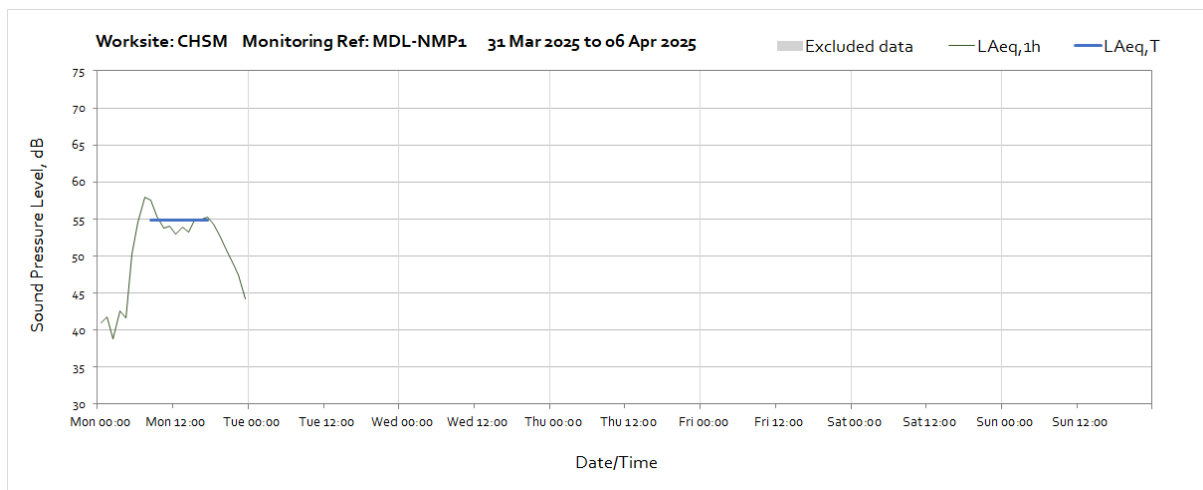
OFFICIAL



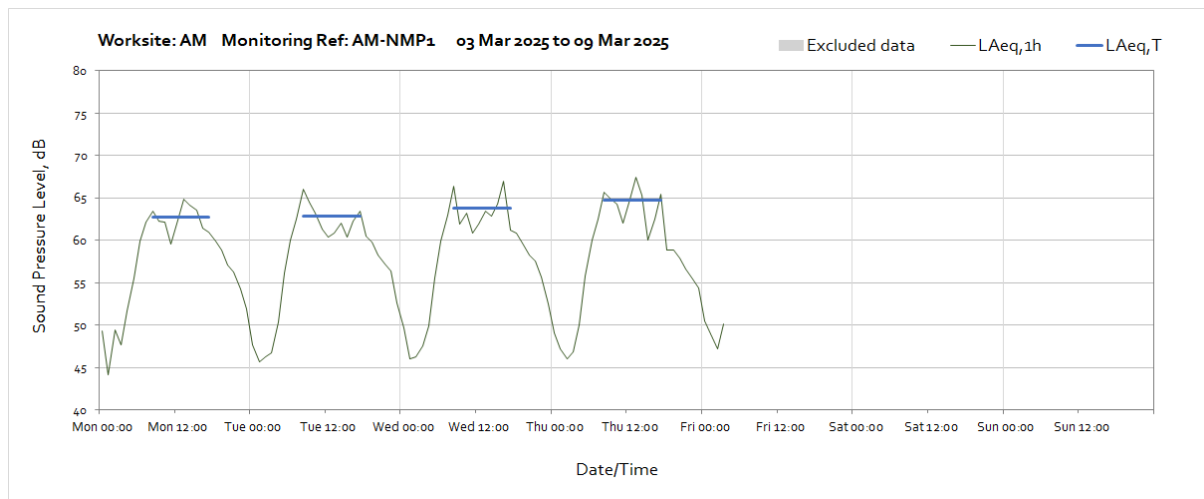
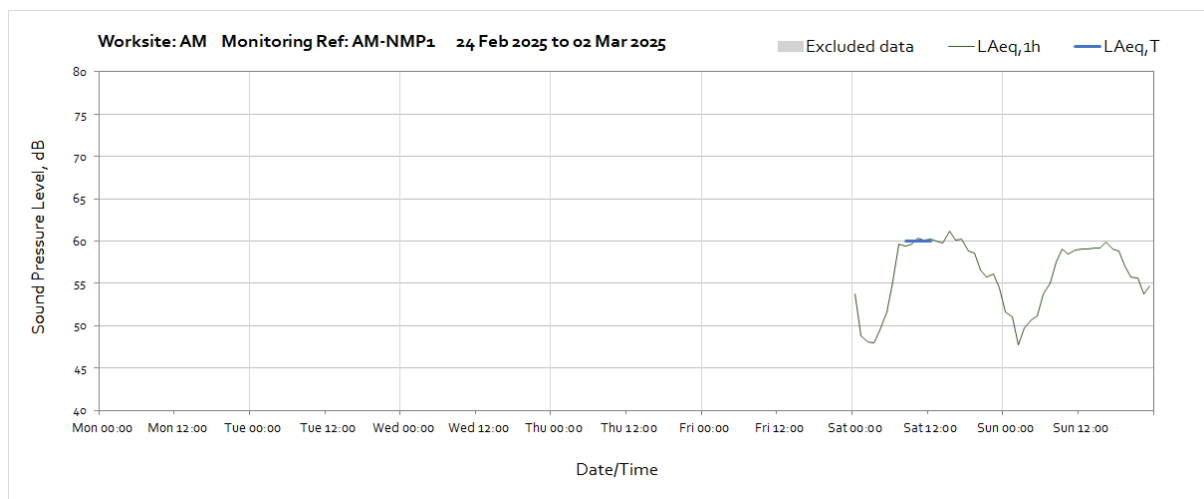
Note: Missing data between 11:00 and 12:00 on Tuesday 18th March was due to monitor field calibration.



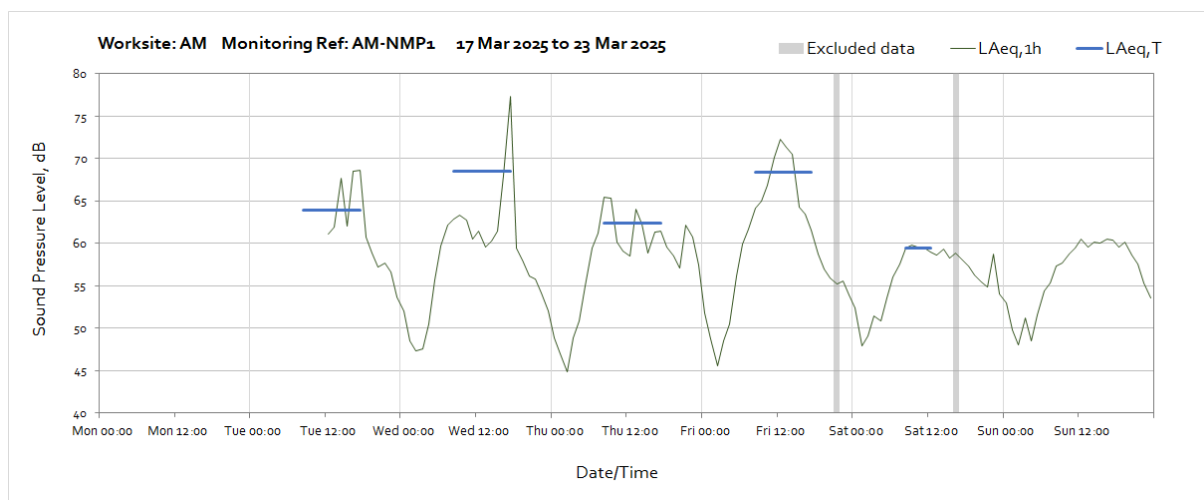
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



Worksite: AM – Monitoring Ref: AM-NMP1

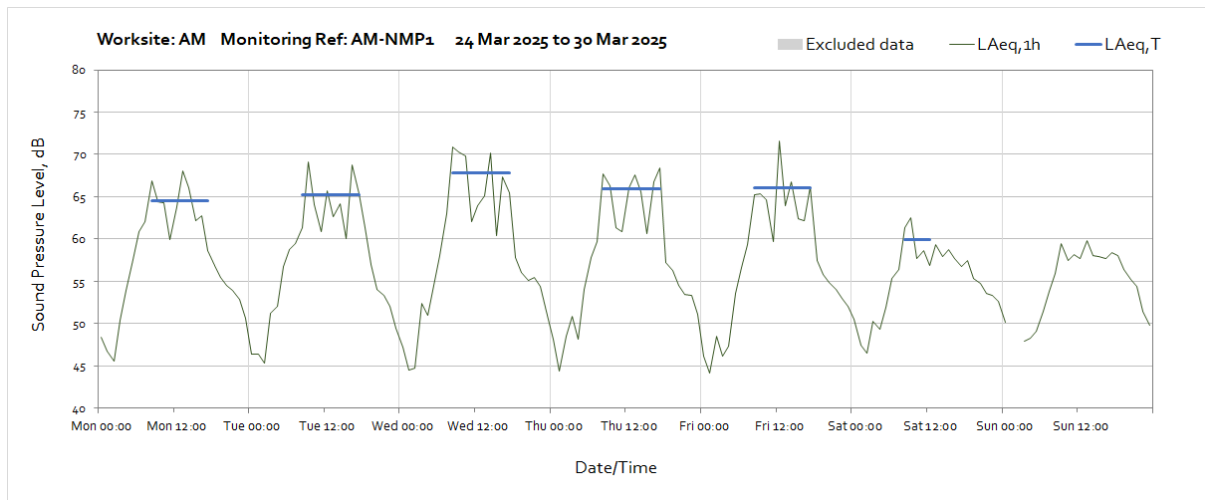


Note: Missing data between 04:00 on Friday 7th March and 12:00 on Tuesday 18th March was due to a loss of connection to the monitoring station.

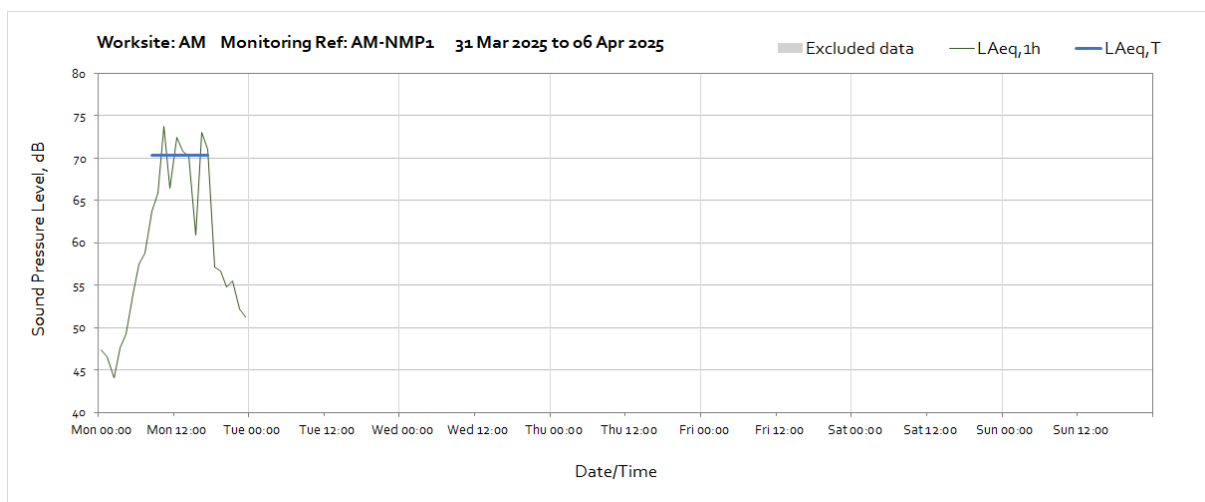


Note: Missing data between 04:00 on Friday 7th March and 12:00 on Tuesday 18th March was due to a loss of connection to the monitoring station.

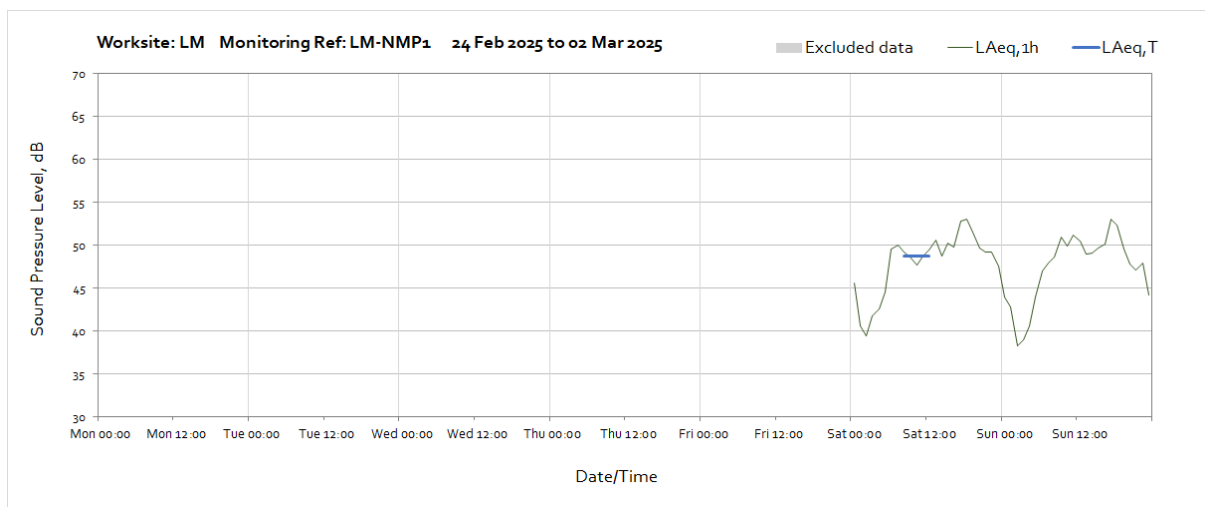
OFFICIAL

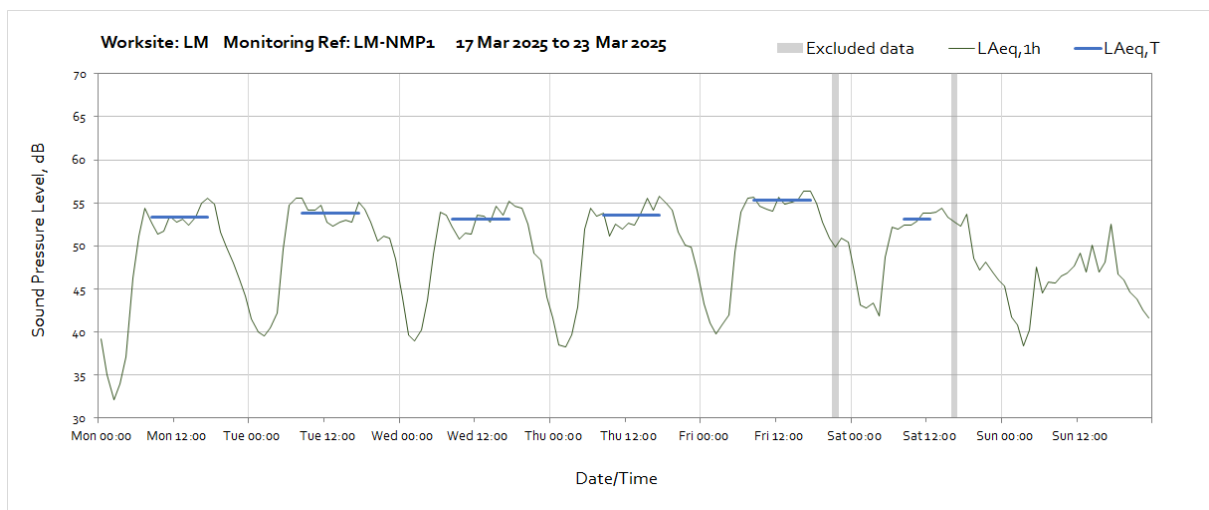
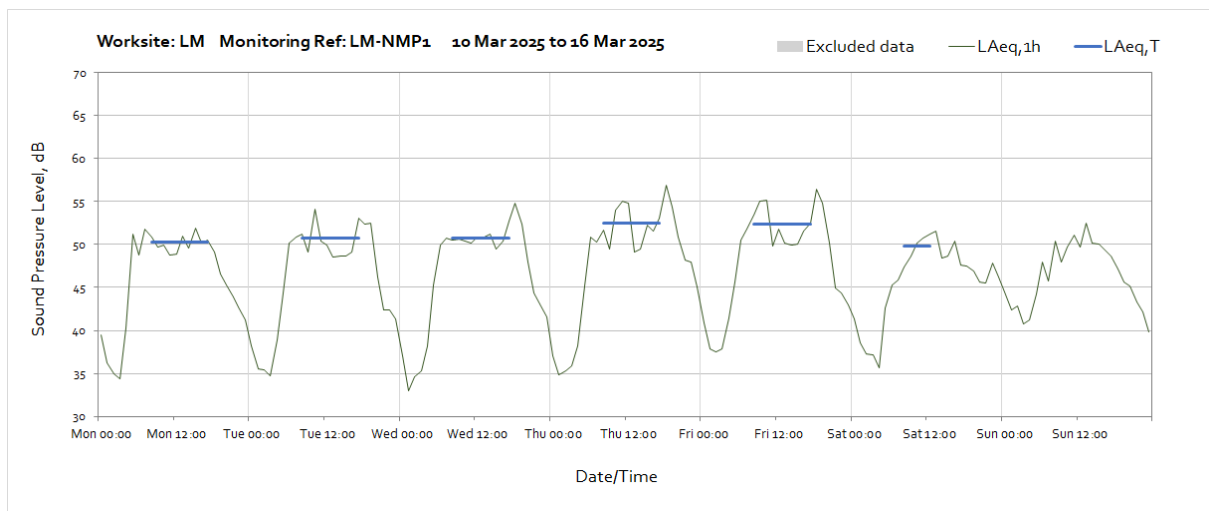
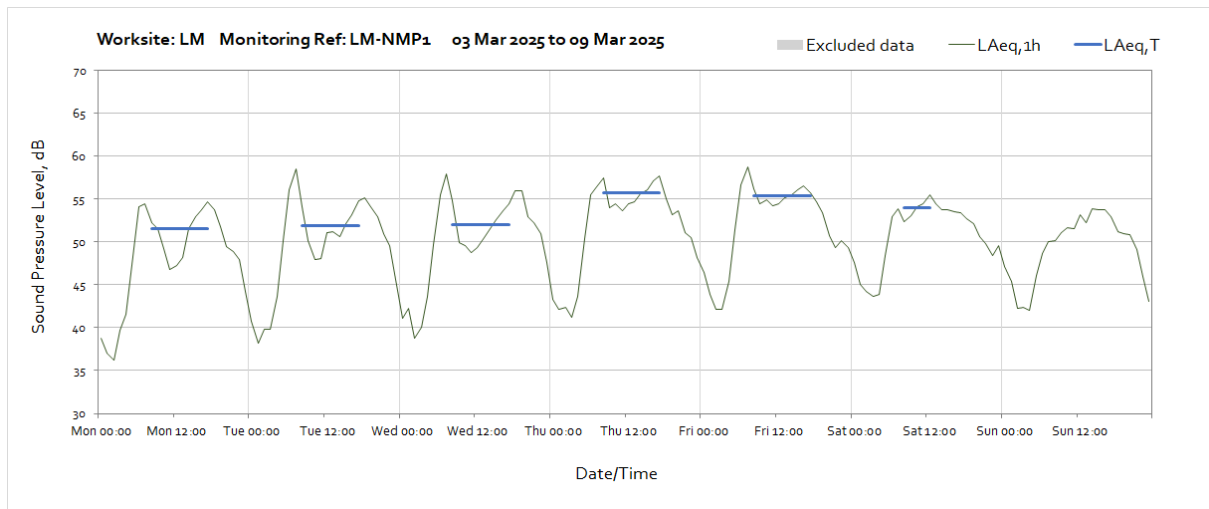


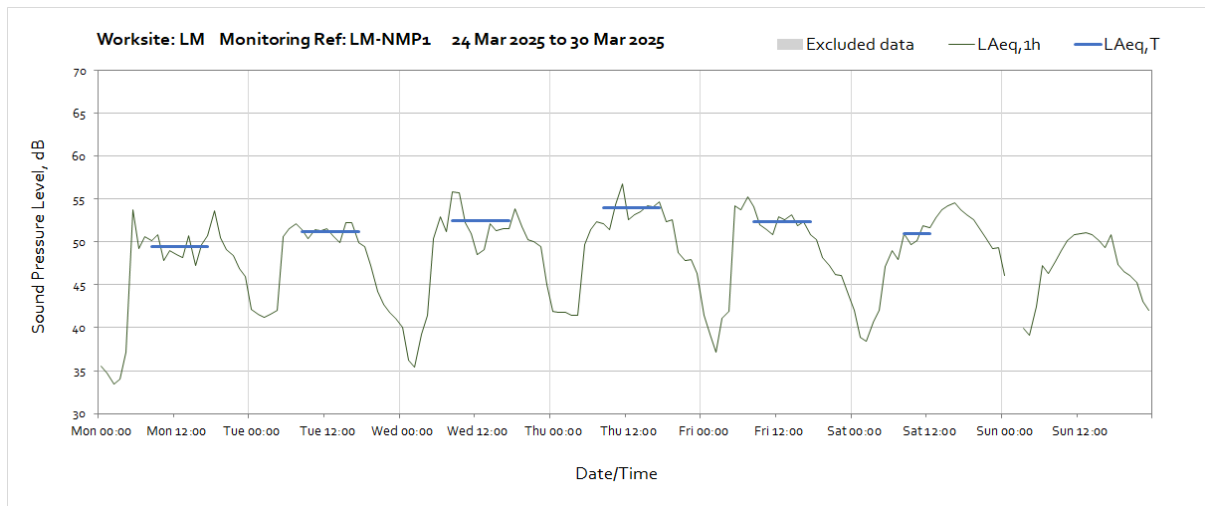
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



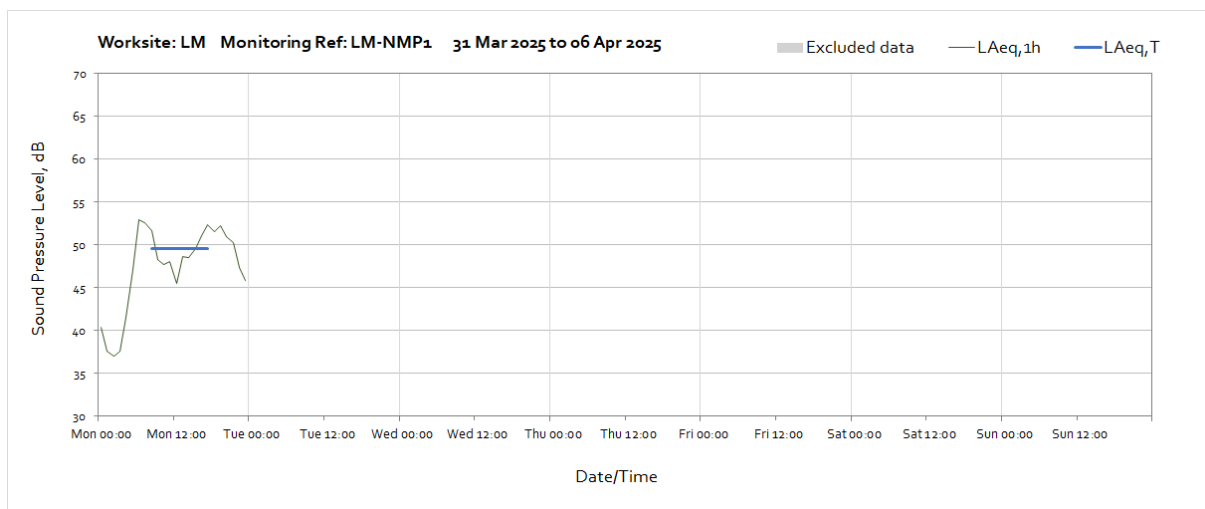
Worksite: LM – Monitoring Ref: LM-NMP1



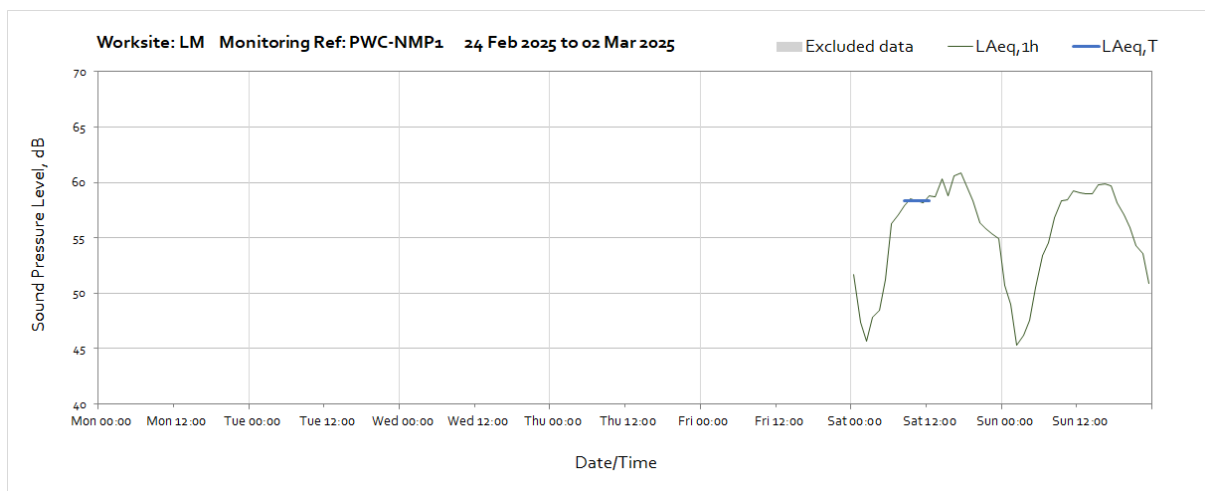


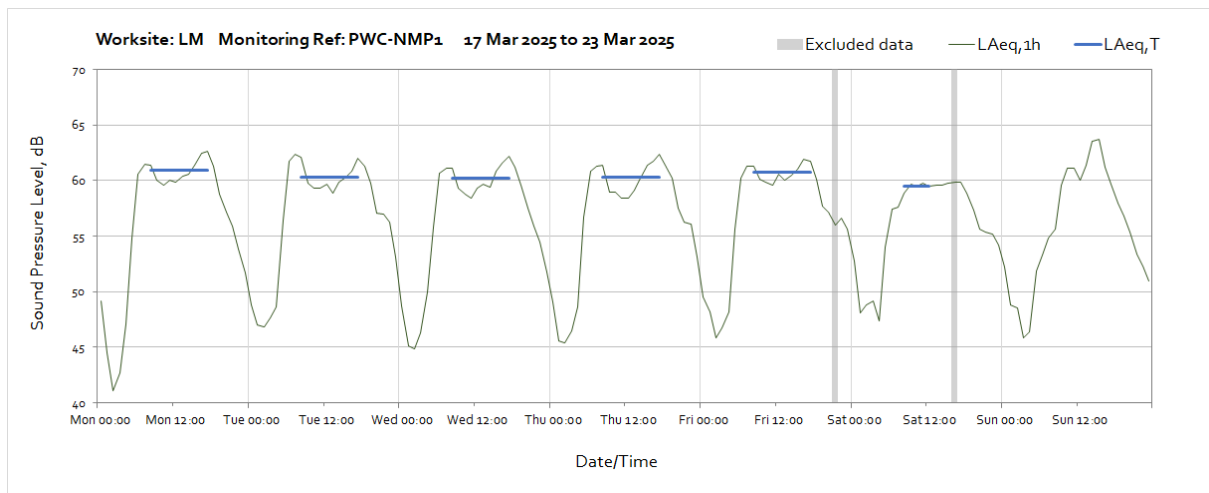
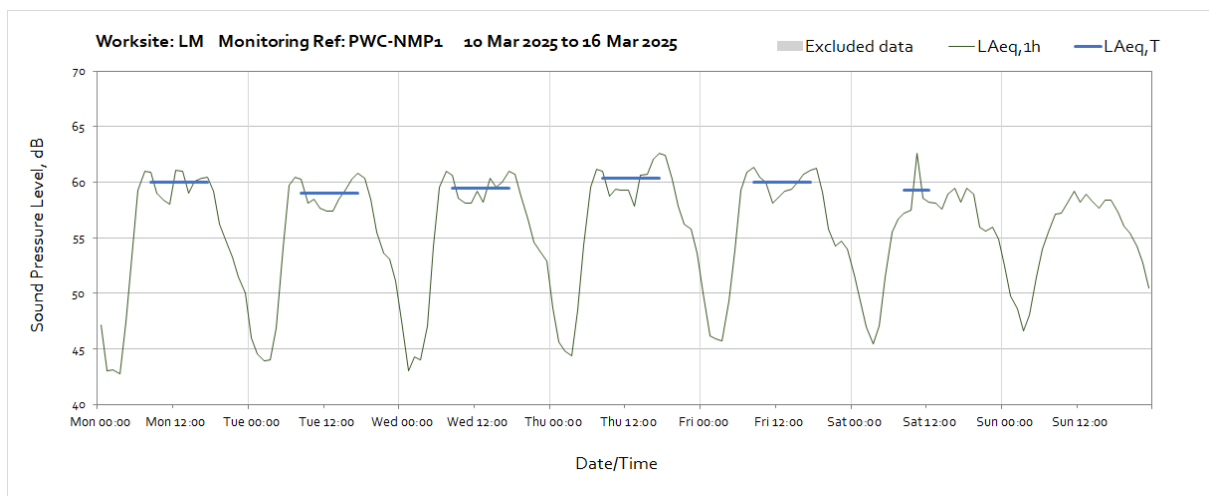
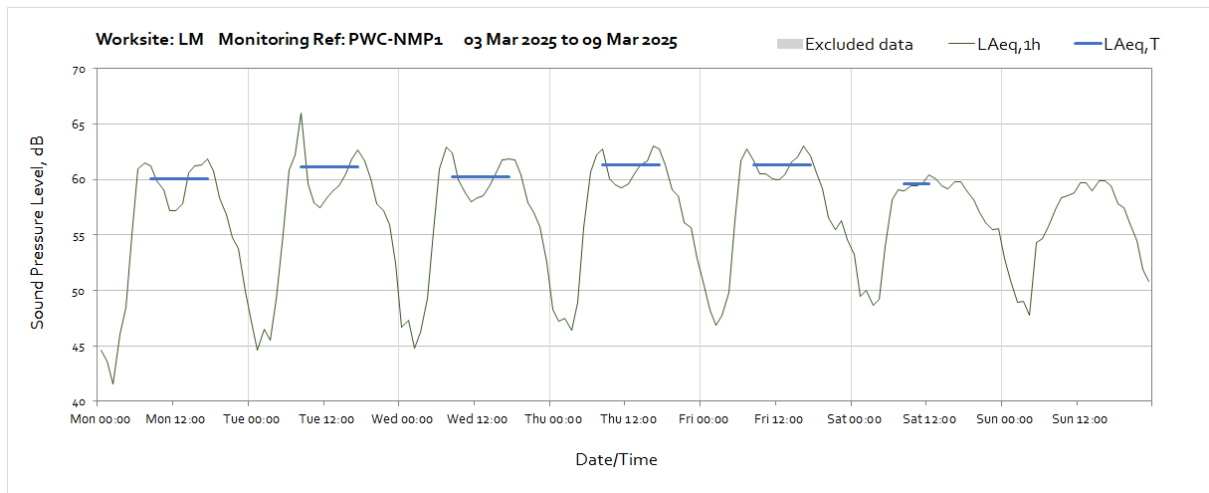


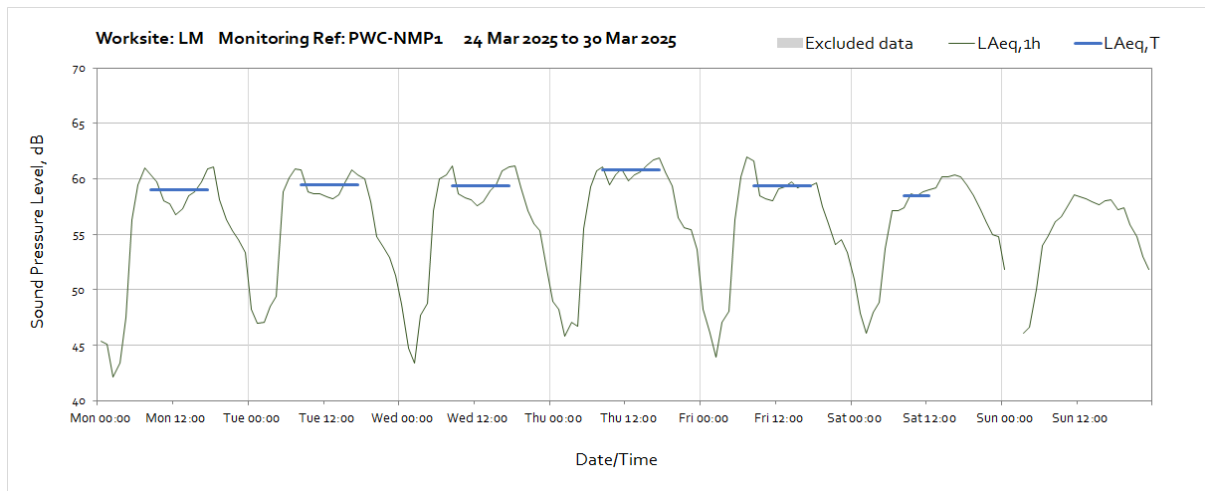
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



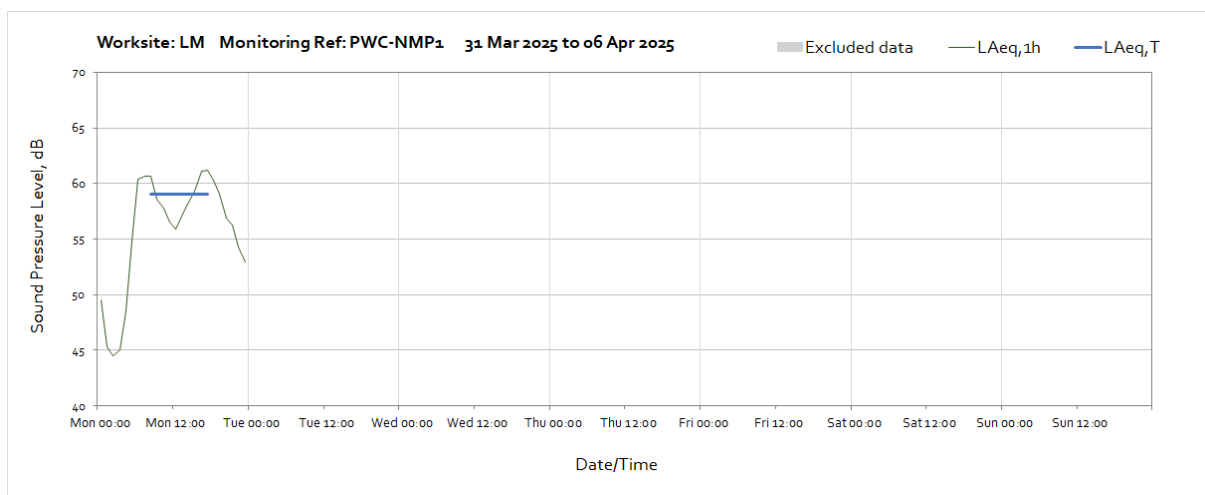
Worksite: LM – Monitoring Ref: PWC-NMP1



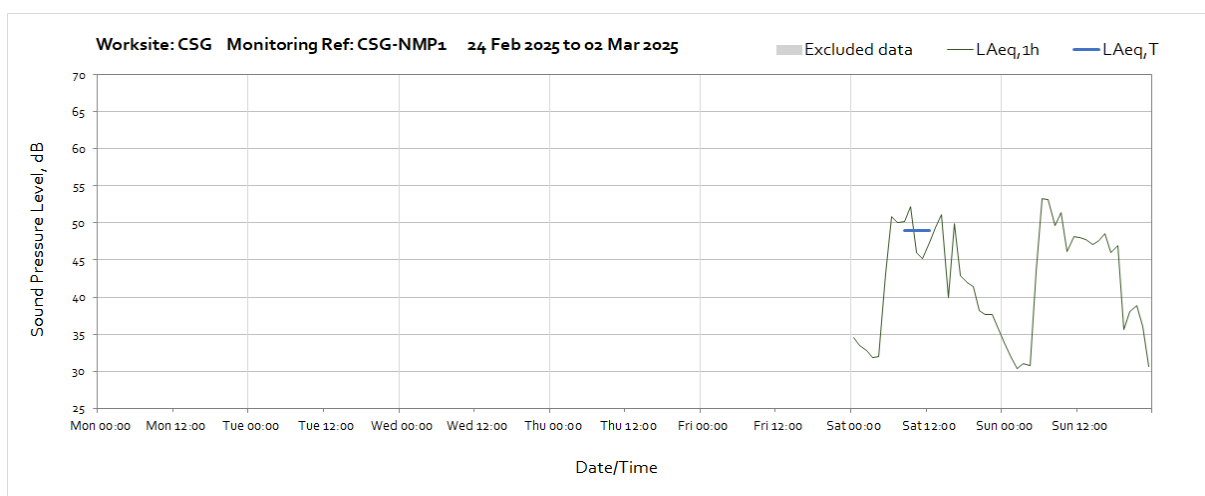


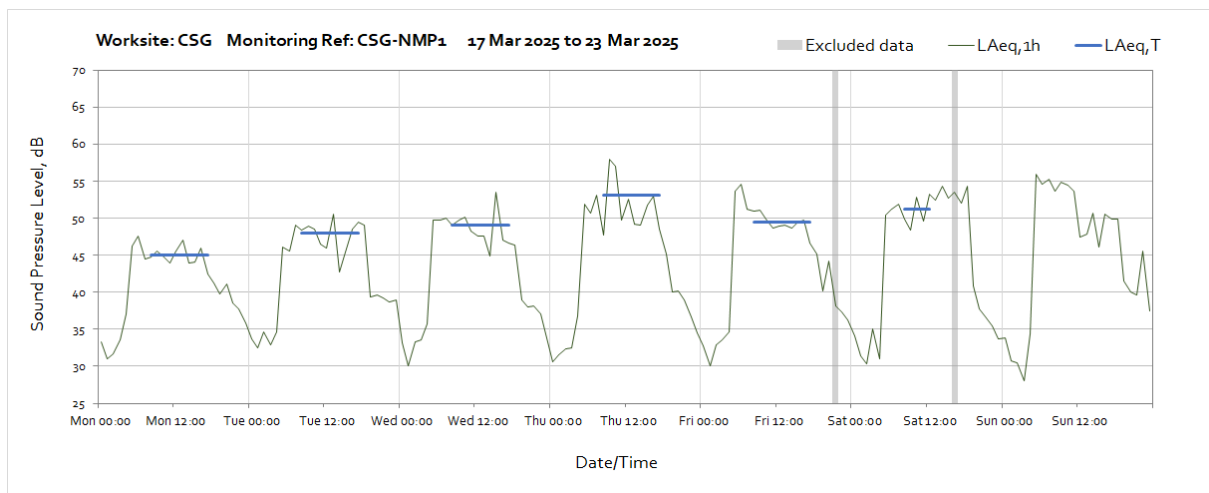
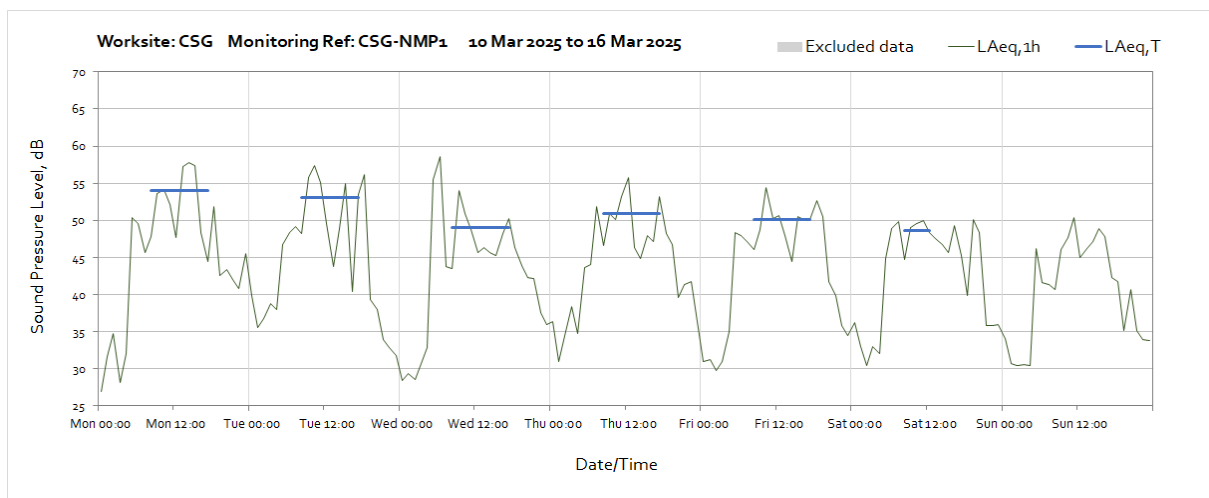
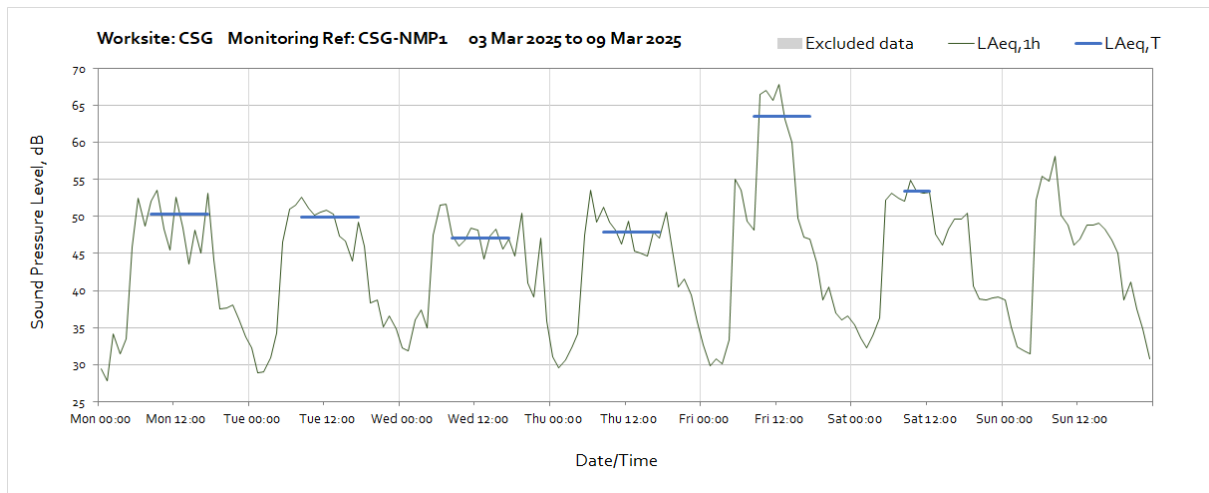


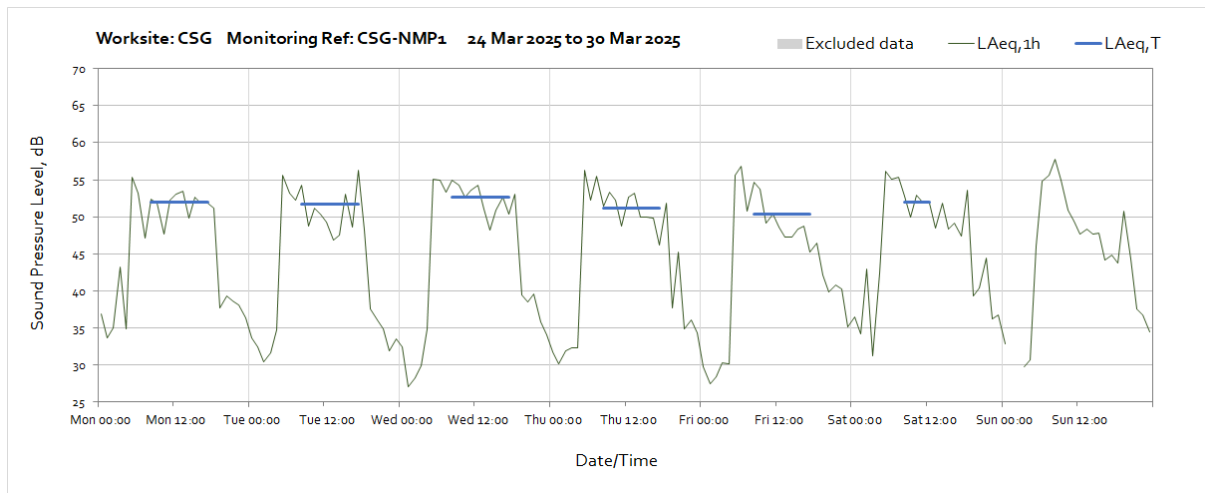
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



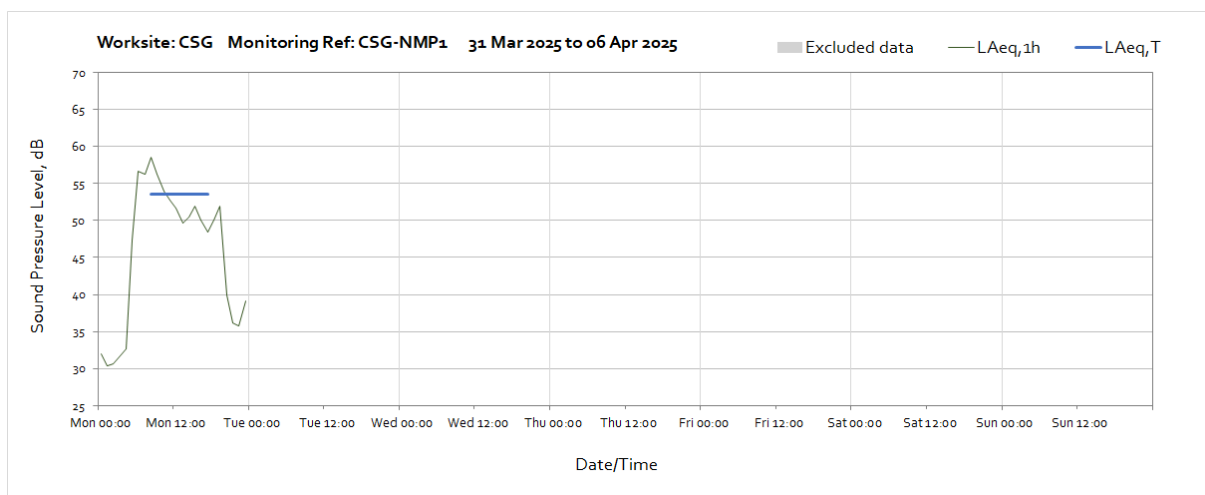
Worksite: CSG – Monitoring Ref: CSG-NMP1



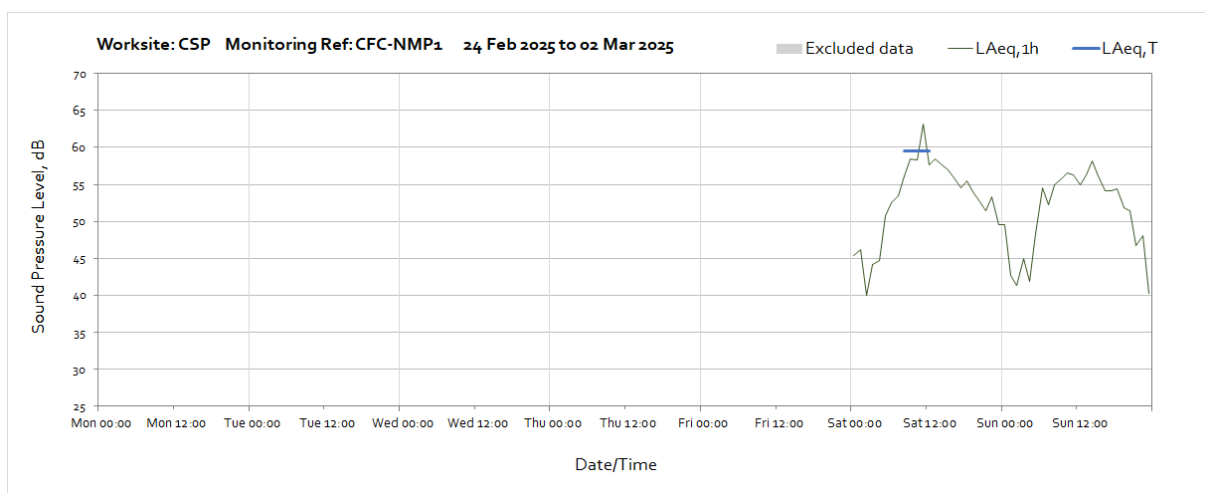


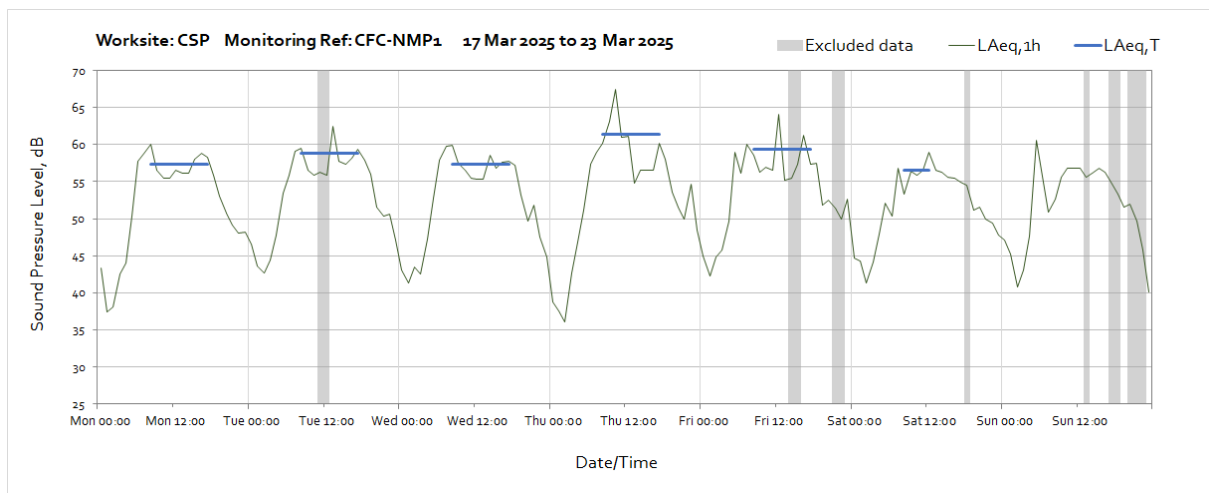
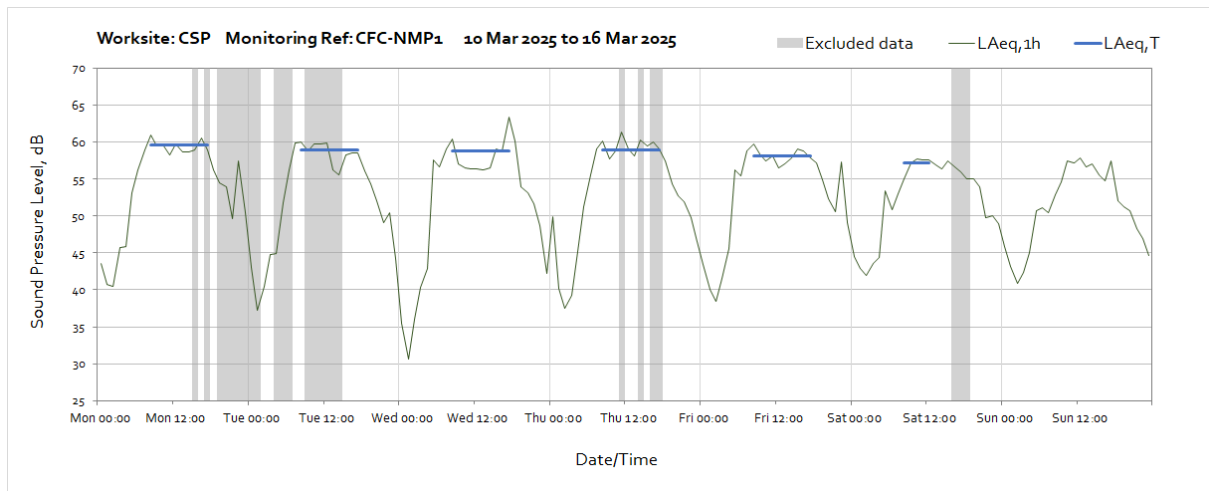
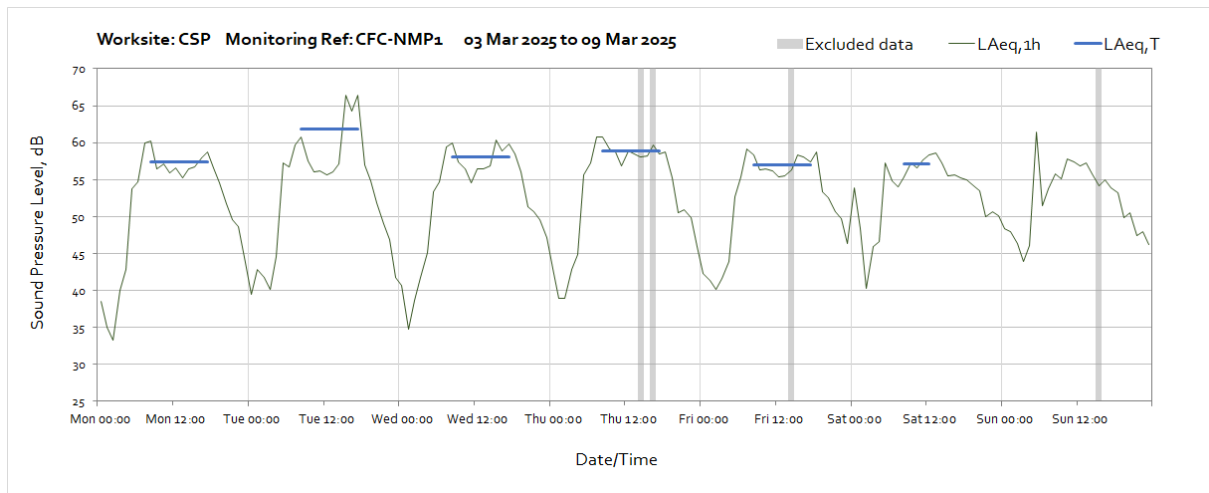


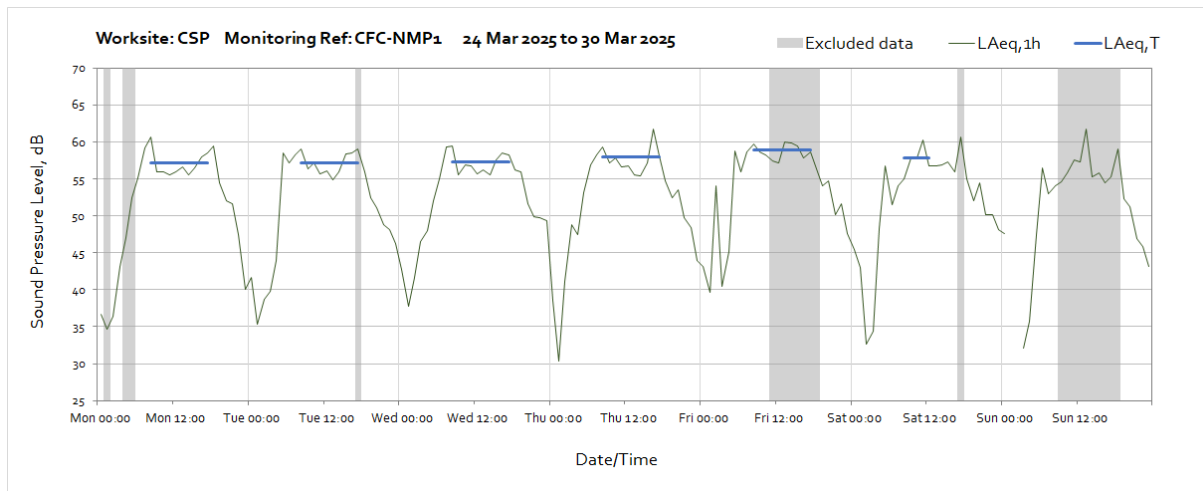
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



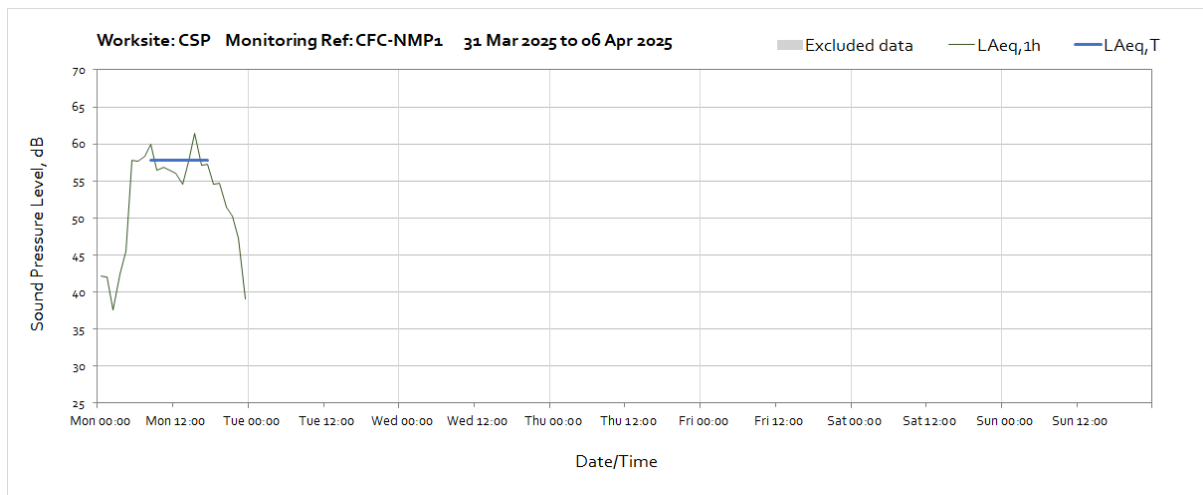
Worksite: CSP – Monitoring Ref: CFC-NMP1



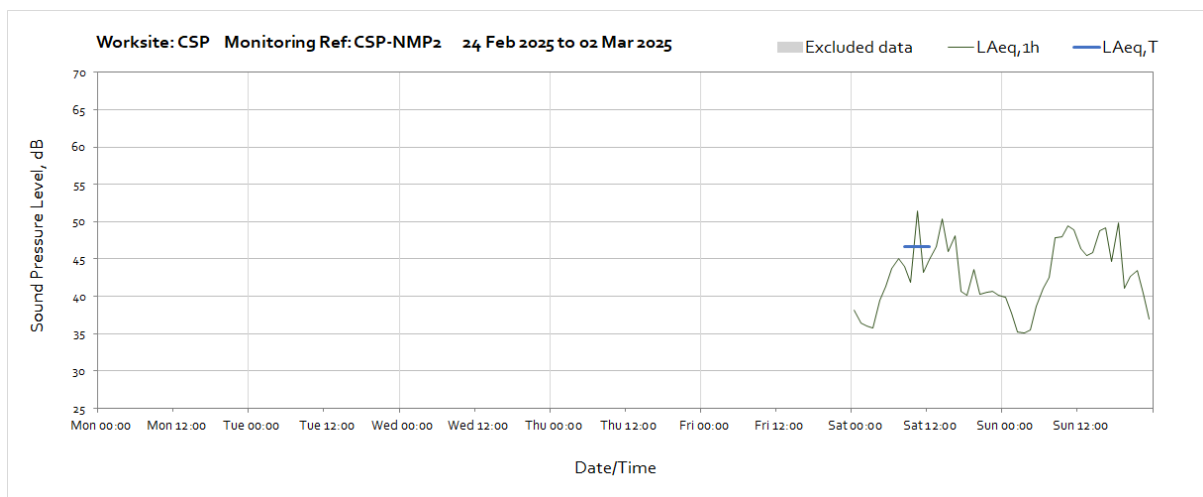


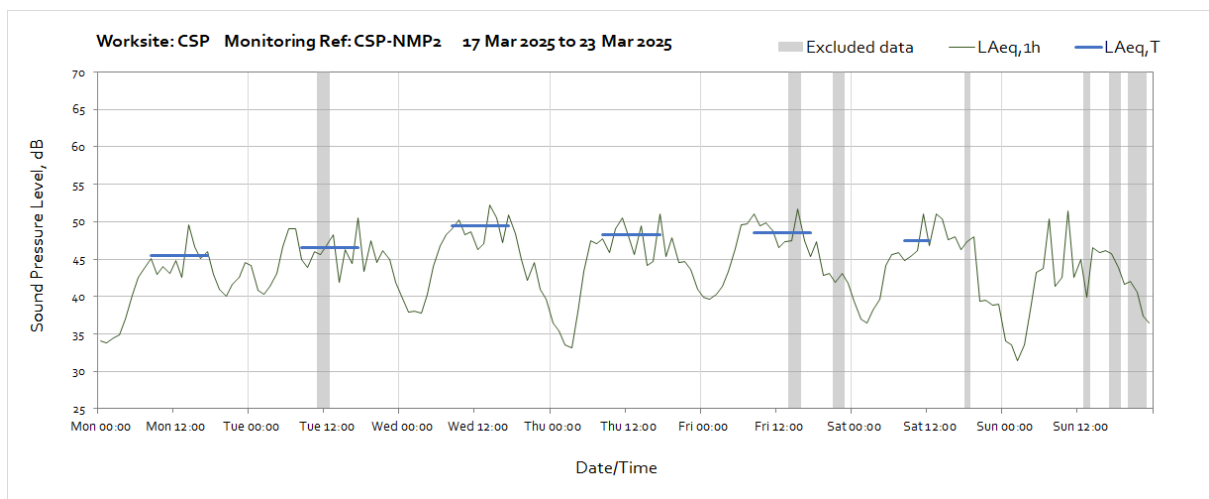
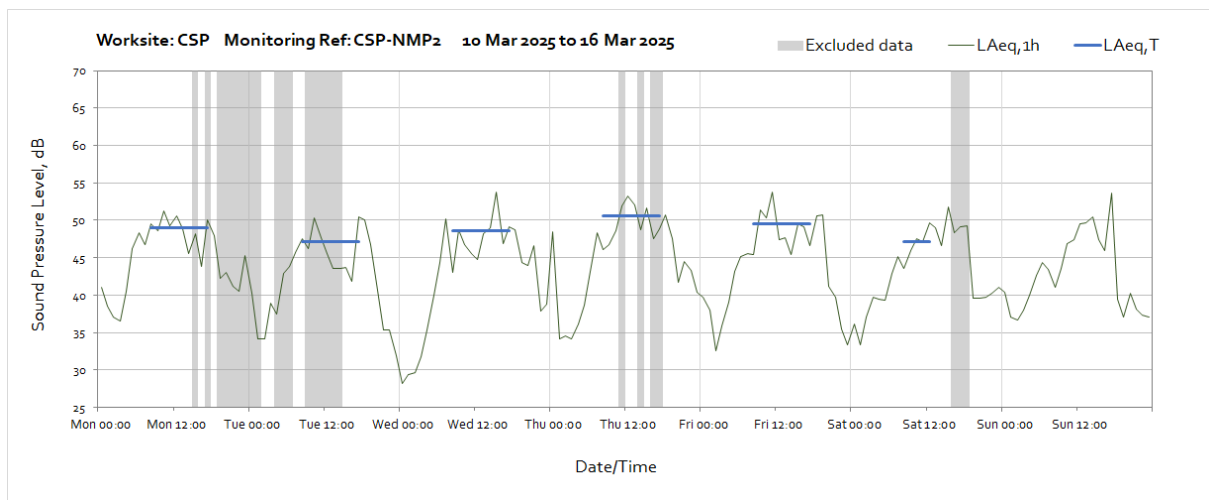
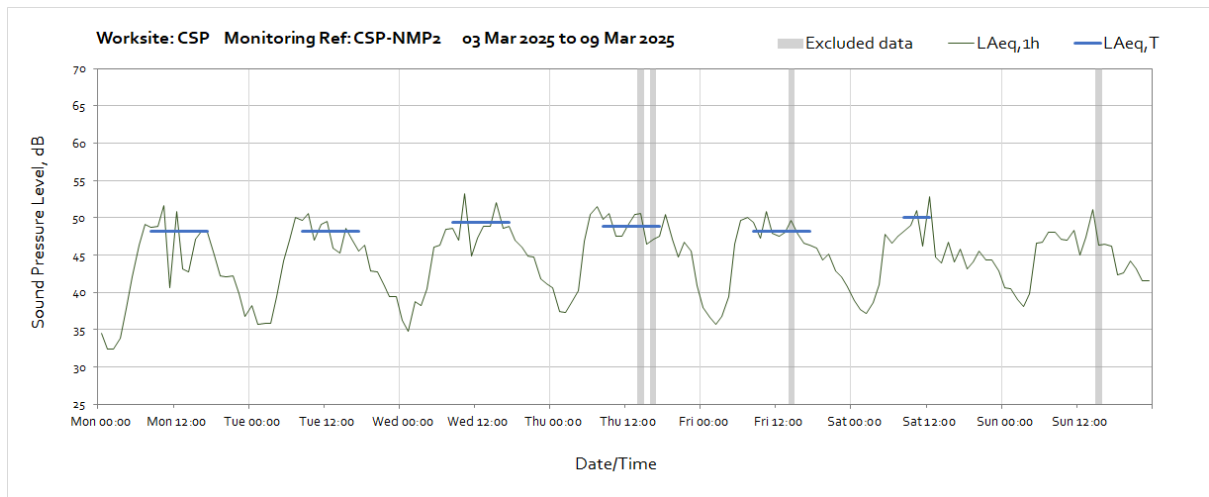


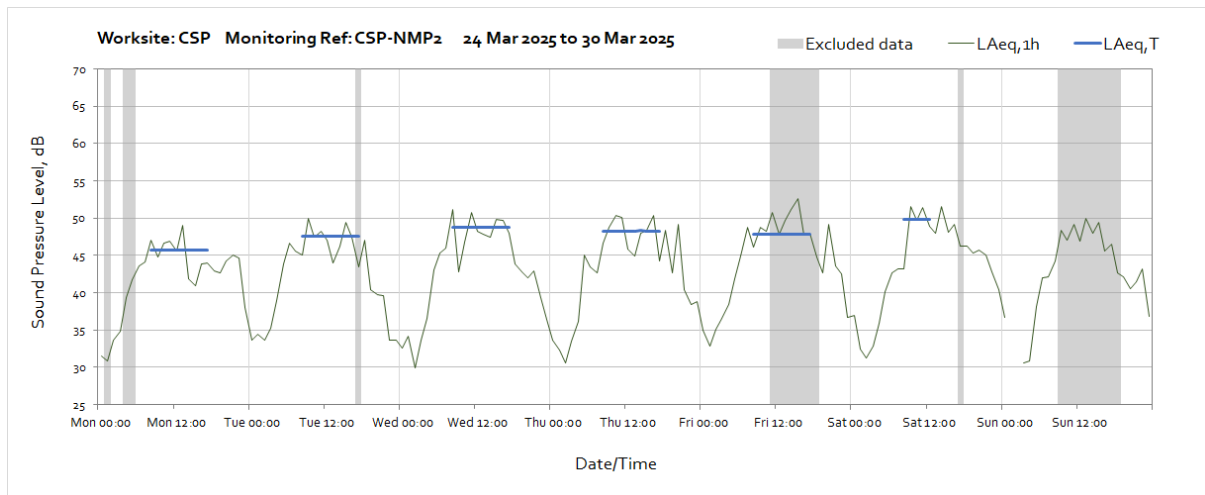
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



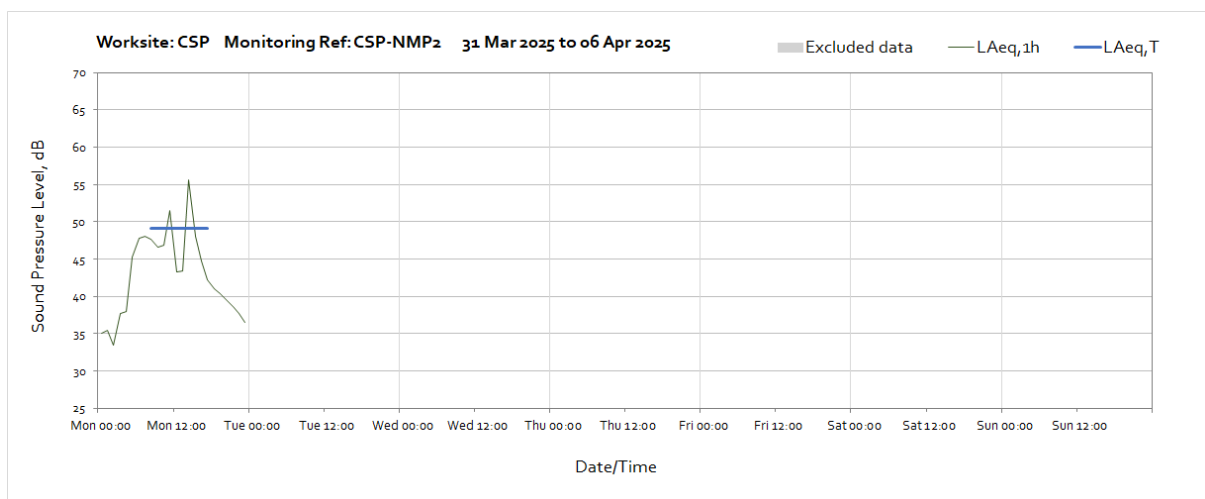
Worksite: CSP – Monitoring Ref: CSP-NMP2



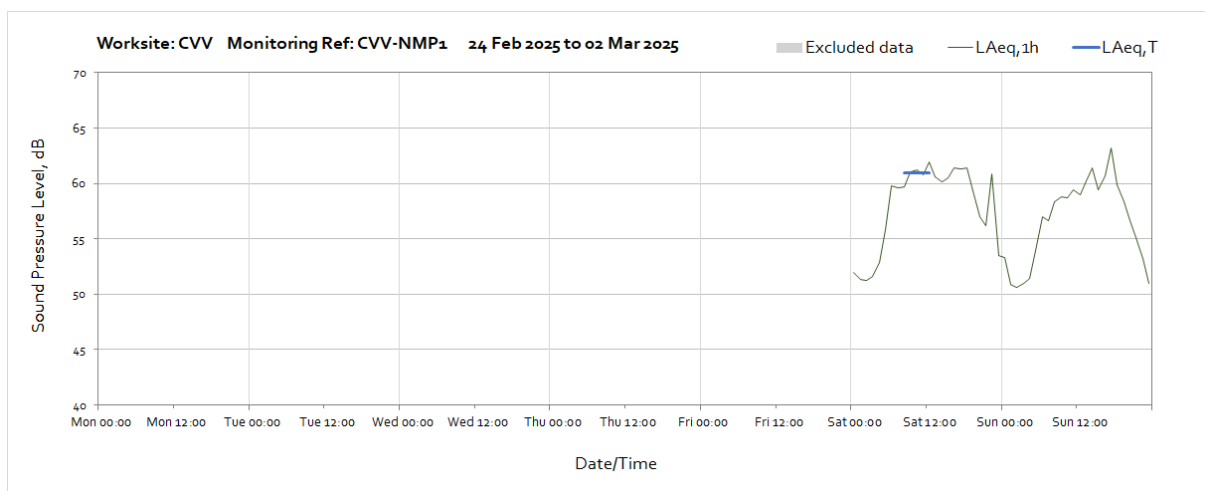


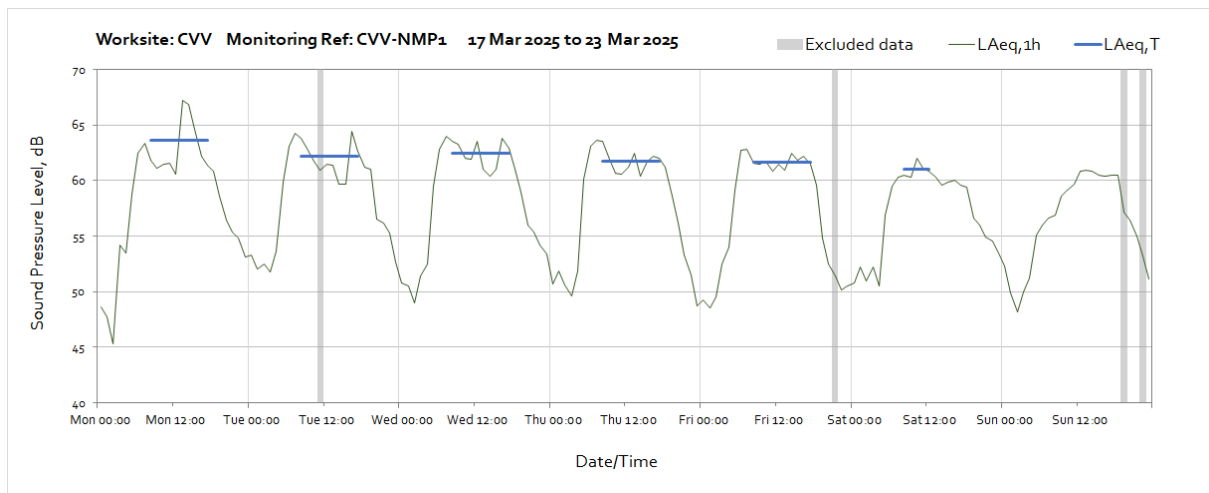
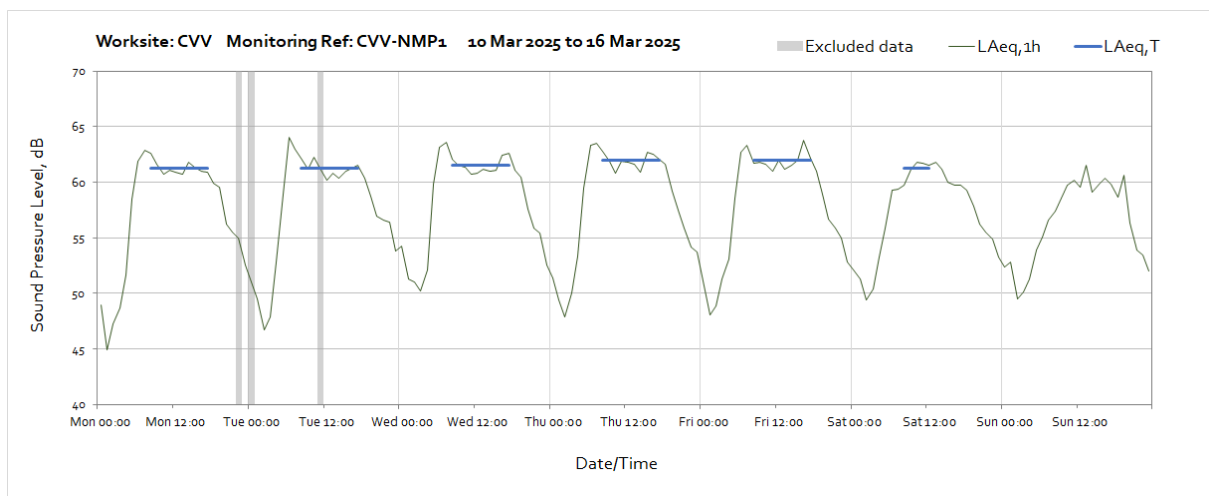
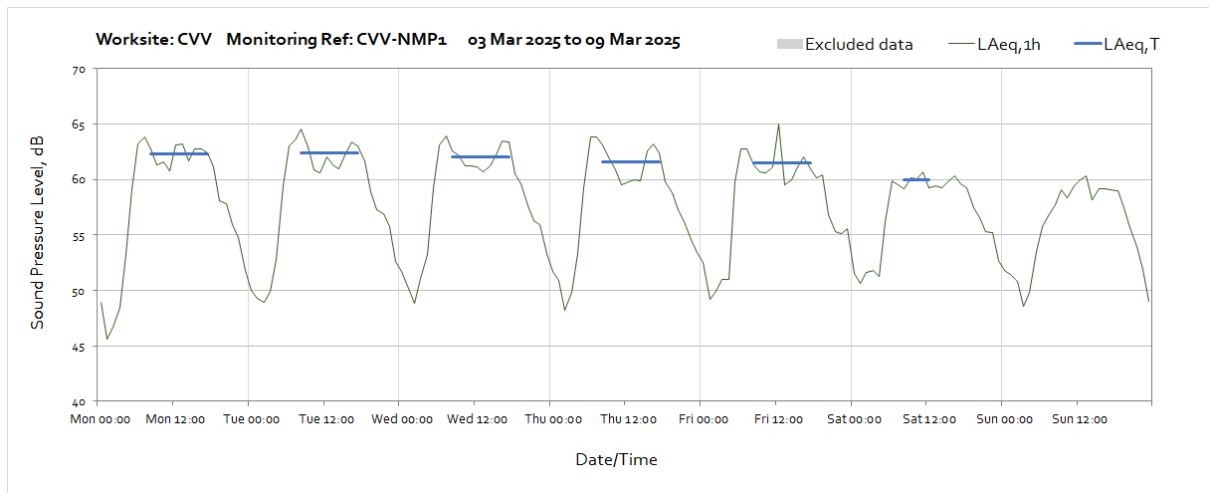


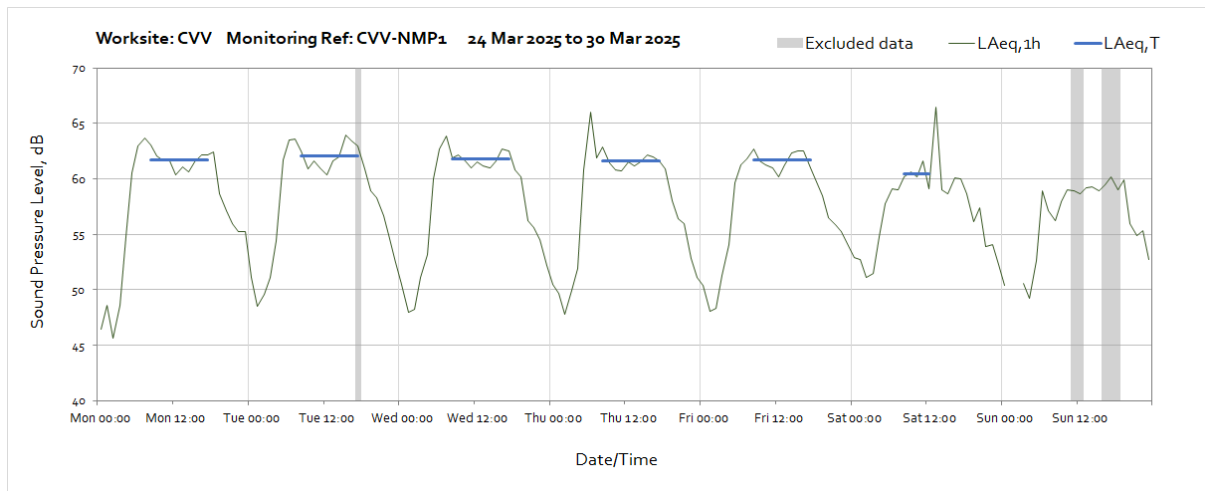
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



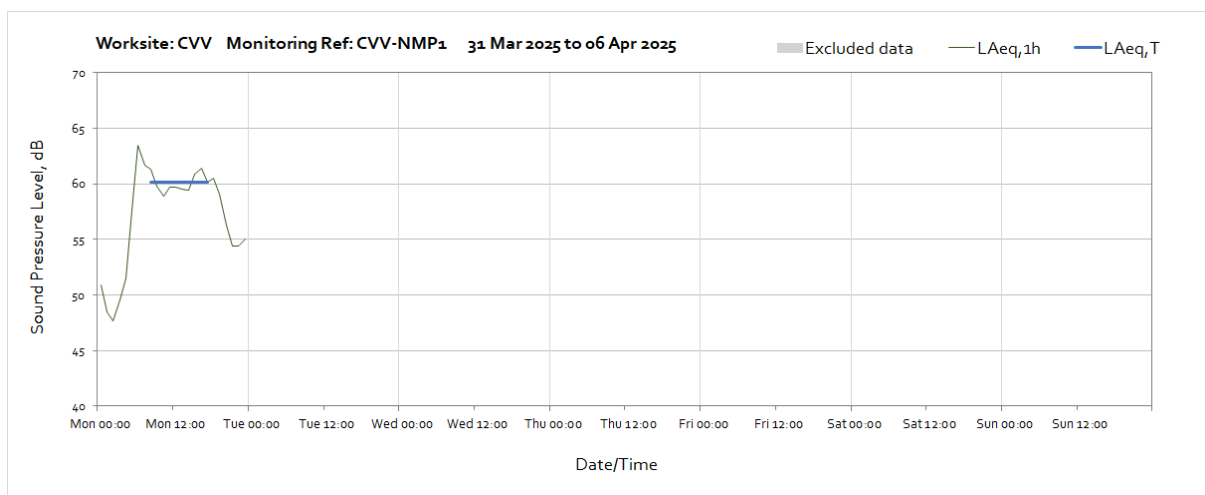
Worksite: CVV- Monitoring Ref: CVV-NMP1







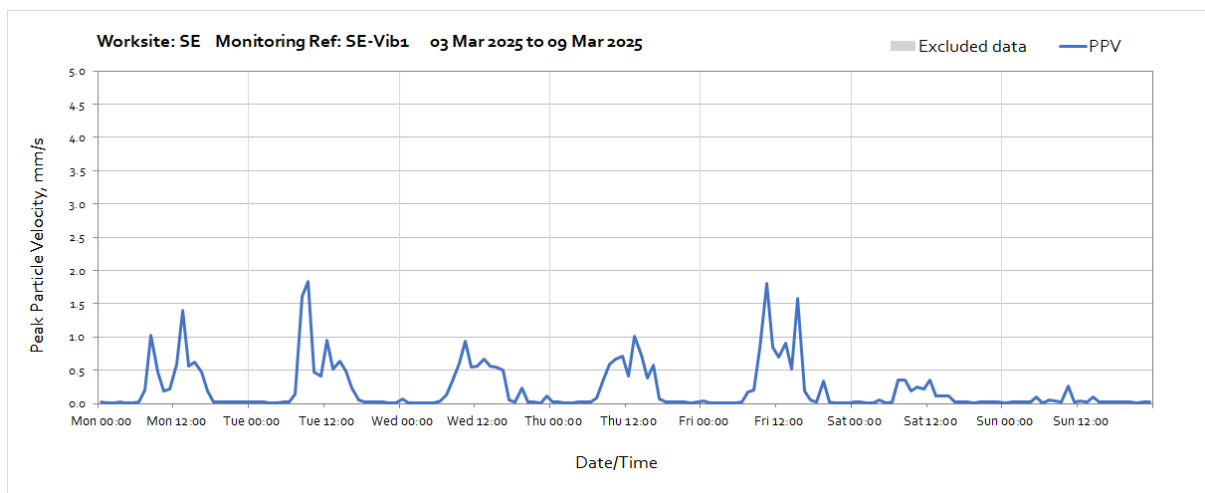
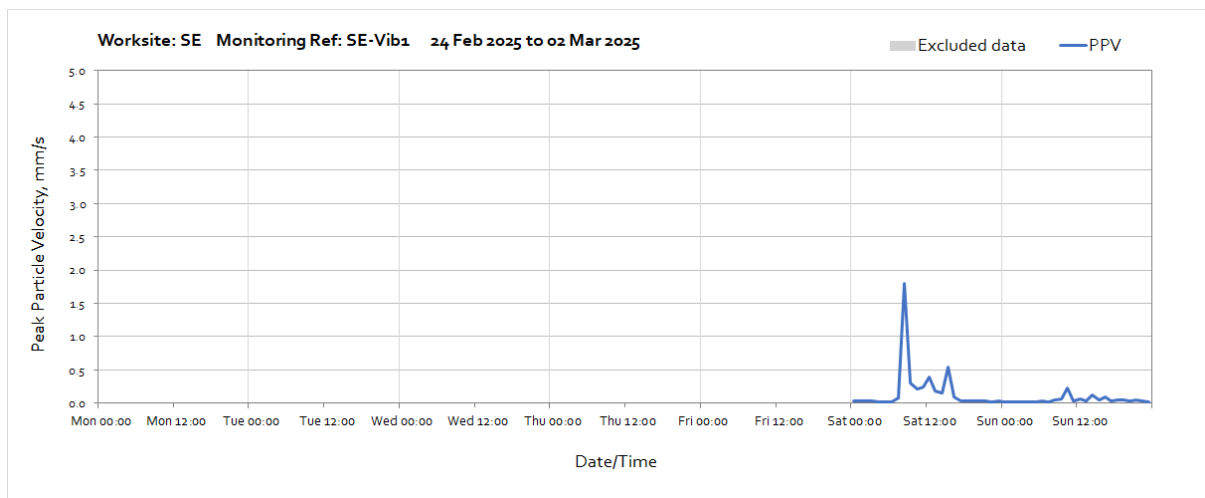
Note: Missing data between 01:00 and 03:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

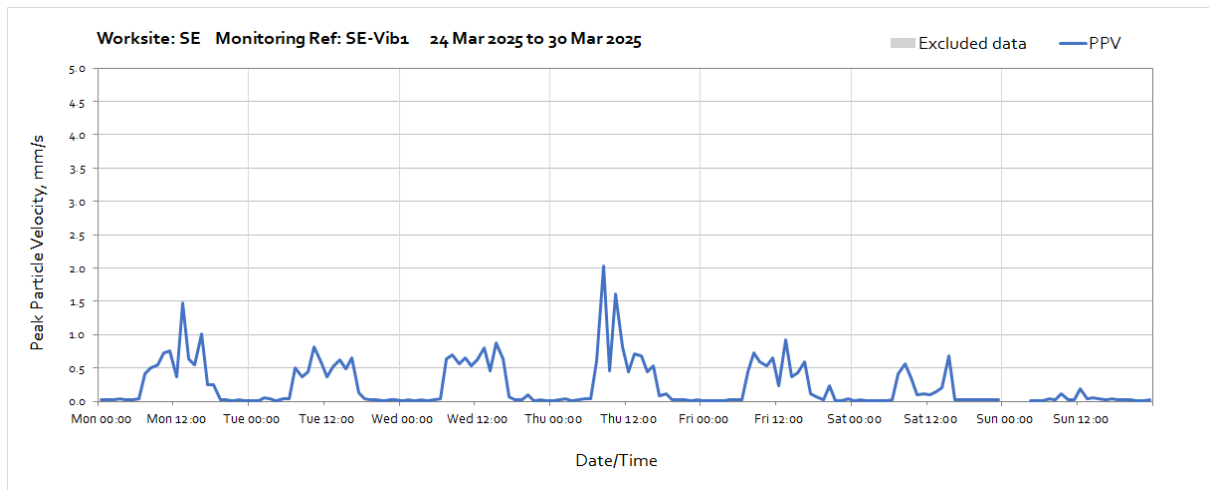
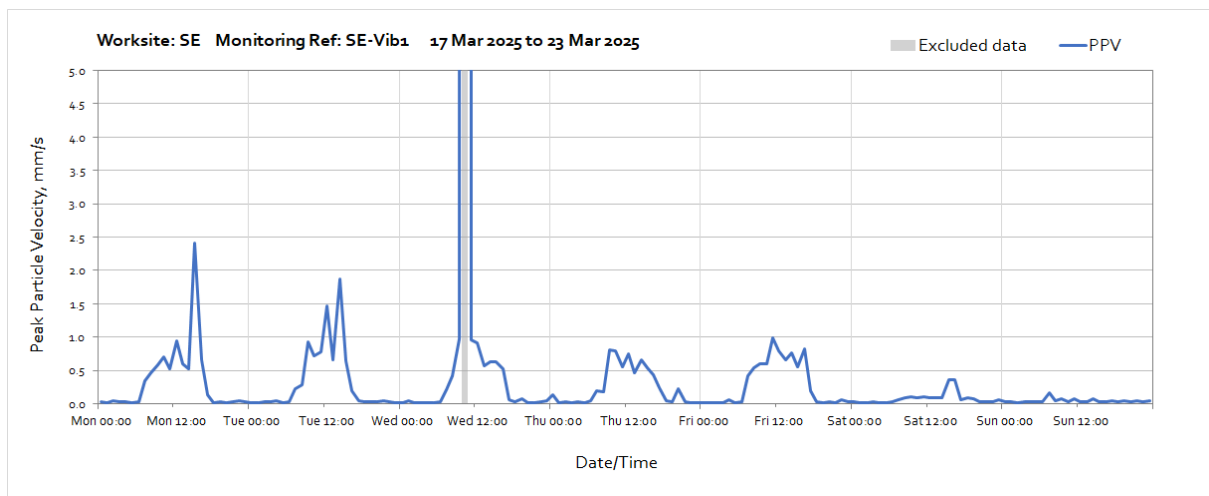
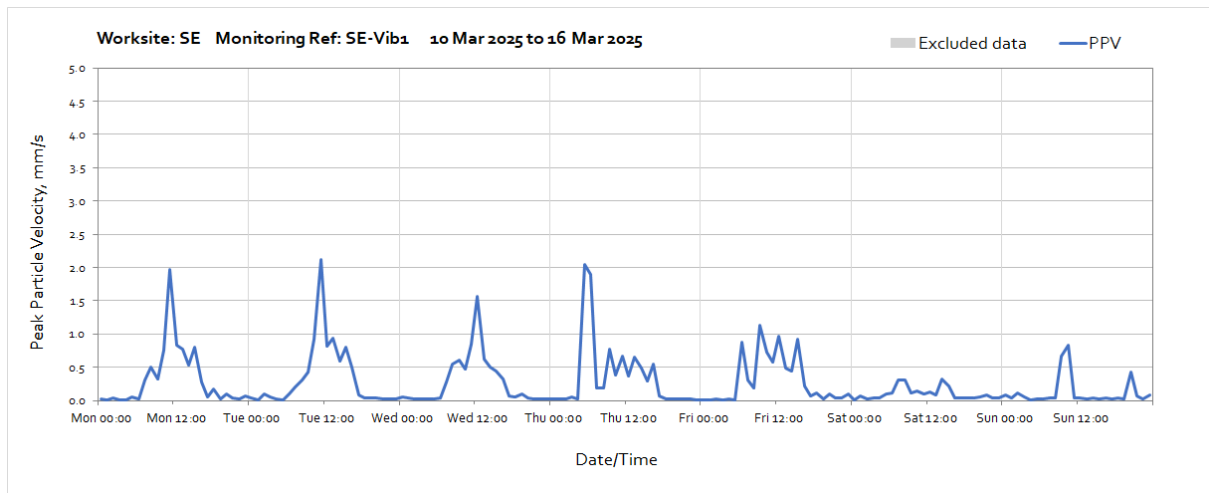


Vibration

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

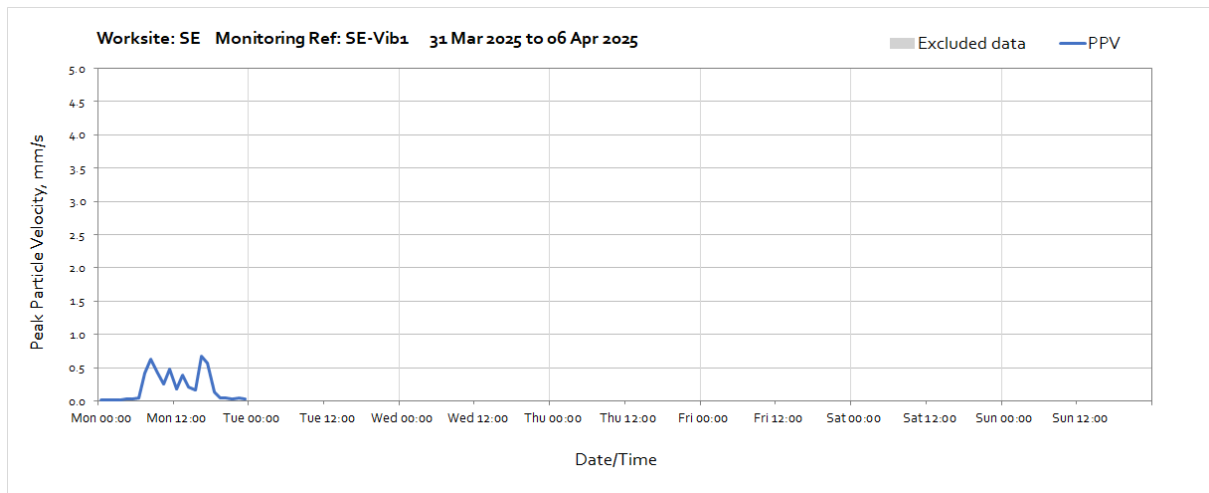
Worksite: SE – Monitoring Ref: SE-Vib1



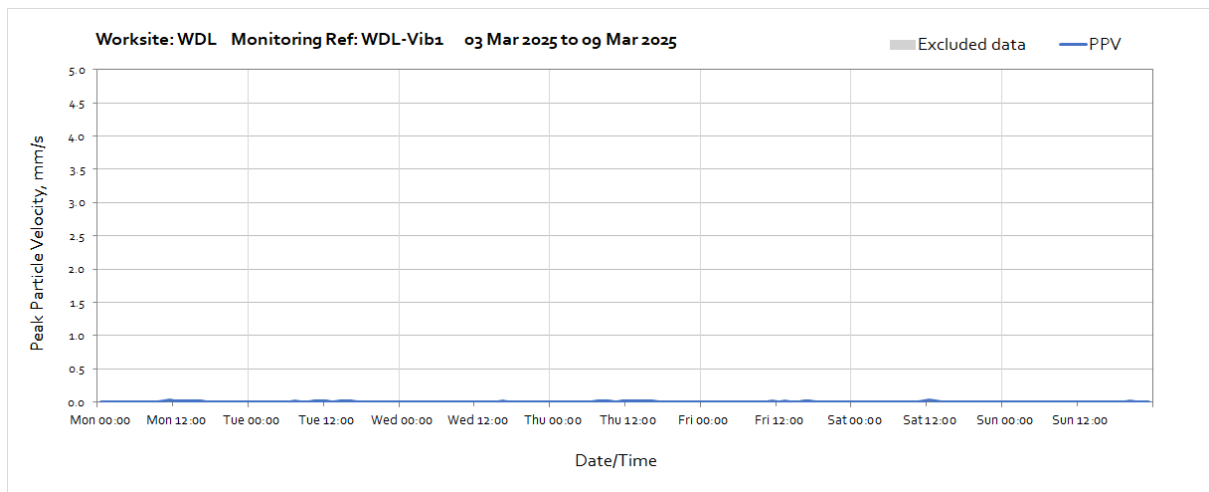
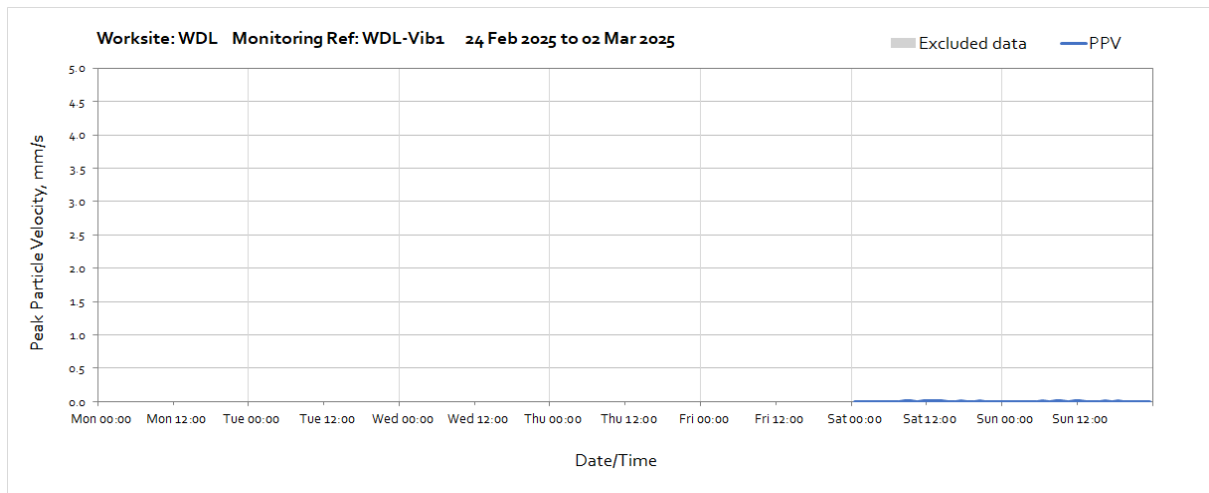


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

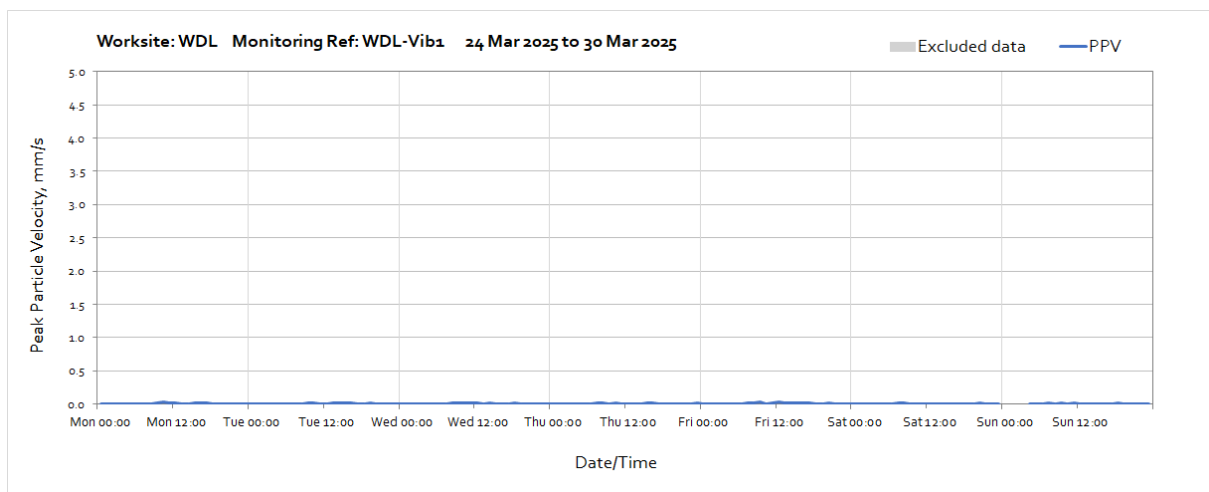
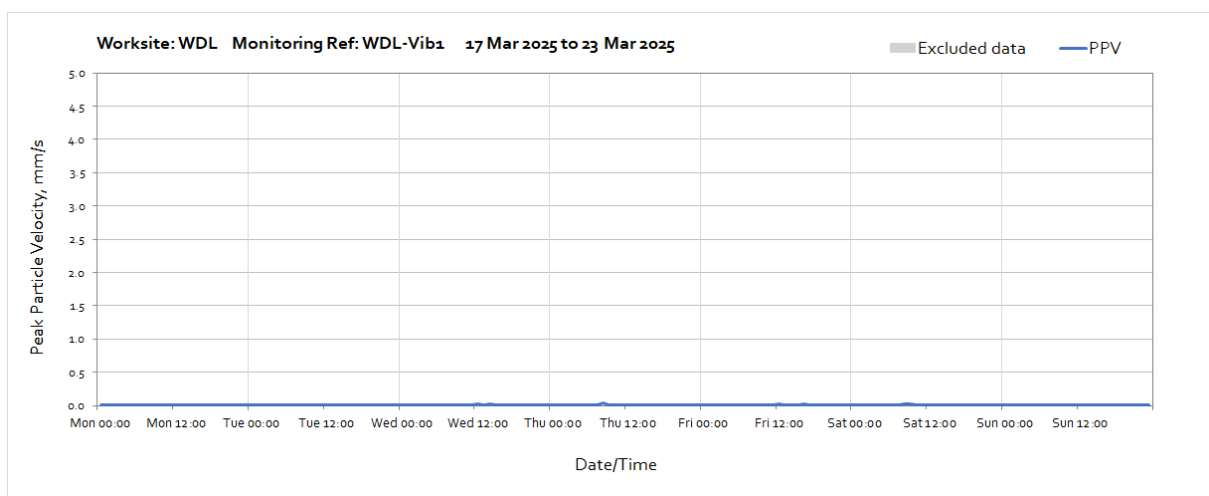
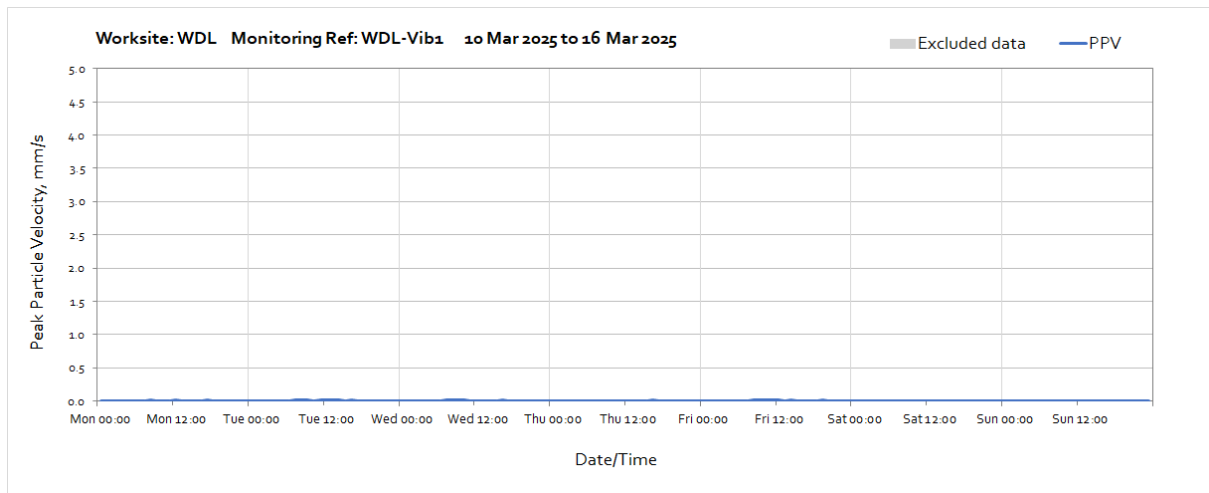
OFFICIAL



Worksite: WDL – Monitoring Ref: WDL-Vib1

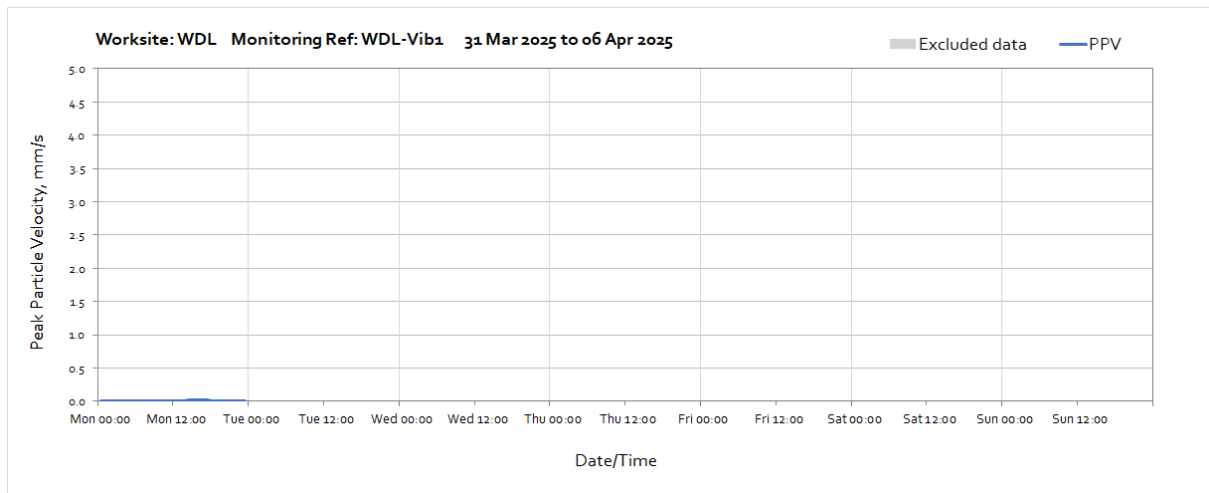


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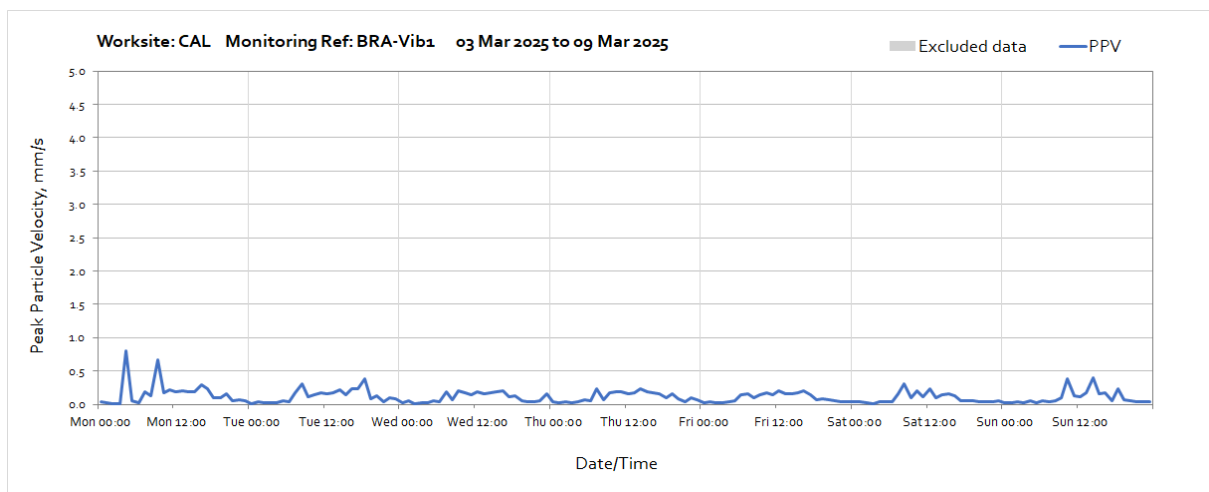
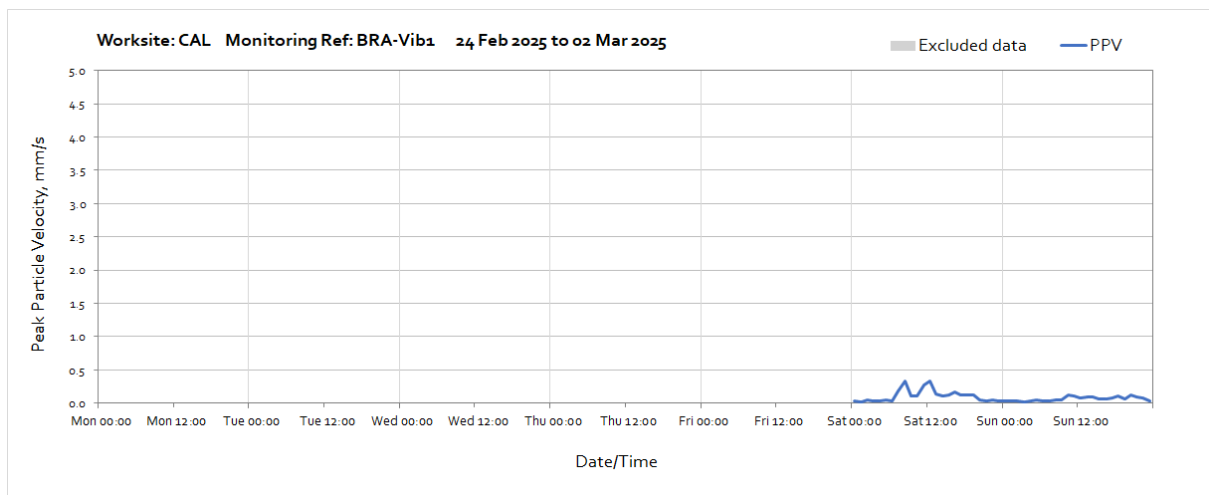


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

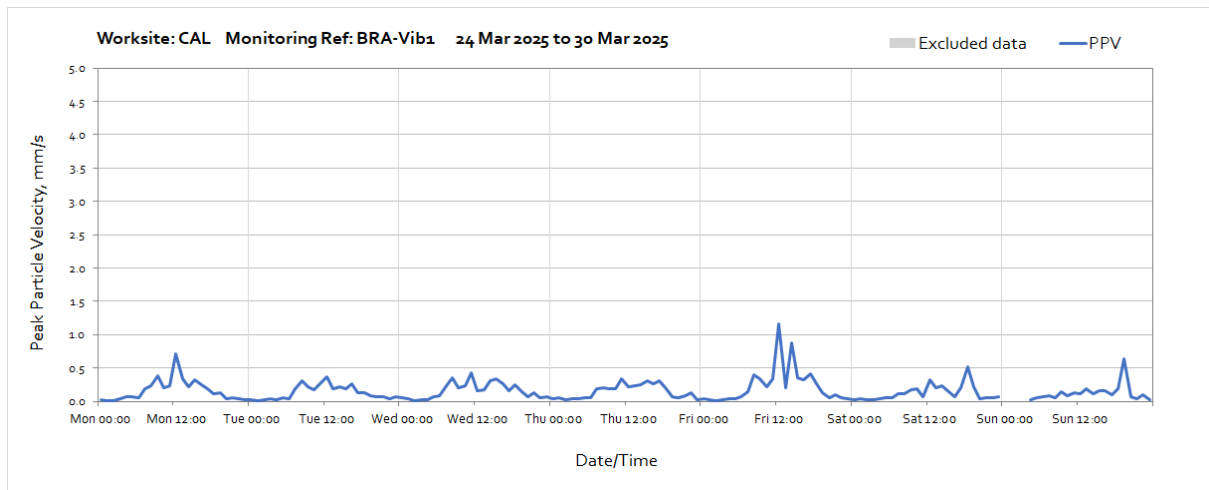
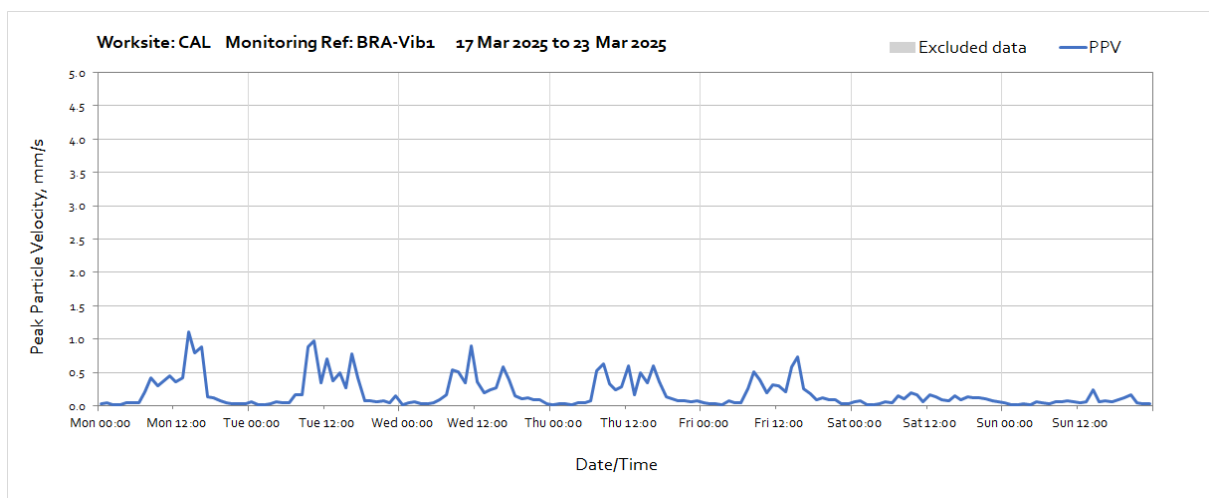
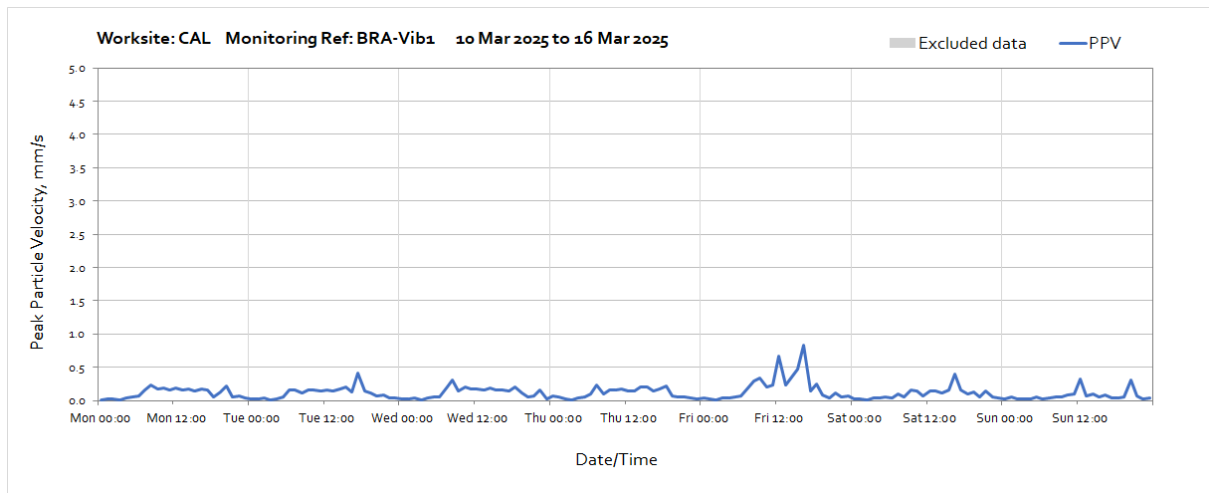
OFFICIAL



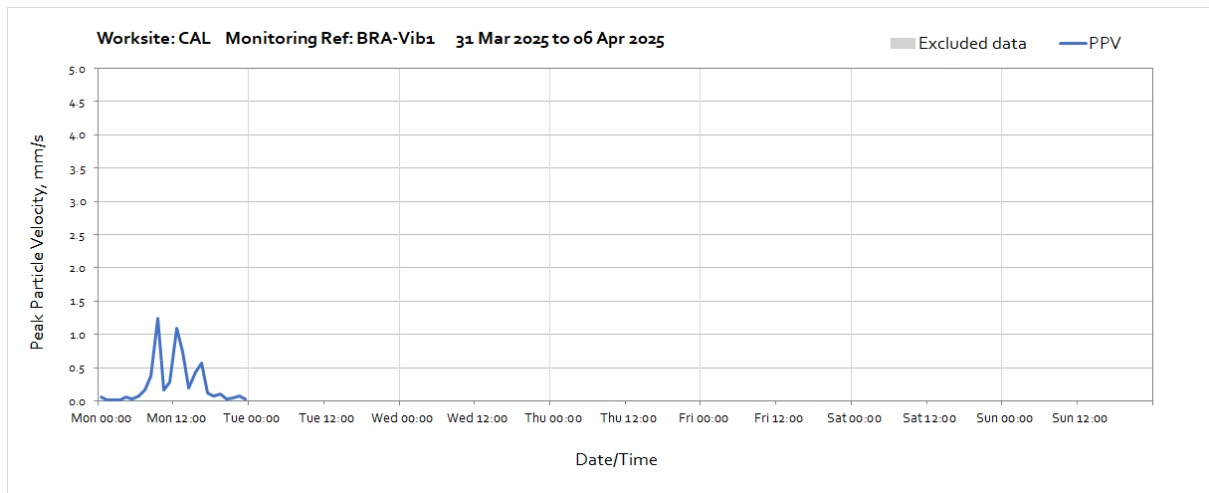
Worksite: CAL – Monitoring Ref: BRA-Vib1



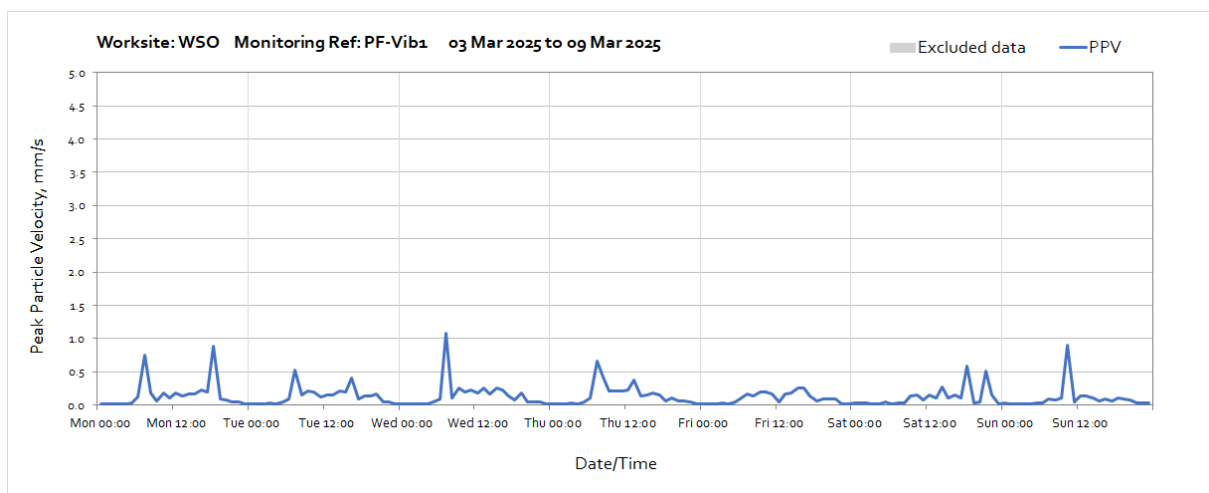
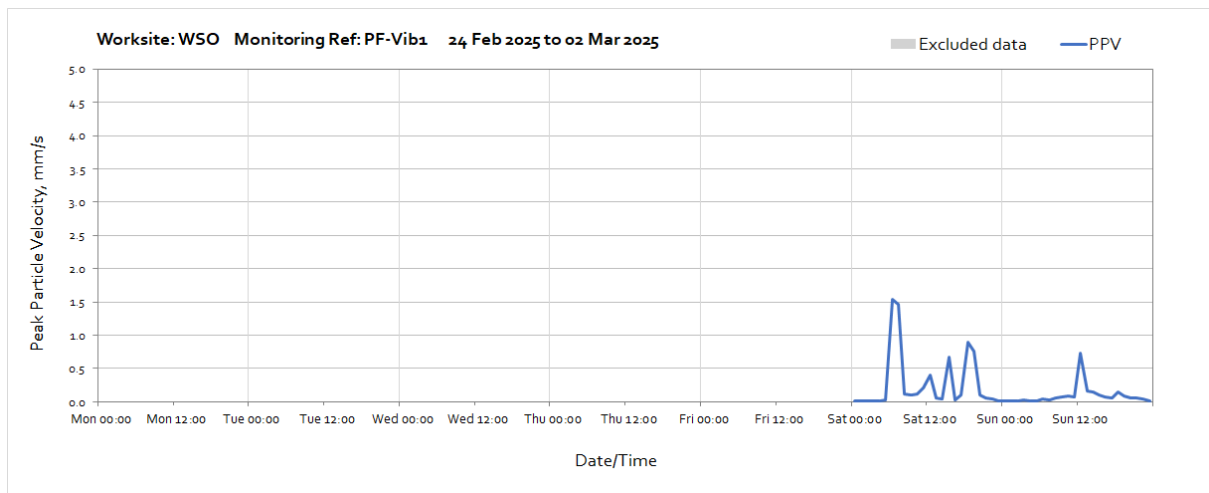
OFFICIAL

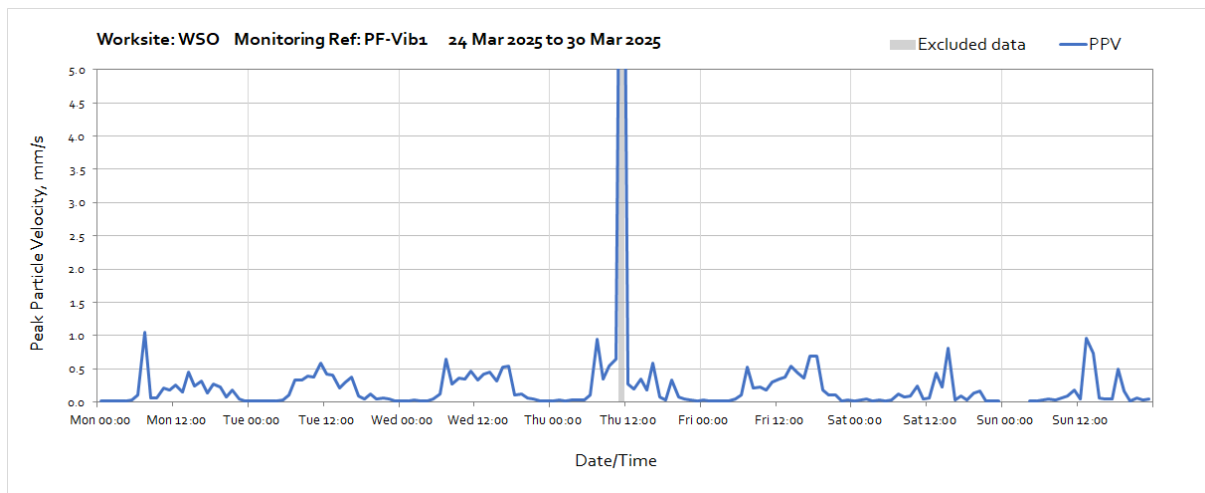
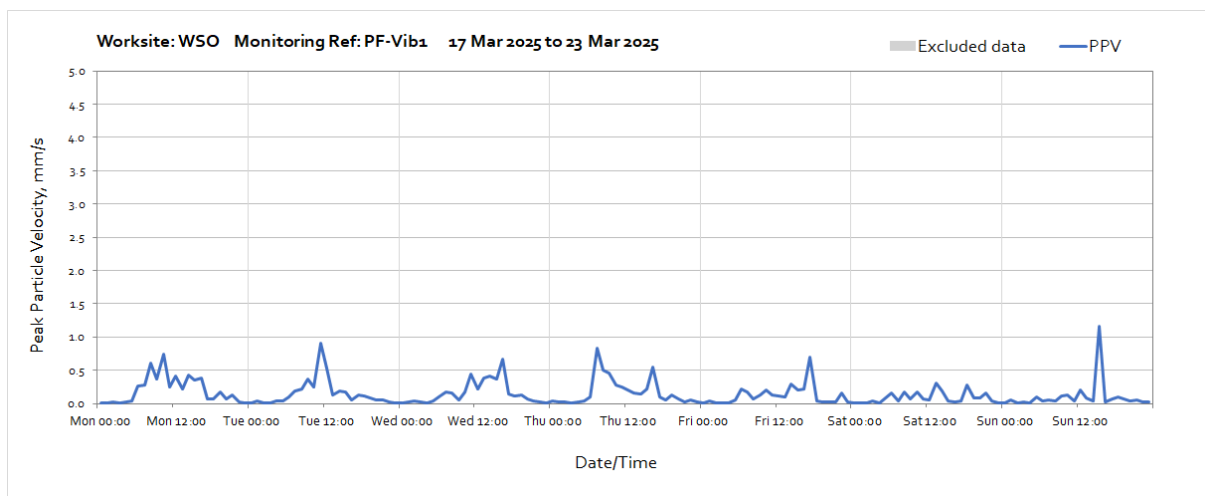
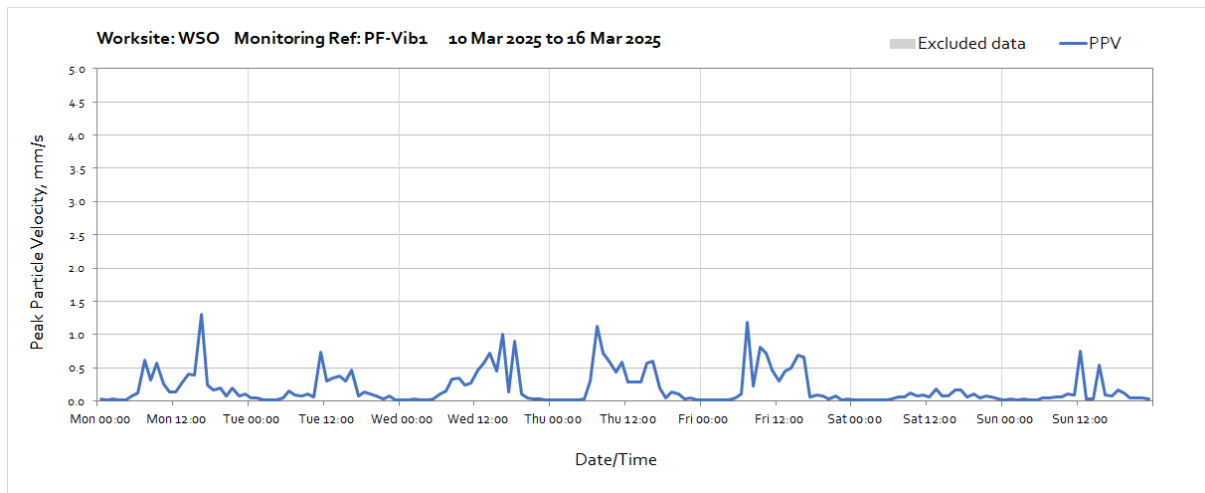


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.



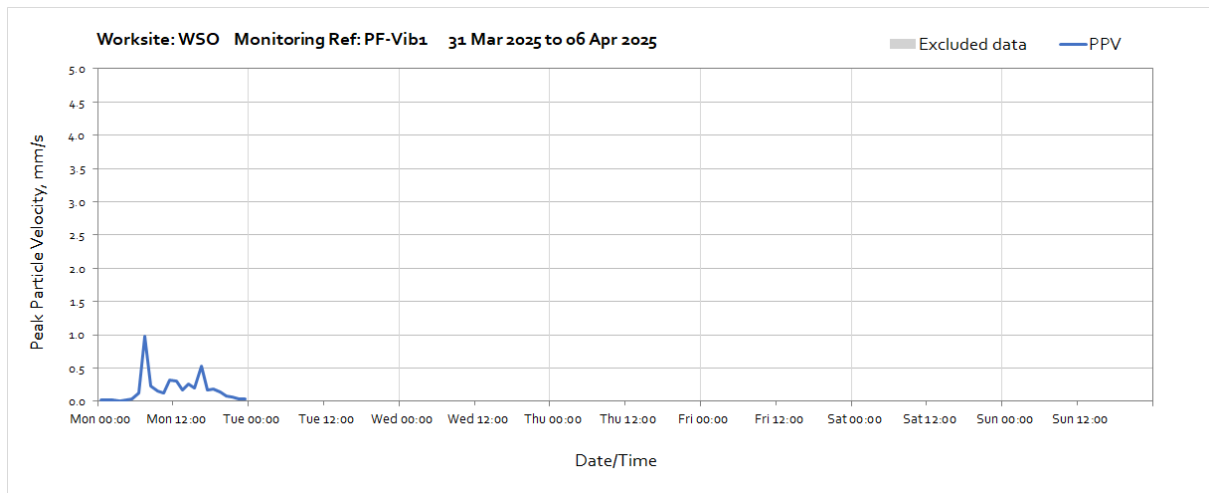
Worksite: WSO – Monitoring Ref: PF-Vib1



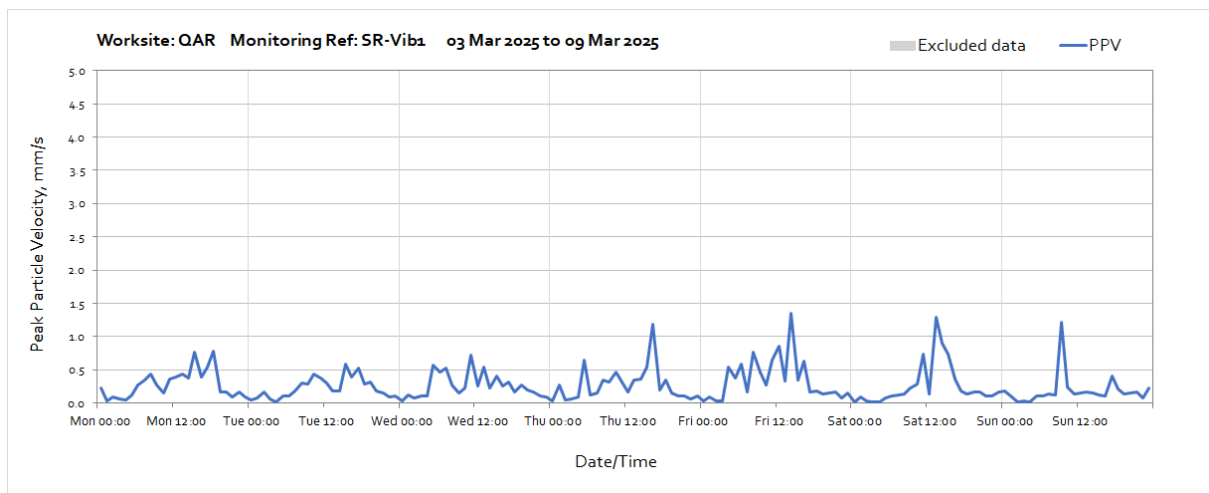
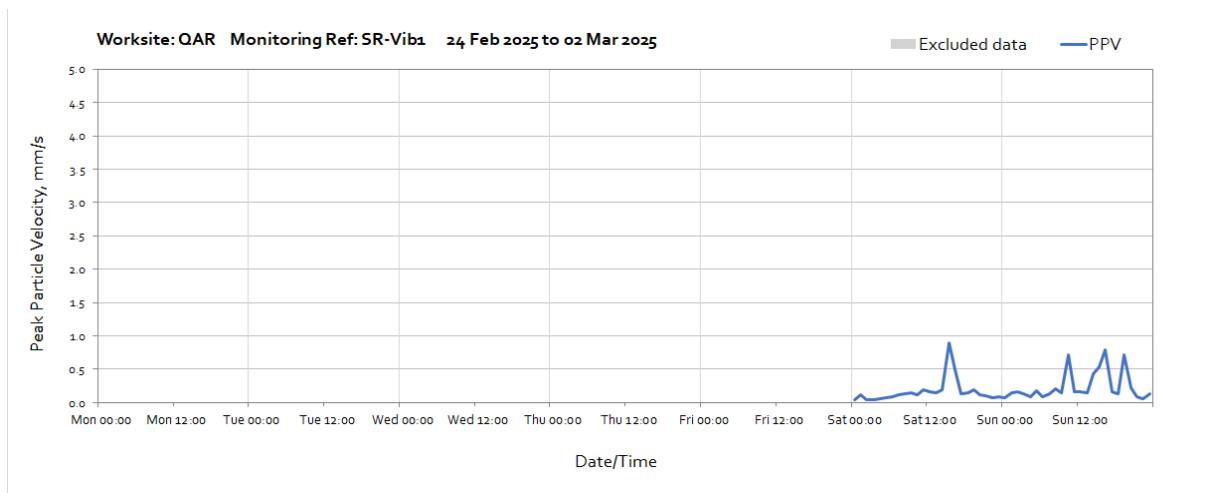


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

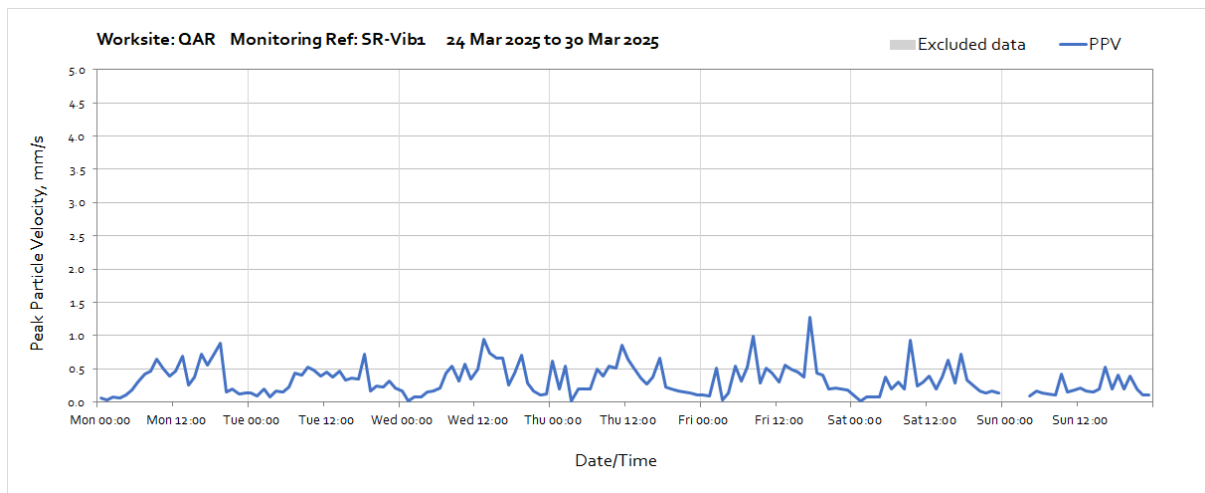
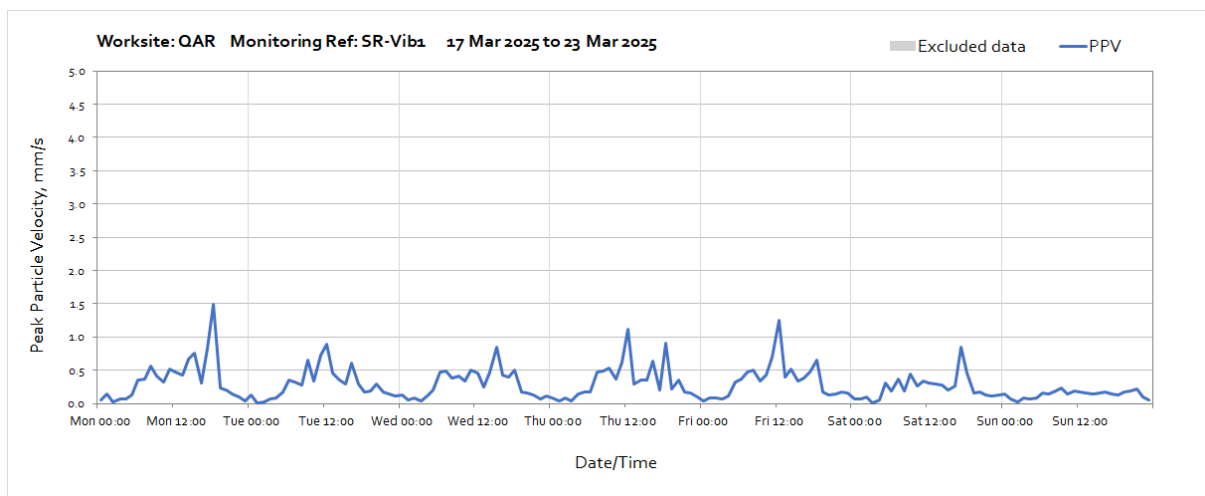
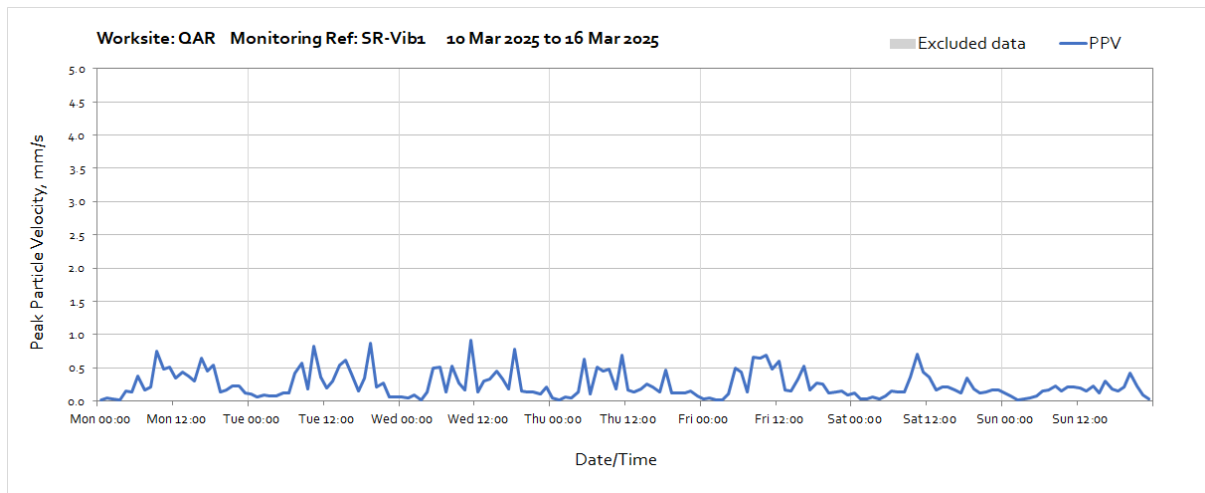
OFFICIAL



Worksite: QAR – Monitoring Ref: SR-Vib1

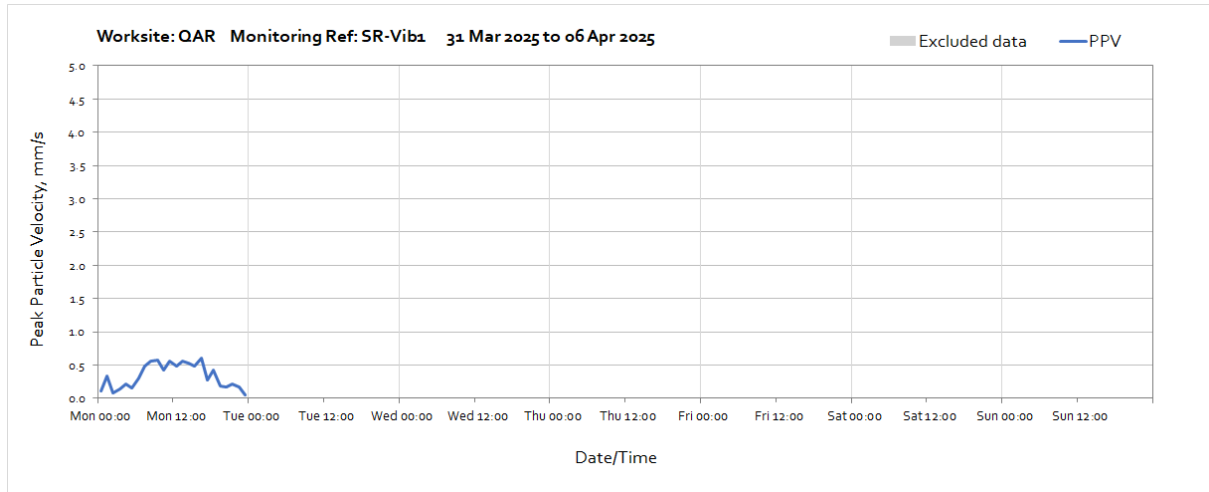


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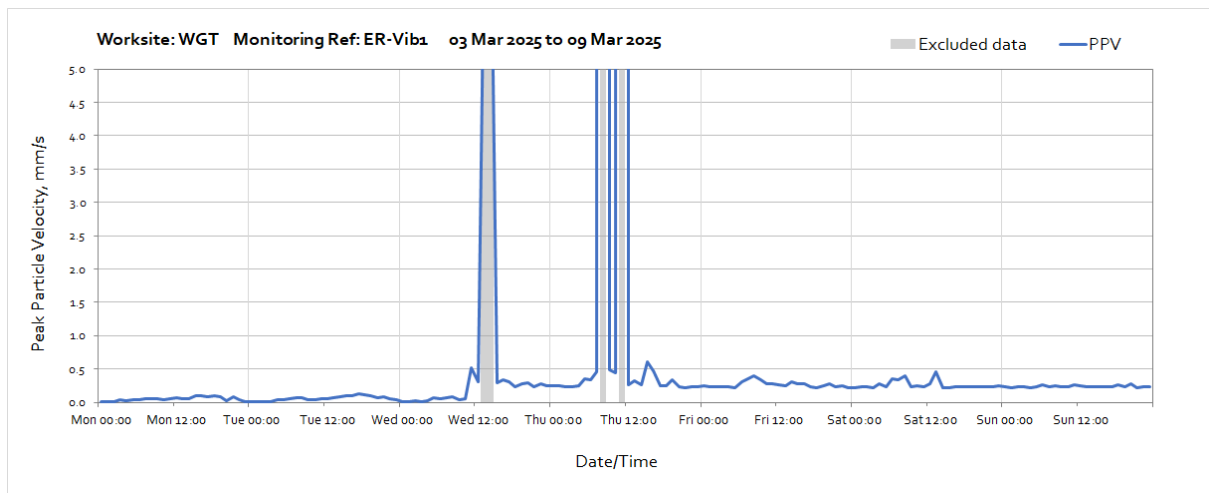
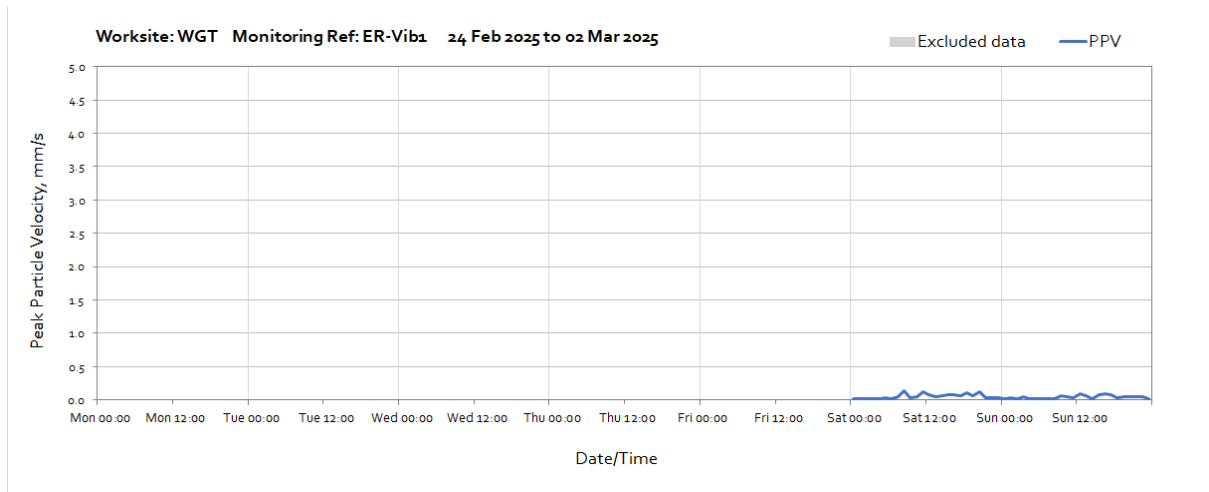


Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

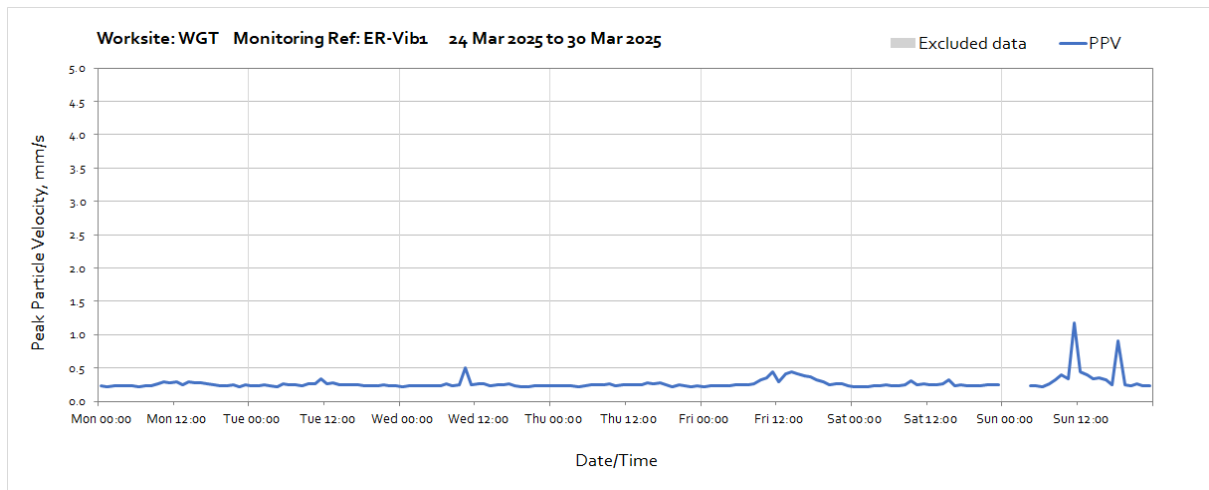
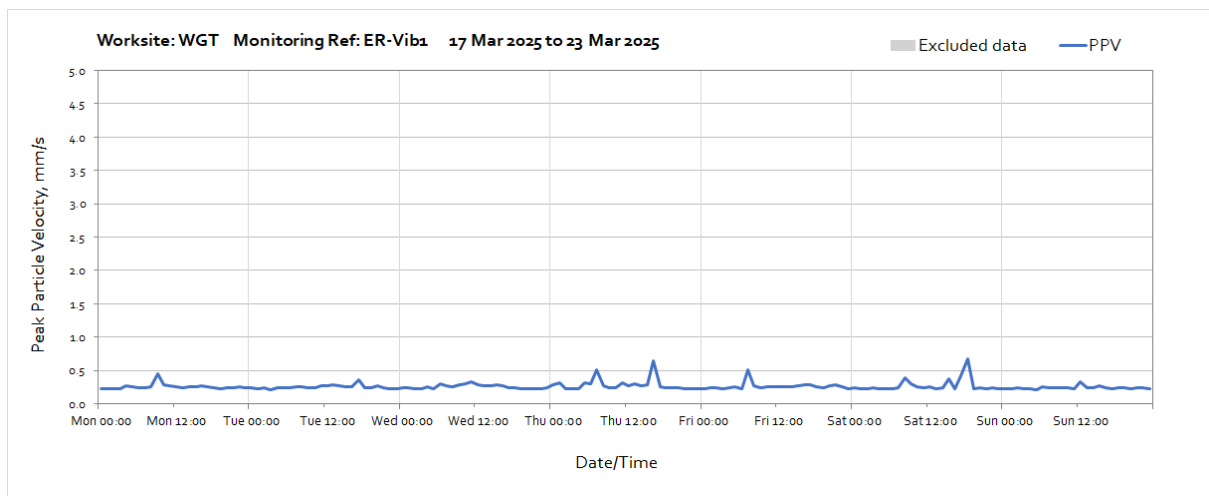
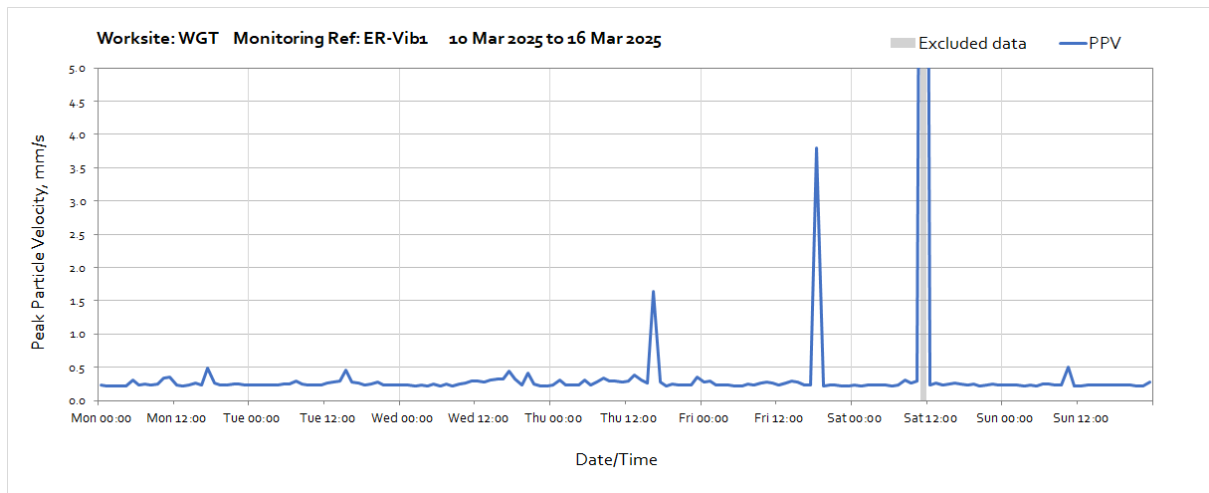
OFFICIAL



Worksite: WGT – Monitoring Ref: ER-Vib1

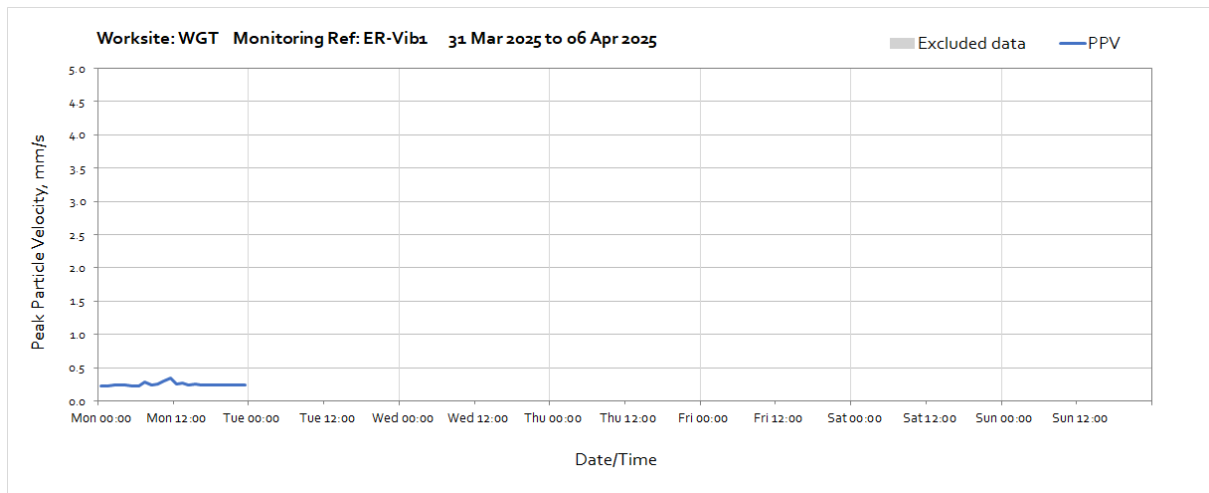


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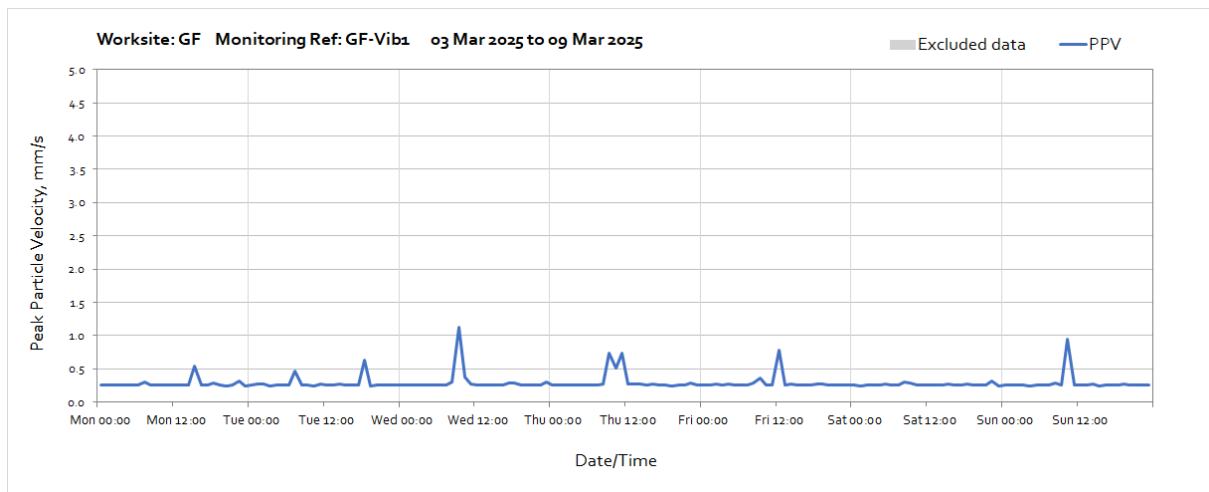
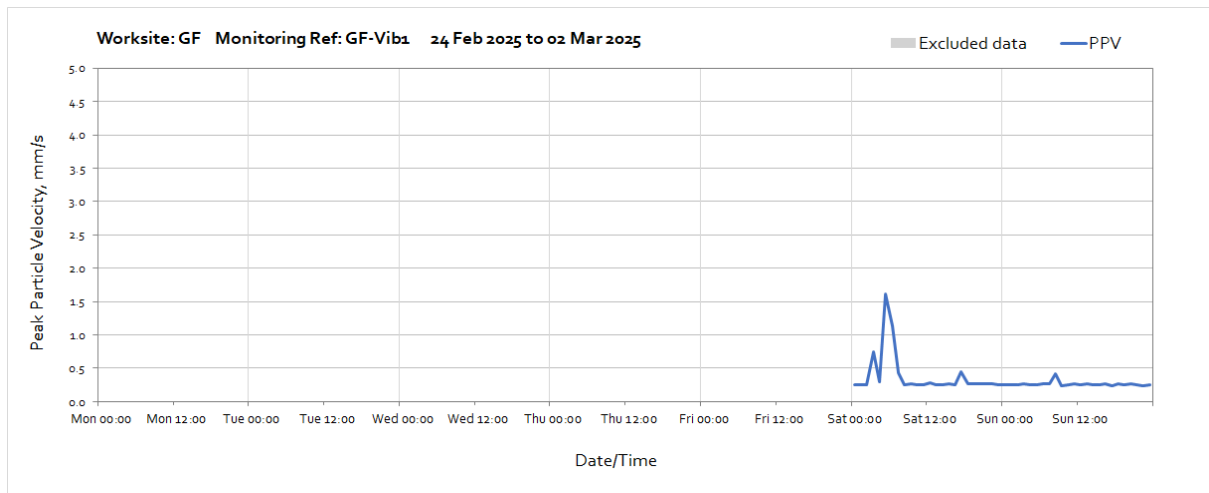


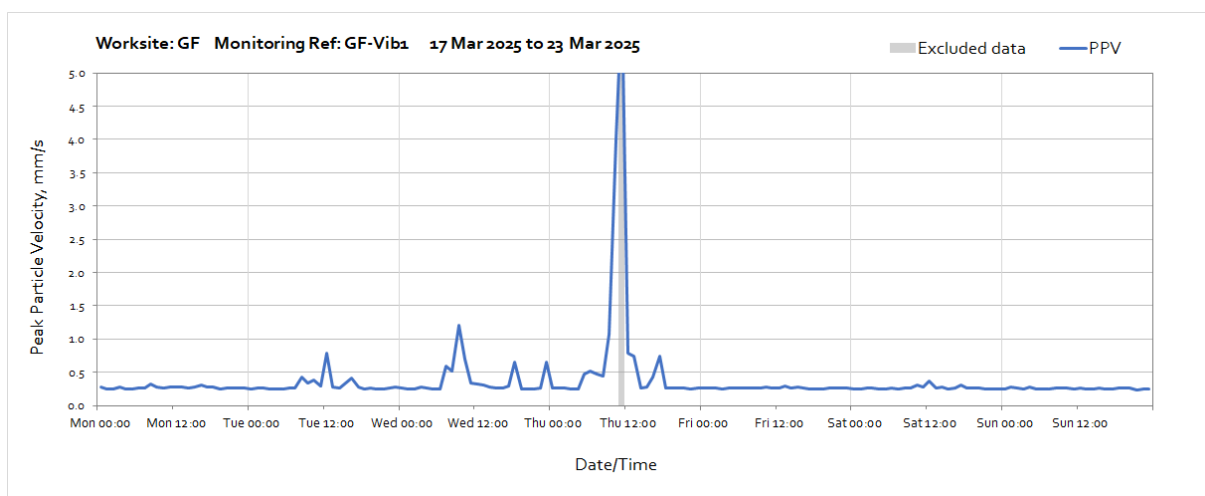
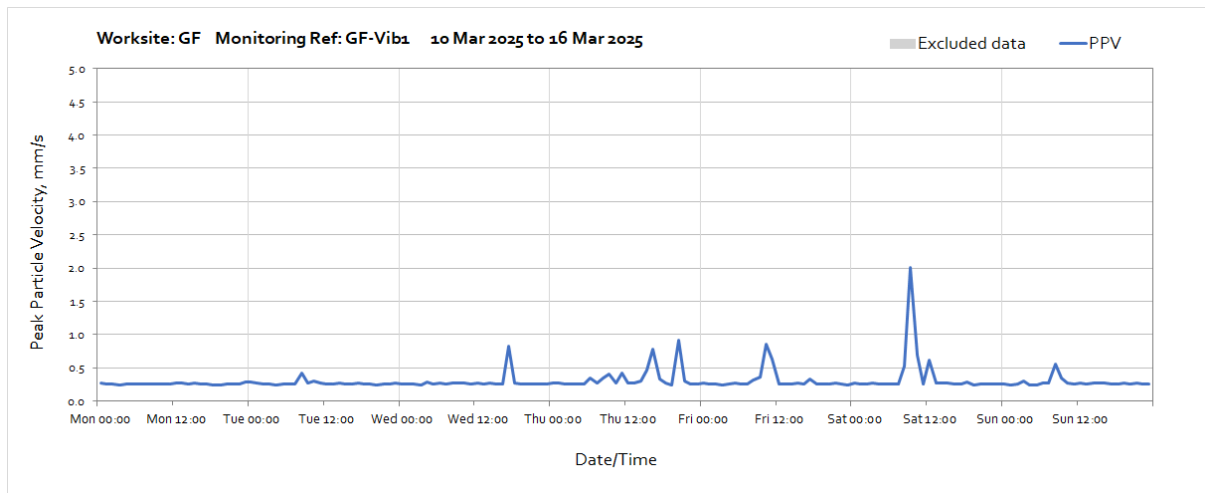
Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

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Worksite: GF – Monitoring Ref: GF-Vib1





Note: Missing data between 00:00 and 04:00 on Sunday 30th March was due to a monitor time adjustment at the start of British Summer Time.

