

## **Construction Noise and Vibration Monthly Report – July 2025**

**Buckinghamshire**

<b>Non-Technical Summary</b>	<b>1</b>
<b>Abbreviations and Descriptions</b>	<b>6</b>
<b>1 Introduction</b>	<b>7</b>
1.2 Measurement Locations	16
<b>2 Summary of Results</b>	<b>19</b>
2.1 Summary of Measured Noise Levels	19
2.2 Exceedances of the LOAEL and SOAEL	26
2.3 Exceedances of Trigger Level	30
2.4 Complaints	31
<b>Appendix A Site Locations</b>	<b>32</b>
<b>Appendix B Monitoring Locations</b>	<b>49</b>
<b>Appendix C Data</b>	<b>64</b>

## List of tables

Table 1: Table of Abbreviations	6
Table 2: Monitoring Locations	16
Table 3: Summary of Measured dB $L_{Aeq}$ Data over the Monitoring Period	20
Table 4: Summary of Measured PPV Data over the Monitoring Period	26
Table 5: Summary of Exceedances of LOAEL and SOAEL	27
Table 6: Summary of Total Exceedances of SOAEL	30
Table 7: Summary of Exceedances of Trigger Levels	31
Table 8: Summary of Complaints	31

# 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 July 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 , earthworks compound development and bridge and road diversion works were underway.
- Noise and vibration were undertaken in the vicinity of School End (ref.: SE) and Hermitage Chetwode (ref.: HC), worksites where overbridge works, bulk excavation, utility works, fill material placement, abutment placement, embankment works and operation and diversion of mass haul road were underway.
- Noise and vibration were undertaken in the vicinity of Twyford worksite (ref.: TW), where embankment and viaduct works were underway.
- Noise and vibration were undertaken in the vicinity of West Street Overbridge worksite (ref.: WSO), where soil filling and retention, formwork reinforced concrete works, parapet installation, drainage works, backfilling, surfacing works, utility diversion and installation of protection slabs were underway.
- Noise and vibration were undertaken in the vicinity of Calvert worksite (ref.: CAL), where formwork reinforced concrete works, beam installation, diversion works, batching plant operation, material movements and drainage works were underway.
- Noise and vibration were undertaken in the vicinity of Woodlands worksite (ref.: WDL), where technical backfill, stabilisation works and material movements were underway.
- Noise and vibration were undertaken in the vicinity of Quainton worksite (ref.: QAR), where earthworks, embankment filling and utility works were underway.
- Noise and vibration were undertaken in the vicinity of Waddesdon worksite (ref.: WAD), where culvert construction, material deliveries and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Thames Valley Viaduct worksite (ref.: TVV), where formwork installation, lifting operations and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Aylesbury Golf Course worksite (ref.: GC), where earthworks, culvert and utility works were underway.

- Noise and vibration were undertaken in the vicinity of Oat Close worksite (ref: OC), where relief road, overbridge works, and earthworks were underway.
- Noise and vibration were undertaken in the vicinity of Risborough Road worksite (ref.: RR), where relief road construction, utility diversions and underpass construction were underway.
- Noise and vibration were undertaken in the vicinity of Nash Lee Lane worksite (ref.: NLL), where site road works, excavation, de-vegetation, earthworks, construction of piling platform and site access road and installation of drainage system were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Green Tunnel worksite (ref.: WGT), where excavation, surface water management, drilling, de-vegetation, construction of low permeability wall working platform, installation of tarmac, drainage, silo, guide wall reinforcement, base course to bridge, road signs, and mesh around walkway and gates, topsoil stripping, concrete crushing and shuttering were underway.
- Noise and vibration were undertaken in the vicinity of Grove Farm worksite (ref.: GF), where surface water management and drilling were underway.
- Noise and vibration were undertaken in the vicinity of Small Dean Viaduct Compound worksite (ref.: SDVC), where drainage diversion works, grout trials, v-ditch maintenance, access road maintenance, pile cap service relocation, survey monument installation, delivery of abutments, laydown area rearrangement and drilling were underway.
- Noise and vibration were undertaken in the vicinity of Rocky Lane Embankment worksite (ref.: RLE), where construction of fuelling compound, backfilling and stockpile management were underway.
- Noise and vibration were undertaken in the vicinity of Wendover Dean Viaduct worksite (ref.: WDV), where equipment relocation, scaffolding construction and stripping, welding, sheet piling, demobilisation of plant and satellite compound and construction of haul road were underway.
- Noise and vibration were undertaken in the vicinity of Leather Lane worksite (ref.: LL), where stockpile movements and shutter installation were underway.
- Noise and vibration were undertaken in the vicinity of South Heath worksite (ref.: SH), where earthworks, drainage works, utility works, general site activities, overbridge construction and ground investigation works were underway.
- Noise and vibration were undertaken in the vicinity of North Portal worksite (ref.: NP), where earthworks, utility works, general site activities, culvert works, overbridge construction, ground investigation works 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:

- Grovehill 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.
- Addison Road where drainage, earthworks and ditch construction were underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks and drainage installation were underway.
- MCJ where backfilling was underway.

- Bat Mitigation Structure where formwork reinforced concrete works and technical backfill were underway.
- Greatmoor Culverts where formwork reinforced concrete works, drainage and backfilling were underway.
- CAG 2 Underbridge where formwork reinforced concrete works, drainage and backfilling were underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where technical backfilling was underway.
- QUA36 Overbridge where embankment works, formwork reinforced concrete works and drainage works were underway.
- QUA26 and QUA28 where formwork reinforced concrete works, approach works and technical backfilling were underway.
- Doddershall Culverts where landscape bunding was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Edgcott Road Overbridge where road realignment works and installation of panels were underway.
- SLC/13 Overbridge where formwork reinforced concrete works, arch installation and technical backfilling were underway.
- Station Road Overbridge where formwork reinforced concrete was underway.
- Culvert No7 where dig and replace and installation of culvert units were underway.
- A418 Compound where earthworks and utility works were underway.
- Along A41 where concrete batching plant operation was underway.
- Fleet Marston where earthworks, culvert and overbridge works were underway.
- Bowood Lane where Holloway backfilling, compacting, excavation, installation of portal ring and construction of culvert were underway.
- Nash Lee Road Diversion where material movements including earthworks were underway.

The HS2 threshold levels for significant noise impacts, which are defined in Information Paper E23 (<https://www.gov.uk/government/publications/hs2-information-papers-environment>), were exceeded due to HS2 works on five (5) occasions during July 2025.

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

One (1) complaint regarding noise and vibration was received by HS2 during the monitoring period.

# Abbreviations and Descriptions

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

Table 1: Table of Abbreviations

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

# 1 Introduction

- 1.1.1 HS2 is required to undertake noise (and vibration) monitoring as necessary to comply with the requirements of the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, including specifically Annex 1: Code of Construction Practice, in addition to any monitoring requirements arising from conditions imposed through consents under Section 61 of the Control of Pollution Act, 1974 or through Undertakings & Assurances given to third parties. Such monitoring may be undertaken for the following purposes:
- monitoring the impact of construction works;
  - to investigate complaints, incidents and exceedance of trigger levels; or
  - monitoring the effectiveness of noise and vibration control measures.
- 1.1.2 Monitoring data and interpretive reports are to be provided to each relevant local authority on a monthly basis and shall include a summary of the construction activities occurring, the data recorded over the monitoring period, any complaints received, any periods in exceedance of agreed trigger levels, the results of any investigations and any actions taken or mitigation measures implemented. This report provides noise data, and interpretation thereof, for monitoring carried out by HS2 within the Buckinghamshire (BS) Local Authority area for the period 1<sup>st</sup> to 31<sup>st</sup> July 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 steel fixing, formwork installation, concrete pours, parapet lifting, and deliveries.
    - Viaduct works, including surcharge works and earthworks.
    - Earthworks including breaking out, material removal, abutment operation, moving scalping's, cutting, deliveries, crushing, soil engineering works and excavation and replace.
    - Compound development.
    - A422 temporary bridge and road diversion works.
  - School End worksite, ref.: SE (see Plan 2 in Appendix A) and Hermitage Chetwode Worksite ref.: HC (see plan 2 in Appendix A), where works activities included:

- Overbridge works including deck waterproofing, barrier collection and demobilising.
- Bulk excavation.
- Utility works.
- Fill material placement.
- Abutment placement.
- Embankment works.
- Operation and diversion of mass haul road.
- Twyford worksite, ref.: TW (see Plan 2 in Appendix A), where works activities included:
  - Embankment works including scalping installation and placement.
  - Viaduct works including steel fixing, formwork installation, concrete works, excavation and backfilling.
- West Street Overbridge worksite, ref.: WSO (see Plan 2 in Appendix A), where works activities included:
  - Soil filling and retention.
  - Formwork reinforced concrete works.
  - Parapet installation.
  - Drainage works.
  - Backfilling.
  - Surfacing works.
  - Utility diversion.
  - Installation of protection slabs.
- Calvert worksite, ref.: CAL (see Plan 3 in Appendix A) where works activities included:
  - Formwork reinforced concrete works.
  - Beam installation.
  - Diversion works.
  - Batching plant operation including production of concrete and cement.
  - Material movements.

- Drainage works.
- Woodlands worksite, ref.: WDL (see Plan 4 in Appendix A) where works activities included:
  - Technical backfill.
  - Stabilisation works.
  - Material movements.
- Quainton worksite, ref.: QAR (see Plan 4 in Appendix A) where works activities included:
  - Earthworks.
  - Embankment filling.
  - Utility works.
- Waddesdon worksite, ref.: WAD (see Plan 5 in Appendix A), where works activities included:
  - Culvert construction.
  - Material deliveries.
  - Earthworks.
- Thames Valley Viaduct worksite, ref.: TVV (see Plan 5 in Appendix A), where works activities included:
  - Formwork installation.
  - Lifting operations.
  - Earthworks.
- Aylesbury Golf Course worksite, ref.: GC (see Plan 6 in Appendix A), where works activities included:
  - Earthworks.
  - Culvert works.
  - Utility works.
- Oat Close worksite, ref.: OC (see Plan 6 in Appendix A), where works activities included:
  - Relief road works including drainage.
  - Overbridge works including repairs.

- Earthworks.
- Risborough Road worksite, ref.: RR (see Plan 6 in Appendix A), where works activities included:
  - Relief road construction.
  - Utility diversions.
  - Underpass construction.
- Nash Lee Lane worksite, ref.: NLL (see Plan 6 in Appendix A), where works activities included:
  - Site road works.
  - Excavation.
  - De-vegetation.
  - Earthworks.
  - Construction of piling platform.
  - Construction of site access road.
  - Installation of drainage system.
- Wendover Green Tunnel worksite, ref.: WGT (see Plan 7 in Appendix A), where works activities included:
  - Excavation.
  - Surface water management.
  - Drilling.
  - De-vegetation.
  - Construction of low permeability wall working platform.
  - Tarmac installation.
  - Topsoil stripping.
  - Installation of drainage.
  - Installation of silo.
  - Installation of guide wall reinforcement.
  - Installation of base course to bridge.
  - Concrete crushing.



- Road sign installation.
- Installation of mesh around walkway.
- Shuttering.
- Installation of gates.
- Grove Farm worksite, ref.: GF (see Plan 7 in Appendix A), where works activities included:
  - Surface water management including coco-matting of v-ditch, silt fencing and pipe installation.
  - Drilling.
- Small Dean Viaduct Compound worksite, ref.: SDVC (see Plan 7 in Appendix A), where works activities included:
  - Drainage diversion works.
  - Grout trials.
  - V-ditch maintenance.
  - Access road maintenance.
  - Pile cap service relocation.
  - Survey monument installation.
  - Delivery of abutments.
  - Laydown area rearrangement.
  - Drilling.
- Rocky Lane Embankment worksite, ref.: RLE (see Plan 7 in Appendix A), where works activities included:
  - Construction of fuelling compound.
  - Backfilling.
  - Stockpile management including material movements.
- Wendover Dean Viaduct worksite, ref.: WDV (see Plan 7 in Appendix A), where works activities included:
  - Equipment relocation.
  - Scaffolding construction and stripping.
  - Welding.

- Sheet piling.
- Demobilisation of plant and satellite compound.
- Construction of haul road.
- Leather Lane worksite, ref.: LL (see Plan 8 in Appendix A), where works activities included:
  - Stockpile movements including earthworks.
  - Shutter installation.
- South Heath worksite, ref.: SH (see Plan 8 in Appendix A), where works activities included:
  - Earthworks.
  - Drainage works.
  - Utility works.
  - General site activities.
  - Overbridge construction.
  - Ground investigation works.
  - Site access and haul road construction and operation.
- North Portal worksite, ref.: NP (see Plan 8 in Appendix A), where works activities included:
  - Operation of site plant.
  - Platform construction.
  - Piling platform reinstatement.
  - Porous portal structure works.
  - Building construction.
  - Batching plant operation and distribution of material.
  - Tunnel walkway slip forming.
  - Utilities works, including drainage.
- Chesham Road worksite, ref.: CHSM (see Plan 8 in Appendix A), where works activities included:
  - General site activities.
  - Internal and external building works, including cladding works.

- Demobilisation.
- Landscaping.
- Little Missenden Vent Shaft worksite ref.: LM (see Plan 9 in Appendix A), where works activities included:
  - General site activities including operation of plant.
  - Tunnel connection works.
  - Headhouse superstructure concrete works.
  - Building construction internal and external works.
- Amersham Vent Shaft worksite, ref.: AM (see Plan 10 in Appendix A), where works activities included:
  - General site activities, including operation of plant.
  - External and internal building works.
  - Pre-casting of boundary wall.
  - Steel and cladding works.
  - Drainage works.
- Chalfont St Giles Vent Shaft worksite, ref.: CSG (see Plan 11 in Appendix A), where works activities included:
  - General site activities, including operation of plant.
  - Road maintenance.
  - Internal and external building works.
  - Demobilisation.
- Chalfont St Peter Vent Shaft worksite, ref.: CSP (see Plan 12 in Appendix A), where works activities included:
  - Operation of plant.
  - Road maintenance.
  - Internal and external building works.
  - Demobilisation.
- Colne Valley Viaduct – Load Test Pile 1 worksite, which is partly located in the London Borough of Hillingdon (LBH), ref.: CVV (see Plan 13 in Appendix A), where works activities included:

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

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

- Grovehill Embankment (Westbury) where excavation and replace 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.
- Addison Road where drainage, earthworks and ditch construction were underway.
- IMD West Culvert where watercourse diversion was underway.
- Infrastructure Maintenance Depot (IMD) where bulk earthworks and drainage installation were underway.
- MCJ where backfilling was underway.
- Bat Mitigation Structure where formwork reinforced concrete works and technical backfill were underway.
- Greatmoor Culverts where formwork reinforced concrete works, drainage and backfilling were underway.

- CAG 2 Underbridge where formwork reinforced concrete works, drainage and backfilling were underway.
- Megaditch Culvert where subsoiling was underway.
- GUN28 overbridge where technical backfilling was underway.
- QUA36 Overbridge where embankment works, formwork reinforced concrete works and drainage works were underway.
- QUA26 and QUA28 where formwork reinforced concrete works, approach works and technical backfilling were underway.
- Doddershall Culverts where landscape bunding was underway.
- Hills Farm where stockpile filling and maintenance was underway.
- Edgcott Road Overbridge where road realignment works and installation of panels were underway.
- SLC/13 Overbridge where formwork reinforced concrete works, arch installation and technical backfilling were underway.
- Station Road Overbridge where formwork reinforced concrete was underway.
- Culvert No7 where dig and replace and installation of culvert units were underway.
- A418 Compound where earthworks and utility works were underway.
- Along A41 where concrete batching plant operation was underway.
- Fleet Marston where earthworks, culvert and overbridge works were underway.
- Bowood Lane where Holloway backfilling, compacting, excavation, installation of portal ring and construction of culvert were underway.
- Nash Lee Road Diversion where material movements including earthworks were underway.

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

## 1.2 Measurement Locations

- 1.2.1 Forty (40) noise and seven (7) vibration monitoring installations were active in July in the BS area. Table 2 summarises the location of noise and vibration monitoring installations within the BS area in July 2025.
- 1.2.2 The noise monitor at measurement location NLL-NMP1, worksite NLL, was removed on the 17<sup>th</sup> of July as works in the vicinity have ceased.
- 1.2.3 The noise monitor at measurement location GF-NMP1, worksite GF, was removed on the 14<sup>th</sup> of July as works at the worksite have ceased.
- 1.2.4 The vibration monitor at measurement location GF-Vib1, worksite GF, was removed on the 10<sup>th</sup> of July as works at the worksite have ceased.
- 1.2.5 The noise monitor at measurement location SDVC-NMP1, worksite SDVC, was removed on the 10<sup>th</sup> of July as works at the worksite have ceased.
- 1.2.6 The noise monitor at measurement location NCAS5-NMP1, worksite RLE, was removed on the 17<sup>th</sup> of July as works in the vicinity have ceased.
- 1.2.7 The noise monitor at measurement location GD-NMP1, worksite LL, was removed on the 10<sup>th</sup> of July as works at the worksite have ceased.
- 1.2.8 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

Worksite Reference	Measurement Reference	Address
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
WAD	WAD-NMP2	Waddesdon, Buckinghamshire
TVV	TVV-NMP1	Aylesbury, Buckinghamshire
GC	GC-NMP1	Aylesbury, Buckinghamshire
OC	MF-NMP1	Moat Farm, Marsh Lane
RR	RR-NMP1	Stoke Mandeville, Aylesbury
NLL	NLL-NMP1	Nash Lee Lane, Nash Lee
	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	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath
	PKF-NMP1	Park Farm, South Heath
NP	BFH-NMP1	Bury Farm, Great Missenden
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath
	BLH-NMP1	Bayleys Hatch, South Heat, Great Missenden
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath
AM	AM-NMP1	Amersham Vent Shaft Worksite, Whielden Lane, Amersham

Worksite Reference	Measurement Reference	Address
LM	LM-NMP1	Little Missenden, A413, Amersham
	PWC-NMP1	Patricia Holmes, Little Missenden Vent Shaft Worksite, Amersham
CSG	CSG-NMP1	Chalfont St Giles Vent Shaft Worksite, Bottom House Farm Lane
CSP	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite, Chesham Lane, Chalfont St. Peter
CVV*	CVV-NMP1	Northern boundary, Load Test Pile 1 Worksite, Denham Water Ski Club

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



## 2 Summary of Results

### 2.1 Summary of Measured Noise Levels

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

Table 3: Summary of Measured dB L<sub>Aeq</sub> 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	54.2 (58.1)	54.5 (56.6)	52.5 (56.3)	46.8 (50.9)	45.1 (50.0)	47.0 (48.0)	51.3 (53.7)	50.5 (52.9)	50.2 (58.1)	44.6 (47.1)	48.9 (55.9)	45.4 (48.2)
SE	SE-NMP1	School End, Chetwode	Free-field	52.6 (55.4)	56.2 (63.1)	46.2 (52.0)	40.3 (52.4)	38.0 (50.2)	49.1 (51.7)	53.7 (59.7)	53.2 (57.7)	46.8 (55.2)	37.0 (42.3)	46.9 (56.5)	37.9 (46.1)
HC	HC-NMP1	Hermitage, Chetwode	Free-field	53.9 (58.0)	56.6 (58.5)	47.4 (54.8)	41.5 (54.6)	40.0 (53.0)	50.8 (55.8)	53.6 (55.1)	54.0 (55.4)	47.8 (56.8)	39.8 (46.6)	47.9 (57.1)	40.1 (49.2)
TW	TW-NMP1	Twyford	Free-field	43.9 (49.6)	49.4 (58.2)	44.1 (50.1)	43.4 (55.7)	40.4 (51.2)	42.5 (43.7)	46.4 (48.8)	43.7 (45.4)	44.5 (48.5)	40.5 (45.3)	44.6 (54.9)	41.5 (49.9)
WSO	WSO-NMP1	West Street, Twyford	Free-field	49.0 (62.5)	53.5 (64.8)	41.7 (48.9)	40.3 (60.2)	38.4 (57.1)	44.3 (46.0)	45.0 (49.3)	41.8 (46.3)	41.9 (51.5)	36.8 (47.0)	44.2 (55.8)	41.2 (56.9)
CAL	SHC-NMP1	School Hill Compound, Calvert	Free-field	53.8 (57.8)	59.2 (64.3)	50.4 (68.4)	47.5 (69.1)	44.3 (63.0)	48.6 (50.9)	54.5 (58.9)	59.0 (63.9)	55.2 (66.8)	41.3 (50.6)	54.2 (69.4)	44.0 (50.8)
	FCC-NMP1	Calvert South	Free-field	48.9 (53.8)	53.9 (69.9)	41.5 (46.2)	40.3 (51.2)	38.0 (46.9)	43.9 (45.9)	48.1 (50.1)	48.6 (50.0)	46.1 (54.4)	37.3 (44.6)	44.7 (54.5)	38.9 (48.1)
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Free-field	62.7 (70.4)	67.5 (69.7)	48.0 (59.7)	43.4 (50.4)	43.0 (51.5)	55.6 (58.0)	54.3 (59.2)	52.5 (55.1)	52.3 (62.9)	40.9 (46.6)	50.4 (63.8)	44.4 (57.2)

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
QAR	QAR-NMP2	Station Rd, Quainton	Free-field	44.4 (58.6)	60.8 (69.2)	42.6 (50.3)	40.0 (46.8)	36.6 (49.8)	41.7 (43.5)	59.5 (67.9)	59.5 (69.0)	55.9 (65.3)	37.2 (47.0)	58.5 (73.7)	39.9 (56.0)
	LSF-NMP1	Upper South Farm	Free-field	51.2 (55.0)	57.5 (70.1)	43.1 (48.4)	40.0 (49.1)	36.4 (46.8)	45.1 (48.7)	49.5 (52.2)	51.2 (55.7)	47.2 (55.2)	34.4 (41.1)	46.6 (55.8)	38.0 (46.0)
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Free-field	42.3 (46.7)	56.4 (64.9)	52.2 (59.3)	44.2 (56.4)	39.6 (55.9)	44.3 (56.4)	46.9 (51.9)	48.3 (53.5)	46.4 (52.0)	40.9 (51.1)	48.5 (56.3)	41.5 (53.6)
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	Free-field	43.5 (48.9)	48.6 (54.5)	42.3 (49.6)	42.4 (48.9)	39.1 (49.5)	40.5 (43.4)	44.2 (47.9)	46.2 (48.2)	44.9 (51.4)	37.3 (43.4)	44.0 (51.9)	40.0 (51.1)
GC	GC-NMP1	Aylesbury, Buckinghamshire	Free-field	42.9 (47.4)	55.0 (104.1)	49.0 (54.8)	42.2 (51.3)	38.9 (50.7)	43.6 (49.9)	48.8 (52.3)	48.7 (52.3)	48.1 (57.6)	36.5 (40.8)	48.3 (58.3)	38.8 (50.4)
OC	MF-NMP1	Aylesbury, Buckinghamshire	Free-field	43.1 (49.3)	58.6 (62.7)	57.5 (61.1)	45.9 (58.3)	38.1 (48.2)	39.2 (40.6)	48.4 (51.2)	46.2 (51.1)	45.0 (50.3)	37.9 (46.7)	46.7 (55.2)	39.5 (52.1)
RR	RR-NMP1	Stoke Mandeville, Aylesbury	Free-field	47.3 (52.8)	51.7 (58.8)	49.5 (55.8)	48.6 (58.0)	43.0 (59.2)	47.4 (52.5)	49.2 (50.5)	48.8 (52.7)	48.6 (54.5)	44.2 (58.0)	49.4 (56.1)	43.2 (51.6)

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
NLL	NLL-NMP1	Nash Lee Lane, Nash Lee	Free-field	59.4 (64.3)	62.2 (72.3)	52.9 (55.9)	49.2 (52.6)	48.3 (60.1)	49.2 (50.7)	50.7 (53.4)	60.9 (68.2)	55.1 (66.6)	45.4 (48.4)	48.3 (51.4)	46.8 (53.7)
	NLL-NMP2	Nash Lee Lane, Nash Lee	Free-field	49.7 (54.4)	56.2 (63.8)	49.9 (64.7)	46.8 (60.9)	44.5 (61.0)	47.2 (52.9)	49.7 (52.8)	48.7 (51.1)	47.7 (51.0)	45.1 (49.4)	48.1 (54.7)	43.4 (51.6)
WGT	ER-NMP1	Ellesborough Rd, Wendover	Free-field	56.7 (59.4)	57.3 (70.0)	55.7 (58.0)	53.3 (56.9)	51.8 (62.5)	51.9 (52.4)	53.8 (54.2)	53.9 (55.4)	52.8 (56.7)	50.3 (58.2)	53.3 (57.0)	50.5 (56.2)
	BL-NMP1	Bacombe Lane, Wendover	Free-field	47.2 (50.6)	49.2 (52.0)	44.3 (48.0)	43.4 (48.3)	40.8 (47.9)	46.4 (48.9)	47.9 (48.4)	46.5 (48.6)	45.8 (50.4)	40.2 (47.4)	46.6 (50.5)	39.5 (46.2)
	WT-NMP1	A413, Wendover	Free-field	66.7 (67.5)	65.8 (66.8)	65.7 (66.6)	63.3 (68.7)	60.1 (68.0)	62.1 (62.6)	63.5 (64.3)	64.1 (64.6)	63.1 (67.2)	57.7 (61.5)	63.3 (67.6)	58.6 (65.9)
	WGT-NMP1	Wendover, Aylesbury	Free-field	50.3 (55.1)	51.8 (56.1)	50.9 (56.7)	48.6 (54.6)	46.1 (54.8)	43.9 (43.9)	44.9 (44.9)	43.8 (43.8)	43.3 (43.7)	41.9 (46.7)	46.3 (51.7)	44.8 (53.2)
GF	GF-NMP1	Grove Farm, Wendover	Free-field	51.2 (60.3)	54.8 (68.8)	44.7 (48.7)	43.8 (48.5)	46.3 (61.2)	46.2 (52.6)	44.4 (49.4)	42.9 (46.5)	43.0 (50.2)	43.0 (51.5)	44.1 (53.8)	40.0 (42.1)
SDVC	SDVC-NMP1	Rocky Lane, Wendover	Free-field	62.9 (66.0)	62.6 (63.9)	60.6 (61.8)	59.7 (61.6)	56.8 (62.8)	59.2 (59.2)	60.5 (60.5)	60.3 (60.3)	59.5 (60.8)	53.4 (55.9)	59.6 (61.3)	55.2 (56.1)

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
RLE	NCAS6-NMP1	Chesham Lane, The Lee, Wendover	Free-field	49.0 (56.8)	58.5 (71.7)	46.7 (50.5)	44.8 (49.0)	43.4 (54.9)	42.8 (42.8)	48.7 (48.7)	48.2 (48.2)	44.8 (46.7)	42.2 (45.6)	46.2 (49.2)	42.3 (47.8)
	NCAS5-NMP1	Chesham Lane, The Lee, Wendover	Free-field	54.8 (58.4)	57.2 (64.3)	52.0 (54.9)	50.5 (53.9)	47.9 (54.4)	51.7 (52.8)	54.6 (58.3)	55.7 (58.8)	51.2 (56.3)	45.4 (48.1)	49.9 (52.9)	48.6 (53.9)
WDV	WDV-NMP1	Upper Wendover Dean Farm, A413, Wendover	Free-field	51.2 (57.0)	57.4 (60.2)	48.4 (51.6)	45.6 (51.3)	43.8 (58.5)	45.1 (45.1)	45.7 (45.7)	45.9 (45.9)	44.2 (47.3)	42.0 (46.6)	45.4 (49.8)	42.4 (48.0)
LL	GD-NMP1	Grimms Ditch, The Lee, South Heath	Free-field	49.0 (53.1)	55.4 (73.9)	46.1 (47.3)	45.7 (52.5)	43.3 (47.5)	_* _*	_* _*	_* _*	_* _*	_* _*	_* _*	43.2 (43.2)
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath	Free-field	43.2 (46.1)	59.5 (61.3)	56.1 (60.5)	44.3 (50.7)	38.5 (51.5)	42.7 (43.7)	51.8 (57.2)	52.9 (61.4)	51.3 (61.8)	39.1 (46.3)	46.7 (53.1)	38.0 (43.9)
	PKF-NMP1	Park Farm, South Heath	Free-field	44.7 (54.1)	52.8 (57.7)	51.1 (60.4)	46.7 (57.8)	41.3 (59.0)	45.2 (50.3)	51.7 (57.0)	51.9 (60.4)	49.0 (57.4)	40.9 (48.5)	47.1 (52.9)	40.2 (45.4)

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
NP	BFH-NMP1	Bury Farm, Great Missenden	Free-field	42.9 (60.4)	51.1 (63.5)	47.1 (56.2)	43.8 (52.3)	38.7 (58.4)	41.5 (46.1)	46.2 (52.7)	45.7 (46.2)	44.4 (51.2)	37.1 (47.2)	44.6 (49.9)	37.7 (44.2)
	ORC-NMP1	Orchard Cottage, Ballinger Road, South Heath	Free-field	48.8 (61.4)	51.1 (54.5)	49.7 (60.0)	47.0 (55.0)	42.7 (59.2)	47.4 (49.4)	50.5 (56.4)	48.8 (50.1)	48.2 (55.9)	44.1 (55.5)	48.6 (55.0)	40.8 (45.0)
	BLH-NMP1	Bayleys Hatch, South Heath, Great Missenden	Free-field	45.7 (52.6)	48.6 (52.7)	47.7 (52.9)	45.4 (50.3)	39.0 (51.4)	43.3 (47.4)	53.4 (71.2)	50.0 (59.8)	49.7 (60.0)	39.0 (45.7)	46.8 (57.7)	38.9 (46.8)
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	Free-field	54.3 (58.0)	56.9 (59.0)	56.7 (58.6)	54.5 (64.3)	48.0 (56.5)	51.0 (52.8)	54.7 (57.7)	55.6 (57.5)	54.9 (58.2)	48.0 (52.6)	54.3 (58.3)	47.3 (54.1)
AM	AM-NMP1	Whielden Lane, Amersham	Free-field	59.5 (62.7)	64.1 (70.0)	61.5 (74.4)	58.7 (63.2)	52.9 (60.9)	55.1 (55.8)	60.1 (60.8)	60.1 (61.3)	58.6 (60.5)	52.4 (57.7)	57.9 (61.1)	52.2 (57.2)
LM	LM-NMP1	Little Missenden, A413, Amersham	Free-field	49.6 (54.1)	56.7 (68.2)	55.8 (65.6)	51.3 (65.2)	43.0 (52.2)	46.3 (48.0)	54.4 (62.5)	53.5 (62.2)	51.3 (60.0)	41.6 (48.5)	48.1 (51.4)	43.9 (52.0)
	PWC-NMP1	Patricia Holmes, LM Worksite, Amersham	Free-field	56.1 (59.4)	56.1 (59.7)	57.1 (61.4)	54.9 (60.3)	49.3 (61.9)	52.6 (56.1)	54.9 (56.8)	54.6 (62.2)	53.2 (56.6)	48.4 (57.5)	53.3 (60.0)	48.0 (57.0)

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
CSG	CSG-NMP1	CSG Worksite, Bottom House Farm Lane	Free-field	47.7 (60.3)	49.3 (68.6)	45.9 (51.1)	44.6 (54.5)	43.8 (78.8)	49.4 (59.9)	50.1 (54.6)	48.1 (49.3)	46.2 (54.6)	42.1 (52.8)	50.9 (70.0)	41.8 (57.9)
CSP	CSP-NMP2	Chalfont St Peter Vent Shaft Worksite	Free-field	42.9 (47.3)	52.4 (66.0)	46.8 (49.0)	44.1 (50.1)	39.1 (48.0)	40.7 (42.8)	49.4 (51.9)	51.5 (52.1)	47.3 (53.2)	39.2 (46.3)	50.2 (55.4)	41.9 (50.3)
CVV	CVV-NMP1	Northern boundary, Load Test Pile 1 Worksite	Free-field	61.3 (73.9)	62.2 (66.7)	61.1 (63.9)	58.7 (64.8)	55.6 (76.7)	60.7 (70.9)	61.5 (66.0)	59.3 (64.0)	60.2 (67.5)	53.6 (59.4)	61.2 (74.5)	56.2 (73.5)

\*Note: Missing data at monitor GD-NMP1 was due to monitor retrieval on Thursday 10<sup>th</sup> July.

- 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	1.17 (Y-axis)
WDL	WDL-Vib1	Station Road, Quainton	1.45 (Z-axis)
QAR	SR-Vib1	Station Road, Quainton	3.71 (Z-axis)
CAL	BRA-Vib1	13 Brackley Lane, Calvert Village	2.24 (X-axis)
WSO	PF-Vib1	Twyford, Buckinghamshire	1.29 (Y-axis)
WGT	ER-Vib1	46, Ellesborough Rd, Wendover	3.20 (Z-axis)
GF	GF-Vib1	Grove Farm, Wendover	2.40 (X-axis)

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

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

## 2.2 Exceedances of the LOAEL and SOAEL

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



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

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

2.2.4 Where reported construction noise levels exceed the LOAEL and SOAEL 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	Weekday	0800-1800	1	No exceedance
HC	HC-NMP1	Hermitage, Chetwode	All days	All periods	No exceedance	No exceedance
TW	TW-NMP1	Twyford	All days	All periods	No exceedance	No exceedance
WSO	WSO-NMP1	West Street, Twyford	Weekday	0800-1800	1	No exceedance
CAL	SHC-NMP1	School Hill Compound, Calvert	All days	All periods	Not Applicable*	Not Applicable*
	FCC-NMP1	Calvert South	Weekday	0800-1800	1	No exceedance
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quainton	Weekday	0700-0800 0800-1800 1800-1900	18 23 1	1 No exceedance No exceedance
			Saturday	1400-2200	6	1
QAR	QAR-NMP2	Station Rd, Quainton	Weekdays Saturdays	0800-1800 0800-1300 1300-1400 1400-2200	12 1 3 8	No exceedance No exceedance 1 4
	LSF-NMP1	Upper South Farm	Weekday	0800-1800	3	No exceedance

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
GC	GC-NMP1	Aylesbury, Buckinghamshire	Weekday	0800-1800	1	No exceedance
OC	MF-NMP1	Moat Farm, Marsh Lane	All days	All periods	No exceedance	No exceedance
WAD	WAD-NMP2	Waddesdon, Buckinghamshire	Weekday	0800-1800	1	No exceedance
TVV	TVV-NMP1	Aylesbury, Buckinghamshire	All days	All periods	No exceedance	No exceedance
RR	RR-NMP1	Stoke Mandeville, Aylesbury	All days	All periods	No exceedance	No exceedance
NLL	NLL-NMP1	Nash Lee Lane, Nash Lee	Weekday	0800-1800	1	No exceedance
	NLL-NMP2	Nash Lee Lane, Nash Lee	Weekday	0800-1800	1	No exceedance
WGT	ER-NMP1	Ellesborough Rd, Wendover	Weekday	0800-1800	2	No exceedance
	BL-NMP1	Bacombe Lane, Wendover	All days	All periods	No exceedance	No exceedance
	WT-NMP1	A413, Wendover	Weekday	0800-1800	23	No exceedance
	WGT-NMP1	Wendover, Aylesbury	All days	All periods	No exceedance	No exceedance
GF	GF-NMP1	Grove Farm, Wendover	Weekday	0800-1800	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	4	No exceedance
	NCAS5-NMP1	Chesham Lane, The Lee, Wendover	Saturday	1400-2200	2	No exceedance
WDV	WDV-NMP1	A413, Wendover	All days	All periods	No exceedance	No exceedance
LL	GD-NMP1	Grimms Ditch, The Lee, South Heath	All days	All periods	No exceedance	No exceedance

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
SH	HHF-NMP1	Hammonds Hall Farm, Potter Row, South Heath	All days	All periods	No exceedance	No exceedance
	PKF-NMP1	Park Farm, South Heath	Saturday	1400-2200	1	No exceedance
NP	BFH-NMP1	Bury Farm, Great Missenden	Weekday	0800-1800	1	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	Saturday	0800-1300	1	No exceedance
CHSM	MDL-NMP1	Meadow Leigh Cottage, Firth Hill, South Heath	All days	All periods	No exceedance	No exceedance
AM	AM-NMP1**	Whielden Lane, Amersham	All days	All periods	No exceedance	No exceedance
LM	LM-NMP1**	Little Missenden Vent Shaft Worksite	Weekday	0800-1800	2	No exceedance
	PWC-NMP1	Patricia Holmes, Little Missenden Vent Shaft Worksite, Amersham	All days	All periods	Not applicable***	Not applicable***
CSG	CSG-NMP1**	Chalfont St Giles Vent Shaft	All days	All periods	No exceedance	No exceedance
CSP	CSP-NMP2**	Chalfont St Peter Vent Shaft Worksite	All days	All periods	No exceedance	No exceedance

Worksite Reference	Measurement Reference	Address	Day (Weekday, Saturday, Sunday, Night)	Time period	Number of exceedances of LOAEL	Number of exceedances of SOAEL
CVV	CVV-NMP1**	Denham Water Ski Club, North Orbital Road	All days	All periods	Not applicable*	No exceedance

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

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

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

2.2.6 There were exceedances of the LOAEL due to HS2 construction works at nineteen (19) monitoring locations during weekday and Saturday periods.

2.2.7 There were exceedances of the SOAEL due to HS2 construction works at two (2) monitoring locations during weekday and Saturday periods.

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

Table 6: Summary of Total Exceedances of SOAEL

Worksite Reference	Measurement Reference	Monitor Address	Total of SOAEL exceedances in the month
WDL	WDL-NMP1	Woodlands Farmhouse, Station Rd, Quanton	2
QAR	QAR-NMP2	Station Rd, Quanton	3

2.2.9 There were five (5) 24-hour periods where the SOAEL was exceeded due to HS2 construction works during July 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
-	-	-	-	-	-

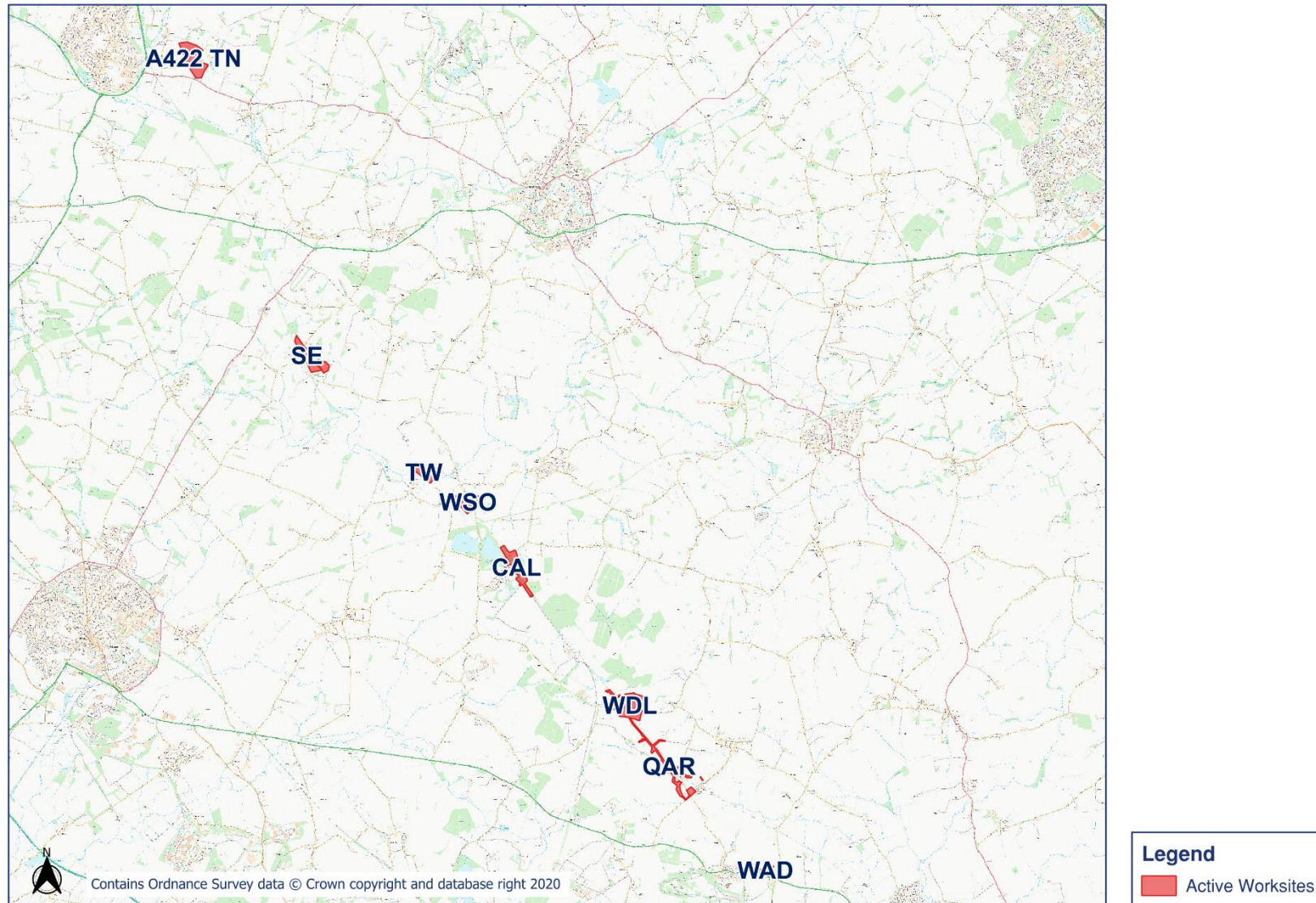
## 2.4 Complaints

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.

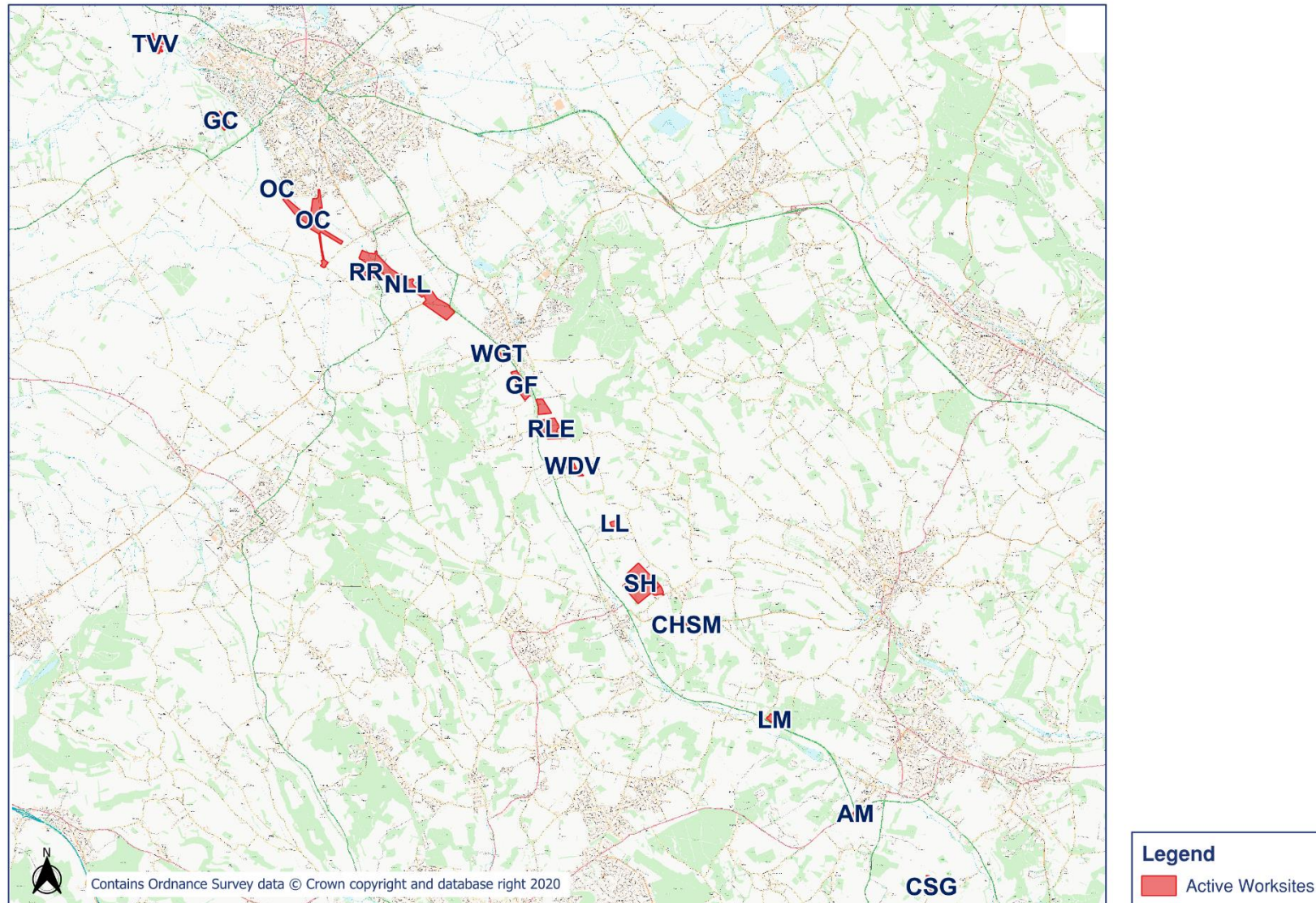
Table 8: Summary of Complaints

Complaint Reference Number	Worksite Reference	Description of Complaint	Results of Investigation	Actions Taken
HS2-25-124456-E-C	GF	Car alarm sounding during the day.	Investigation showed no HS2 vehicles were present in the area at the time of the complaint and therefore the complaint is not related to HS2 works.	Resident has been updated with the results of the investigation.

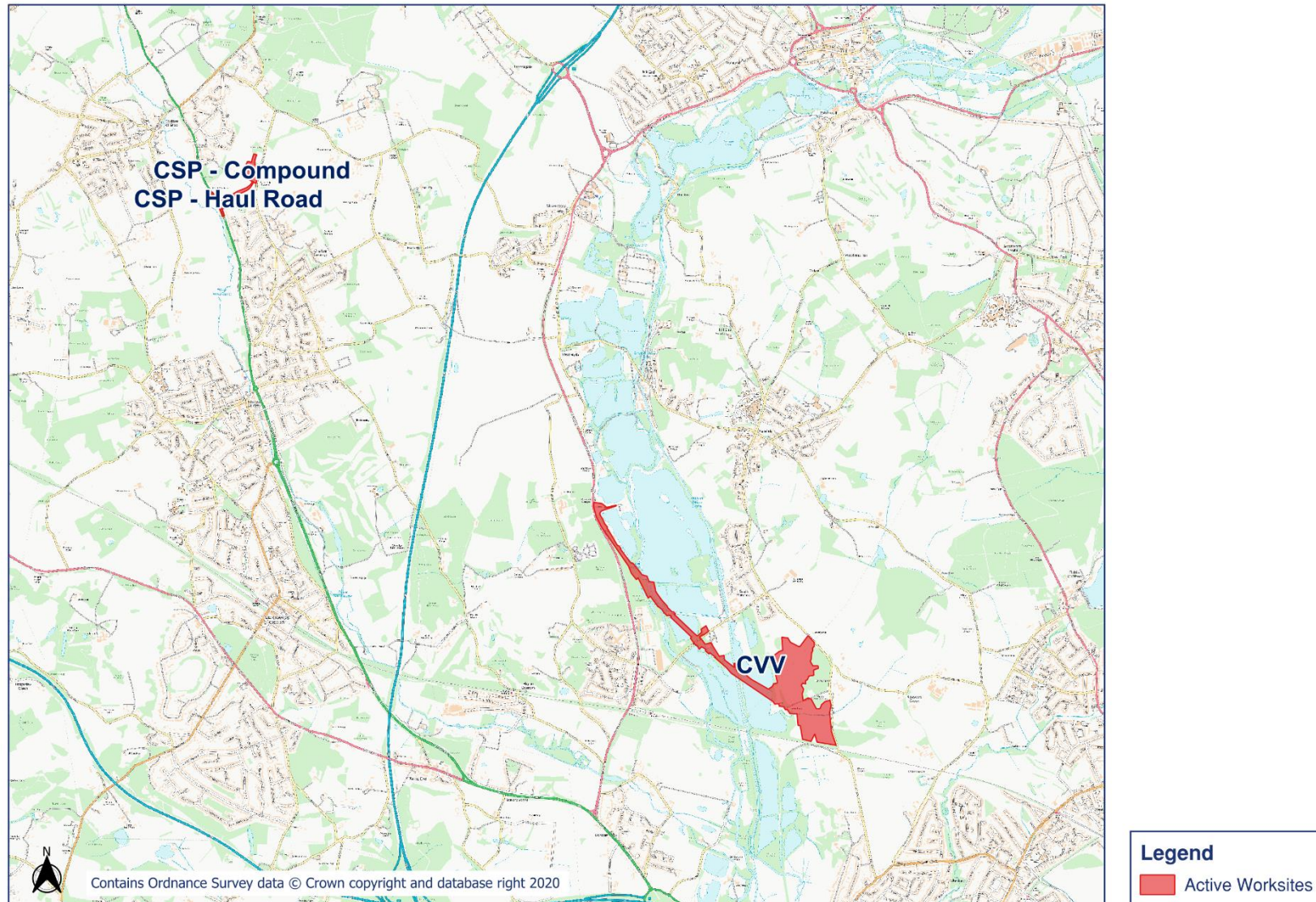
# Appendix A Site Locations

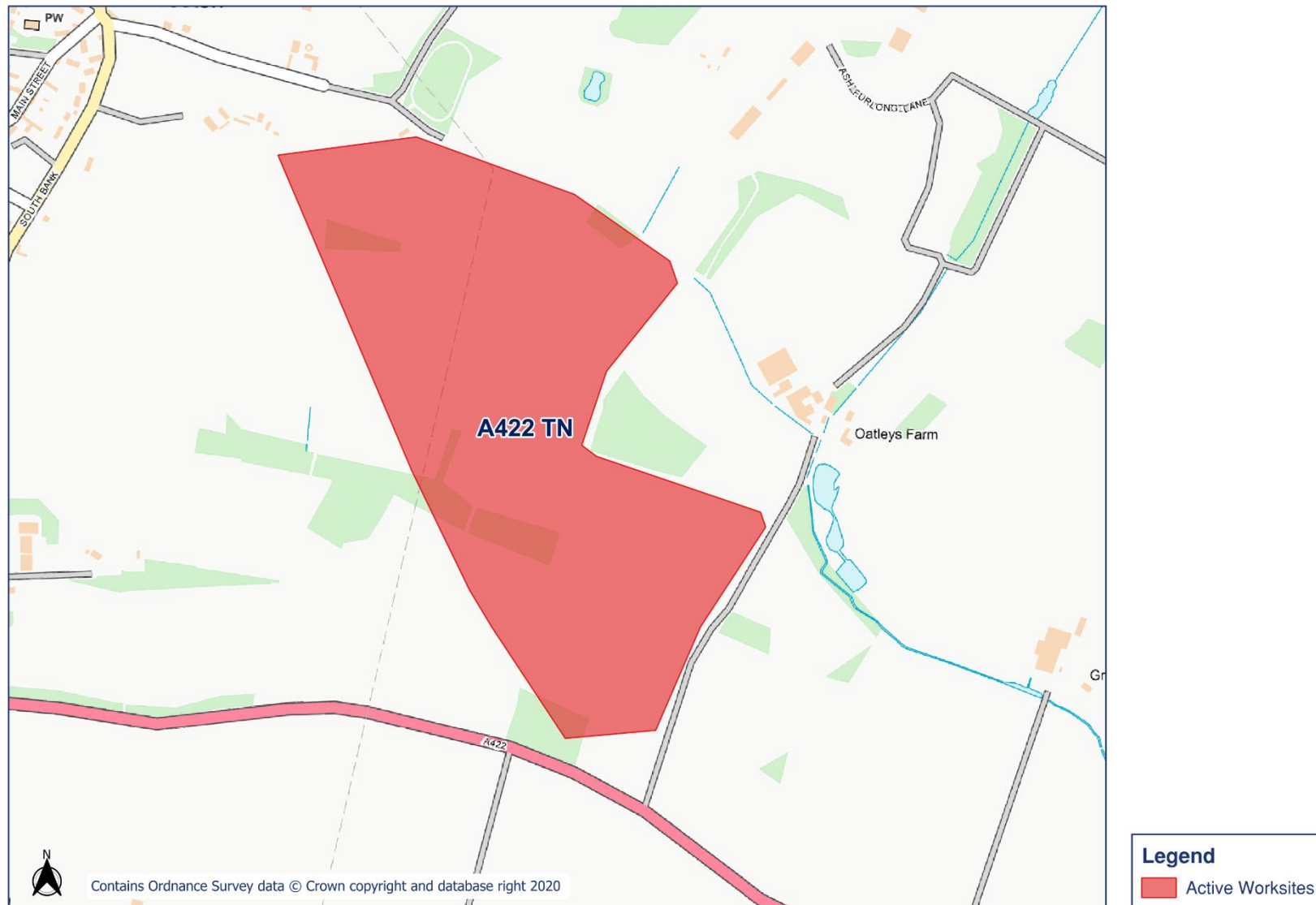








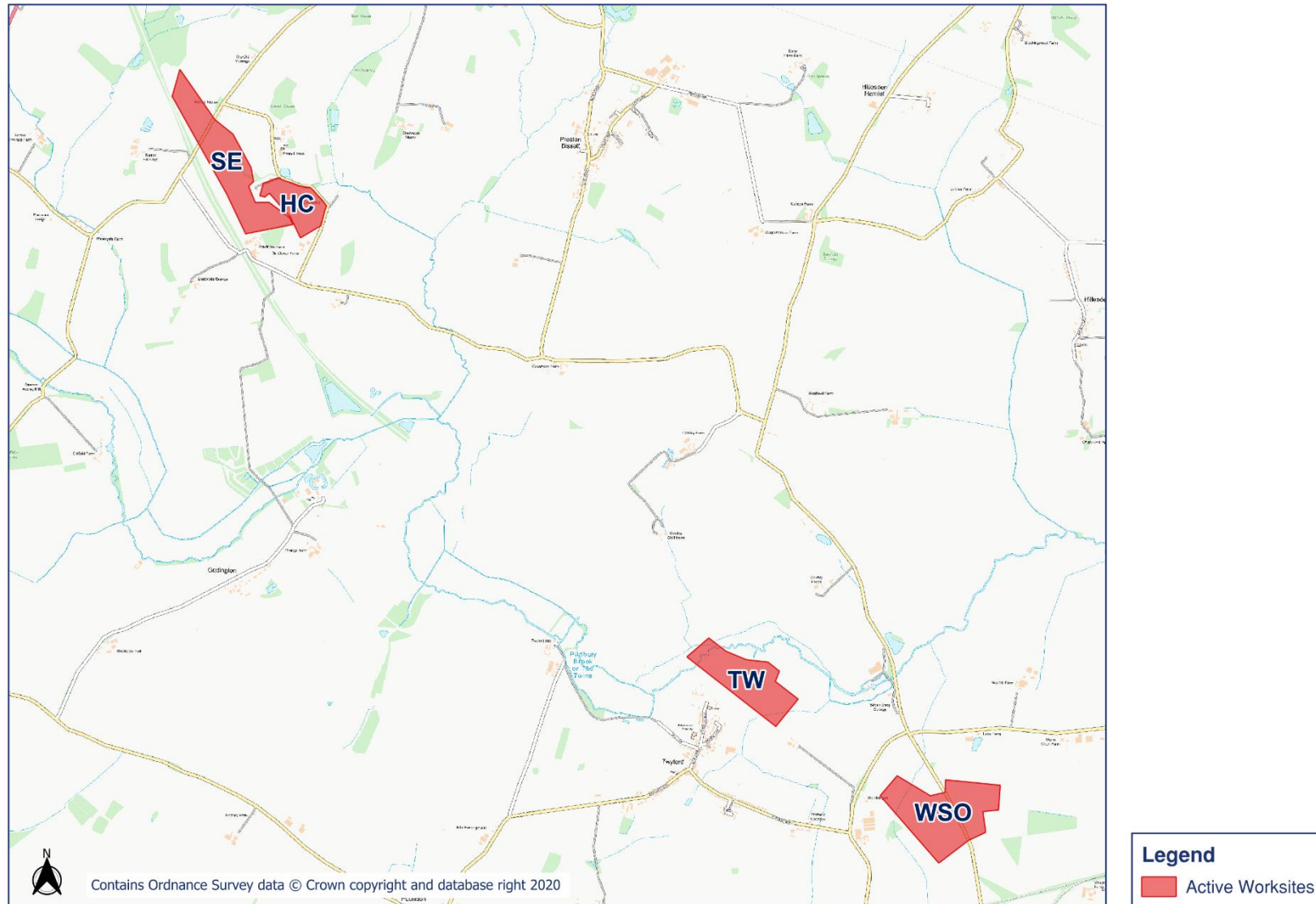


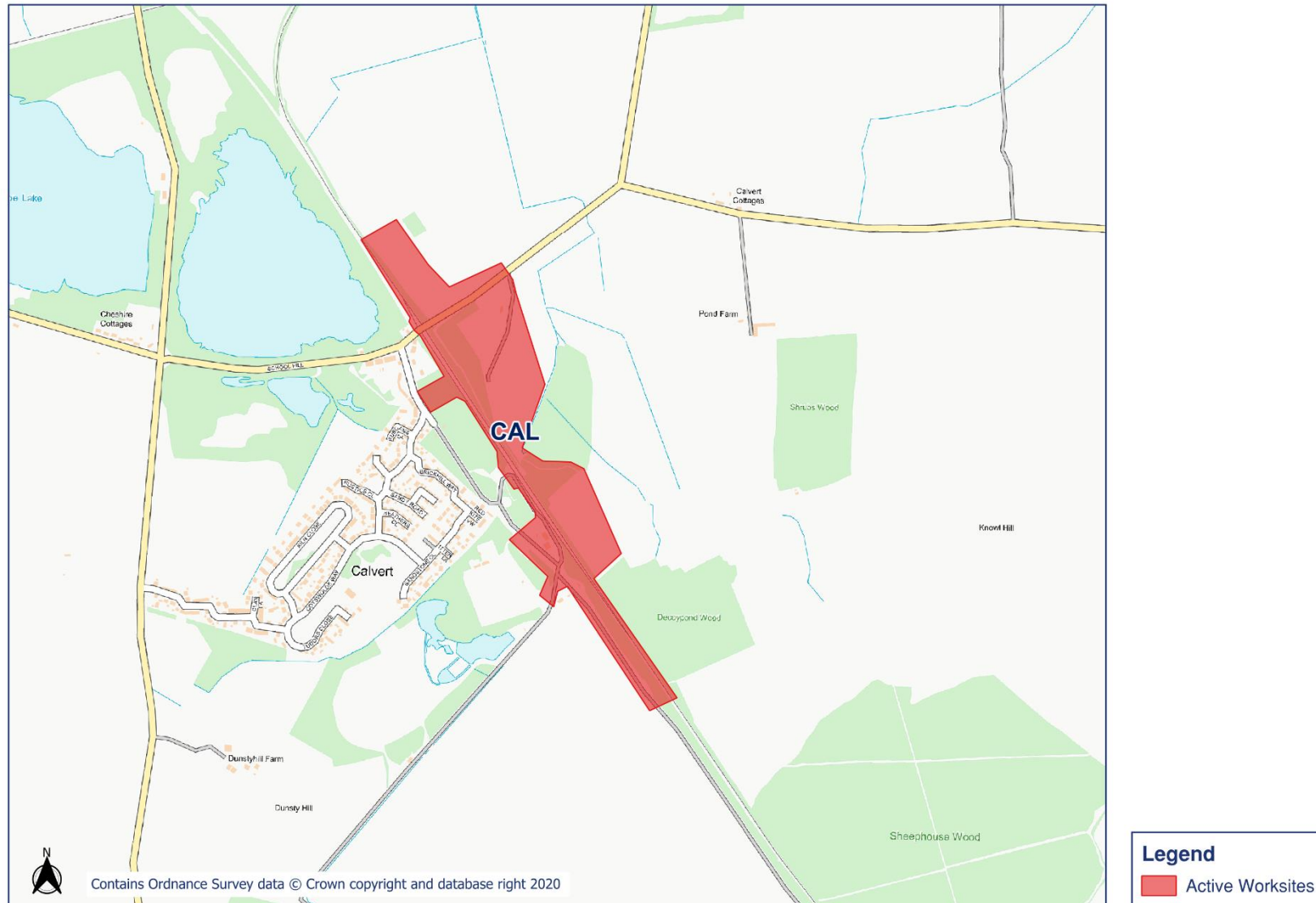




# HS2

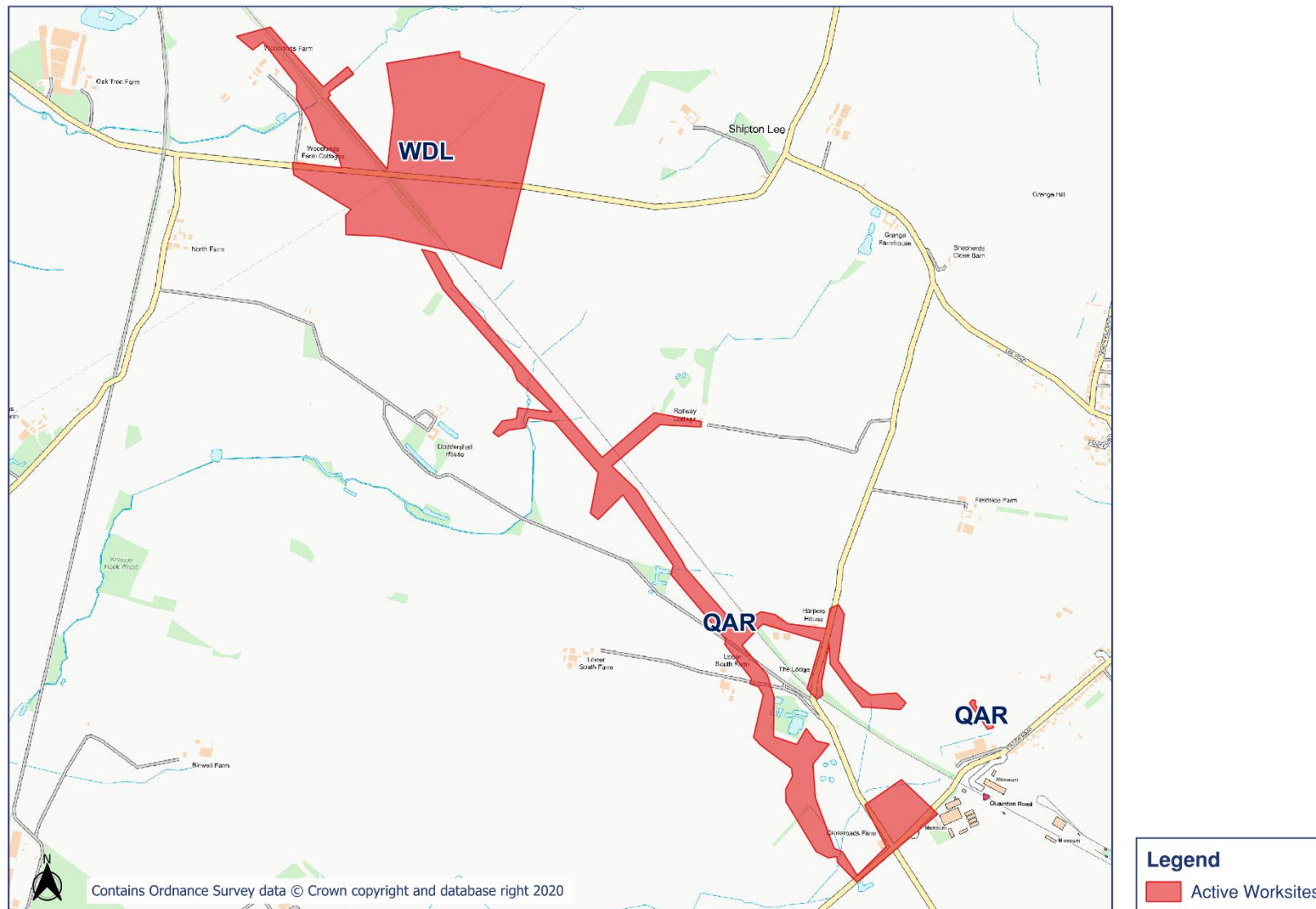
## Worksite Identification Plan - 2

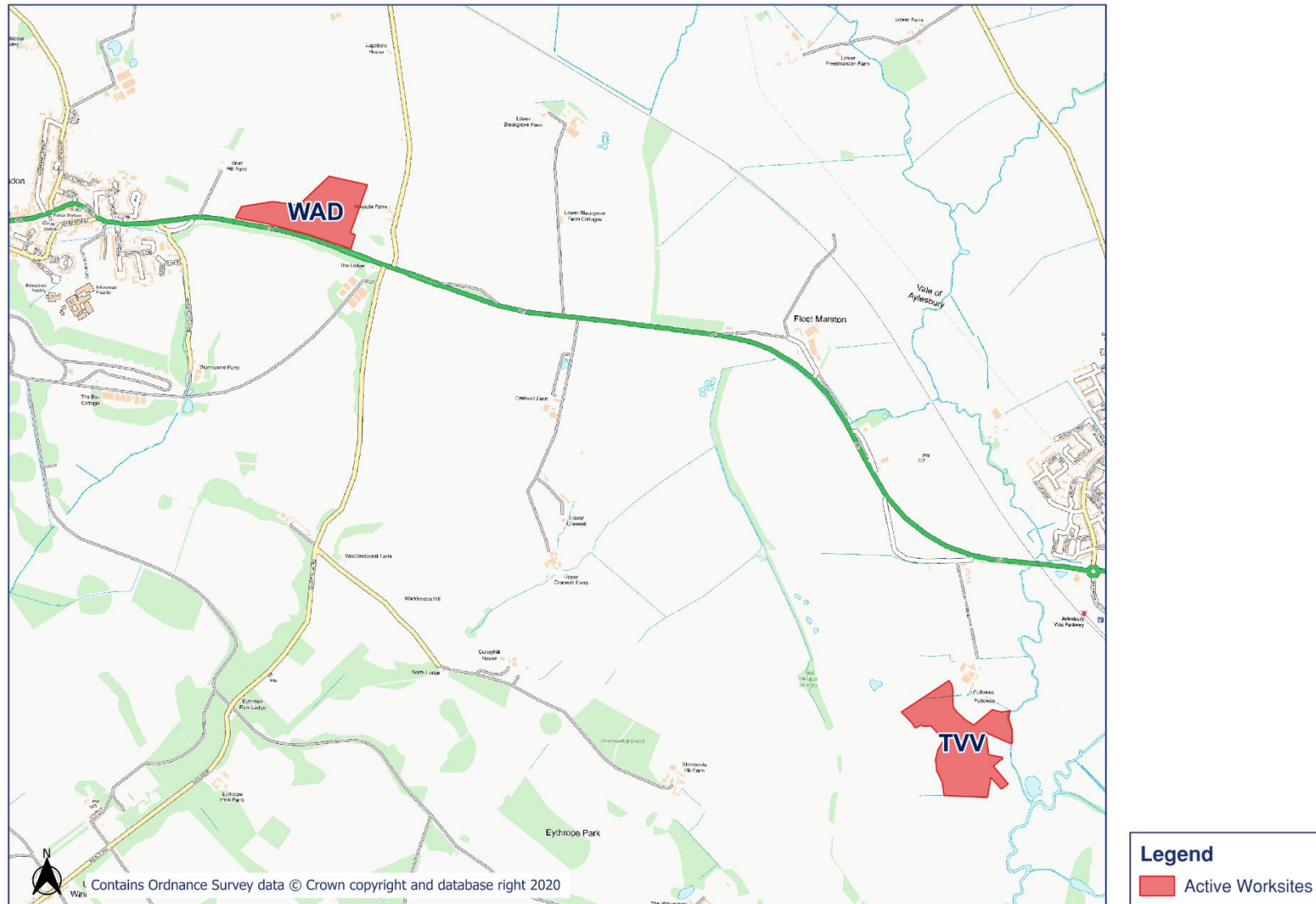




**HS2**

## Worksite Identification Plan - 4

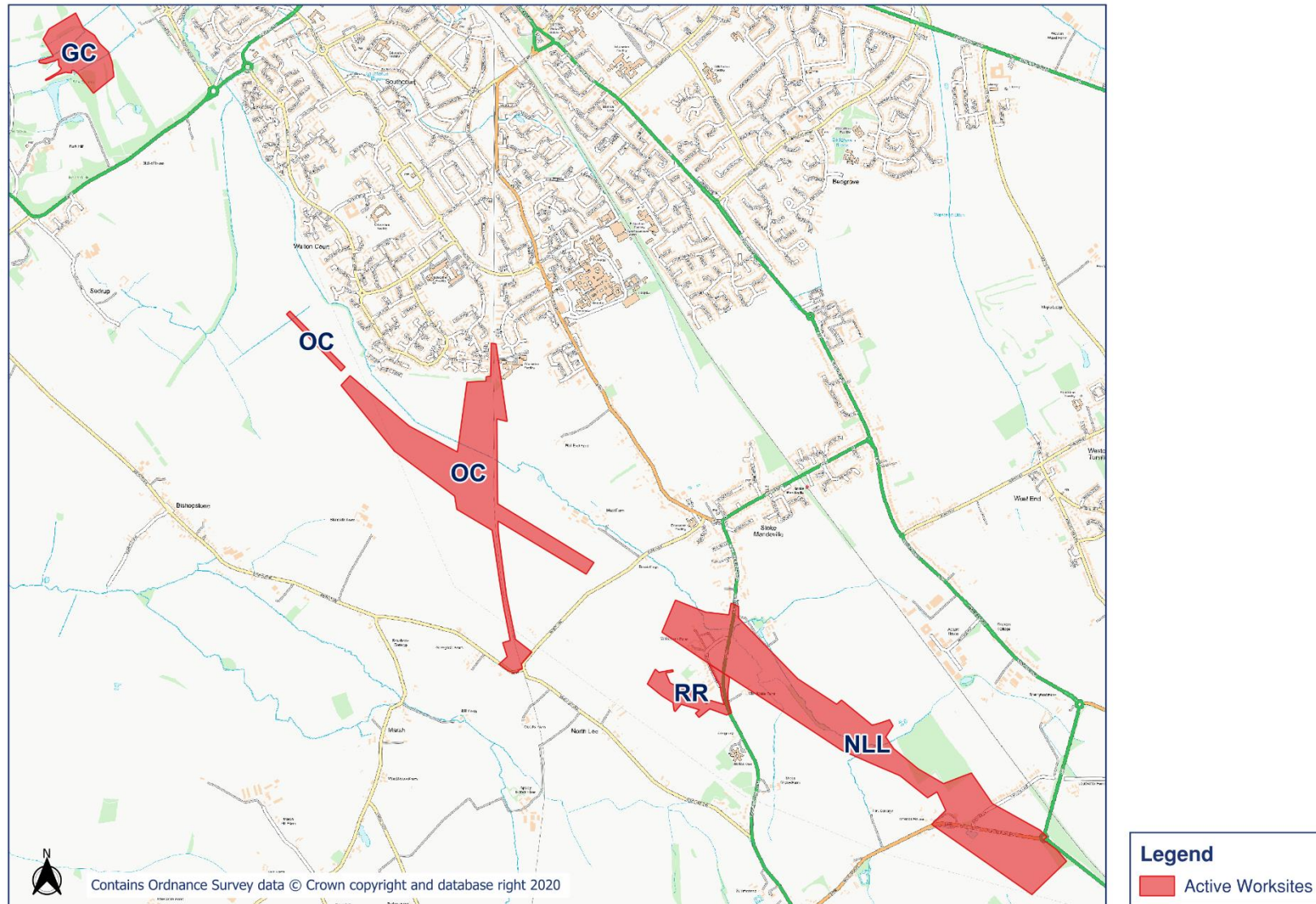






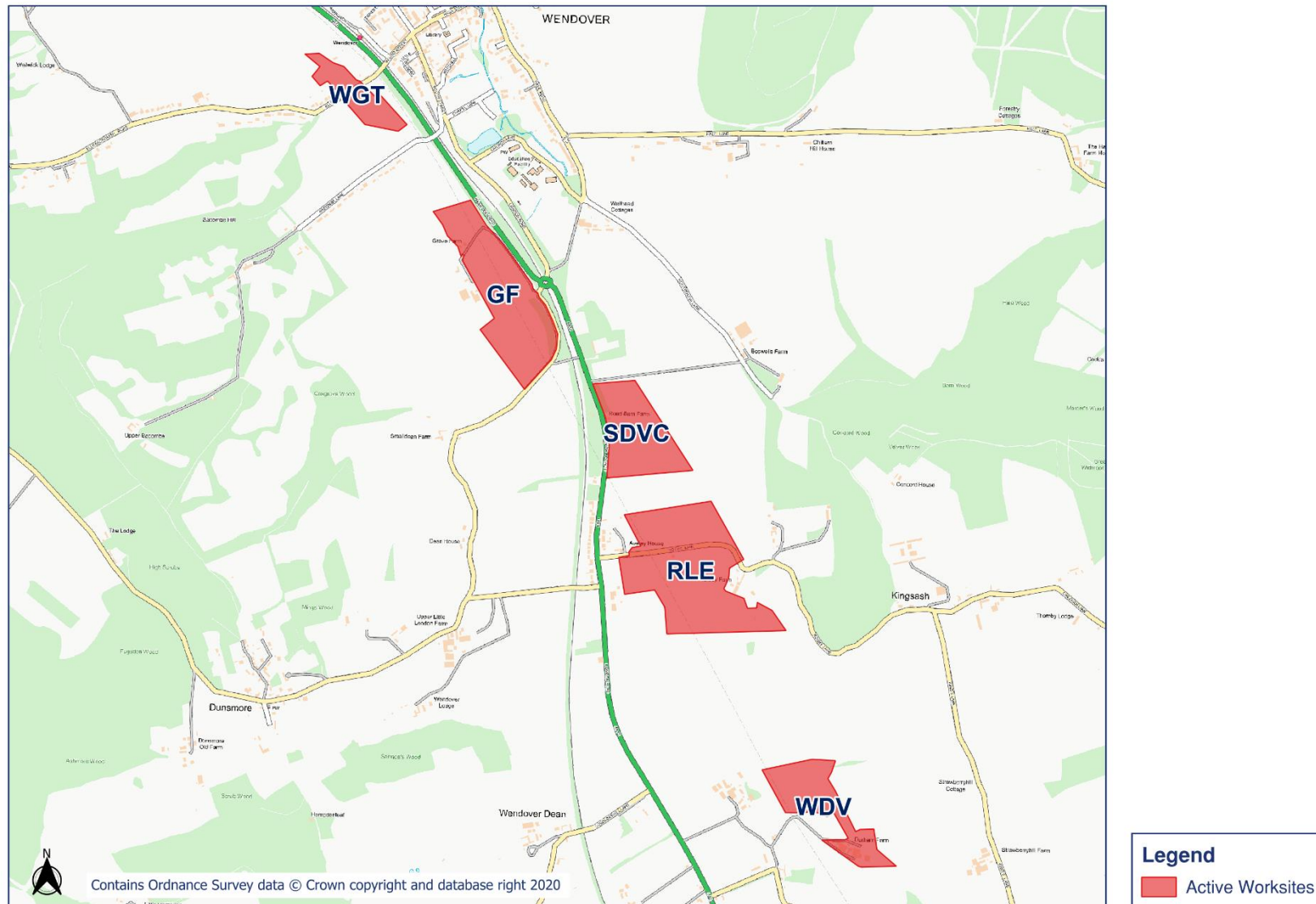
## HS2 Worksite Identification Plan - 6

## HS2 Worksite Identification Plan - 6

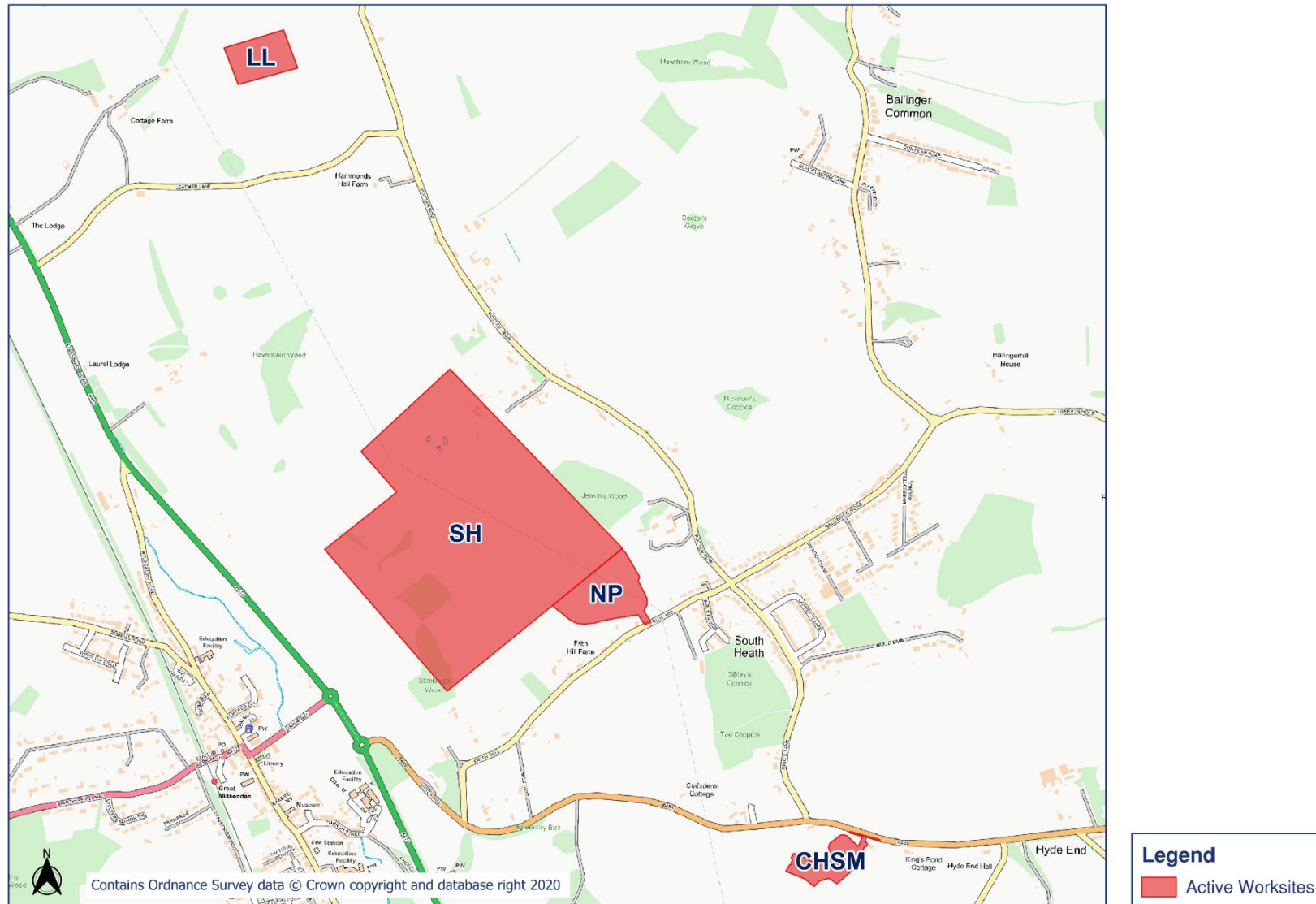


# HS2

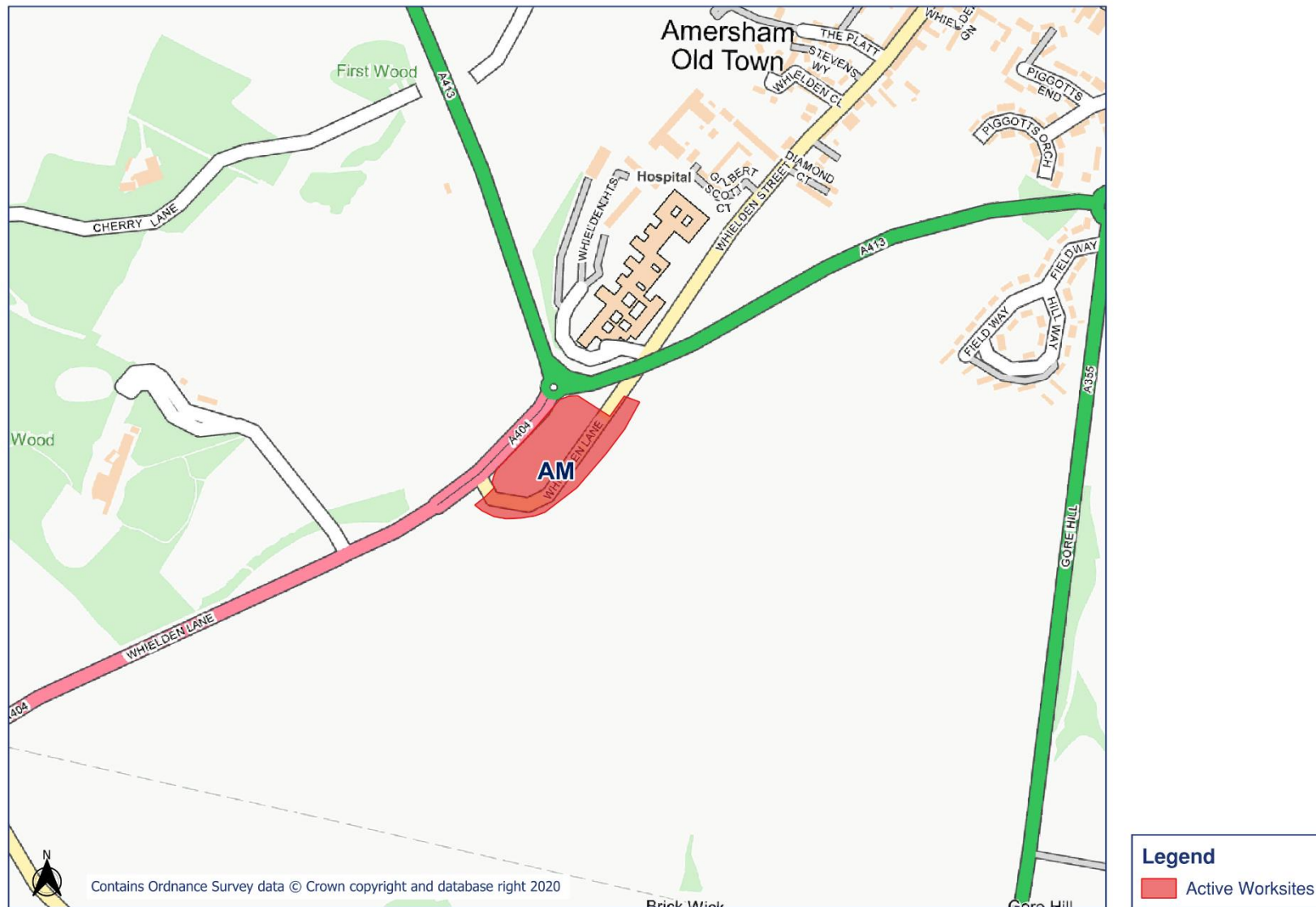
## Worksite Identification Plan - 7







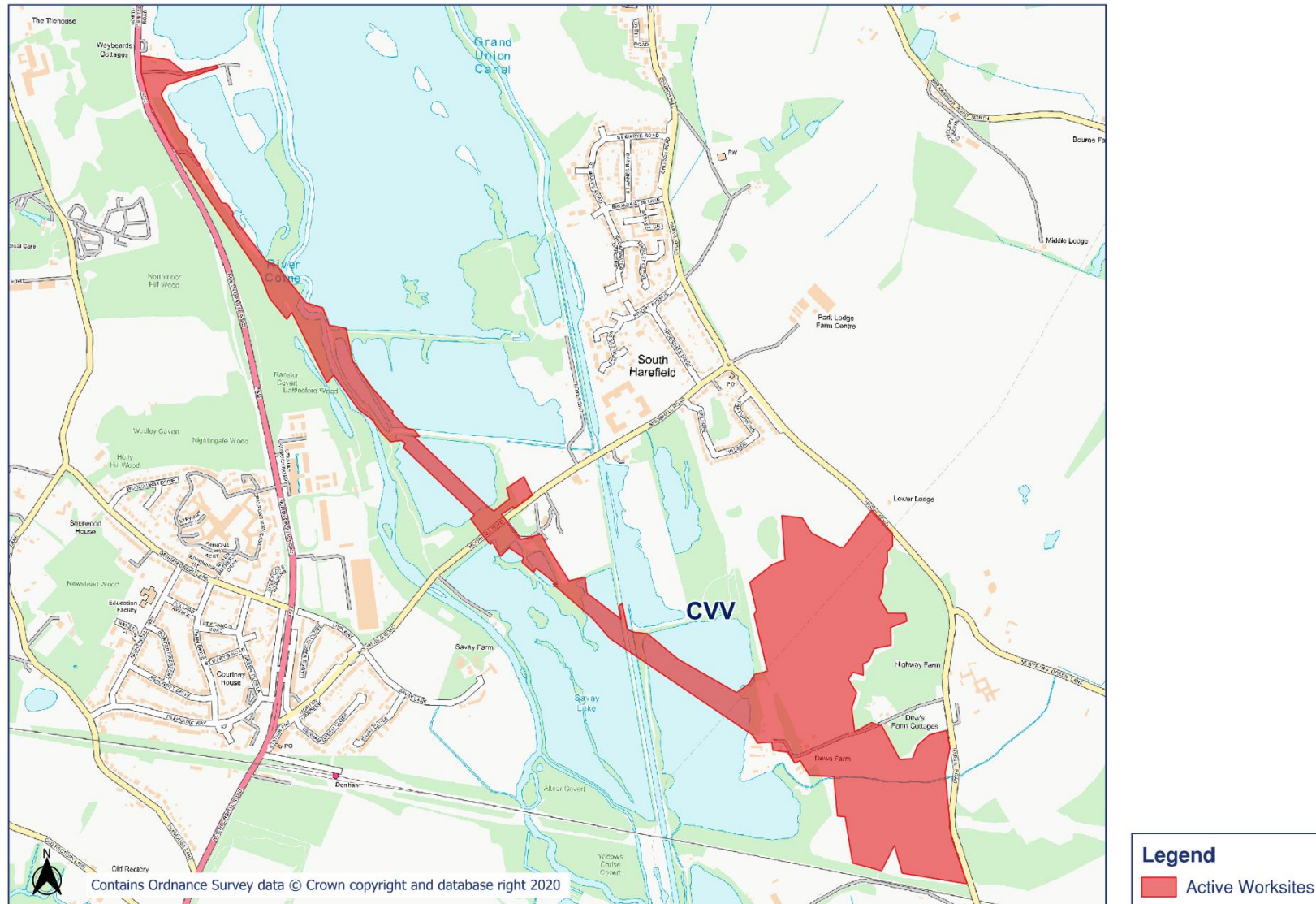




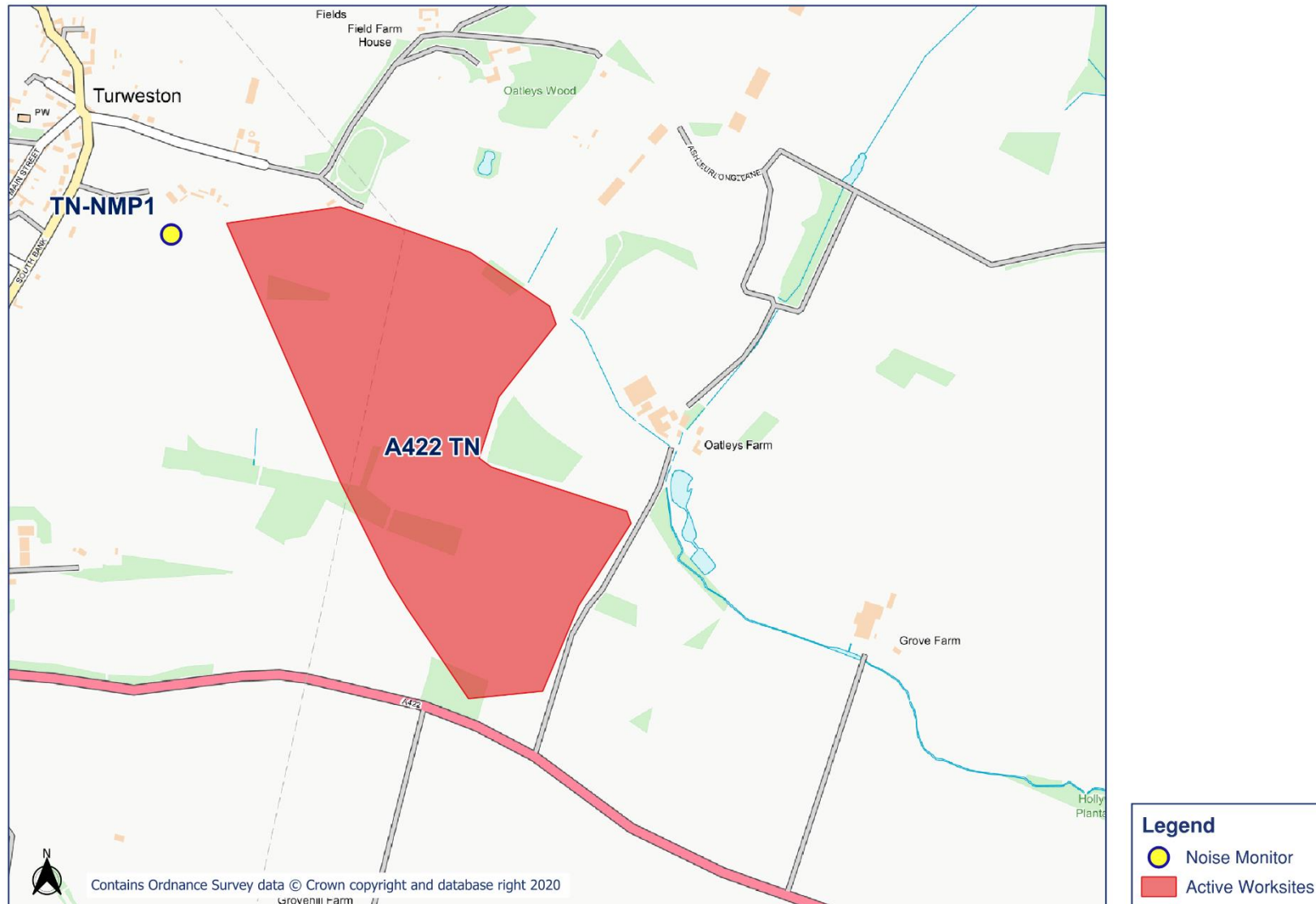






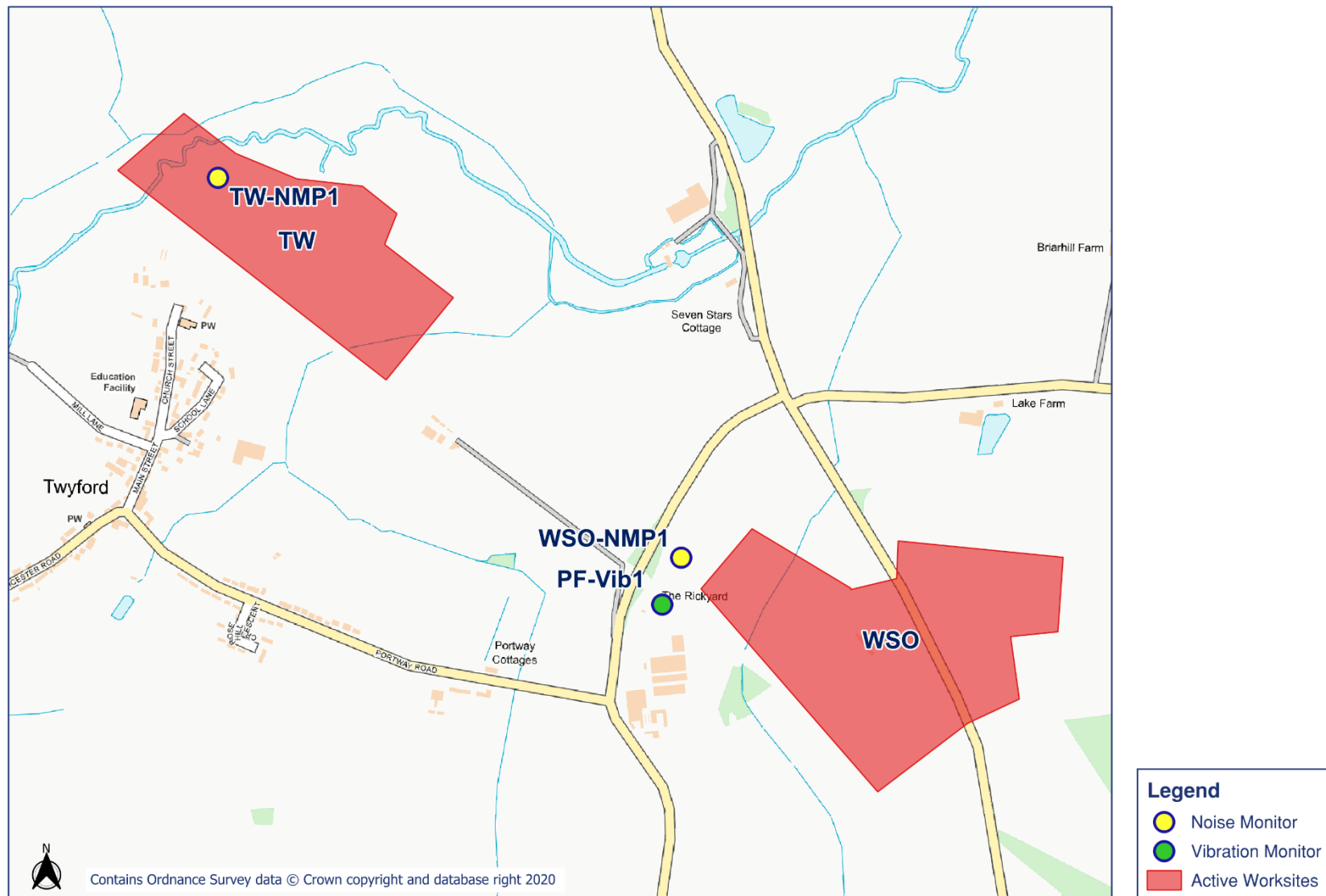


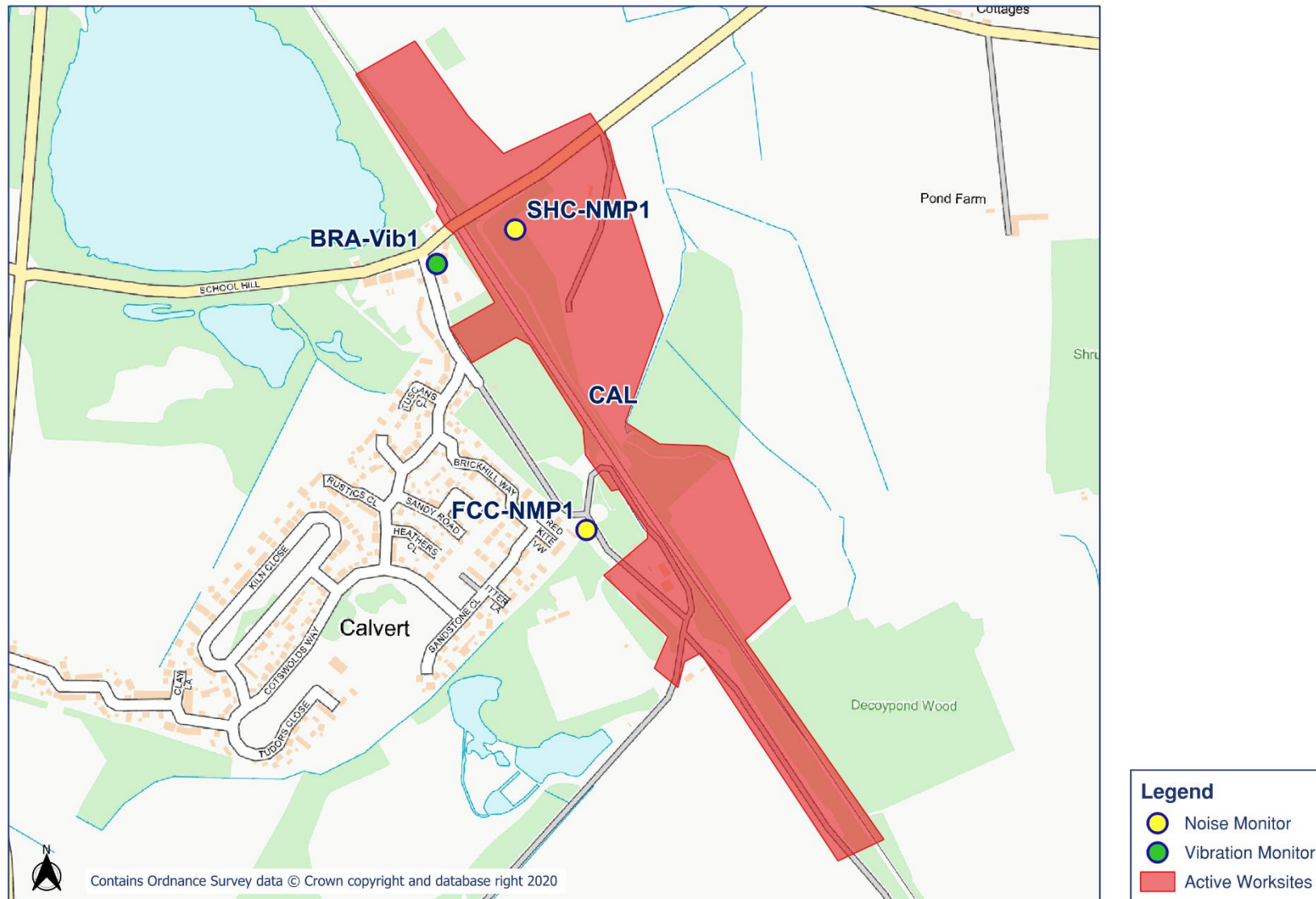
# Appendix B Monitoring Locations

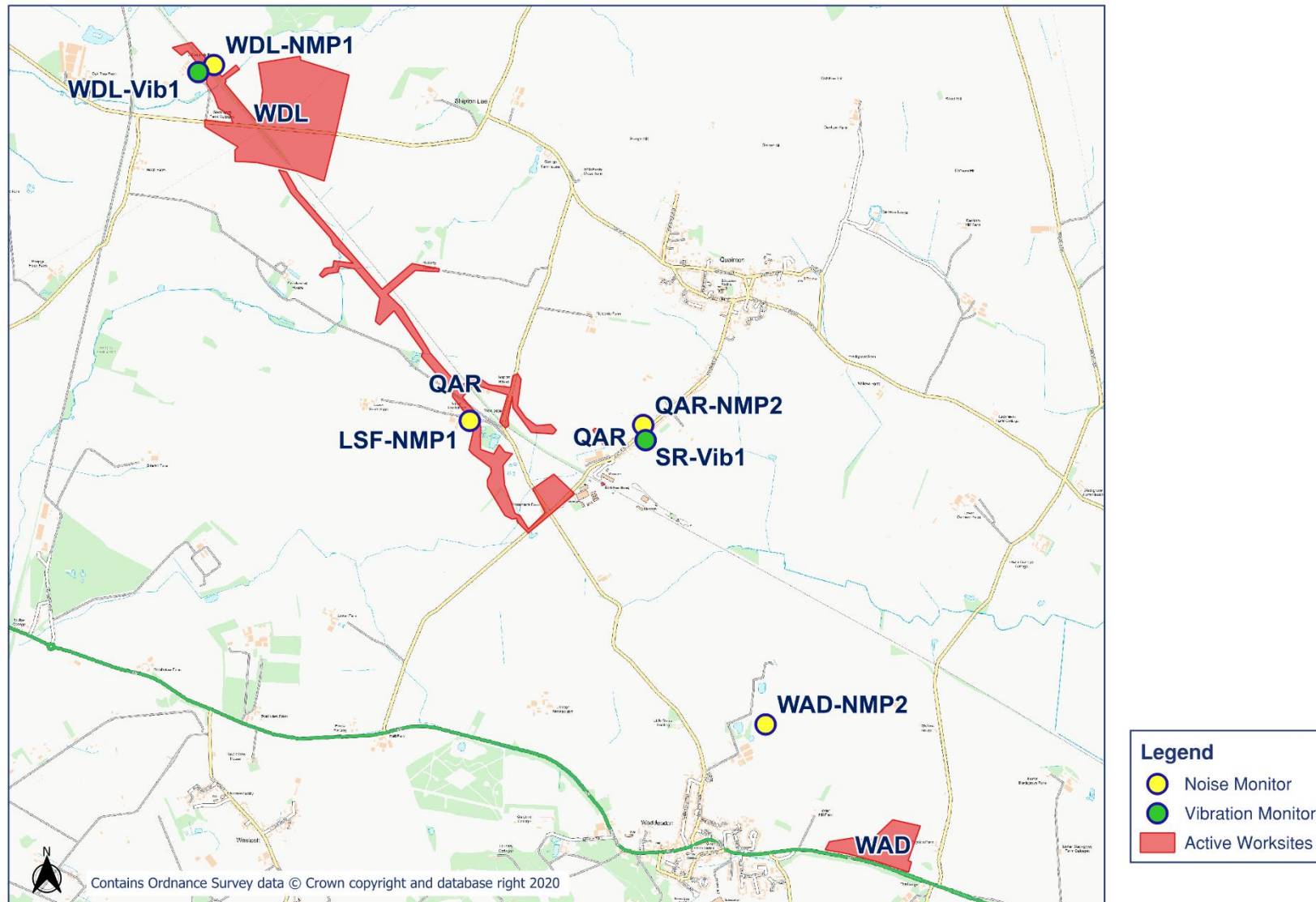




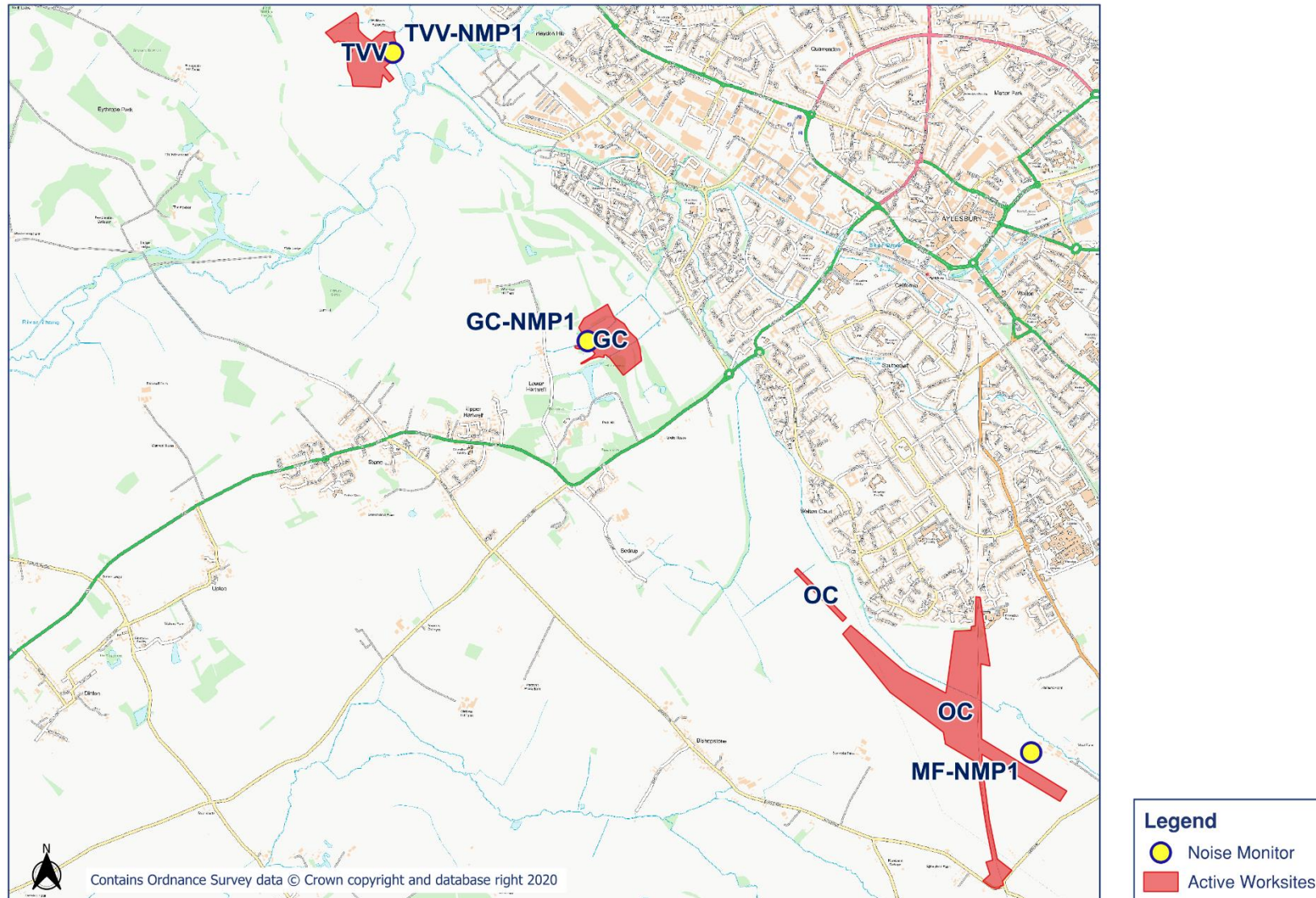






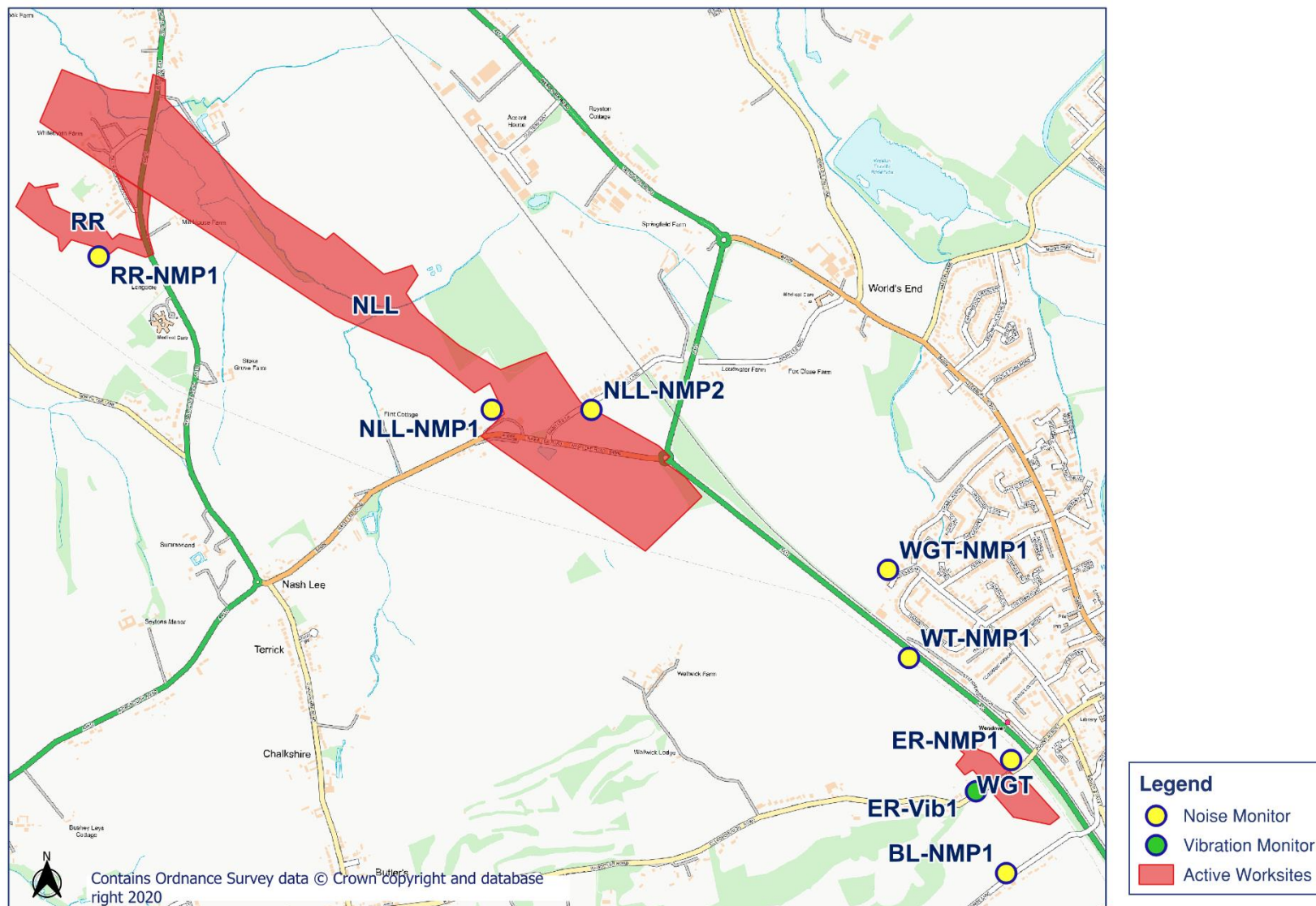






# HS2

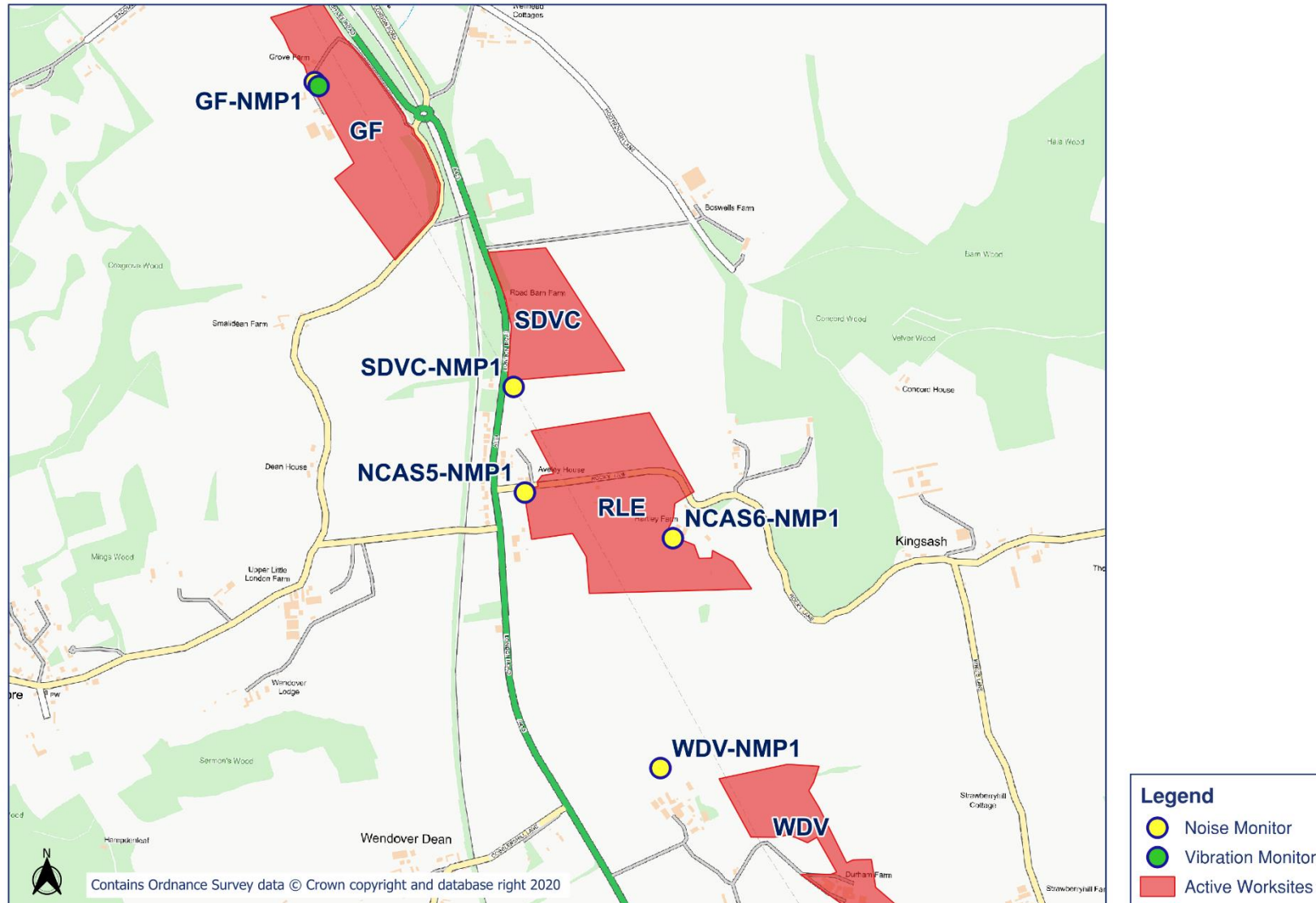
## Noise and Vibration Monitoring Plan - 7





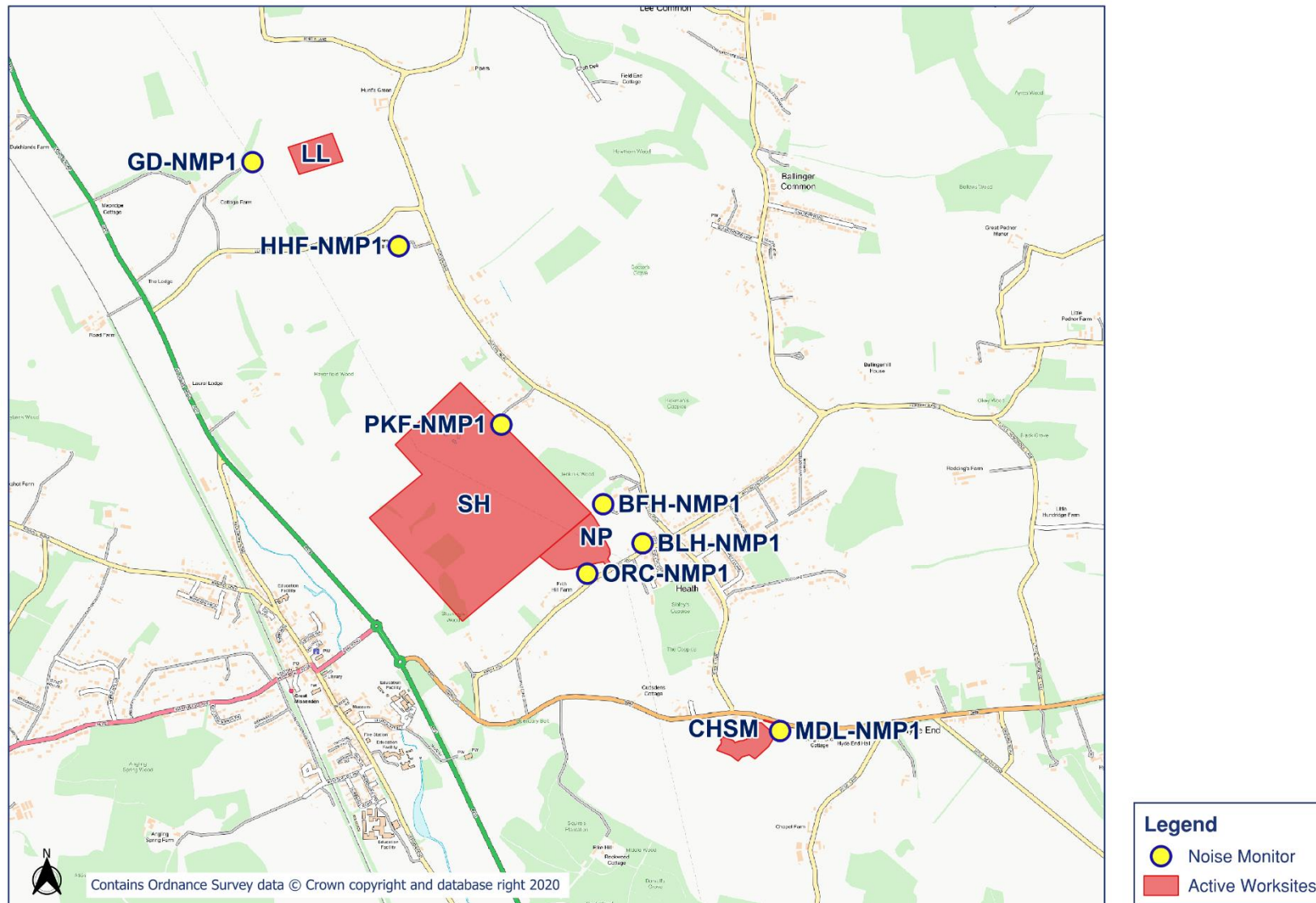
# HS2

## Noise and Vibration Monitoring Plan - 8



# HS2

## Noise and Vibration Monitoring Plan - 9





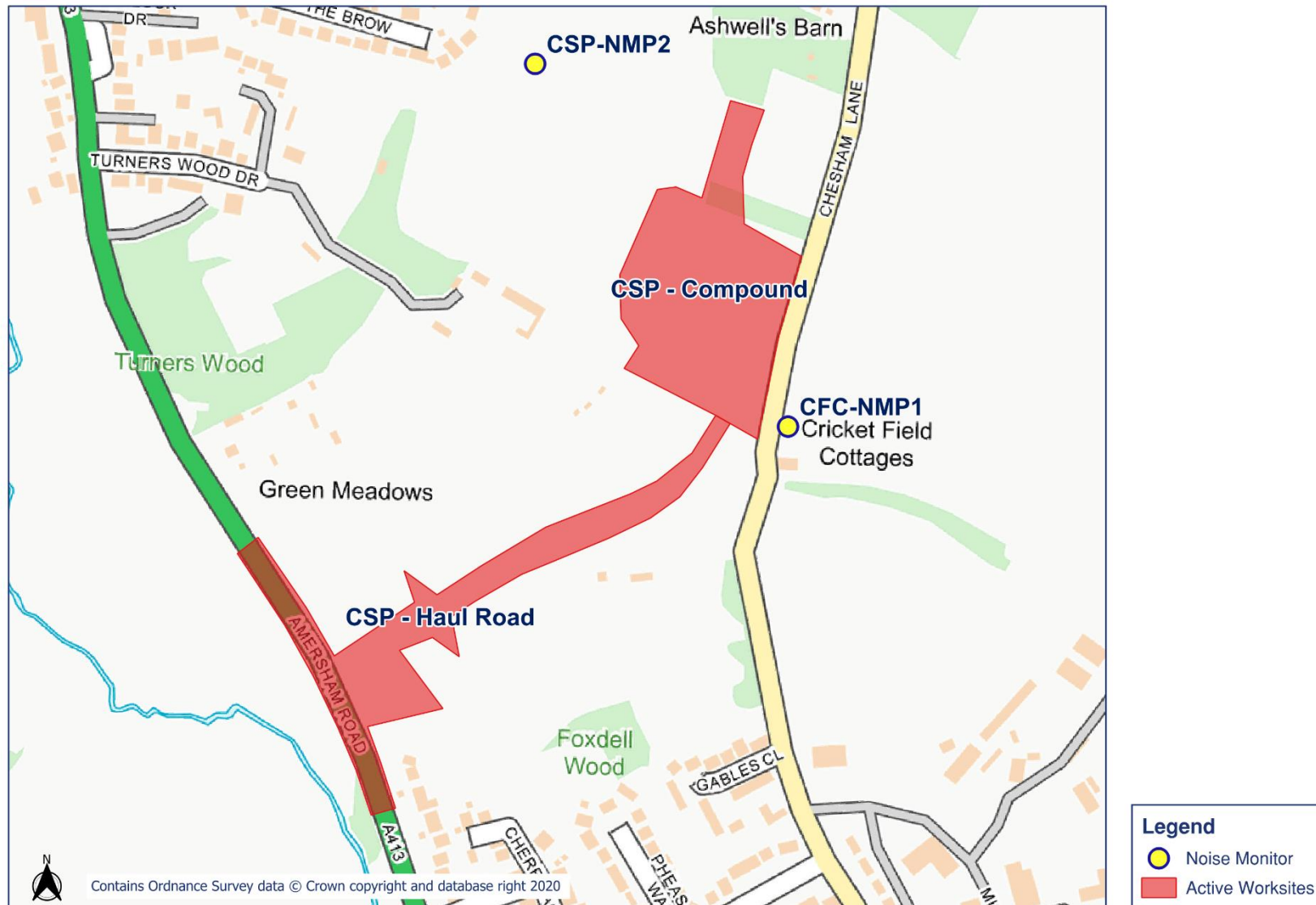


## Noise and Vibration Monitoring Plan - 11

## Noise and Vibration Monitoring Plan - 11









## Noise and Vibration Monitoring Plan - 14

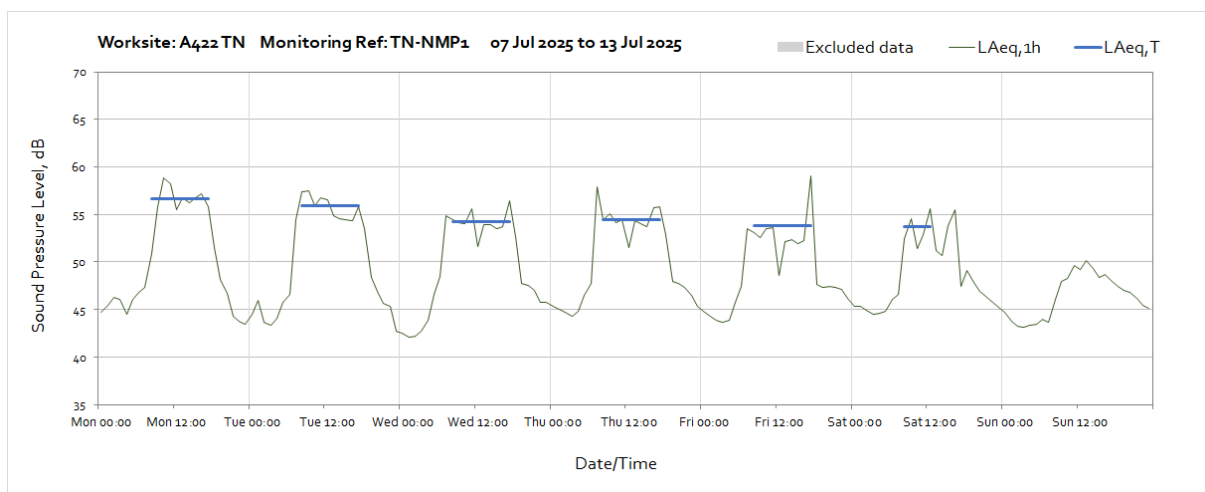
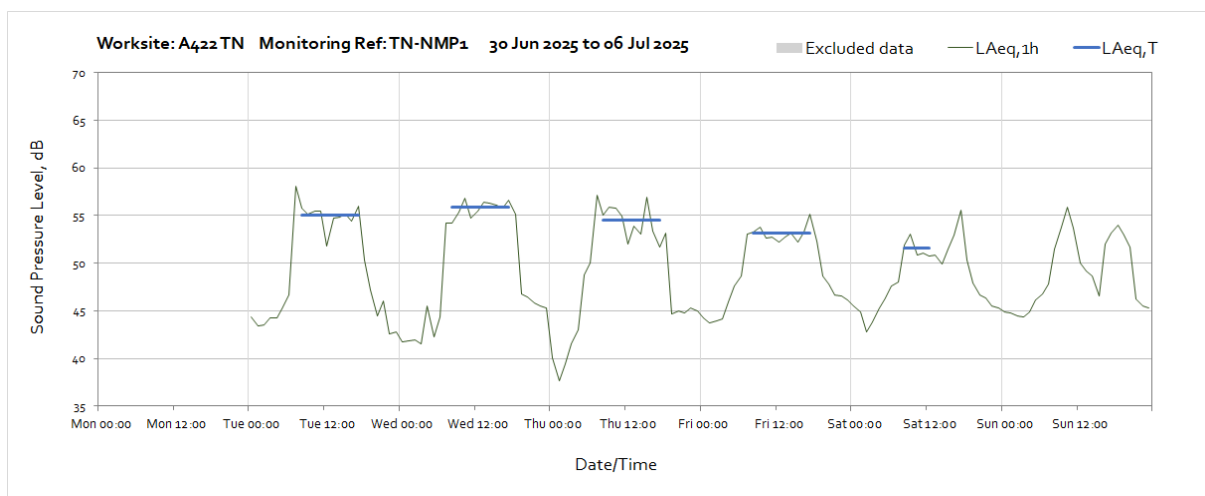


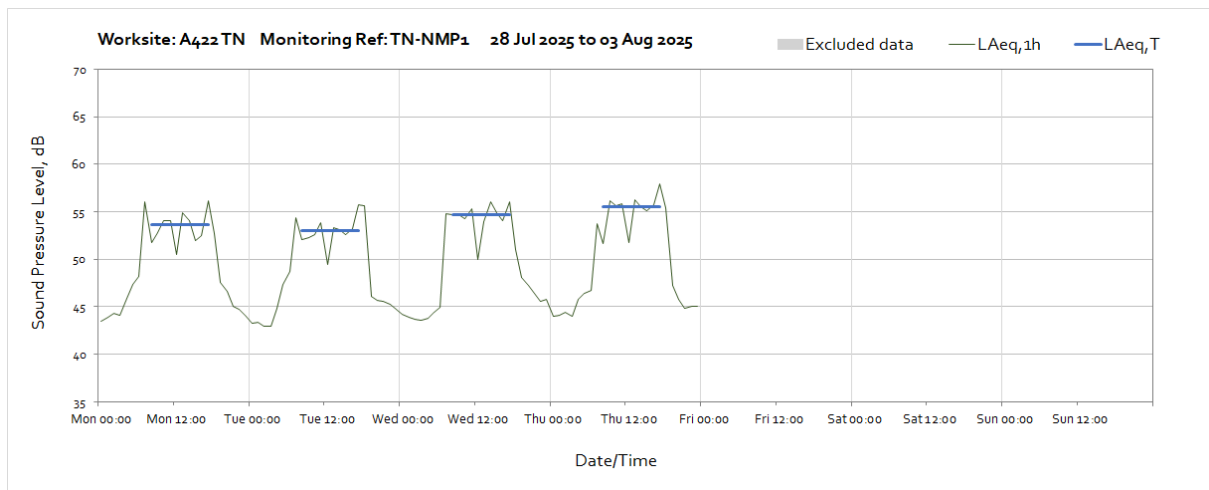
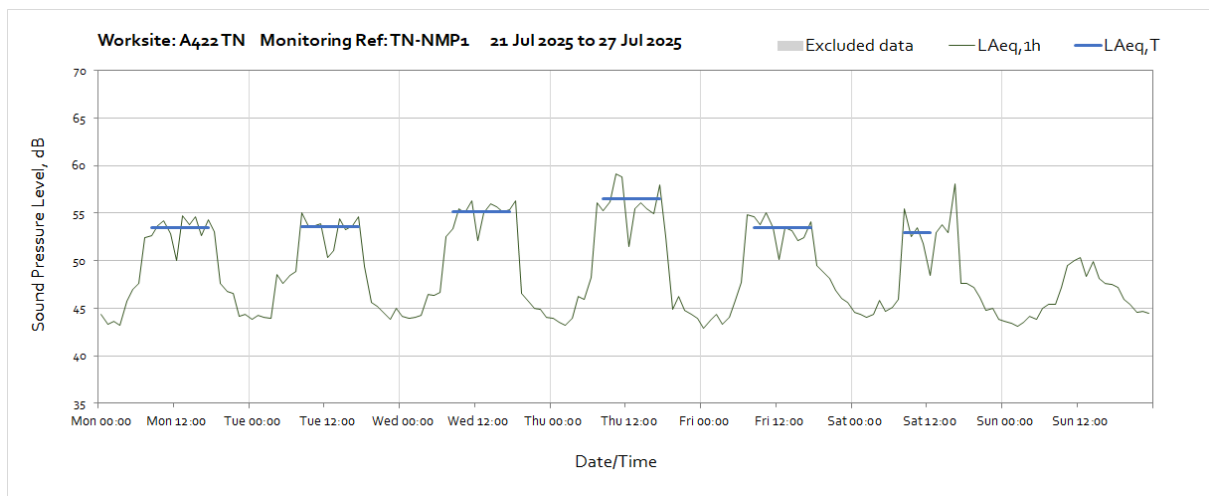
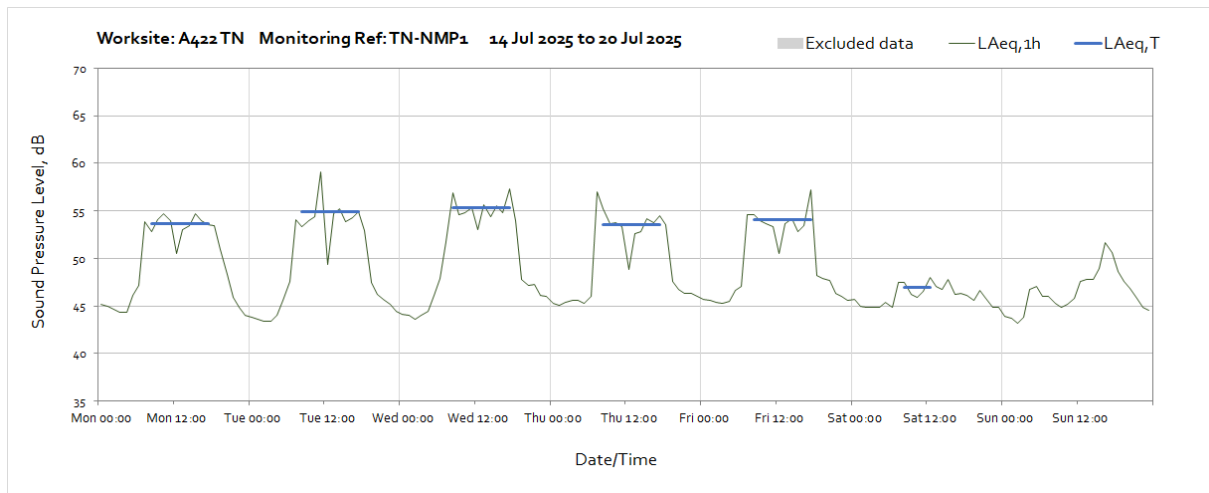
# Appendix C Data

## Noise

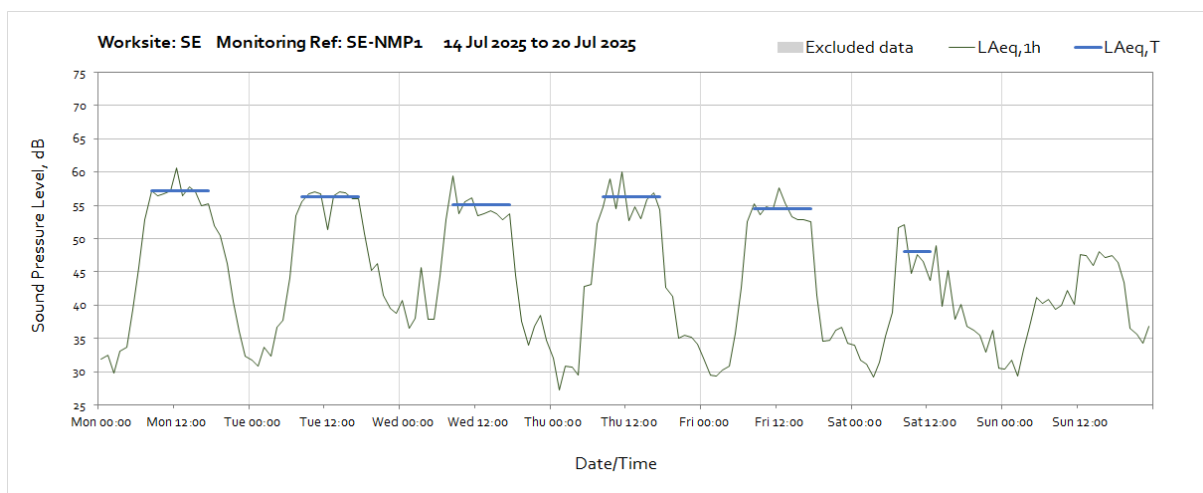
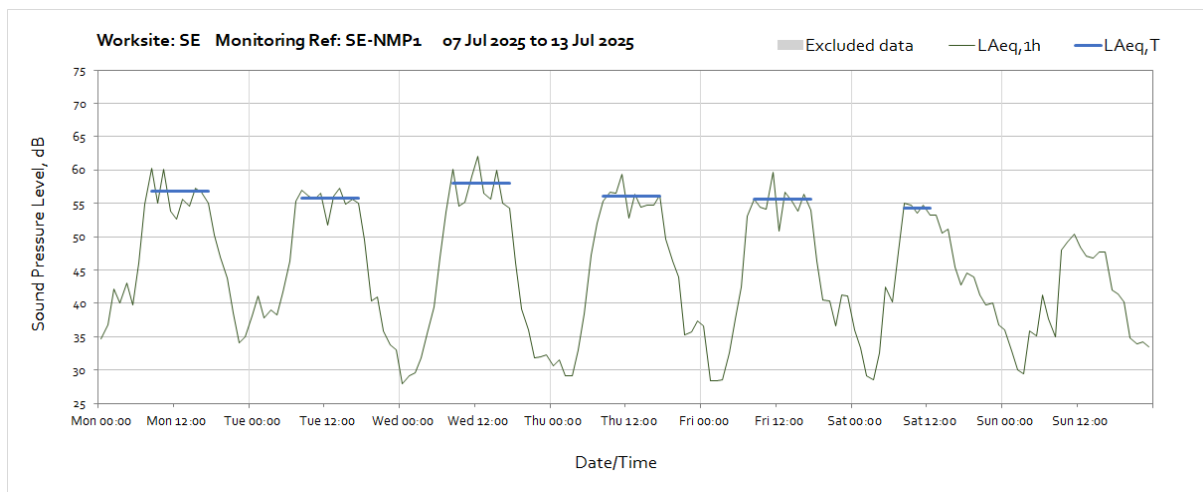
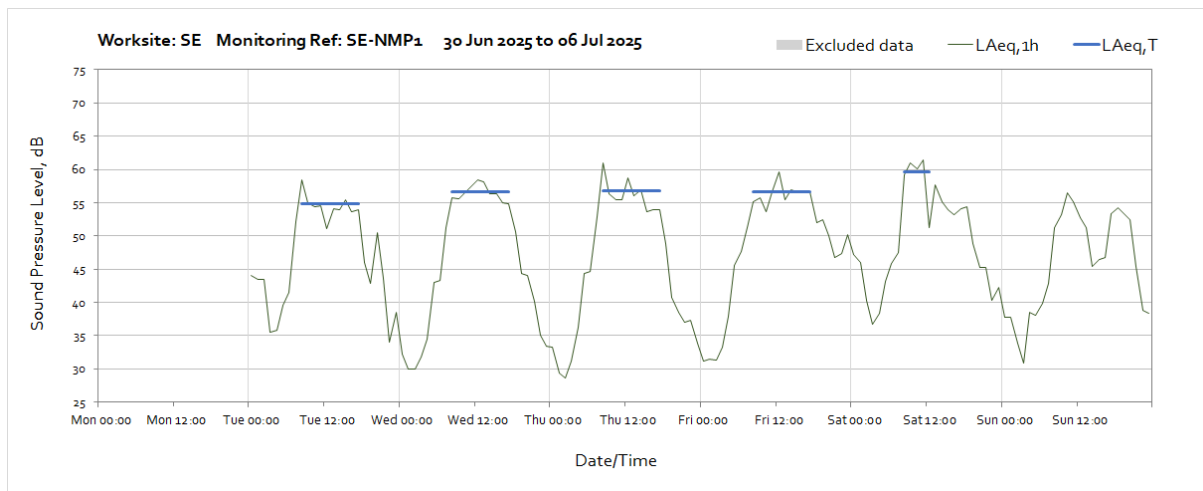
The following graphs show the hourly measured ambient noise level  $L_{Aeq,1h}$  and, where relevant, the averaged noise level  $L_{Aeq,T}$  values, where the time period T is as specified in Table 1 of HS2 Information Paper E23. Periods where noise levels are adversely affected by weather or only measured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

### Worksite: A422 TN – Monitoring Ref: TN-NMP1



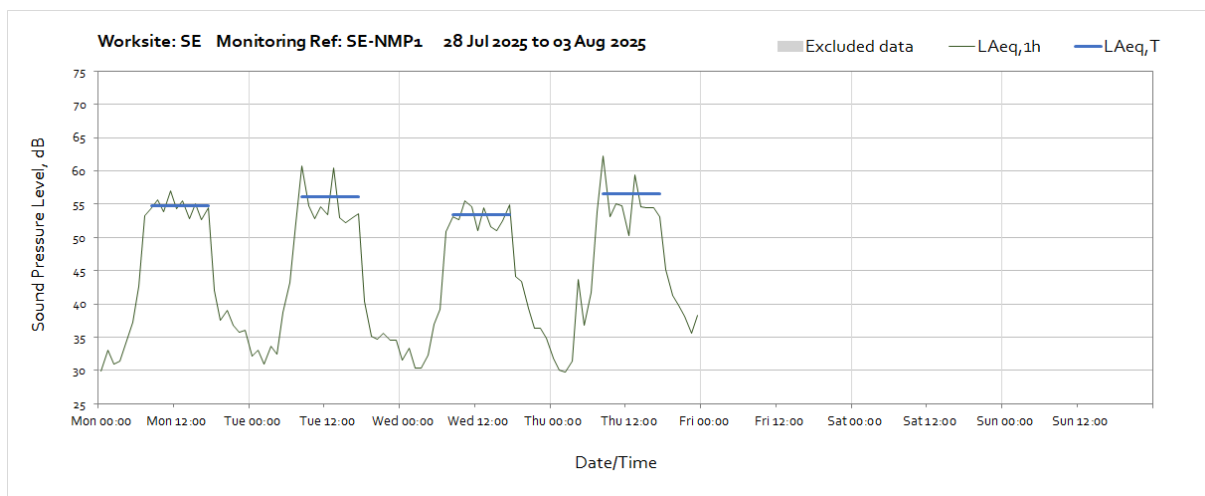
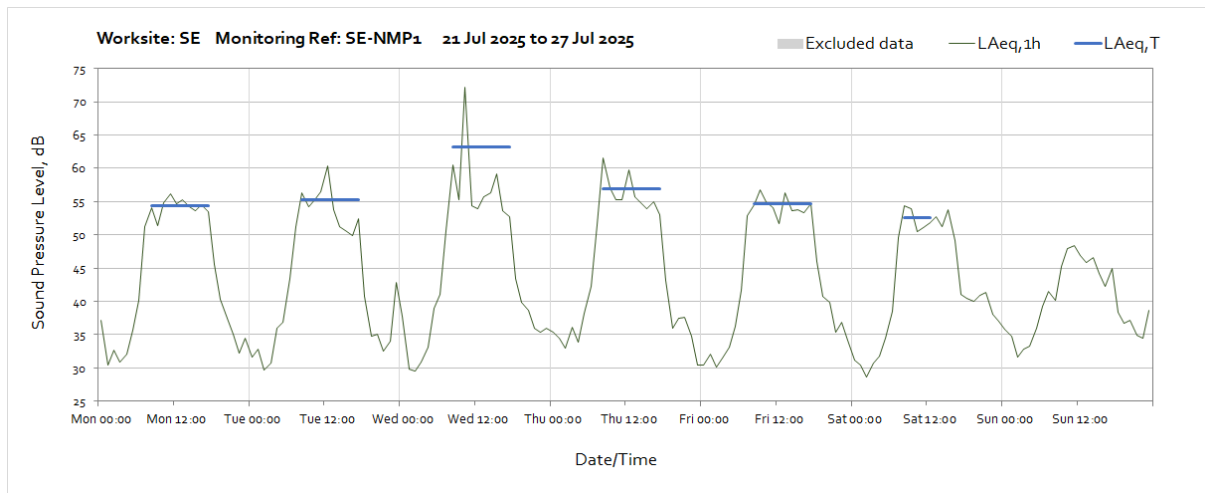


## Worksite: SE – Monitoring Ref: SE-NMP1

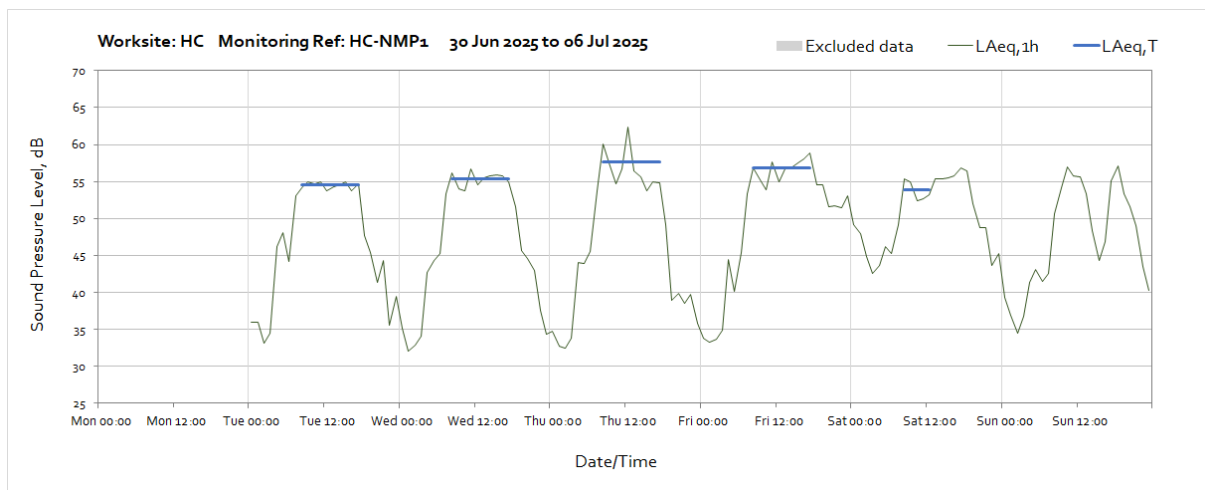


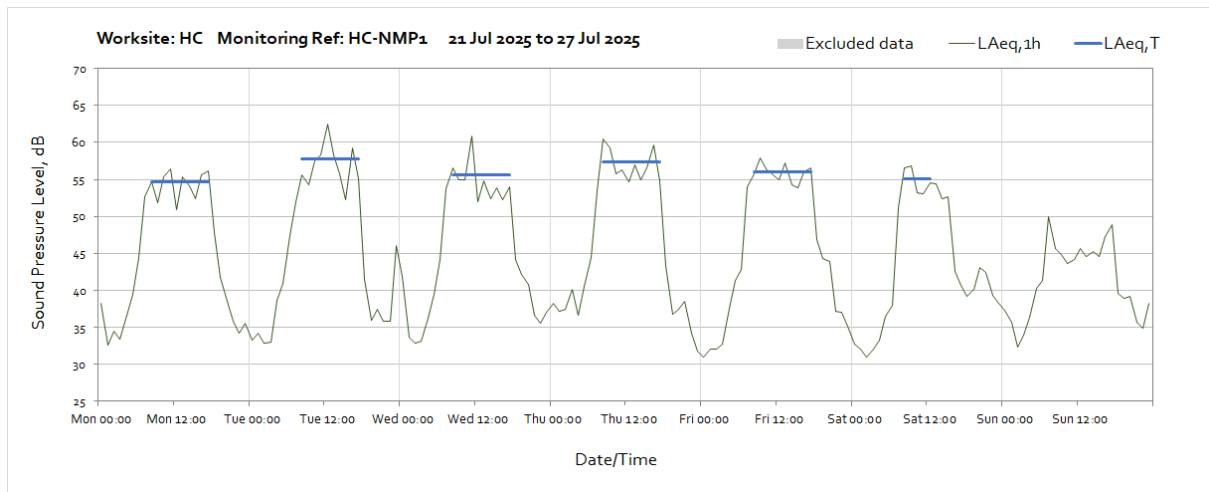
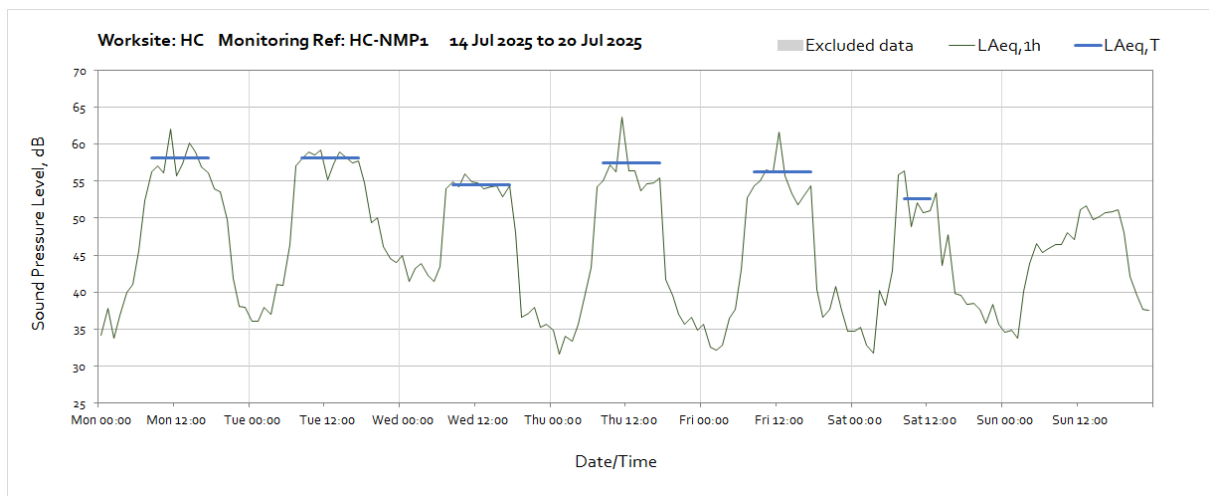
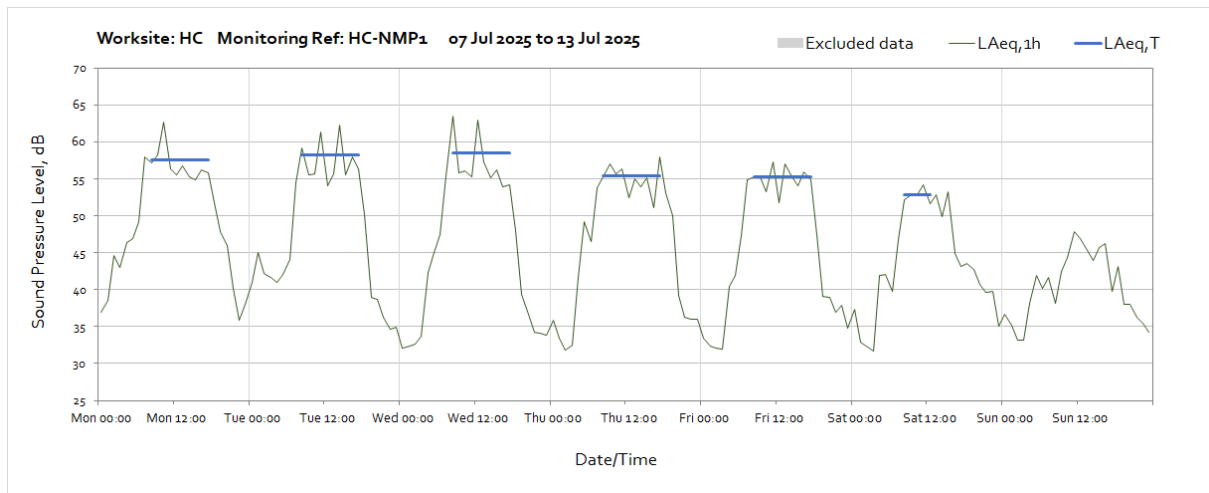
OFFICIAL

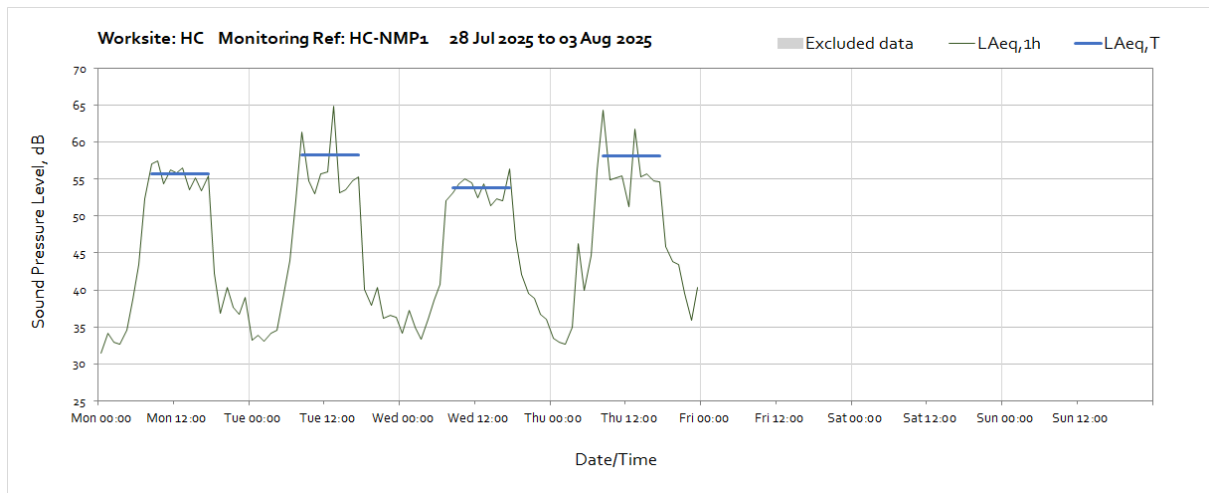




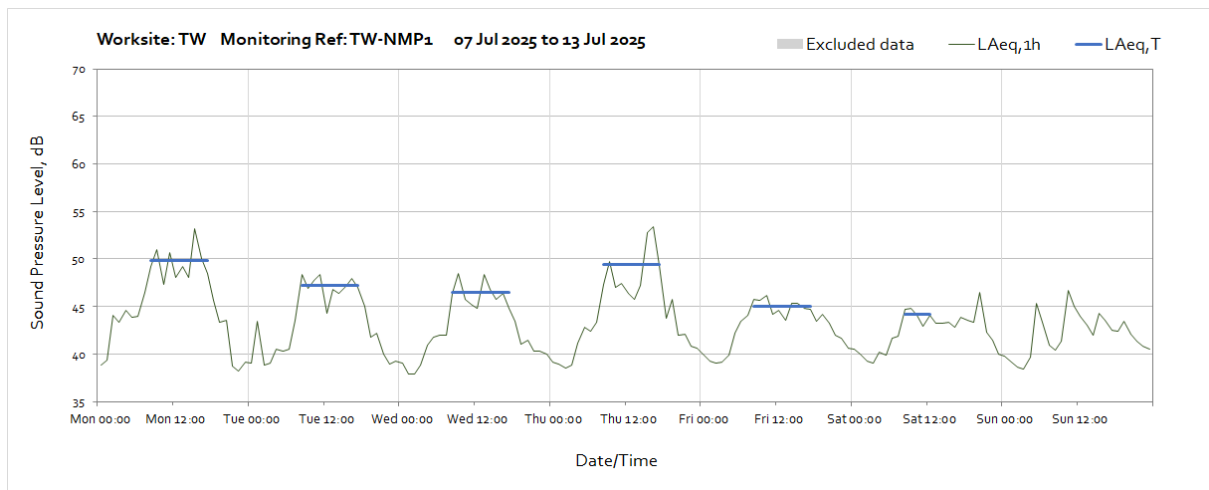
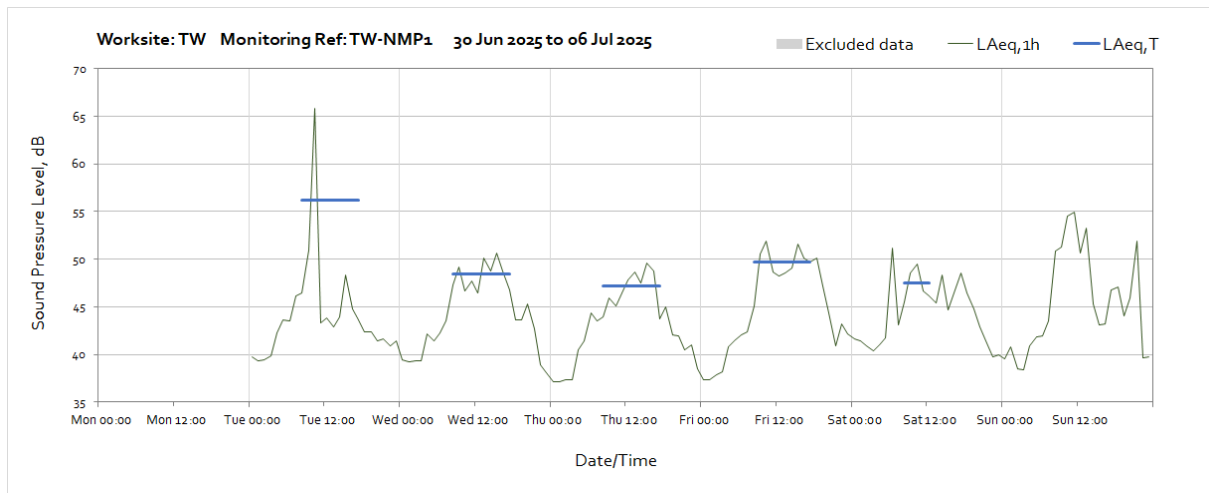
## Worksite: HC – Monitoring Ref: HC-NMP1

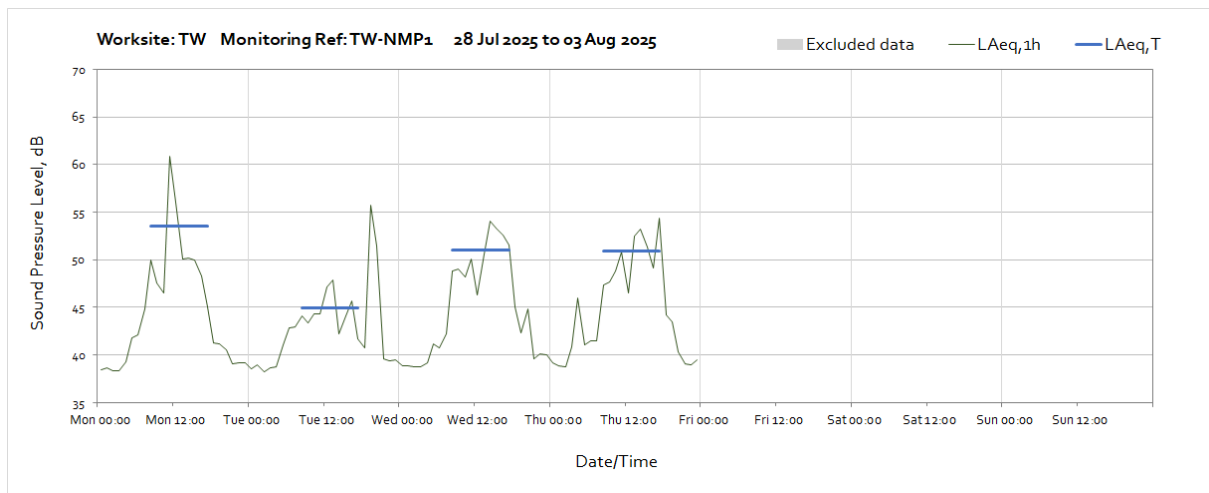
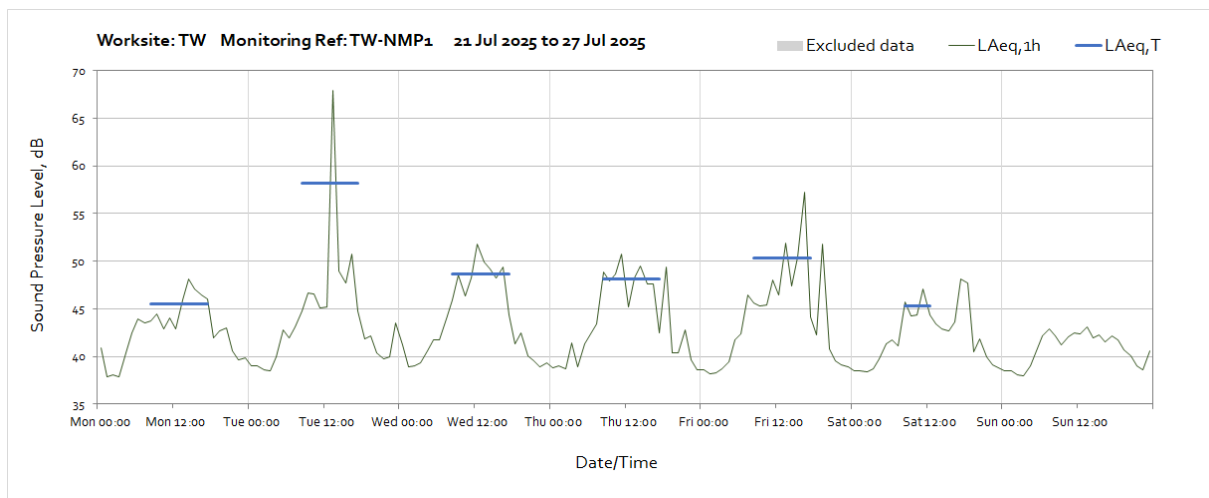
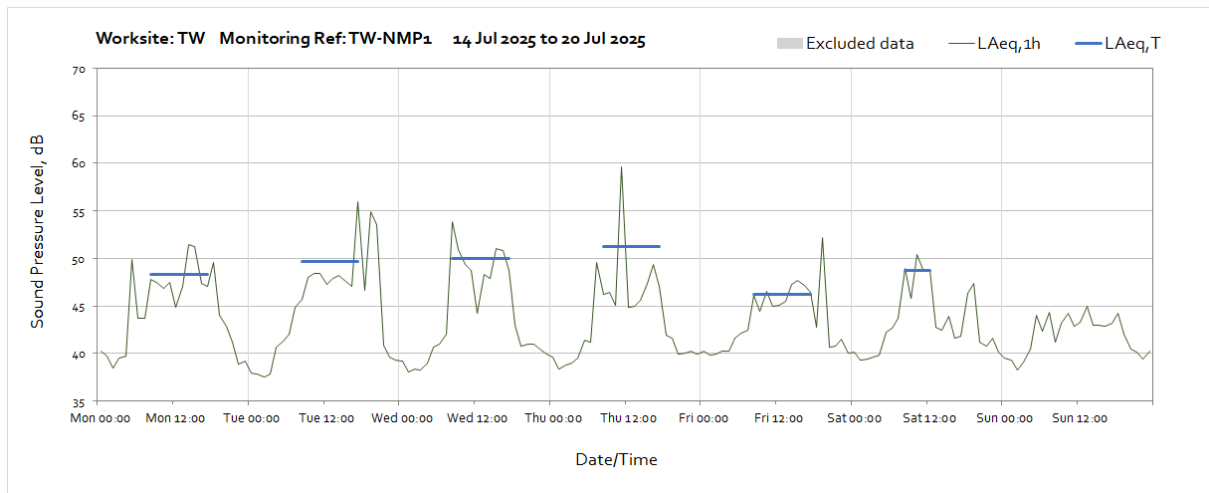




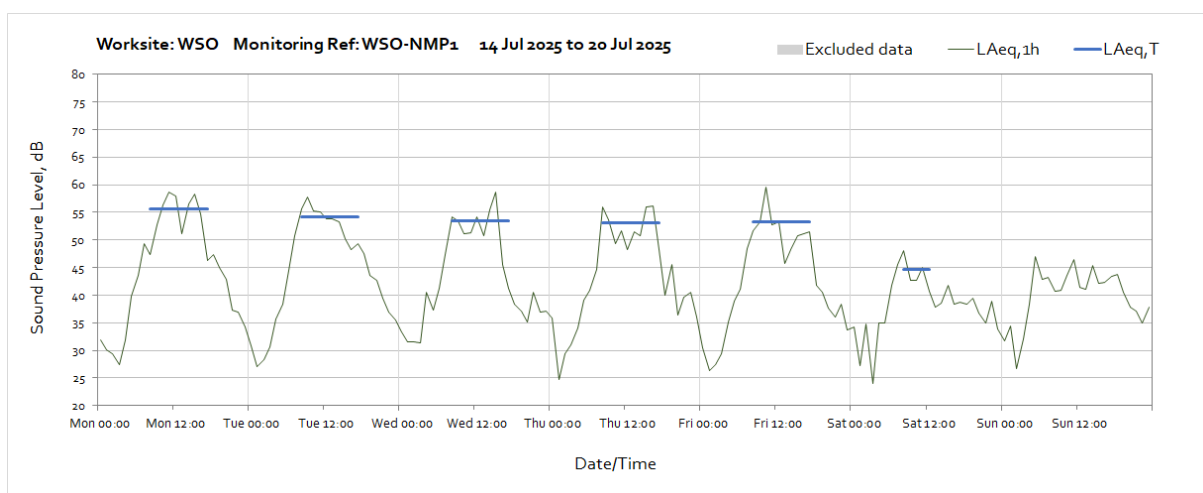
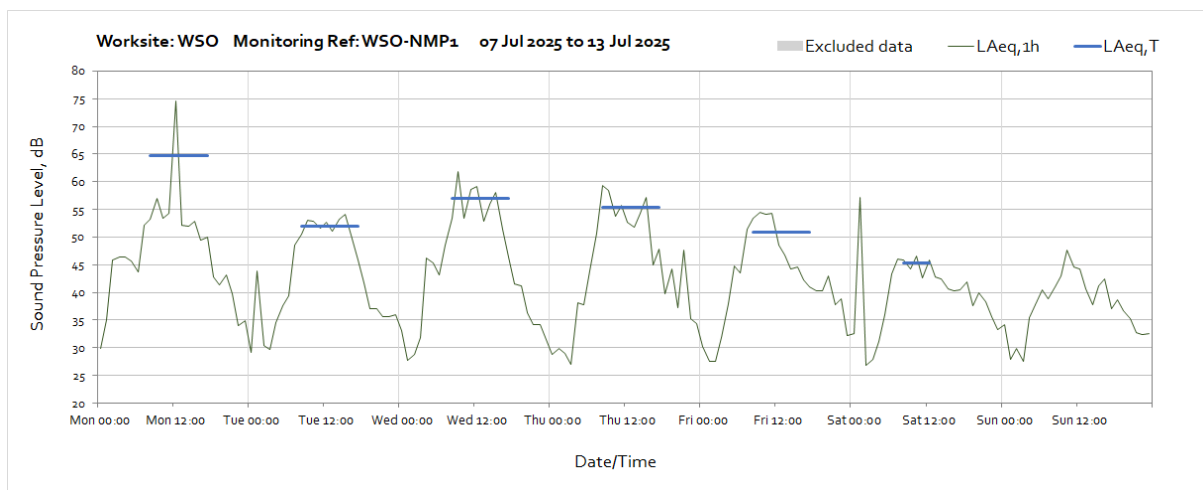
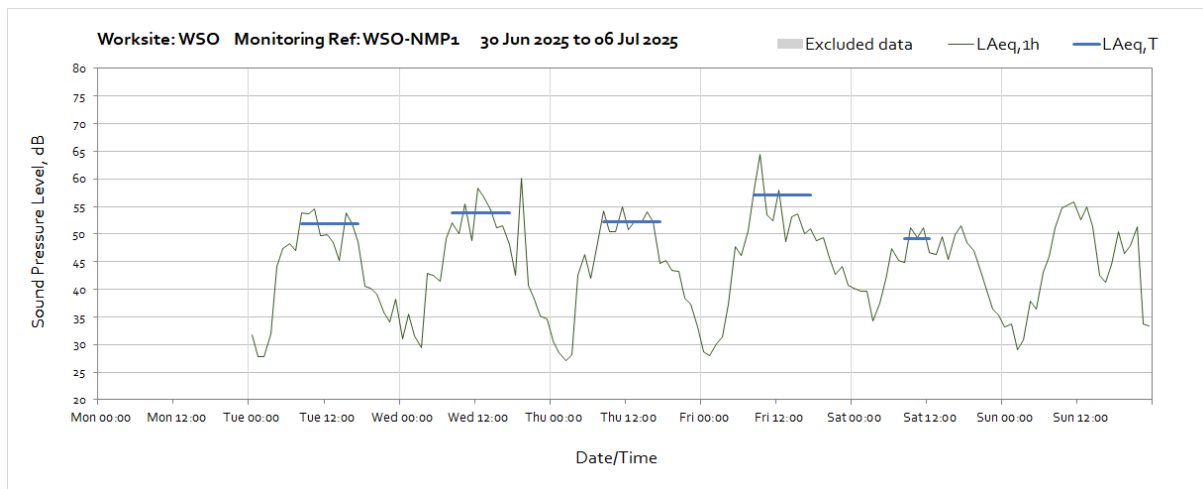


## Worksite: TW – Monitoring Ref: TW-NMP1



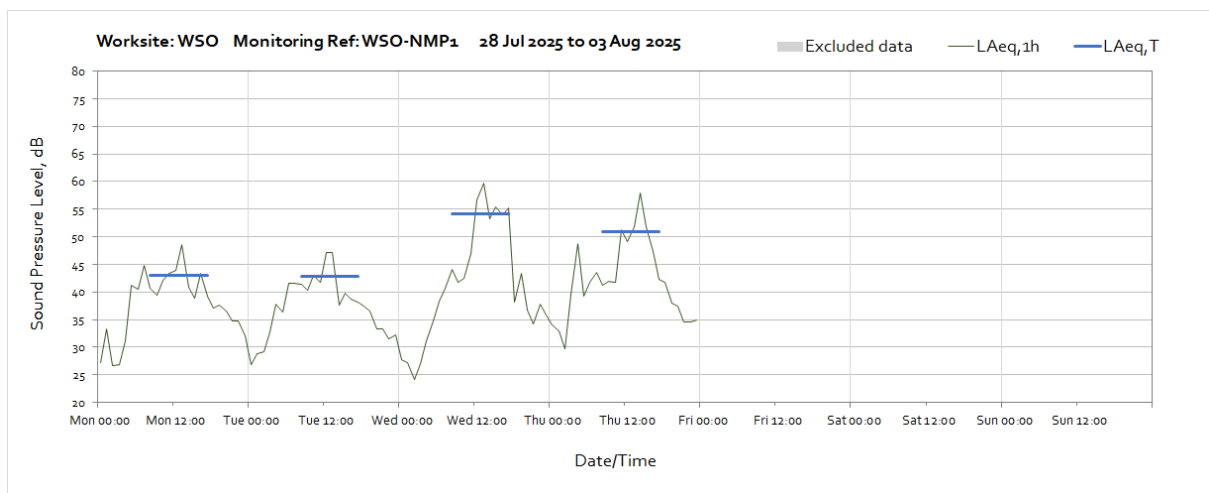
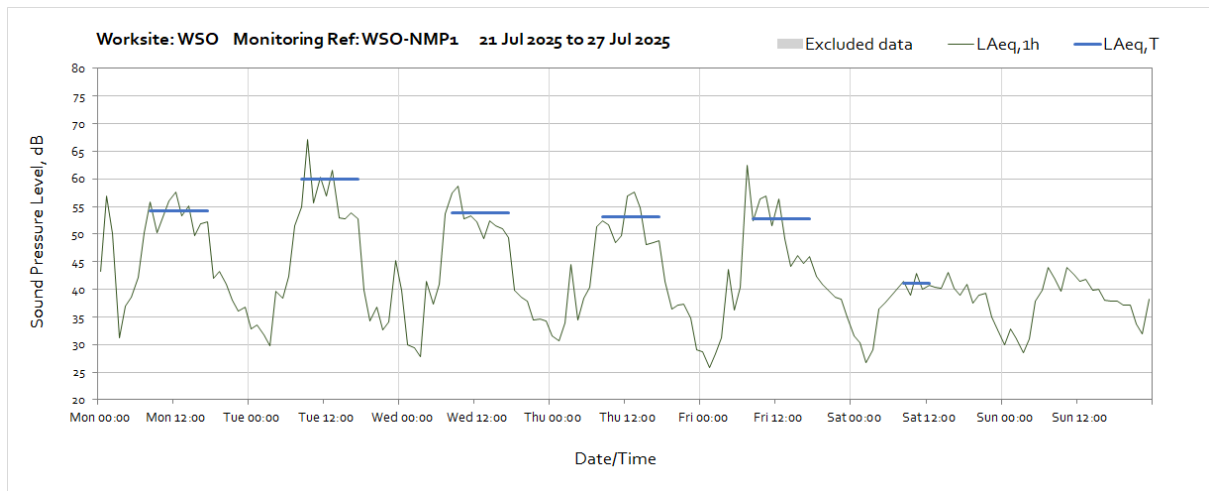


## Worksite: WSO – Monitoring Ref: WSO-NMP1

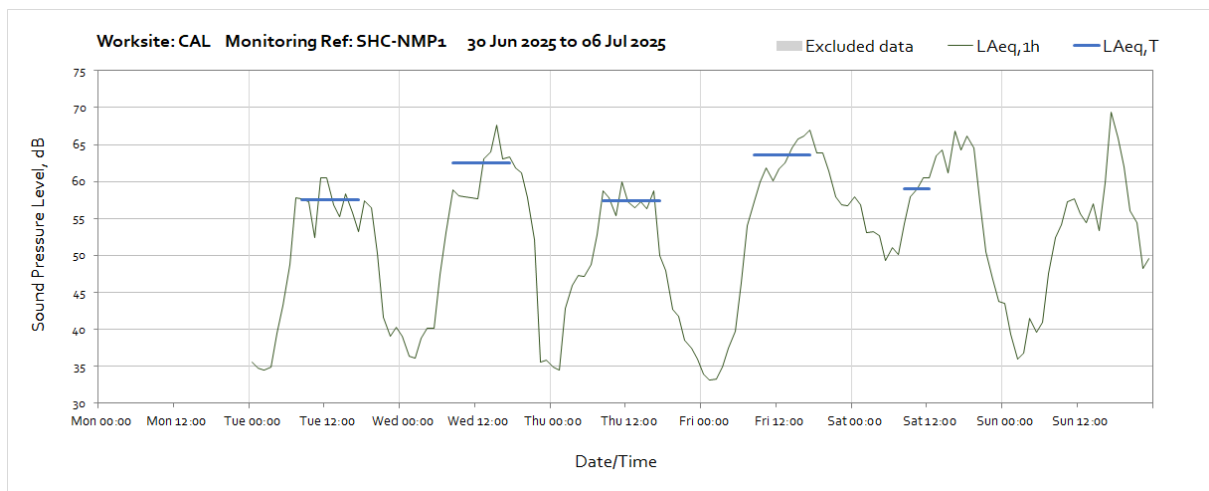


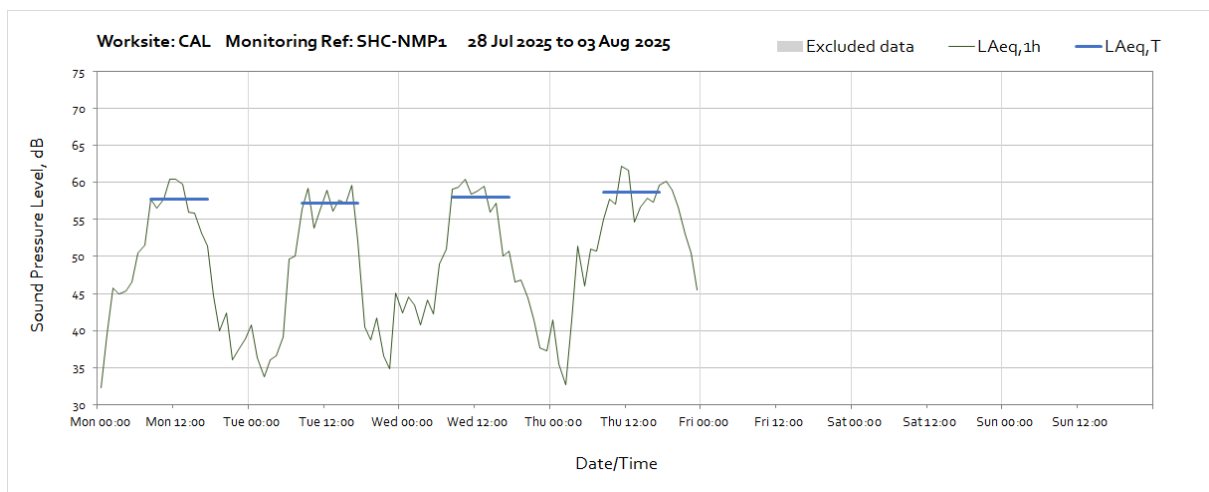
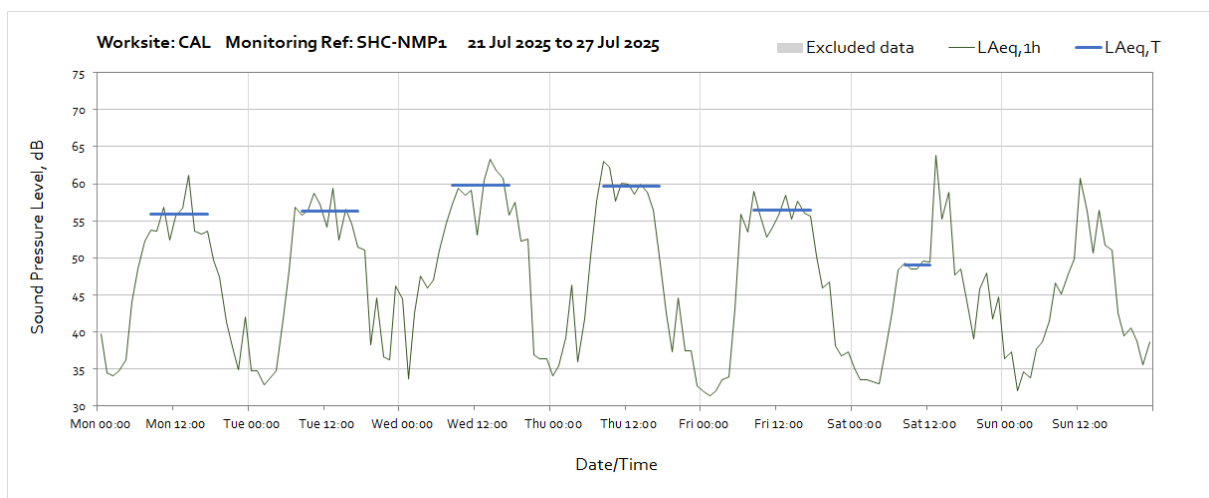
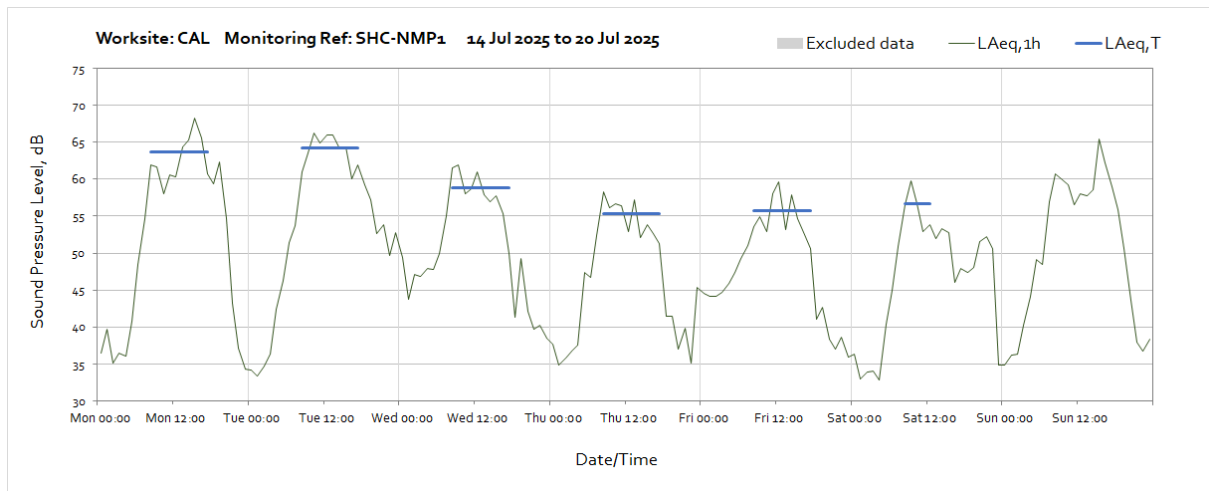
OFFICIAL



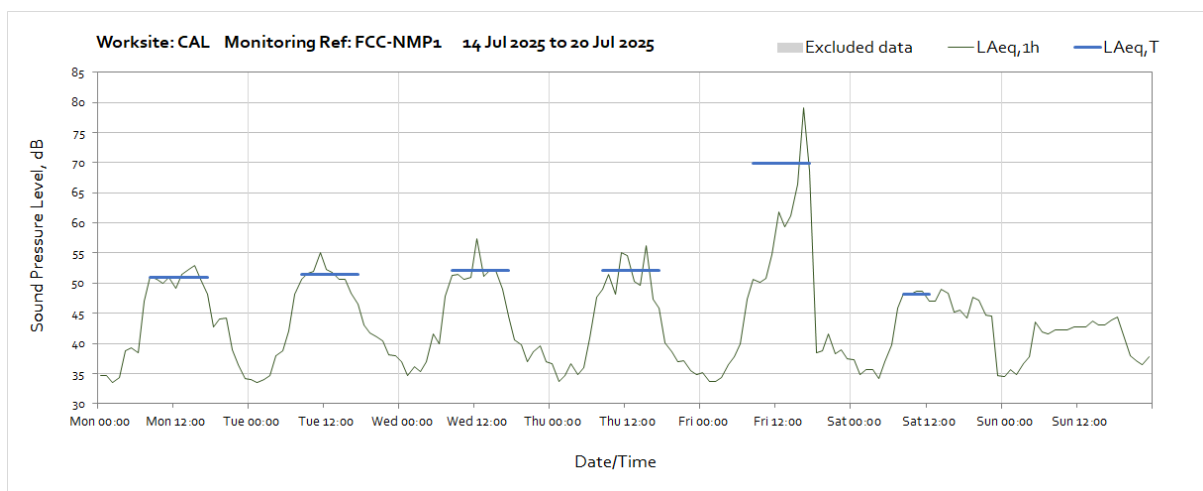
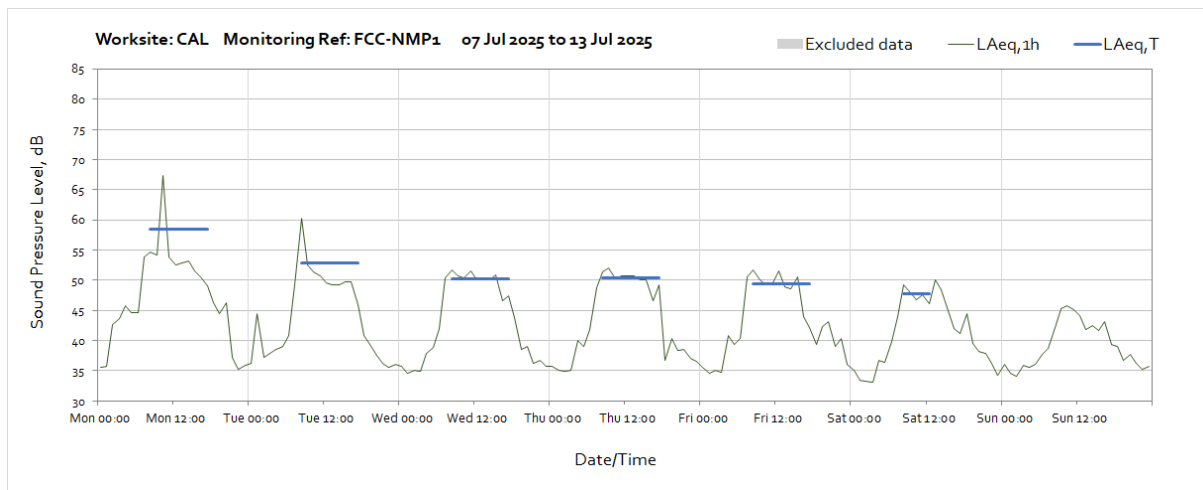
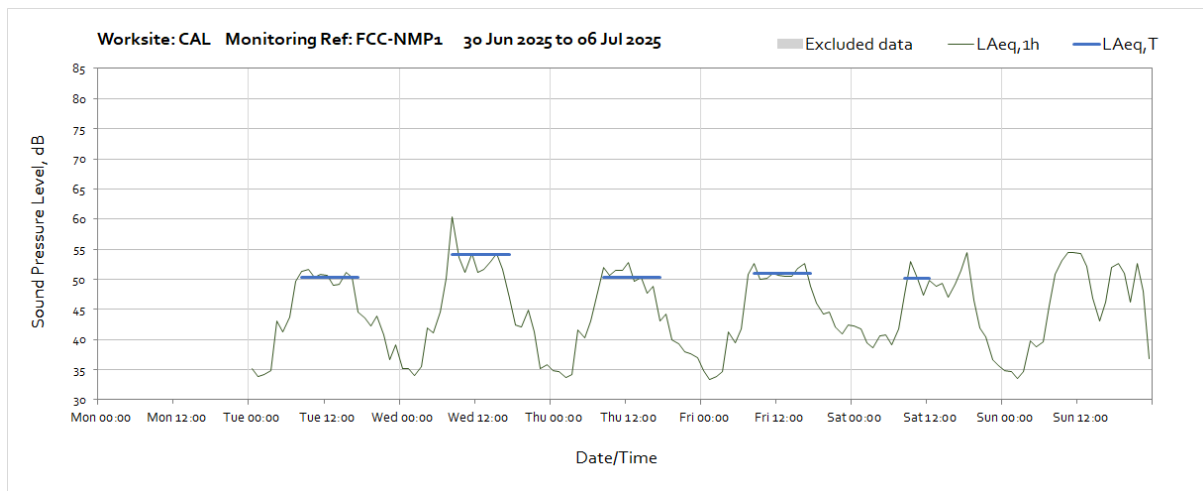


## Worksite: CAL – Monitoring Ref: SHC-NMP1

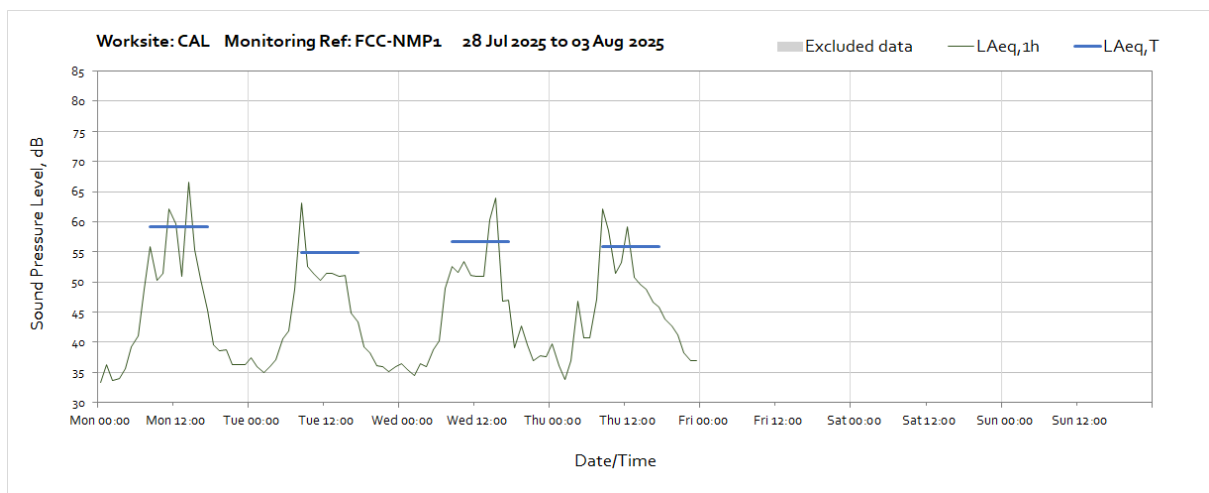
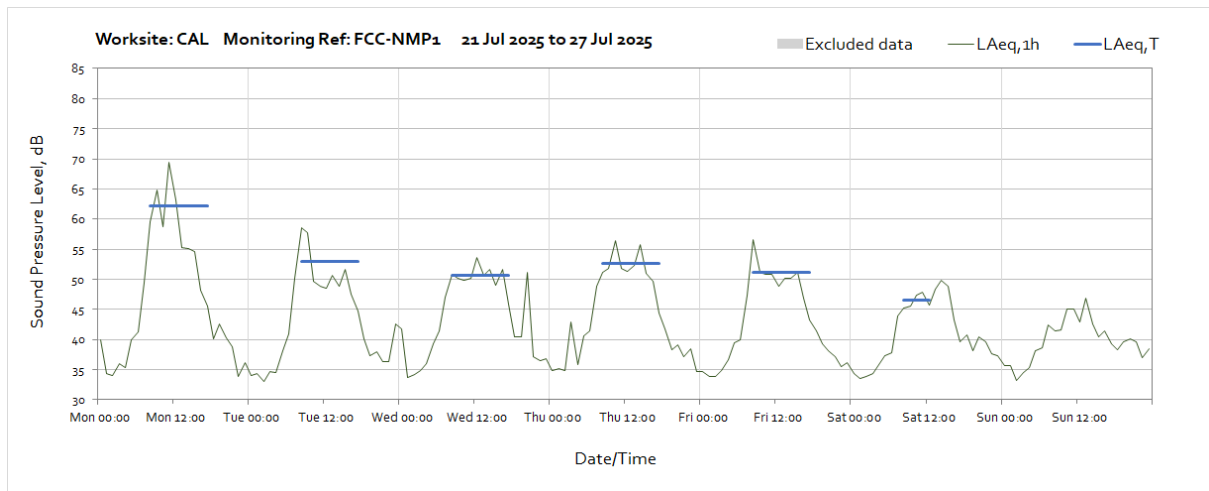




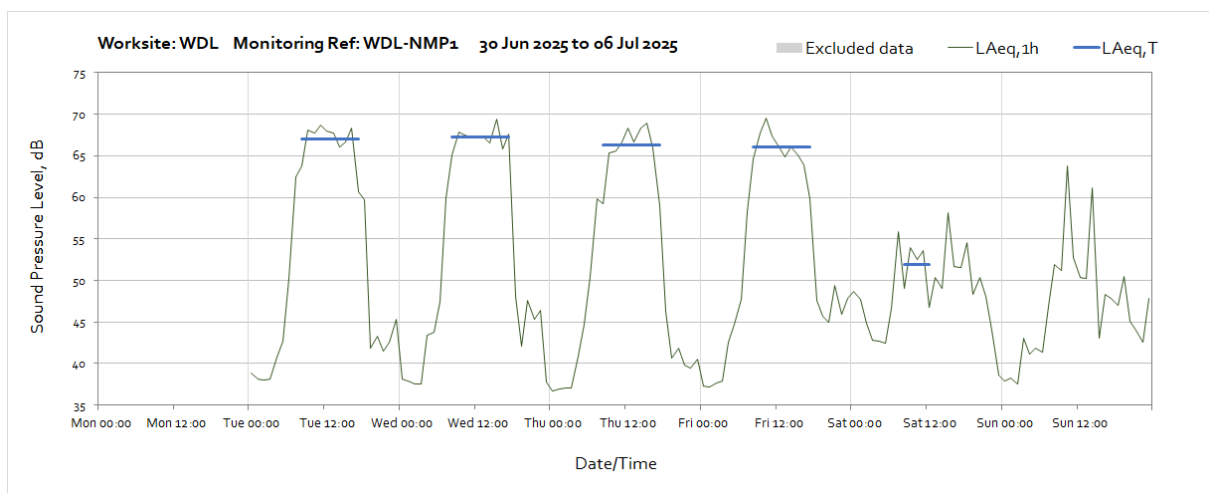
## Worksite: CAL – Monitoring Re: FCC-NMP1

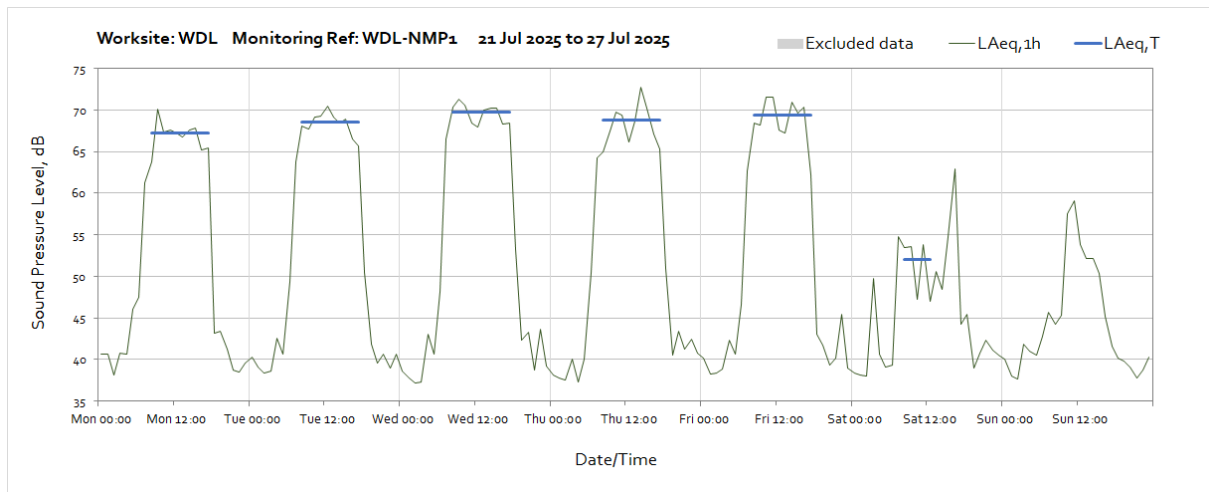
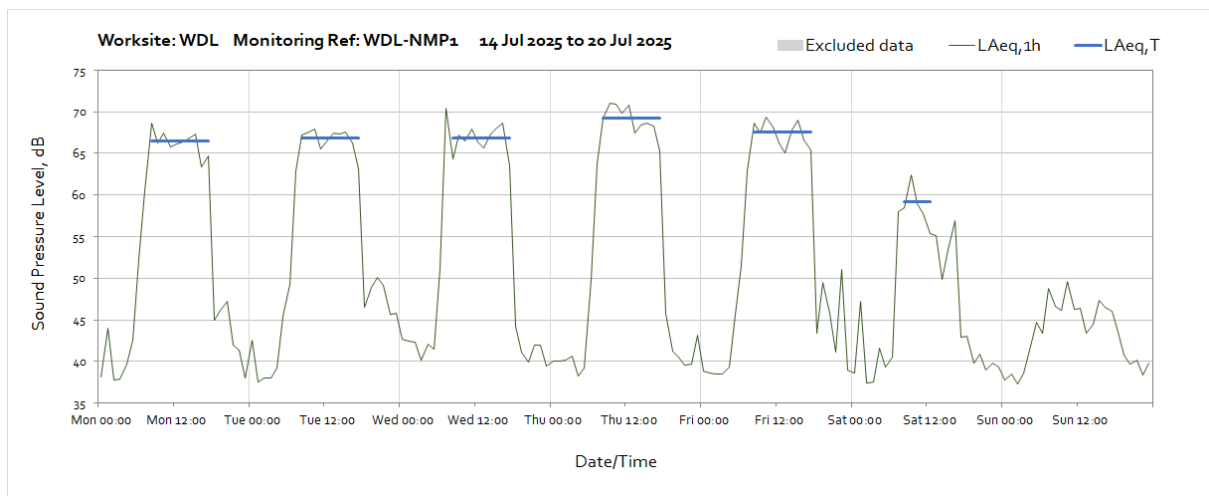
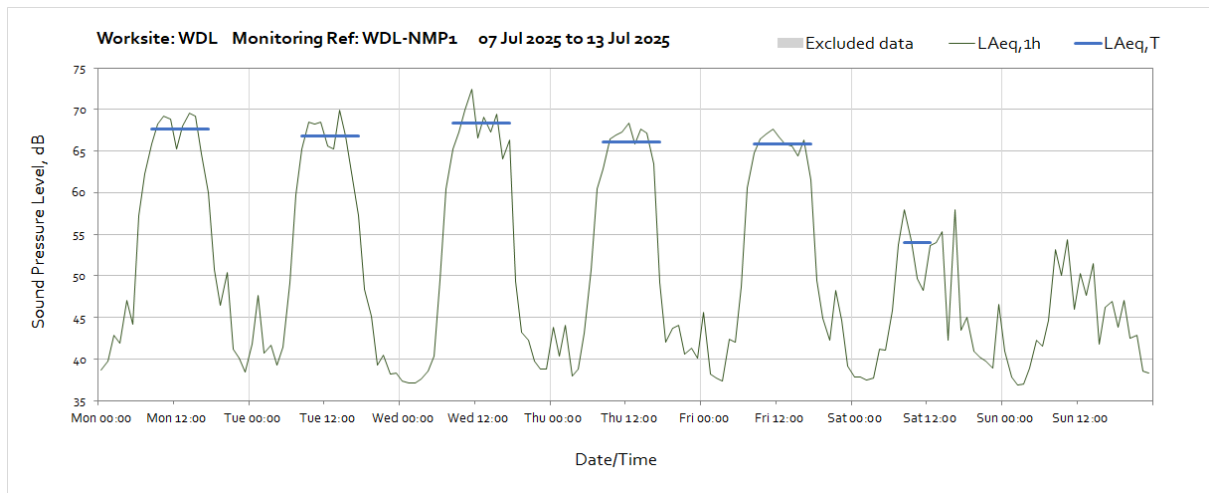


OFFICIAL

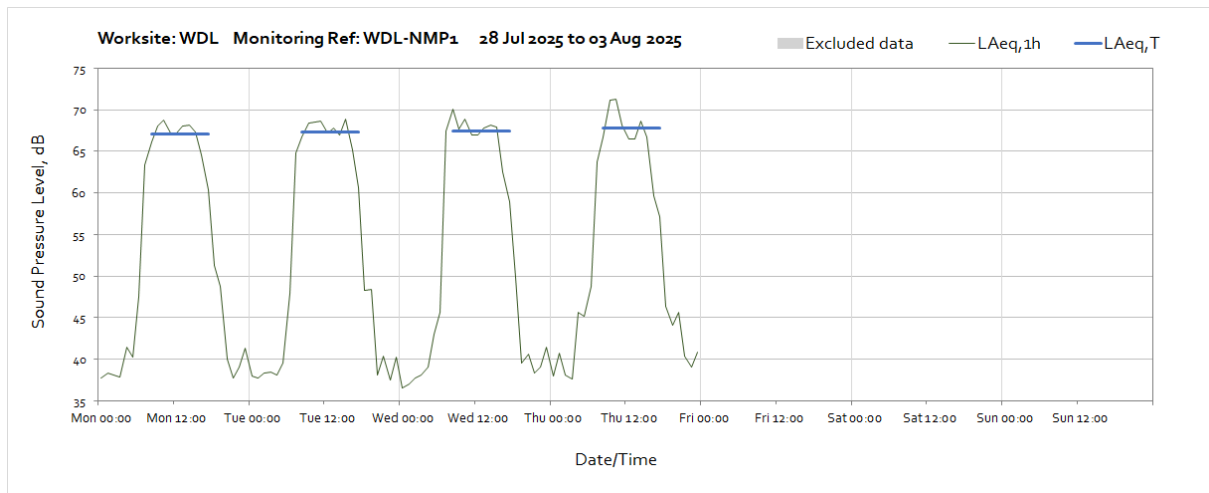


## Worksite: WDL – Monitoring Ref: WDL-NMP1

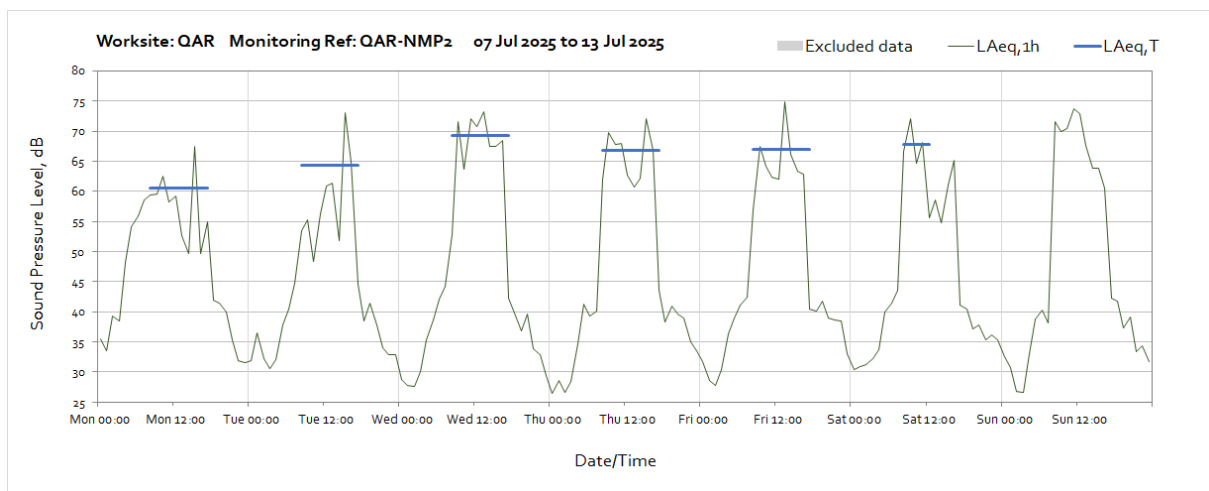
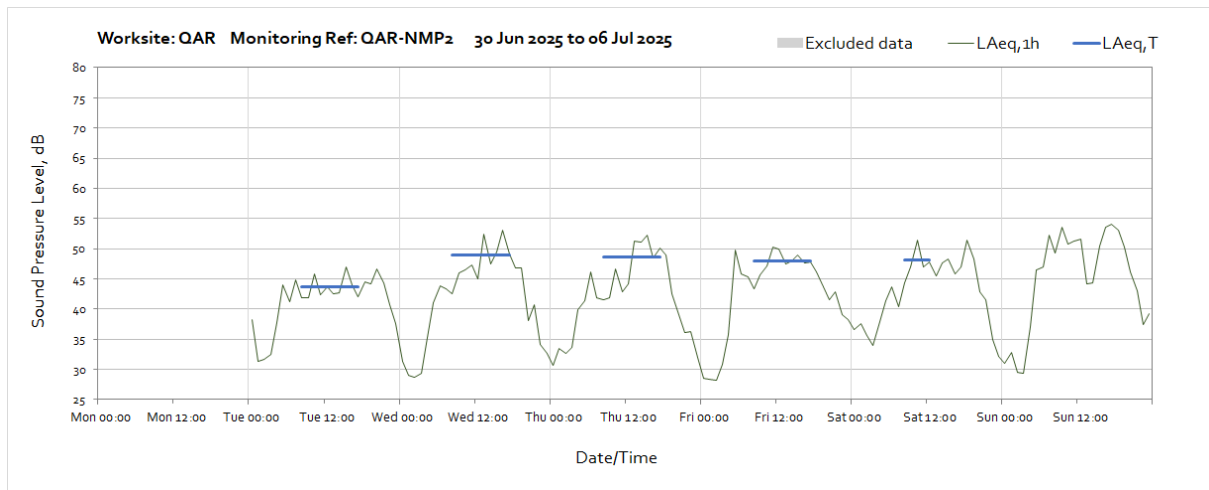


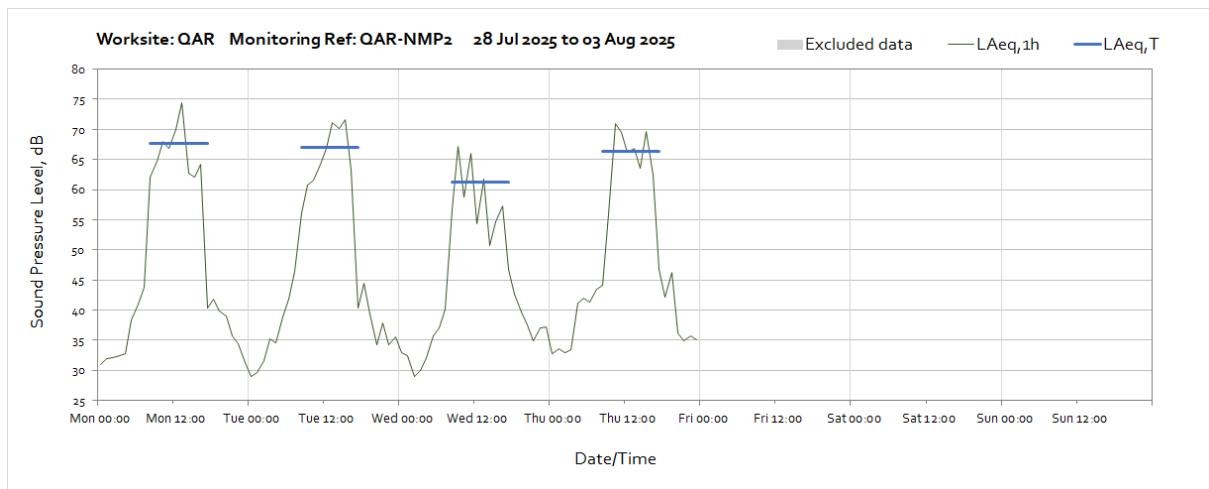
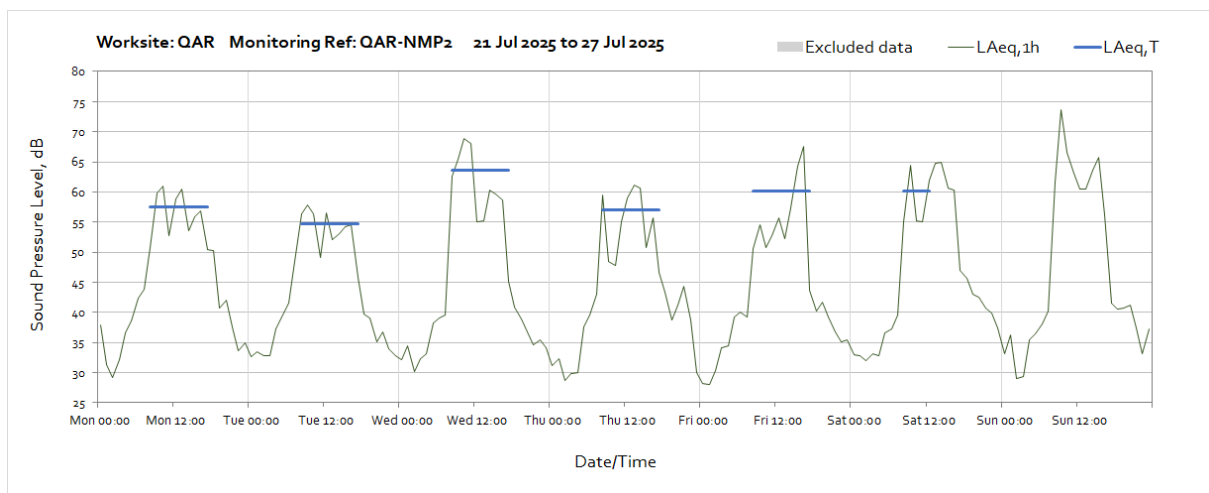
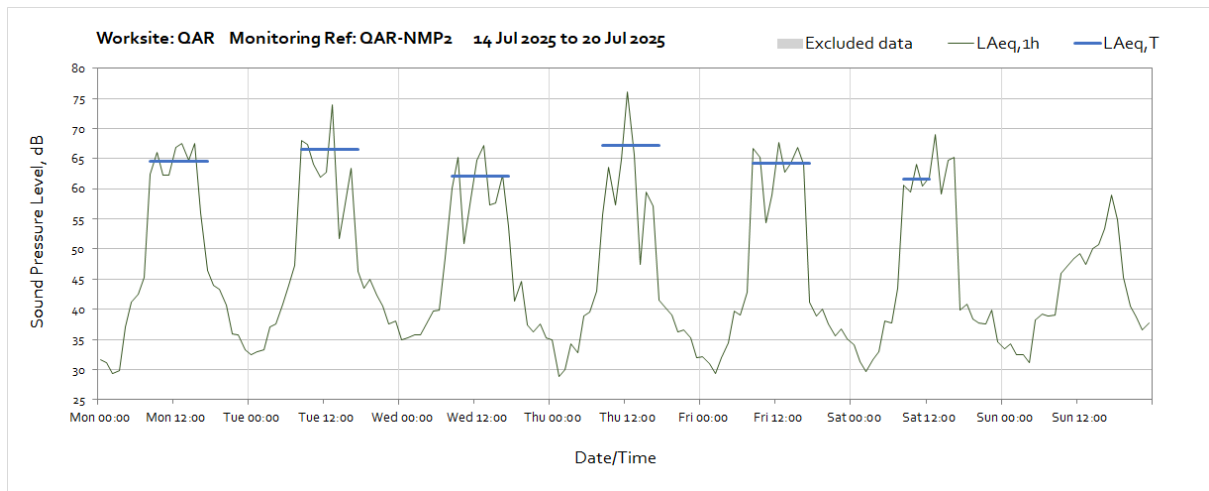






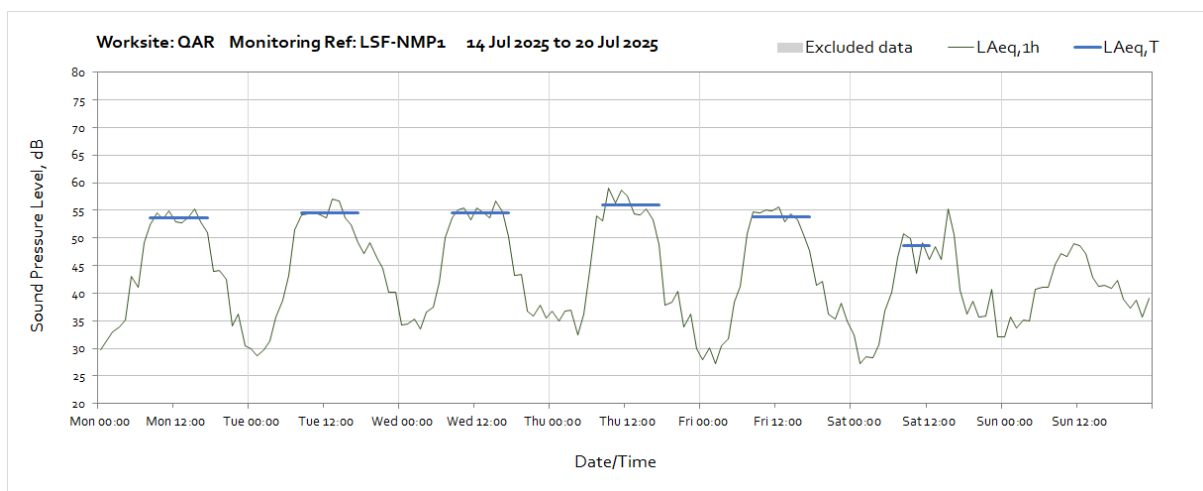
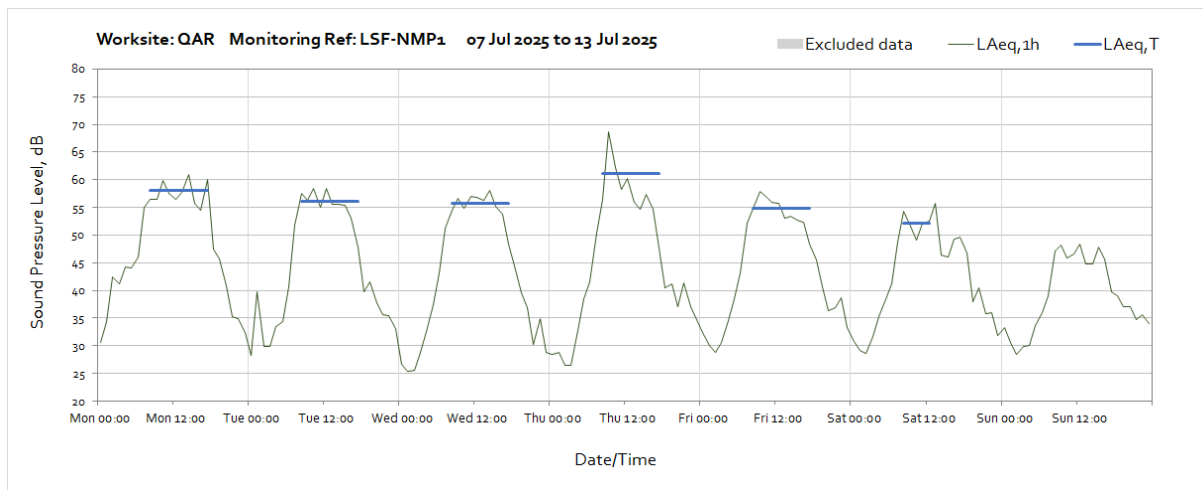
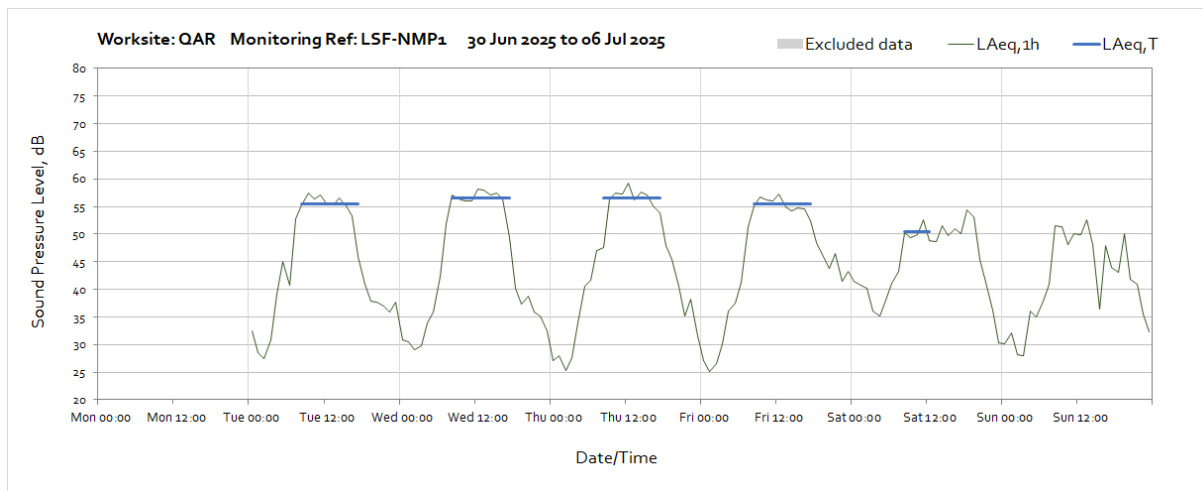
## Worksite: QAR – Monitoring Ref: QAR-NMP2



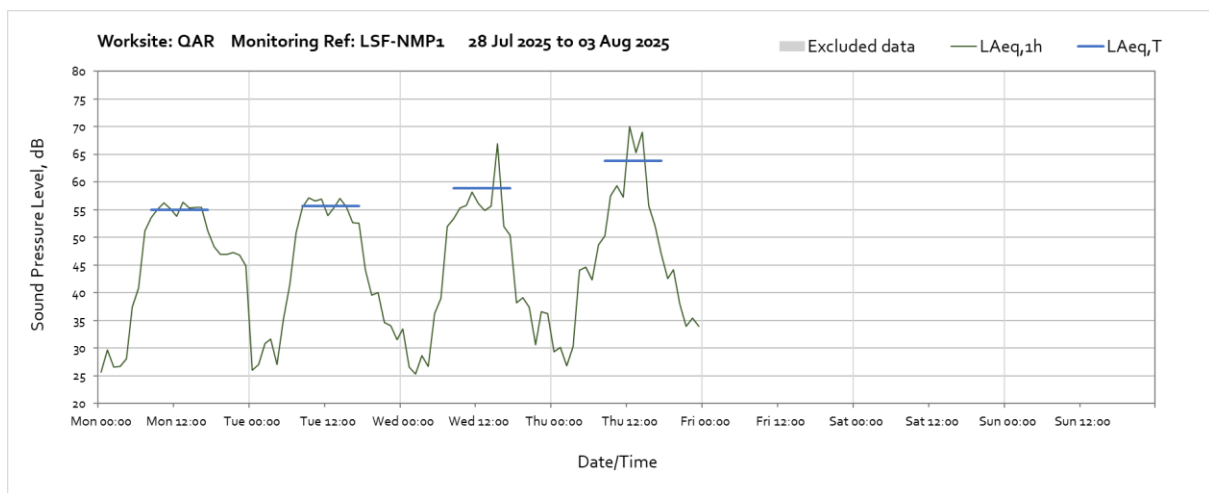
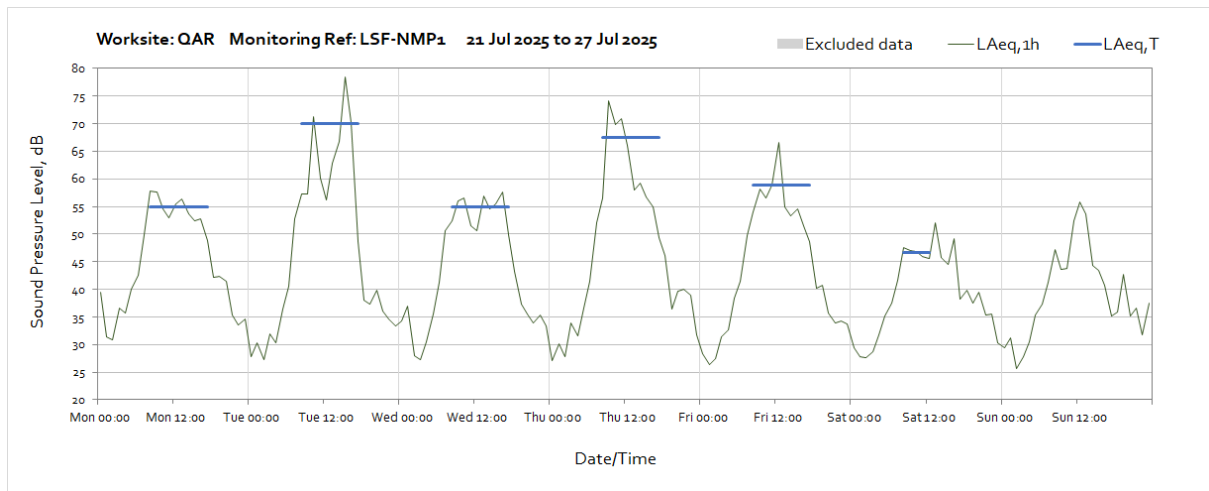


OFFICIAL

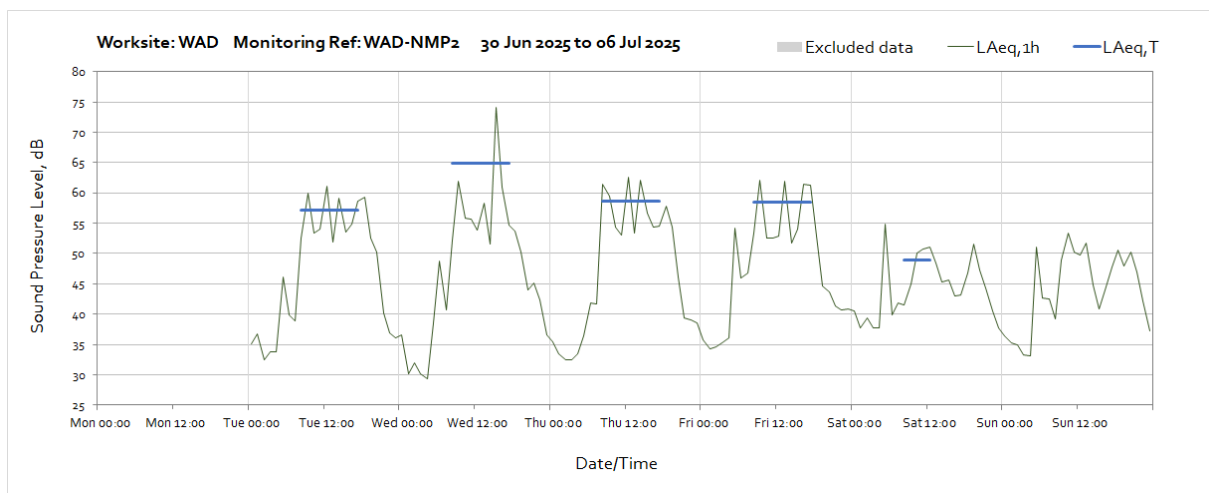
## Worksite: QAR – Monitoring Ref: LSF-NMP1

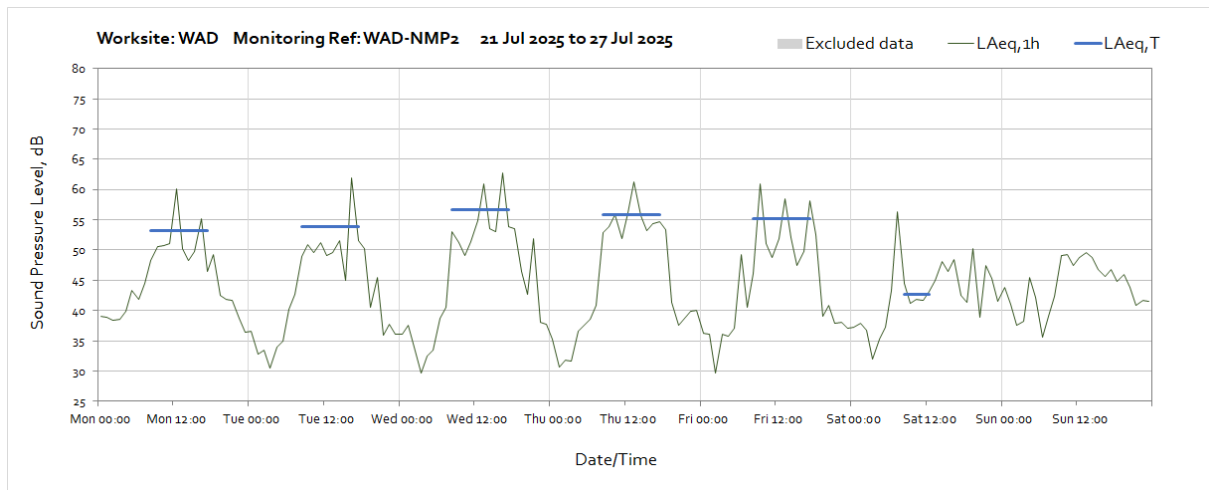
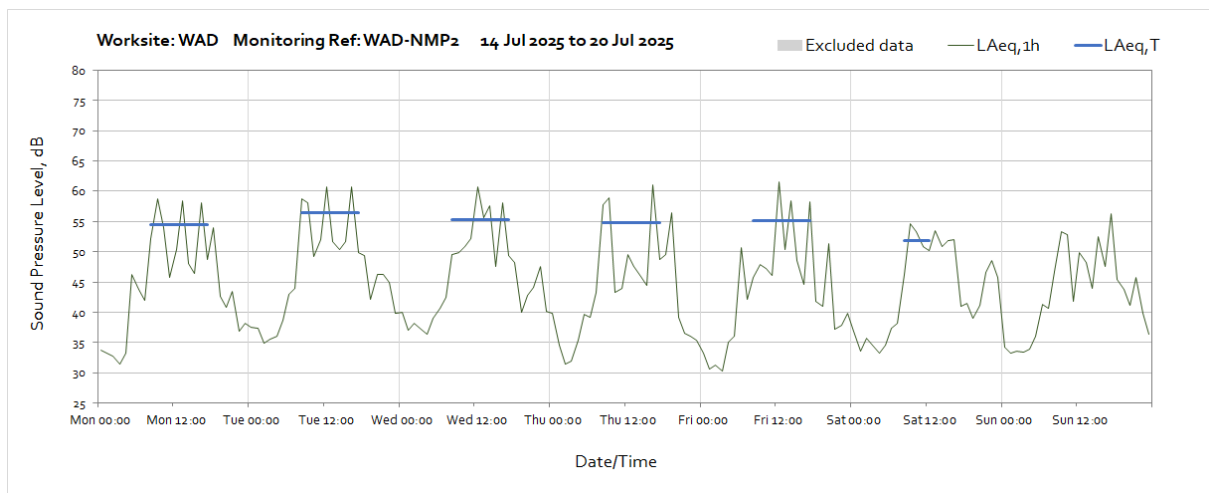
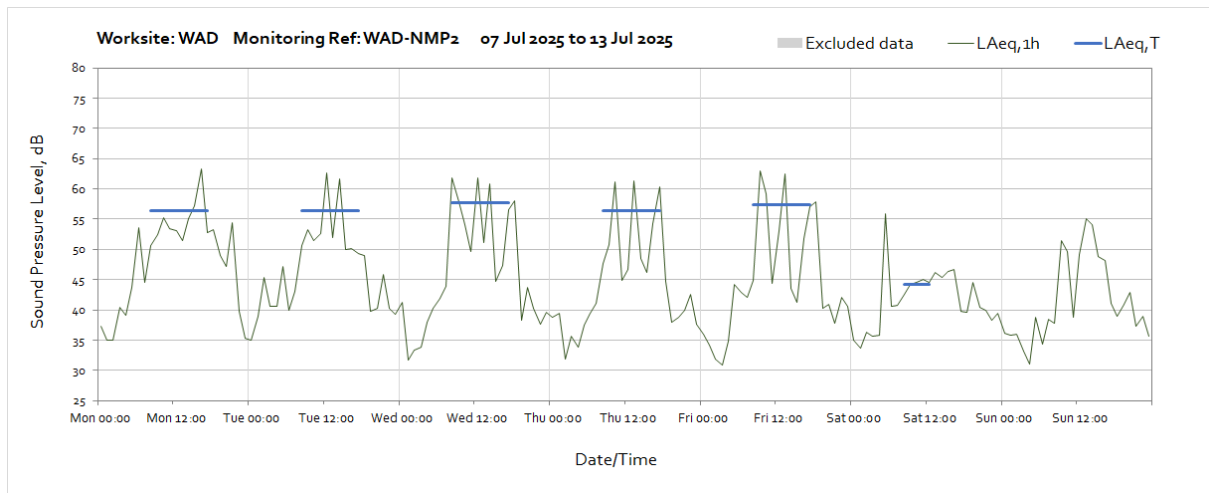


OFFICIAL

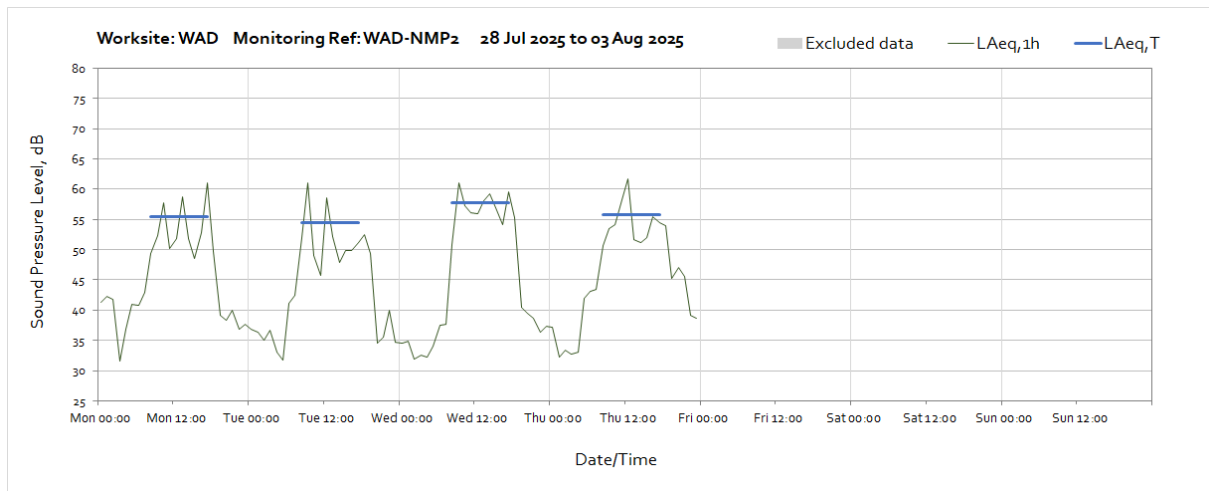


## Worksite: WAD – Monitoring Ref: WAD-NMP2

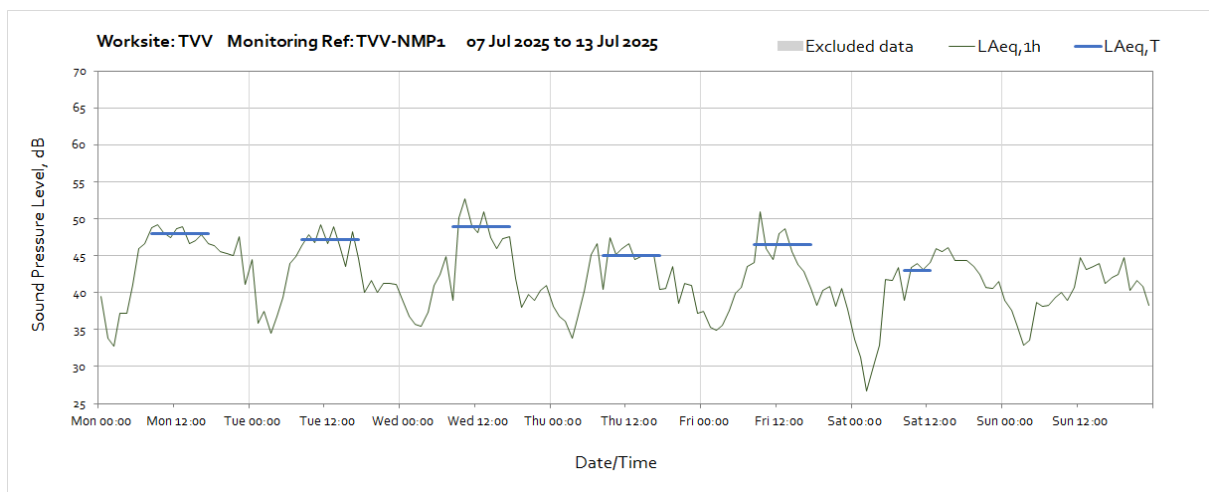
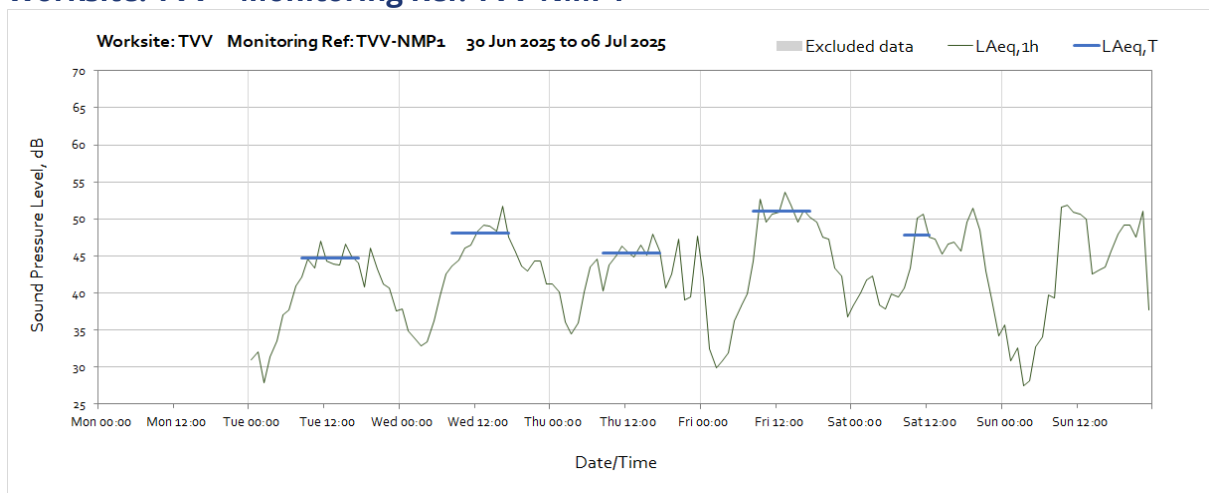


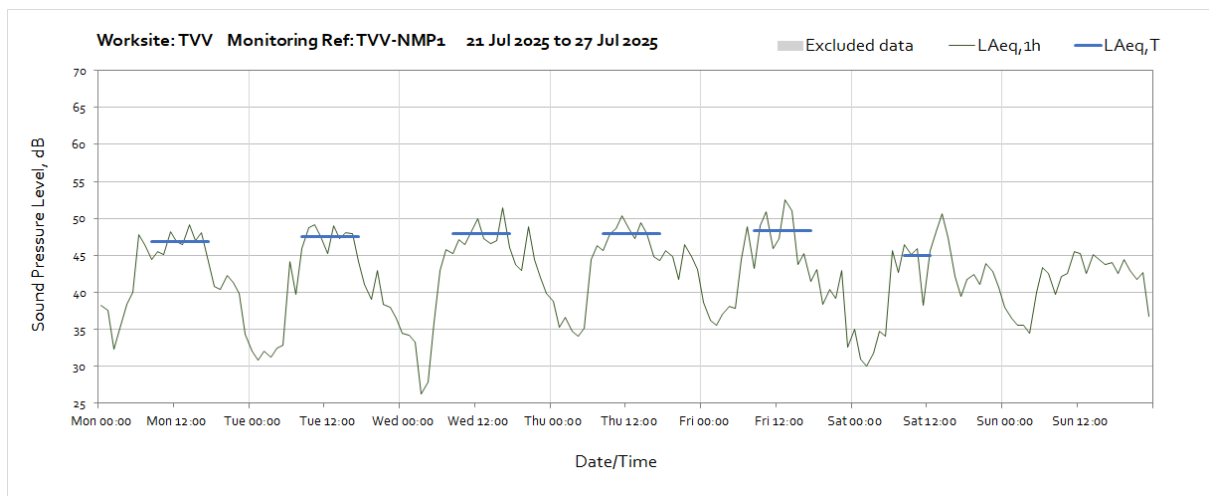
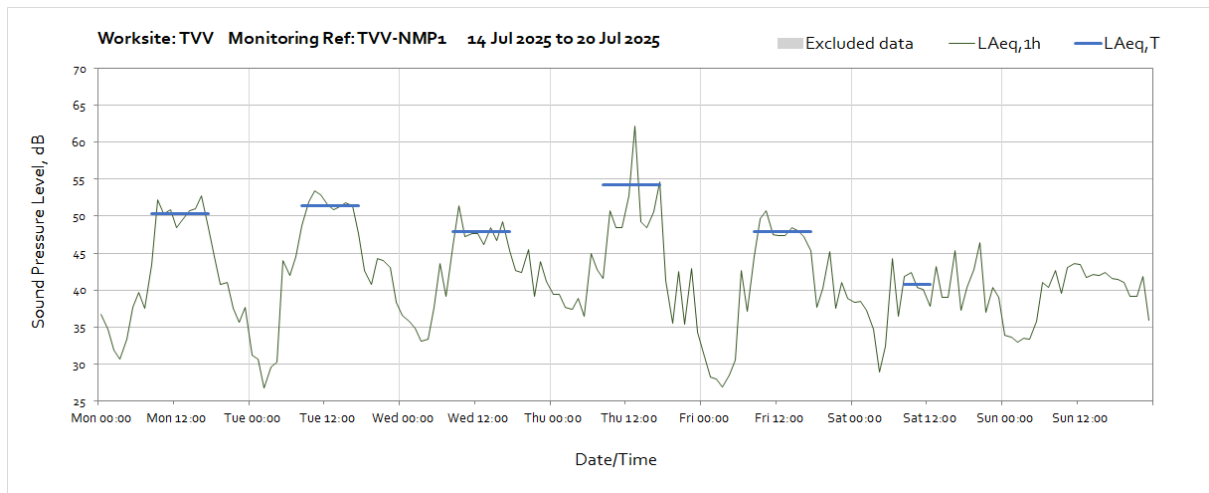


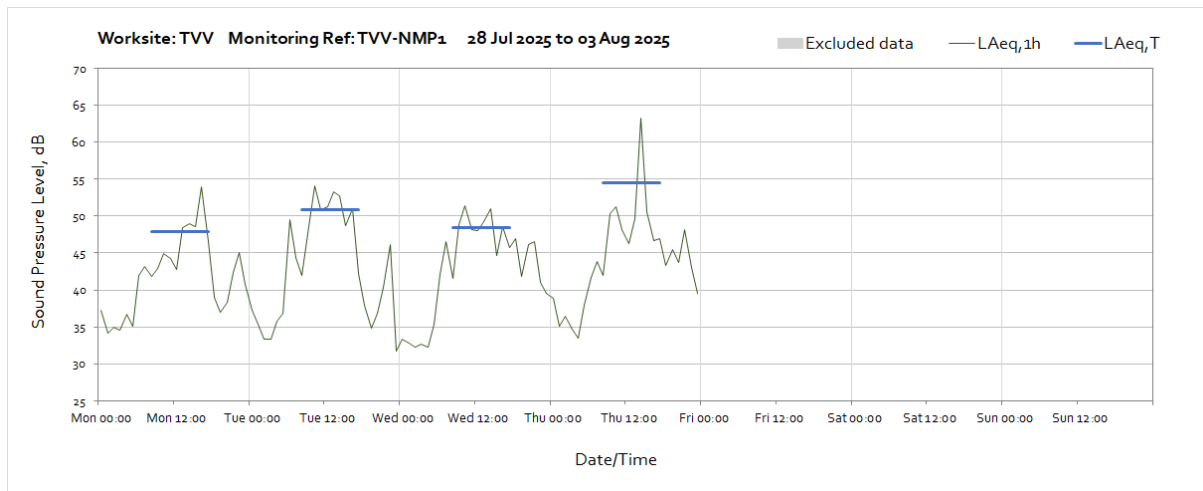




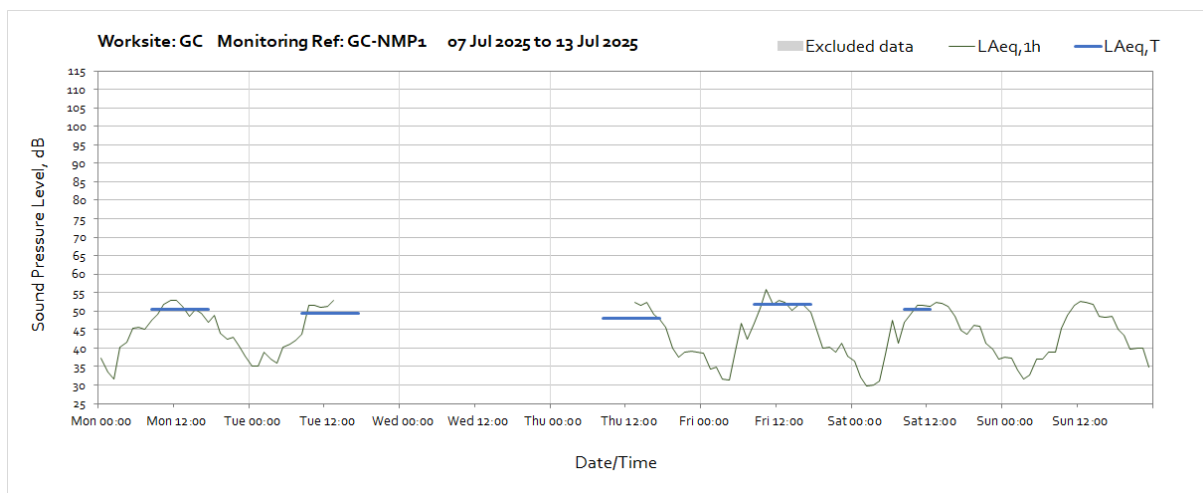
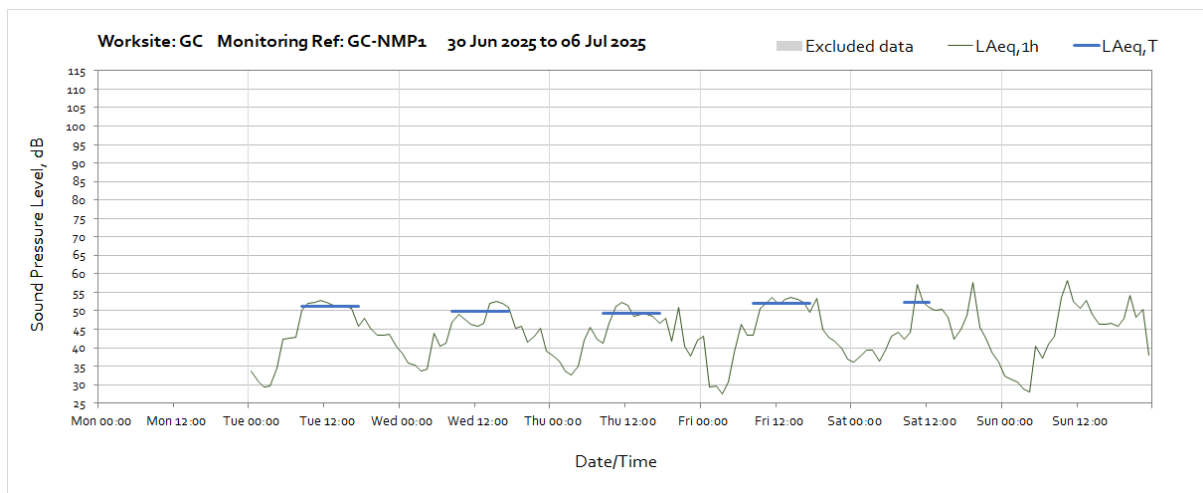
## Worksite: TVV – Monitoring Ref: TVV-NMP1





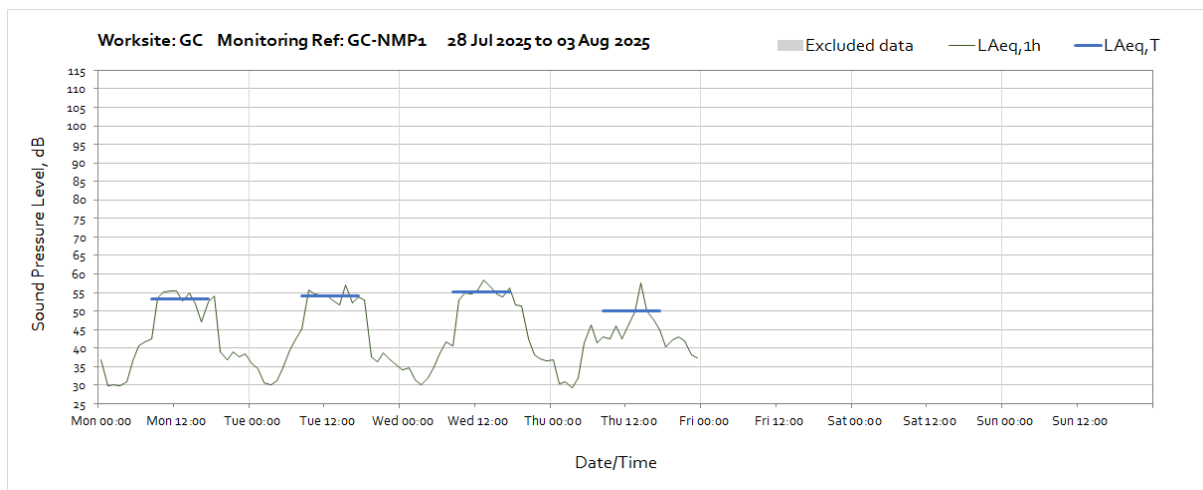
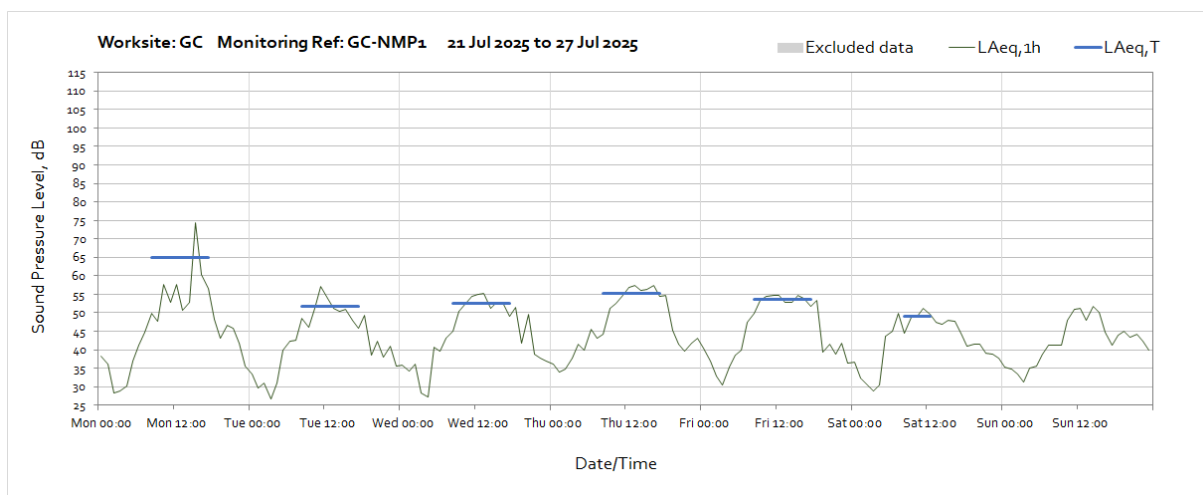
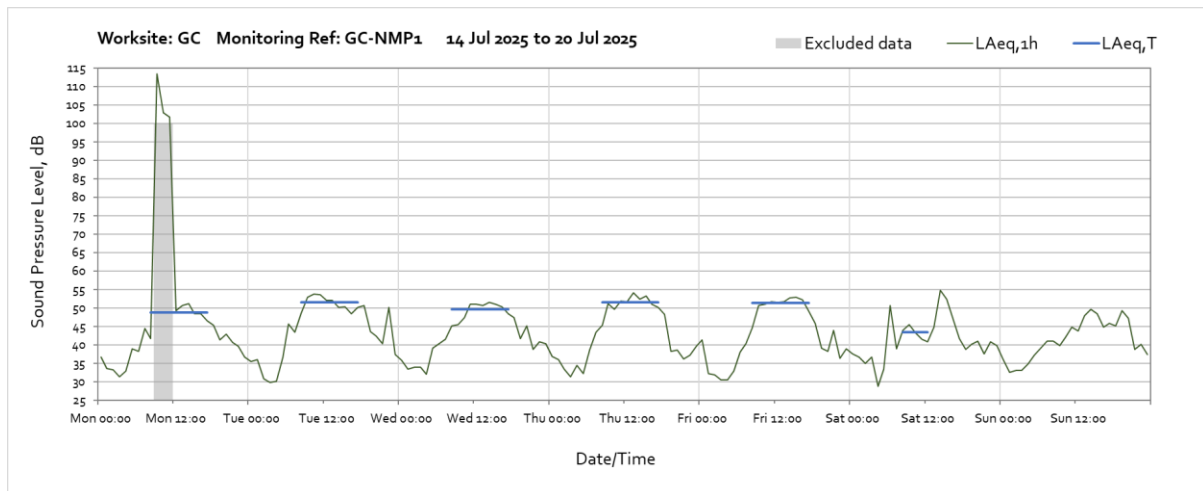


## Worksite: GC – Monitoring Ref: GC-NMP1

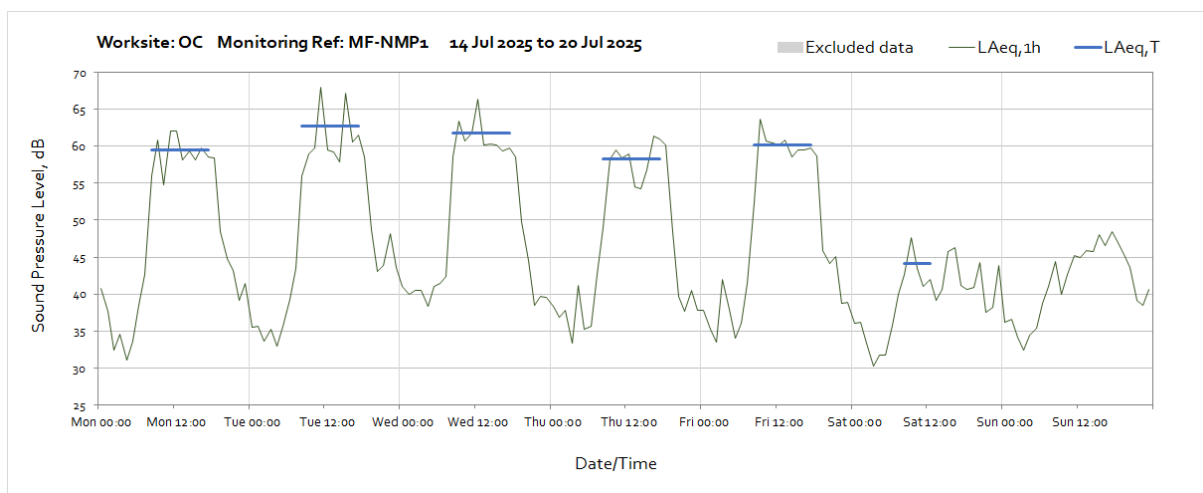
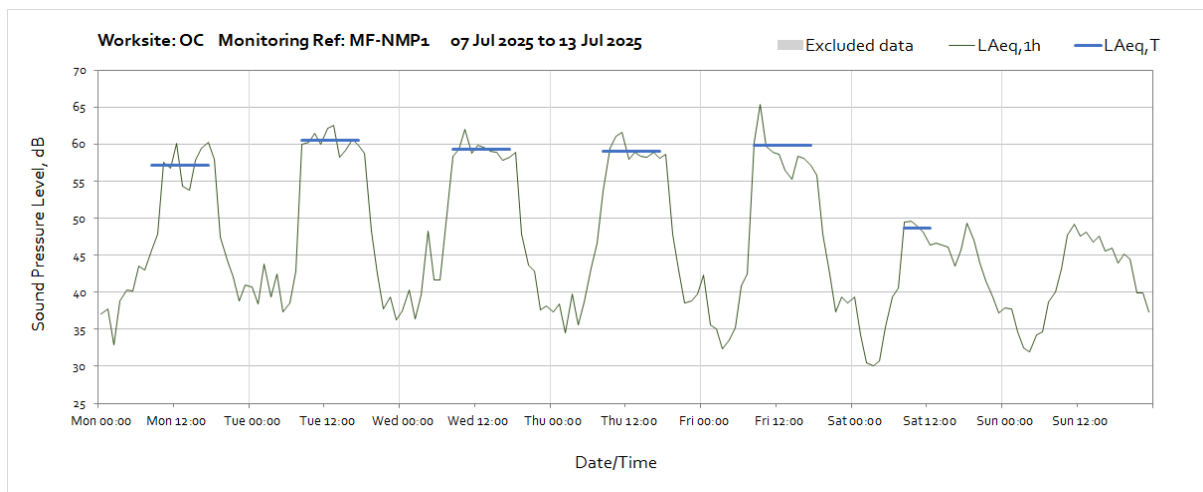
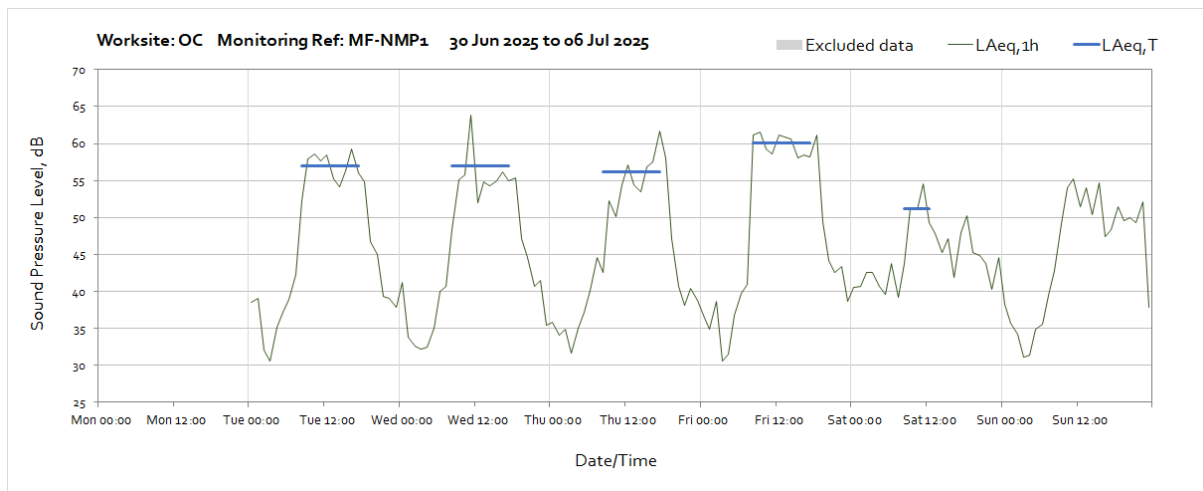


Note: Missing data between 14:00 on Tuesday 8<sup>th</sup> July and 13:00 on Thursday 10<sup>th</sup> July was due to a fault at the monitoring station.

OFFICIAL

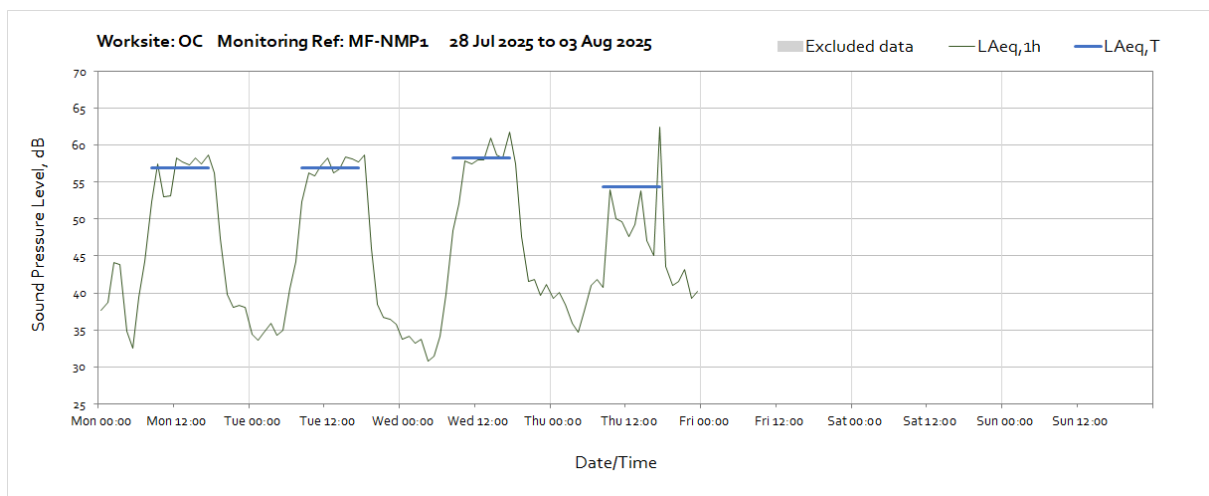
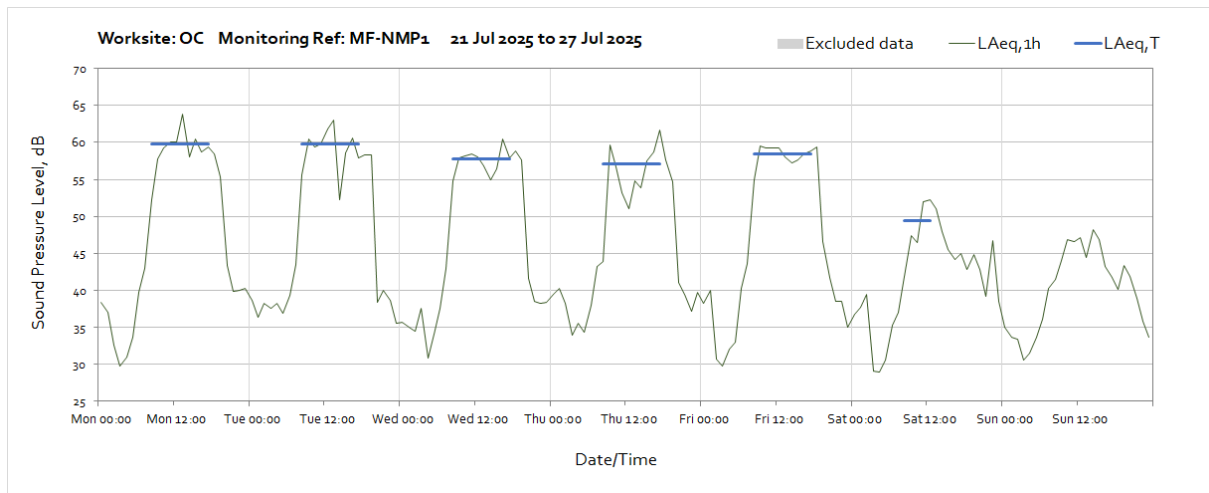


## Worksite: OC – Monitoring Ref: MF-NMP1

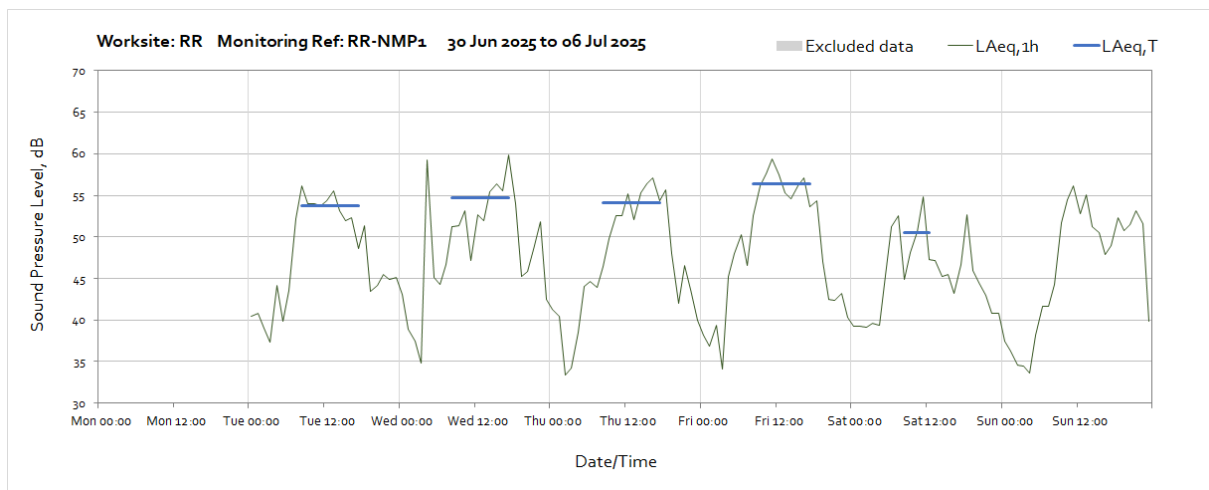


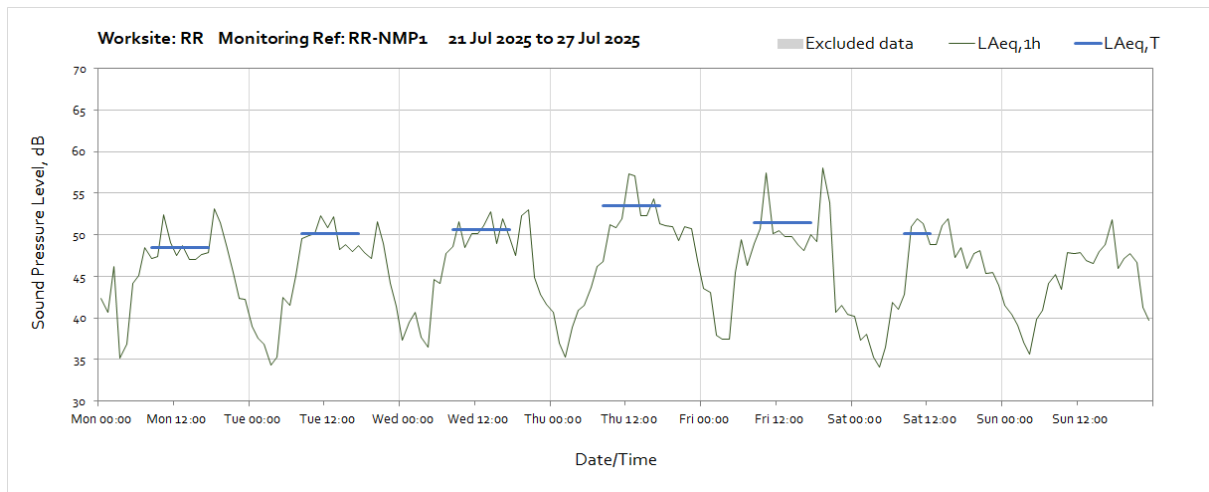
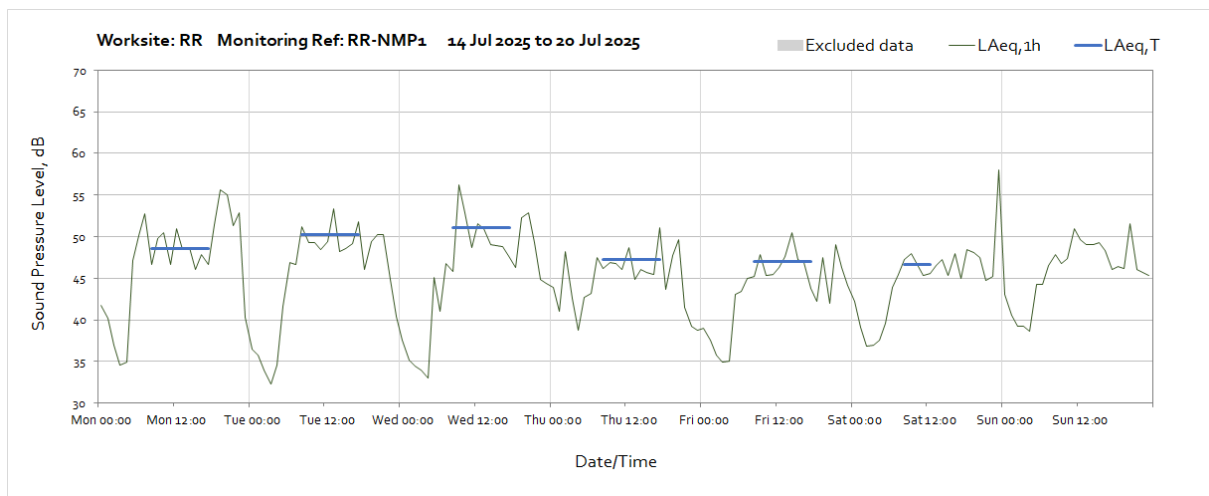
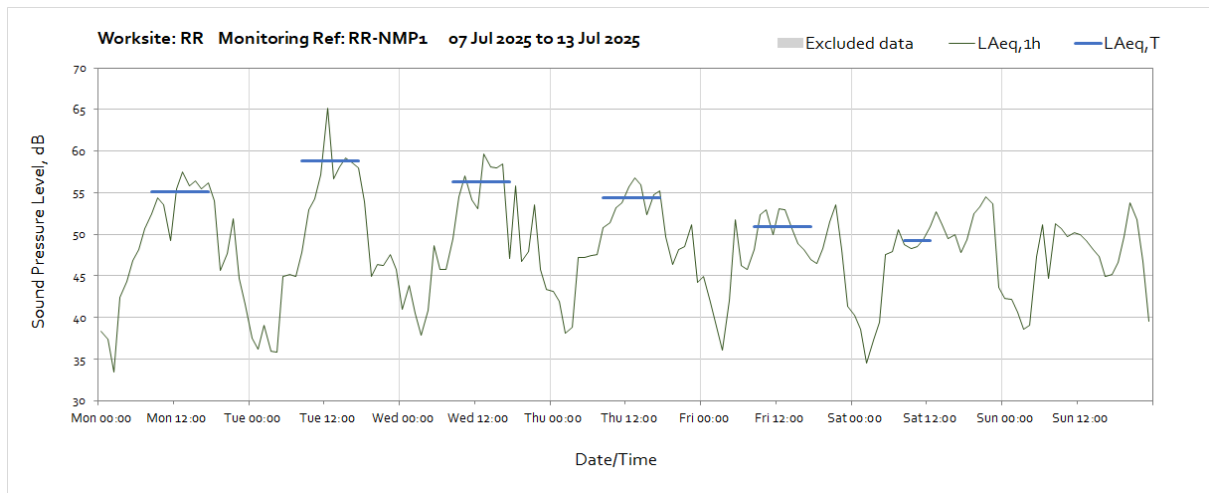
OFFICIAL



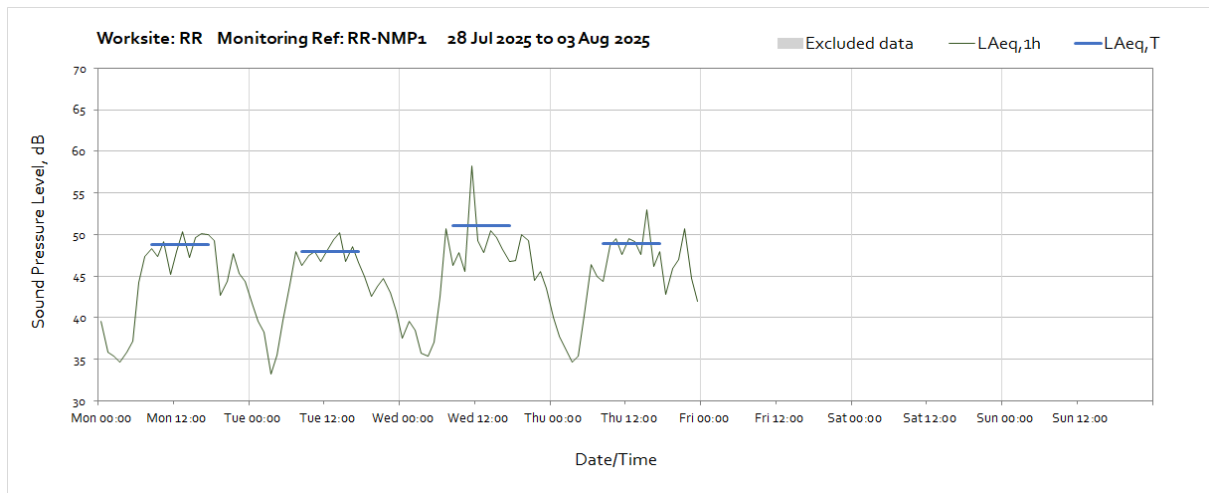


## Worksite: RR – Monitoring Ref: RR-NMP1

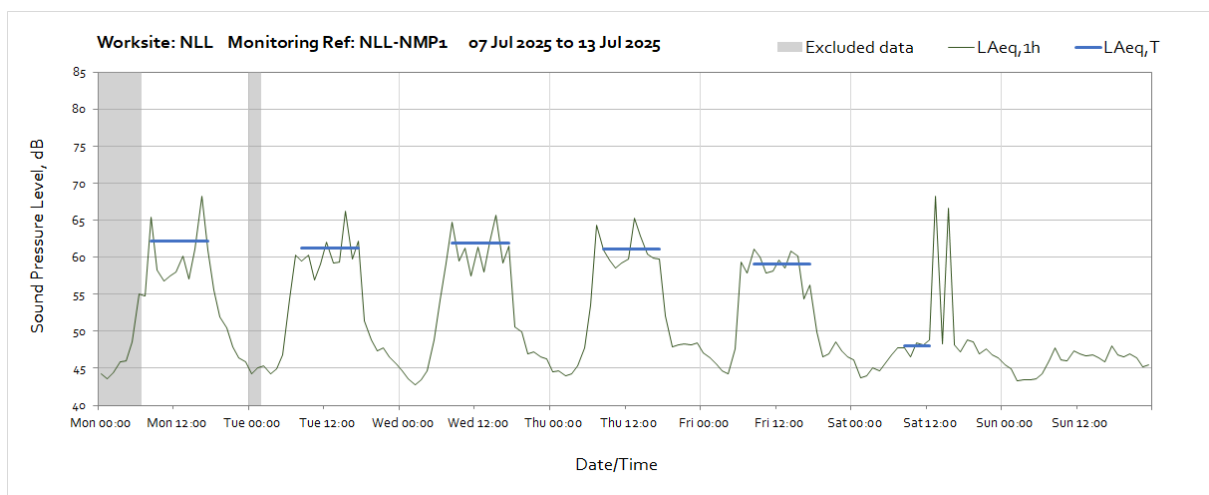
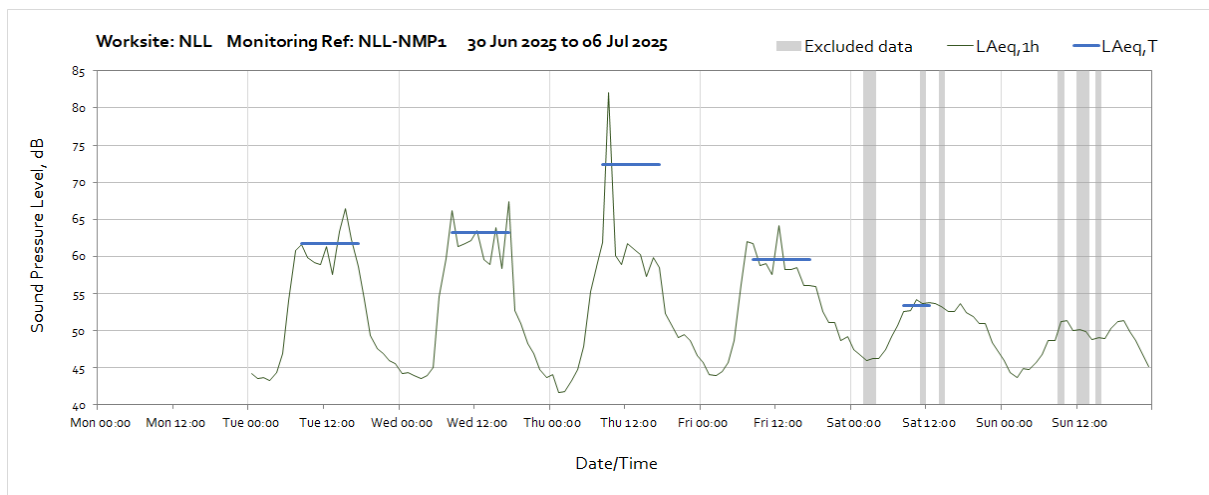


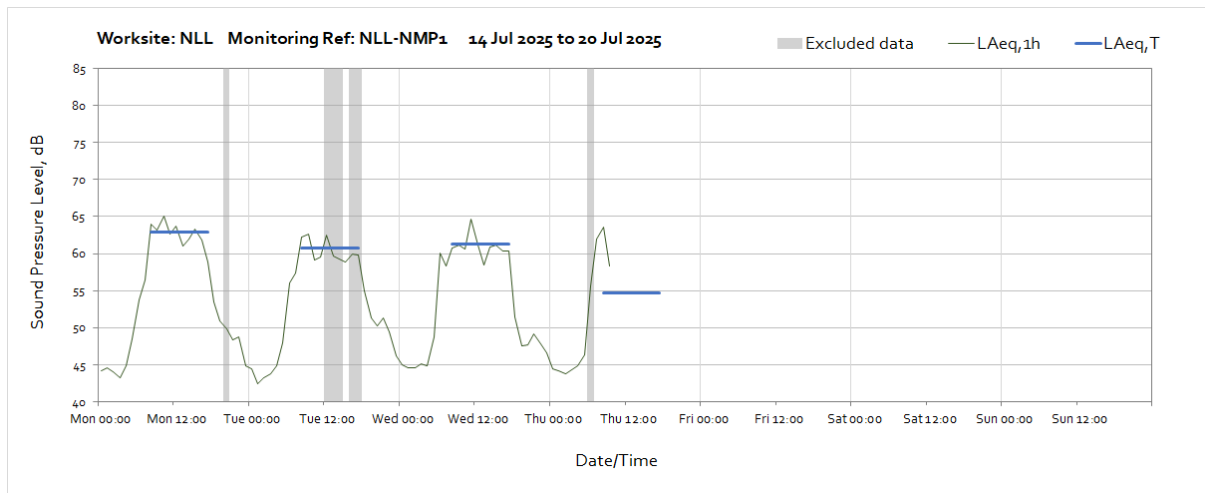


OFFICIAL



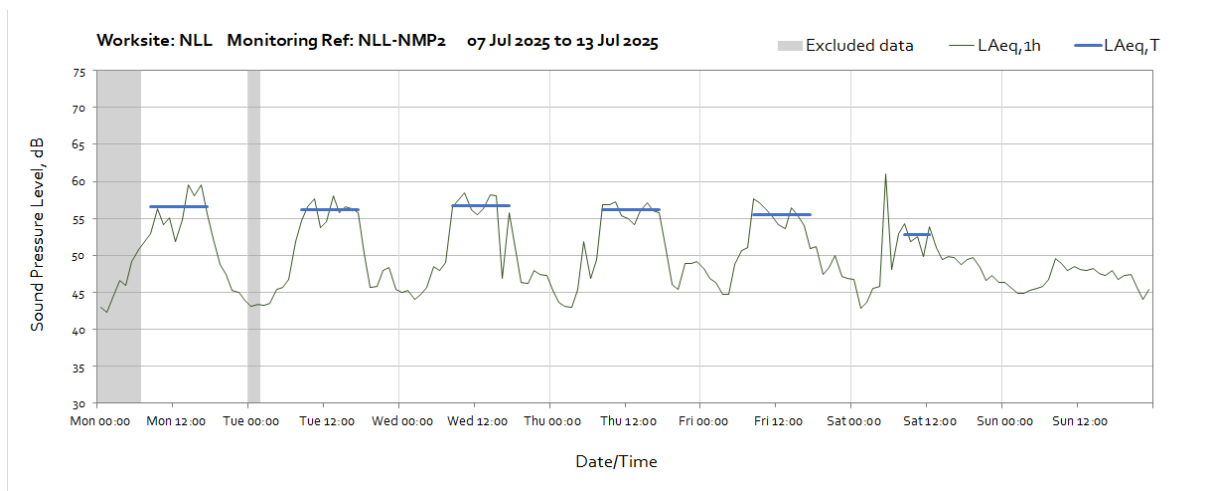
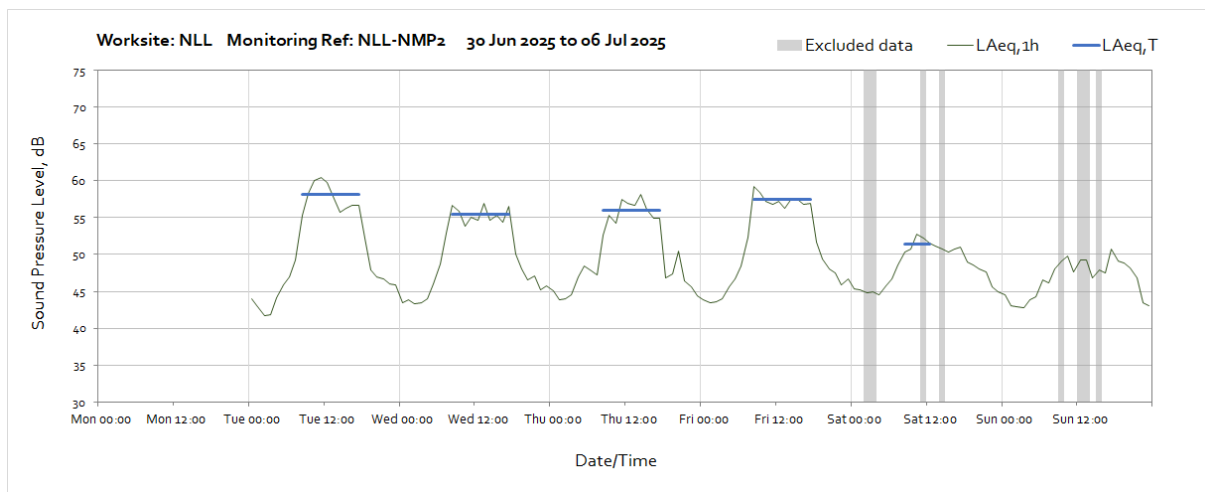
## Worksite: NLL – Monitoring Ref: NLL-NMP1

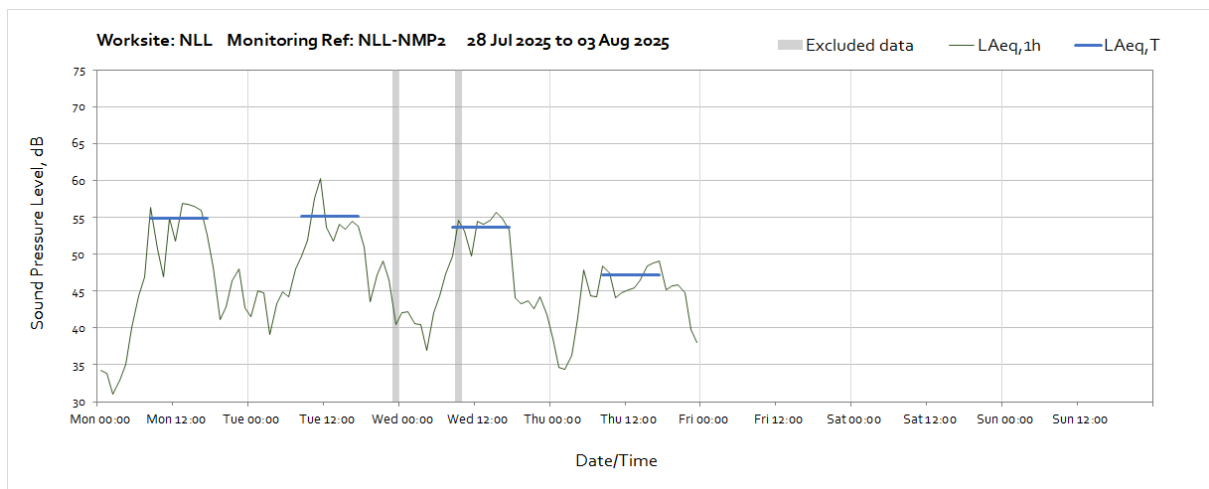
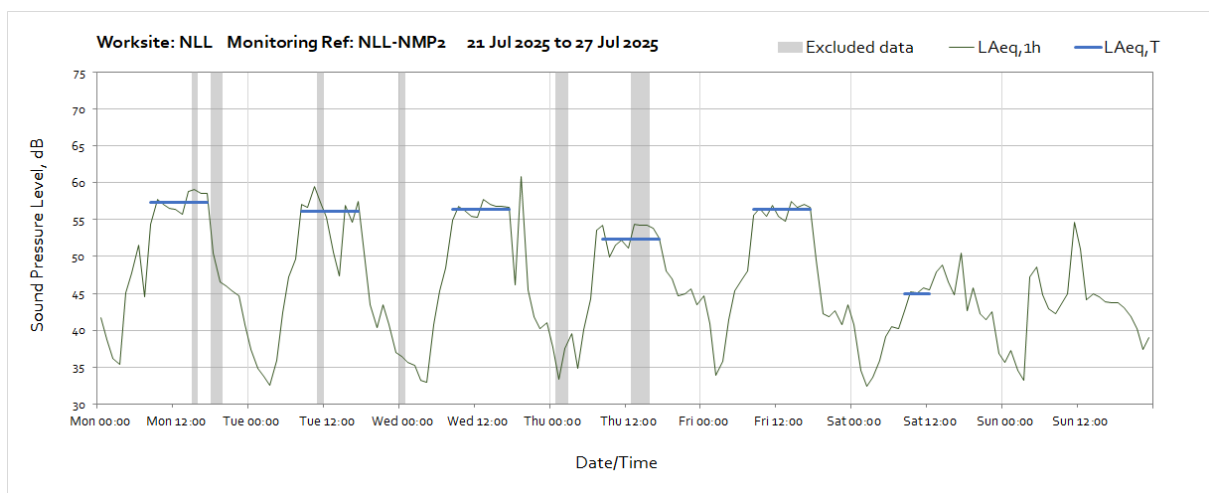
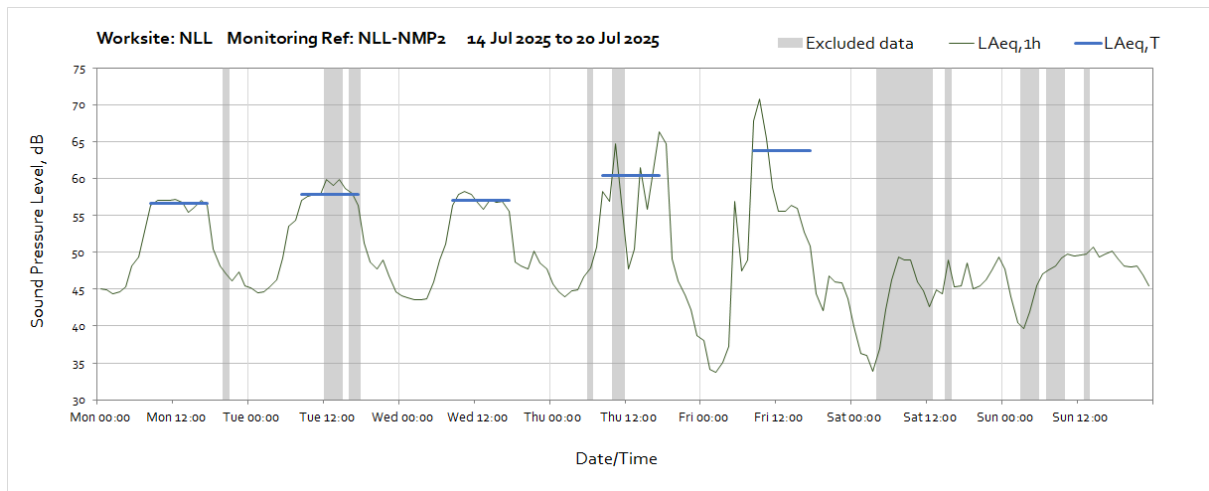




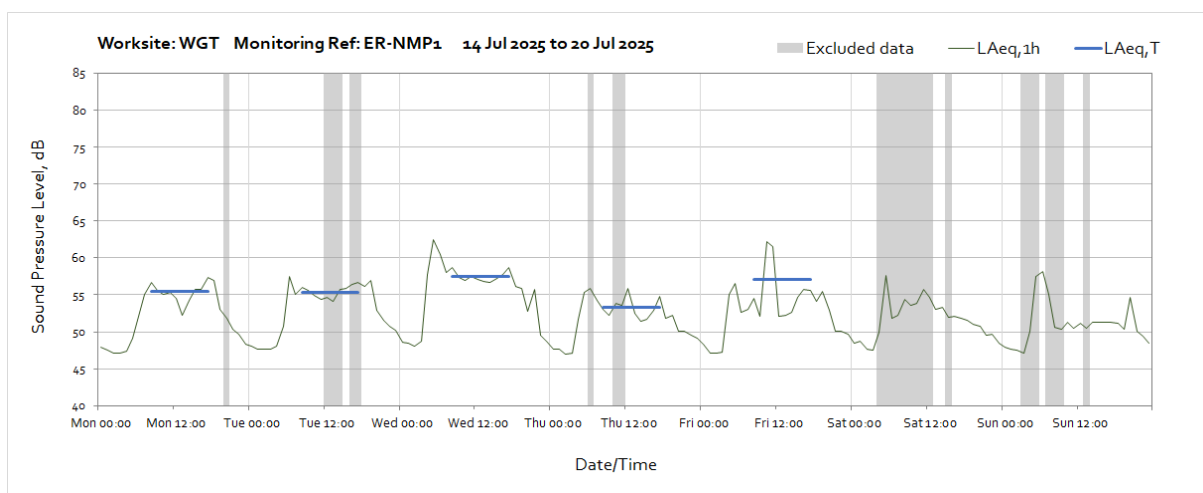
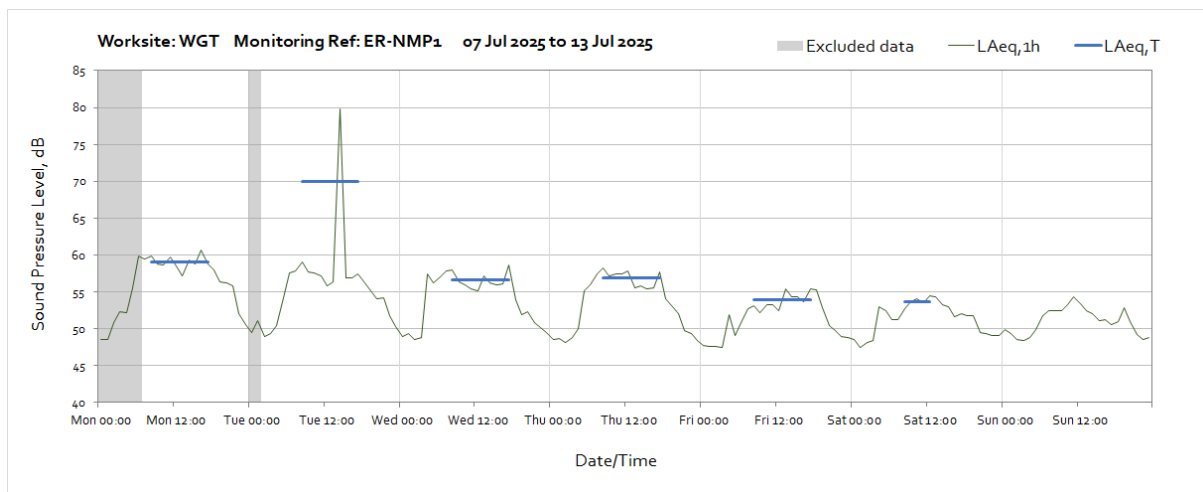
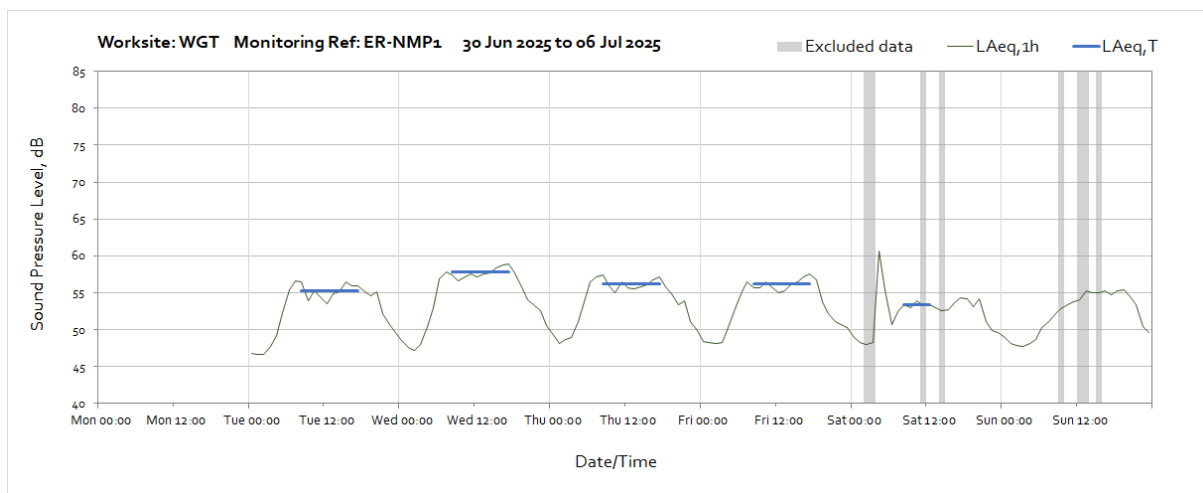
Note: Monitor was retrieved at 10:00 on Thursday 17<sup>th</sup> July.

## Worksite: NLL – Monitoring Ref: NLL-NMP2



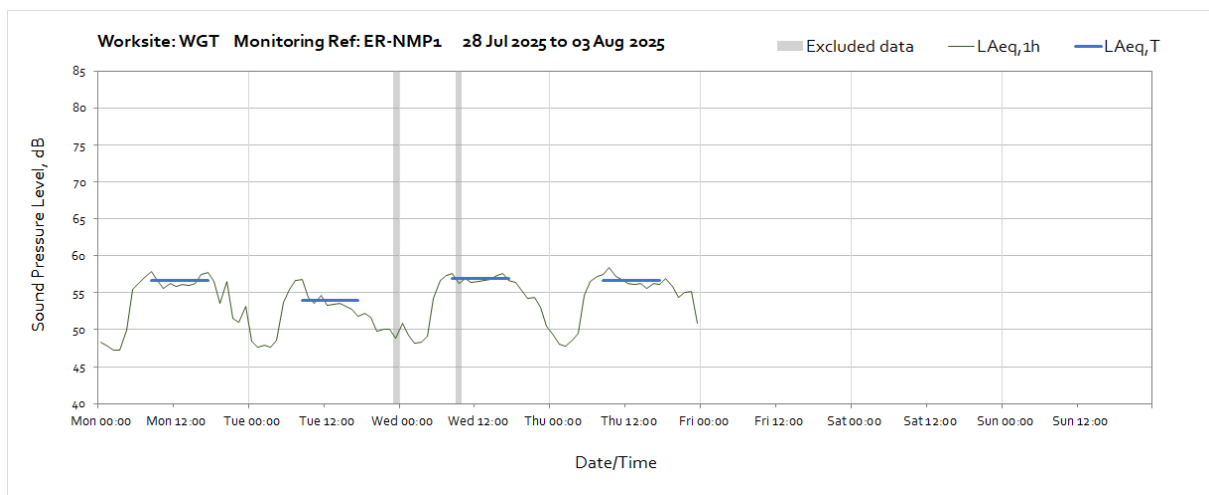
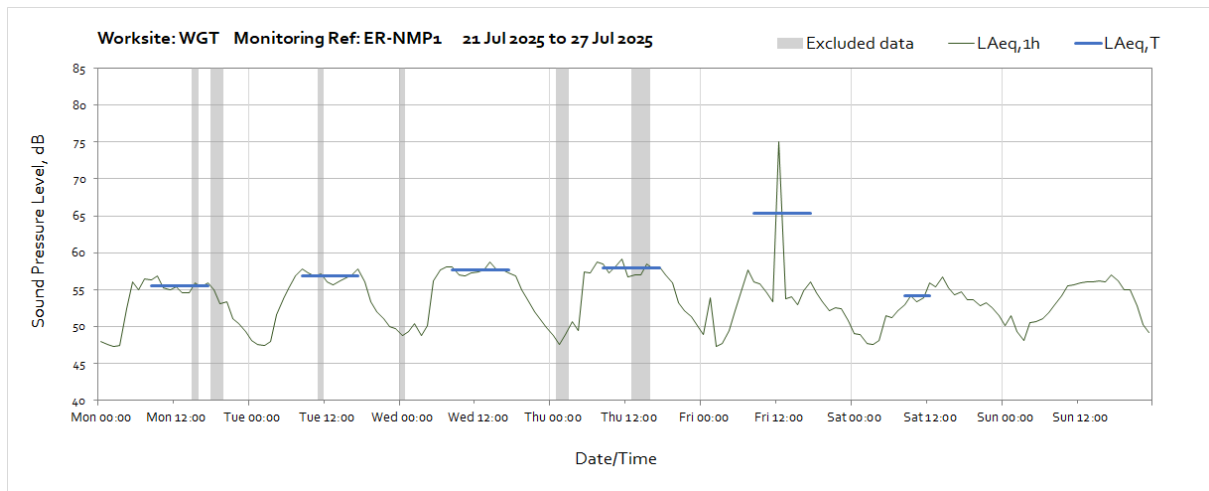


## Worksite: WGT – Monitoring Ref: ER-NMP1

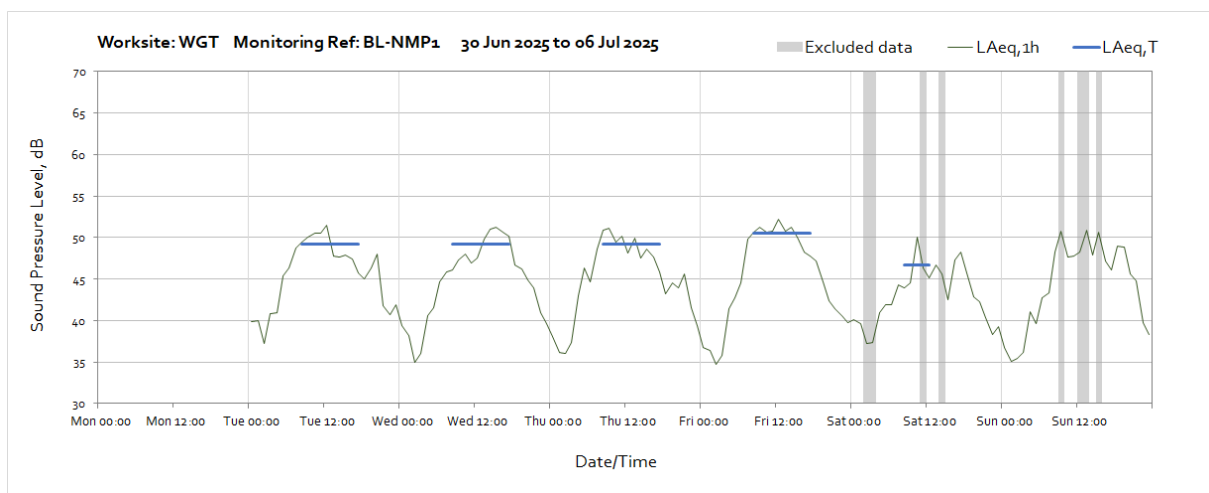


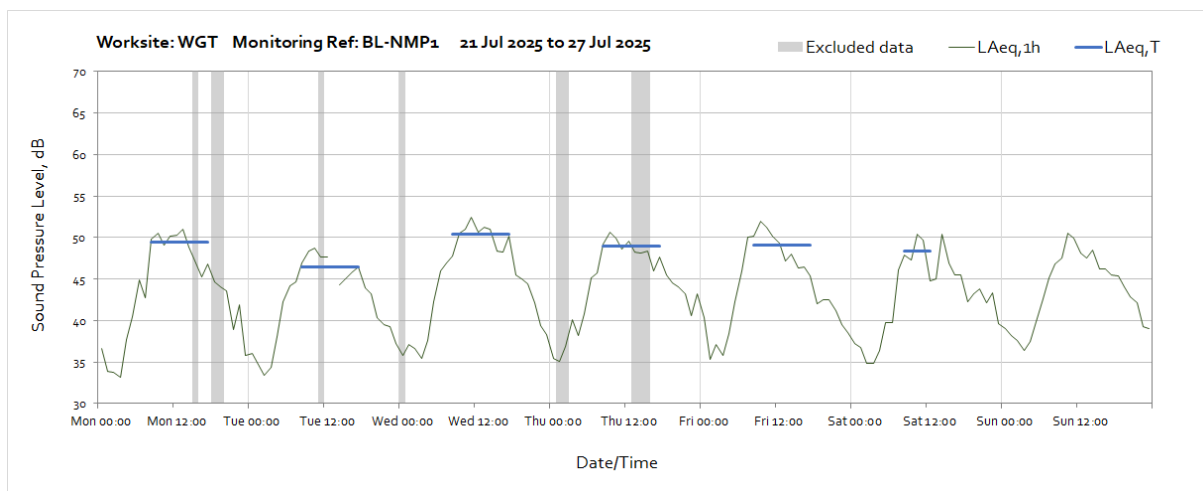
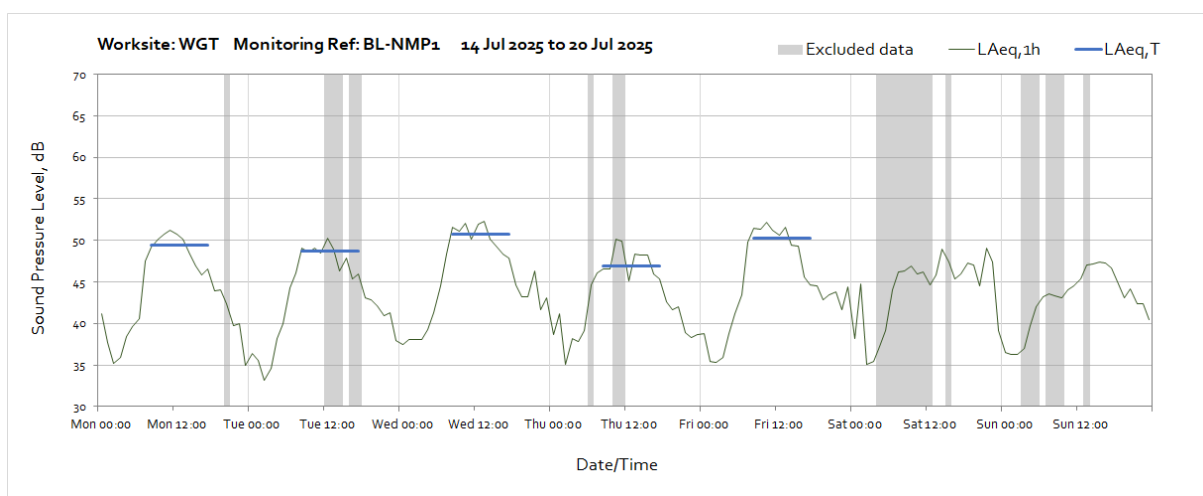
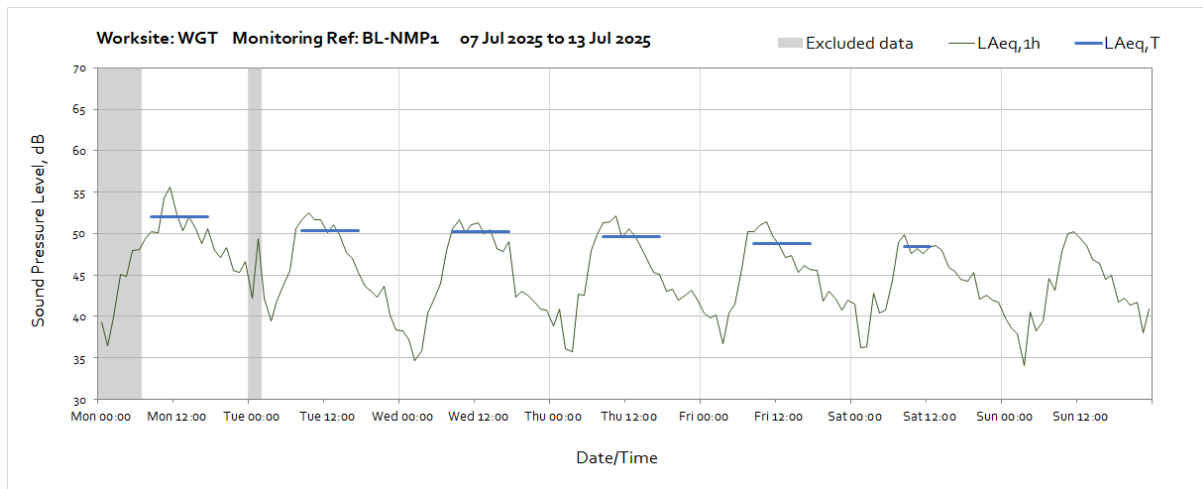
OFFICIAL





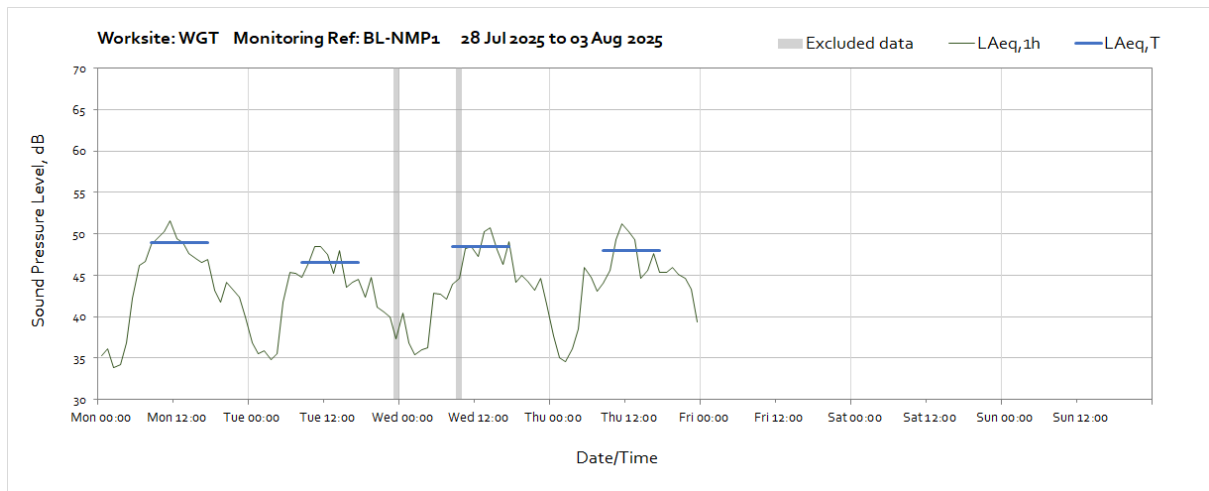
## Worksite: WGT – Monitoring Ref: BL-NMP1



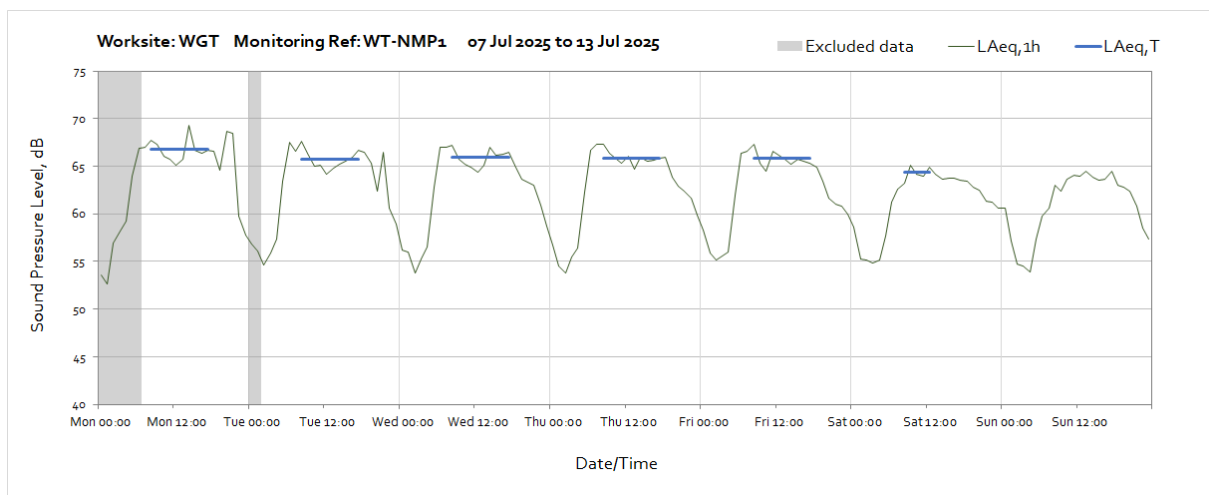
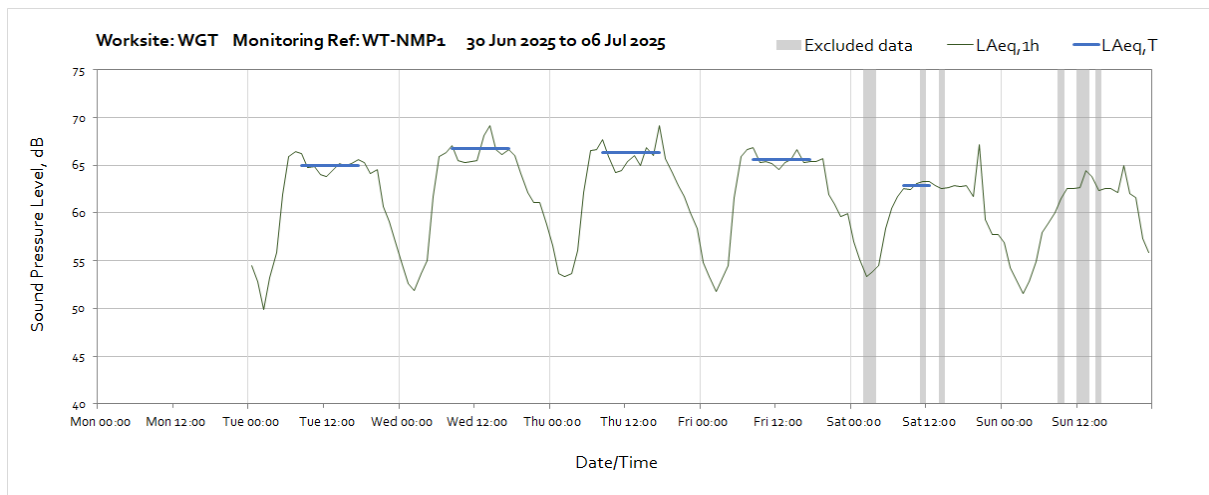


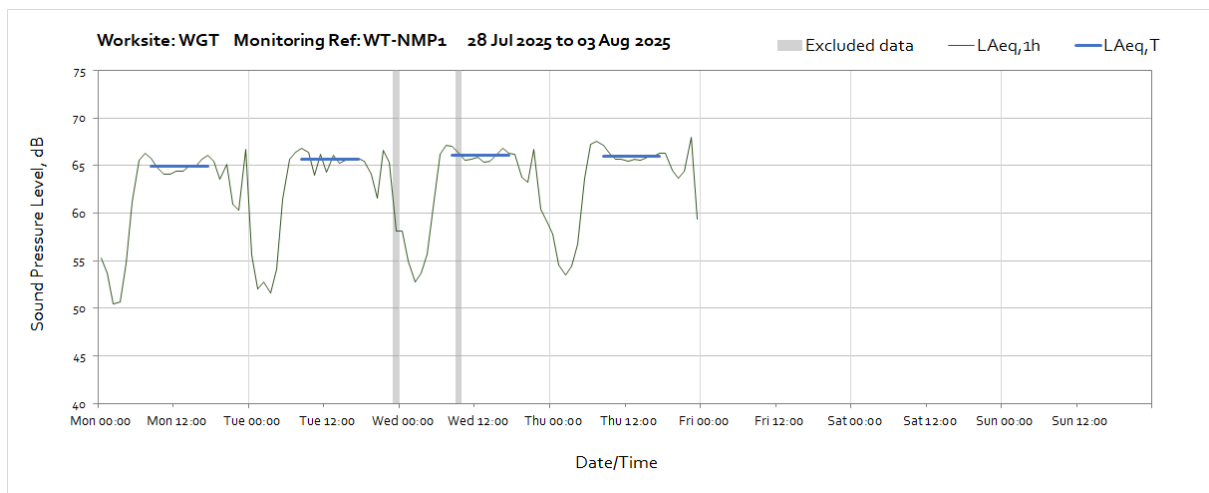
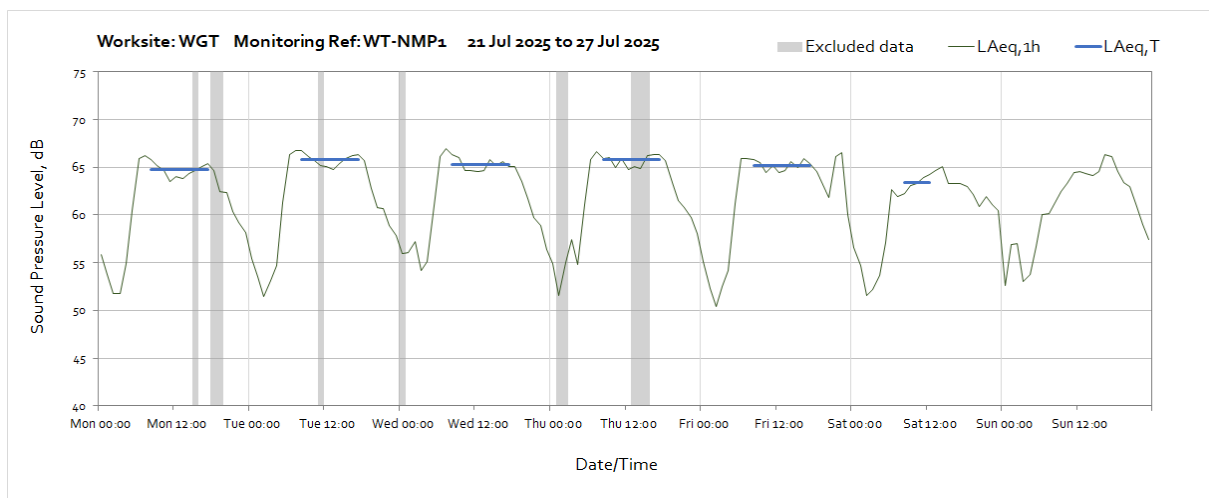
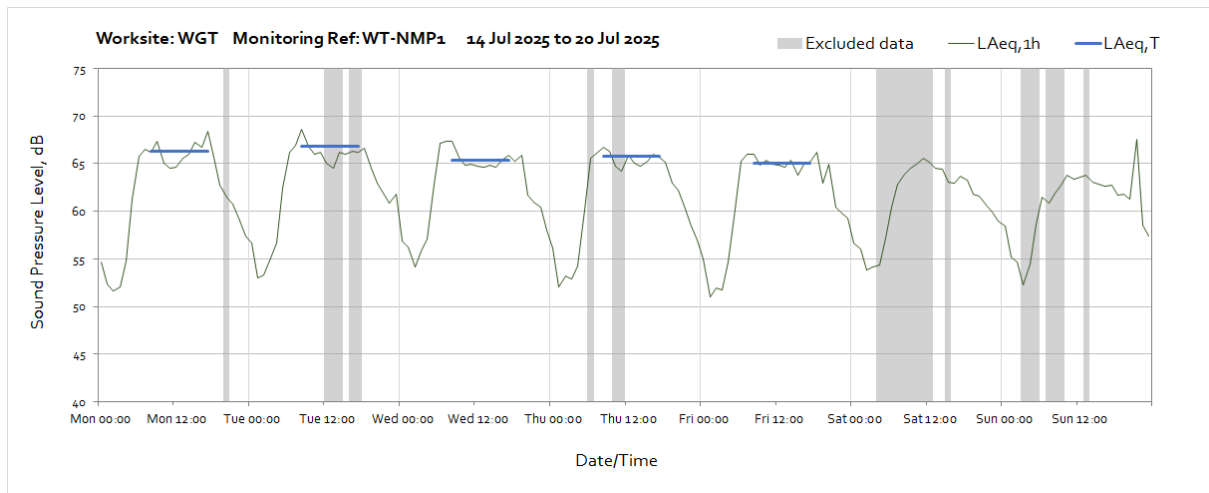
Note: Missing data between 13:00 and 14:00 on Tuesday 22<sup>nd</sup> July was due to monitoring station being retrieved for laboratory calibration and replacement monitoring station installed.

OFFICIAL

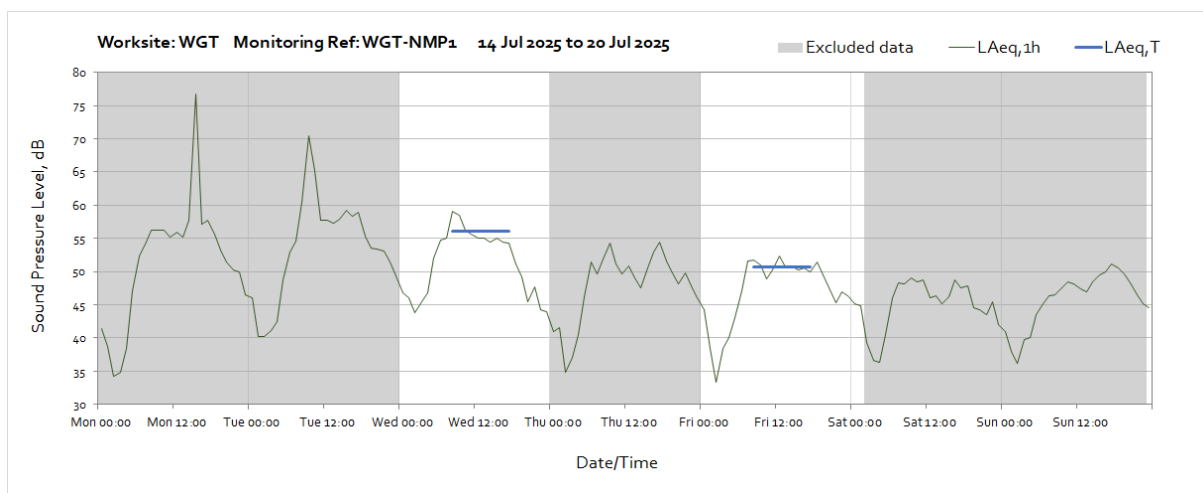
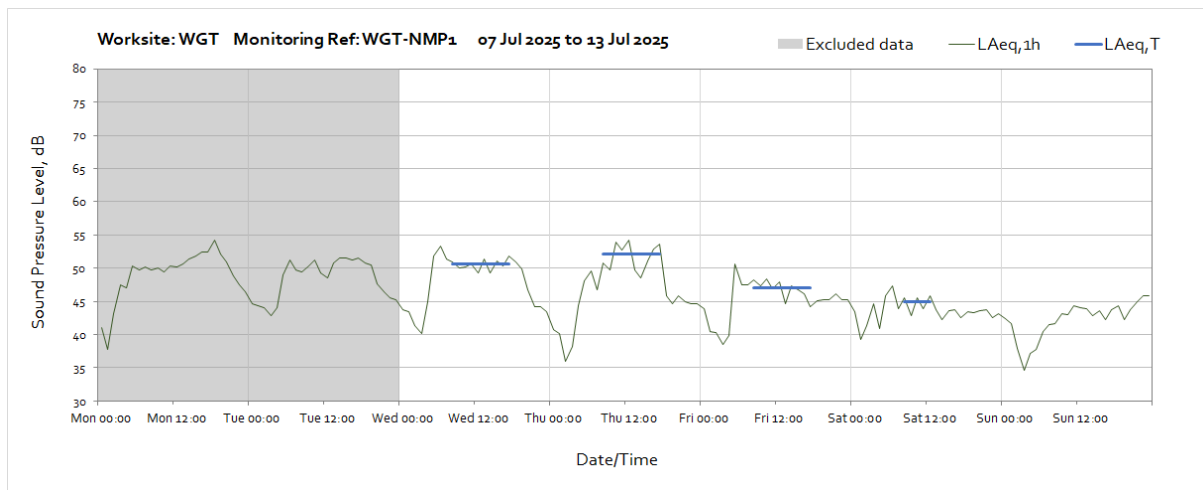
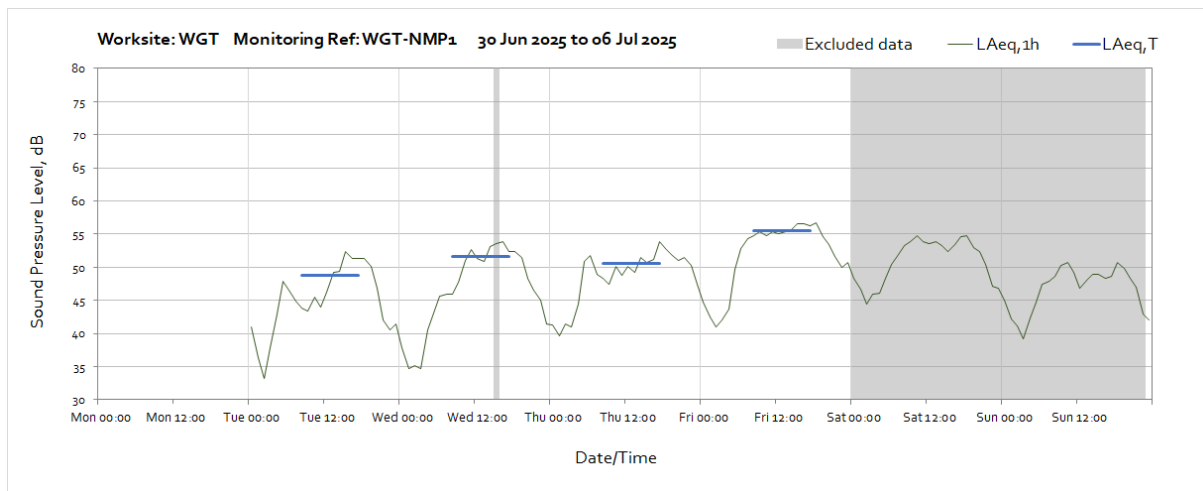


## Worksite: WGT – Monitoring Ref: WT-NMP1

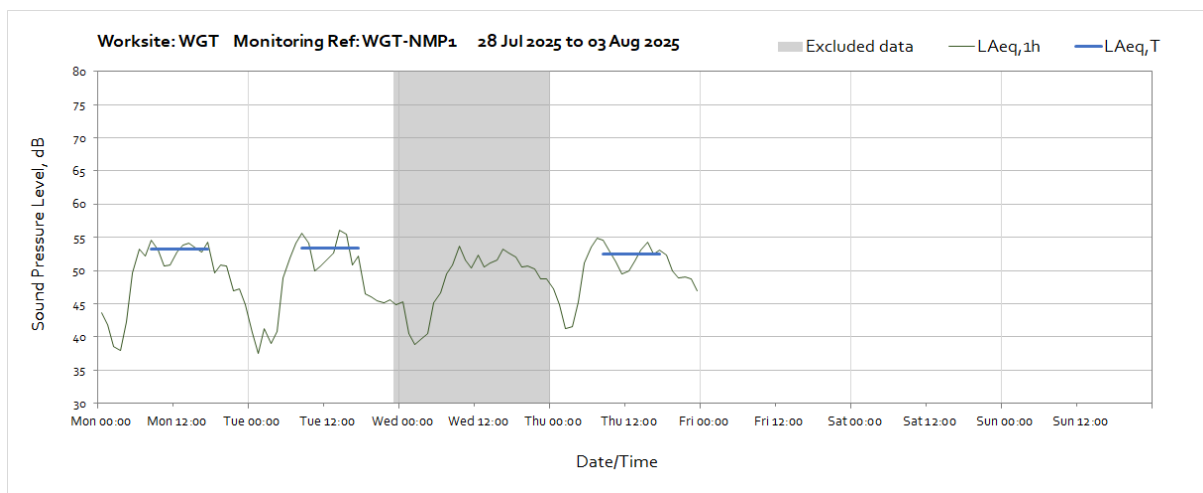
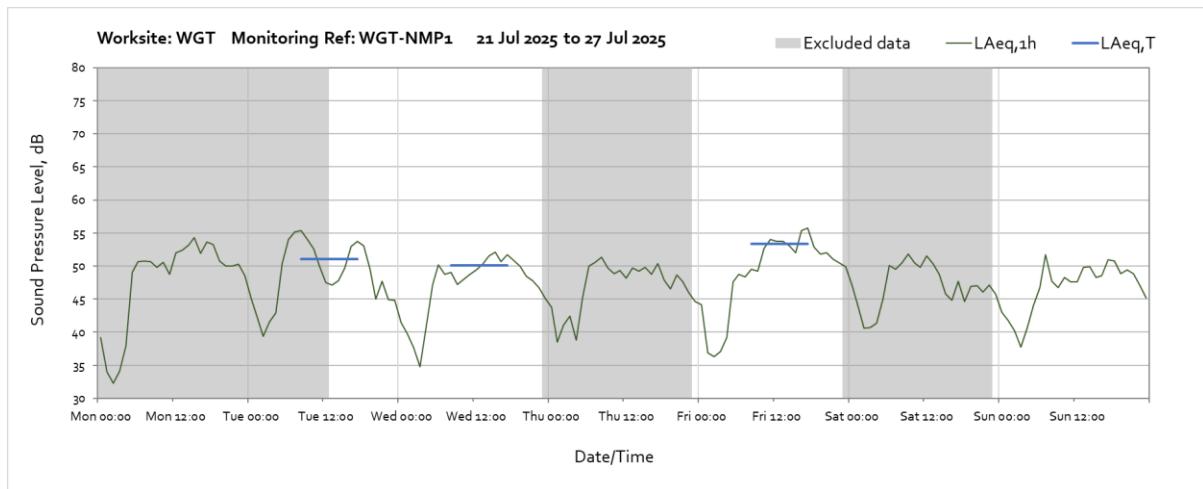




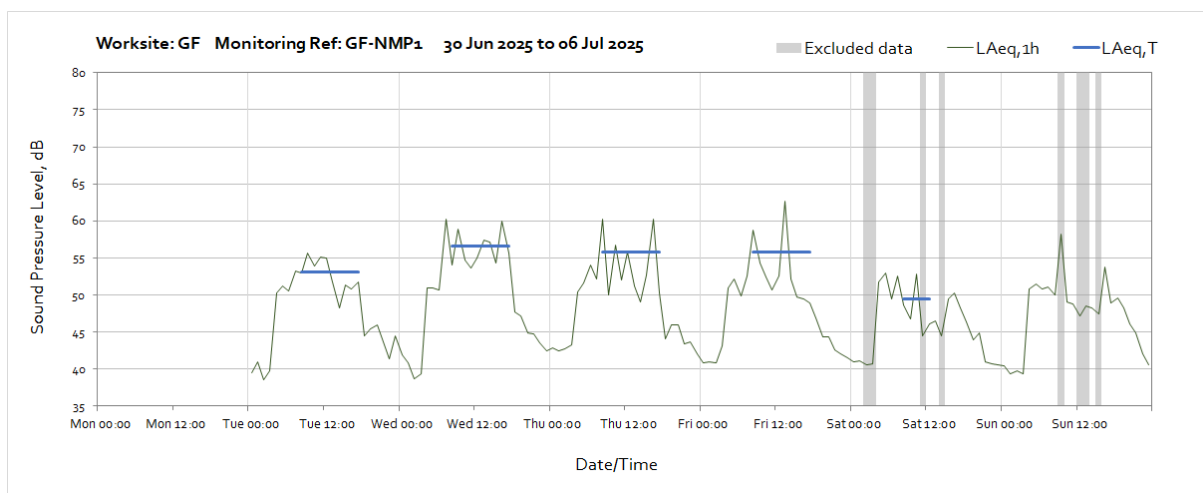
## Worksite: WGT – Monitoring Ref: WGT-NMP1



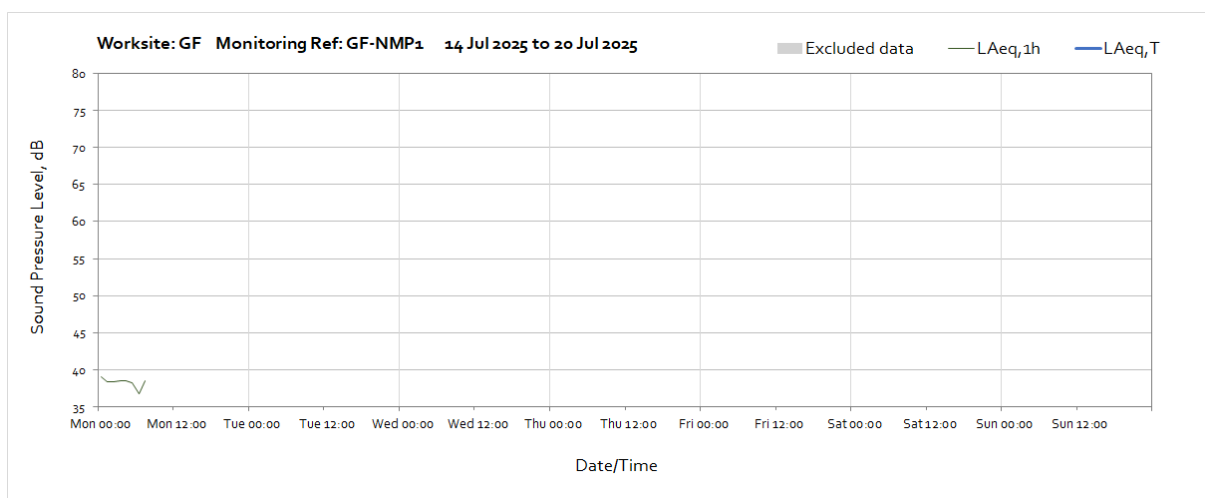
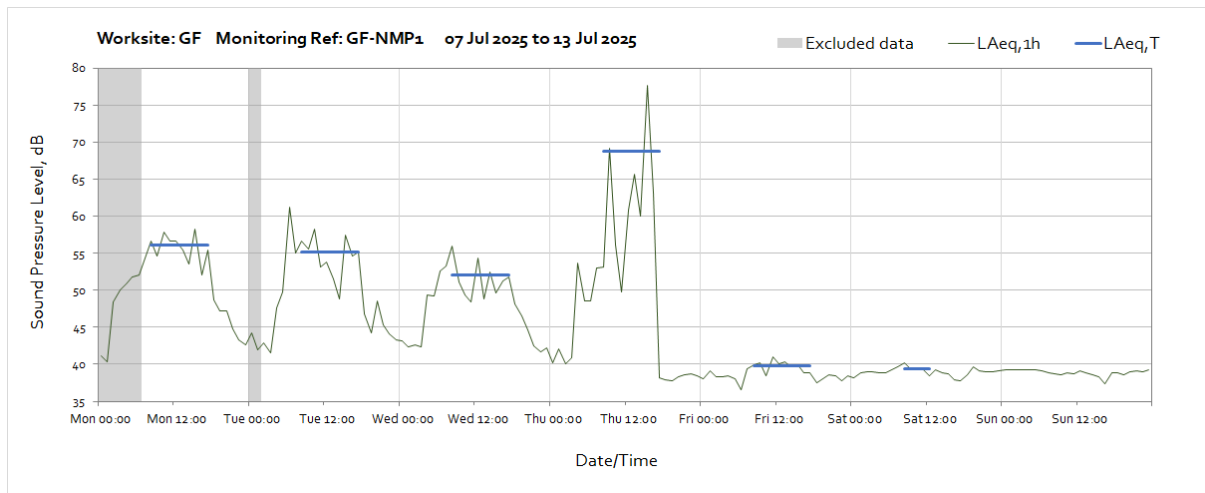
OFFICIAL



## Worksite: GF – Monitoring Ref: GF-NMP1

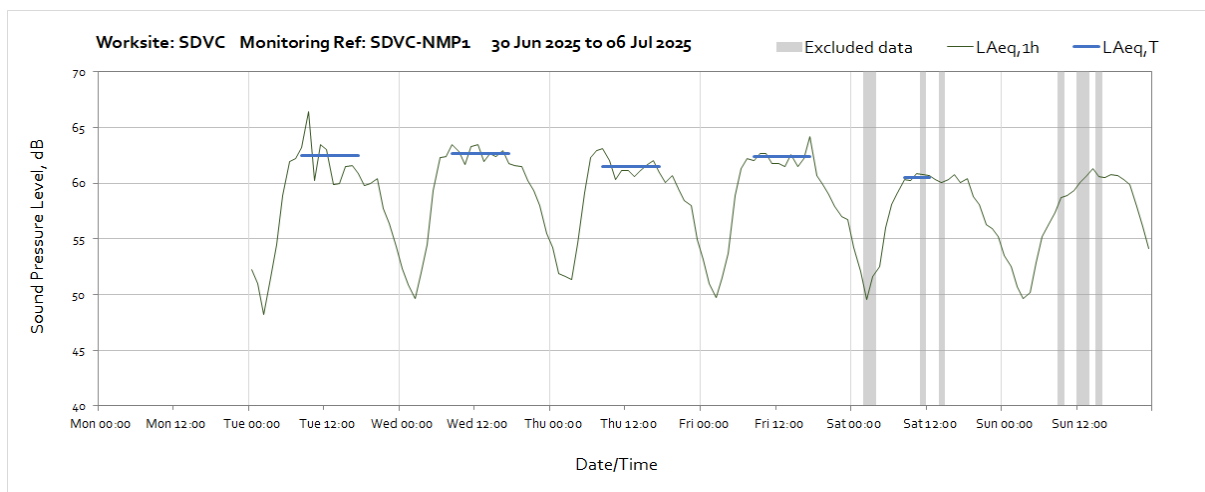


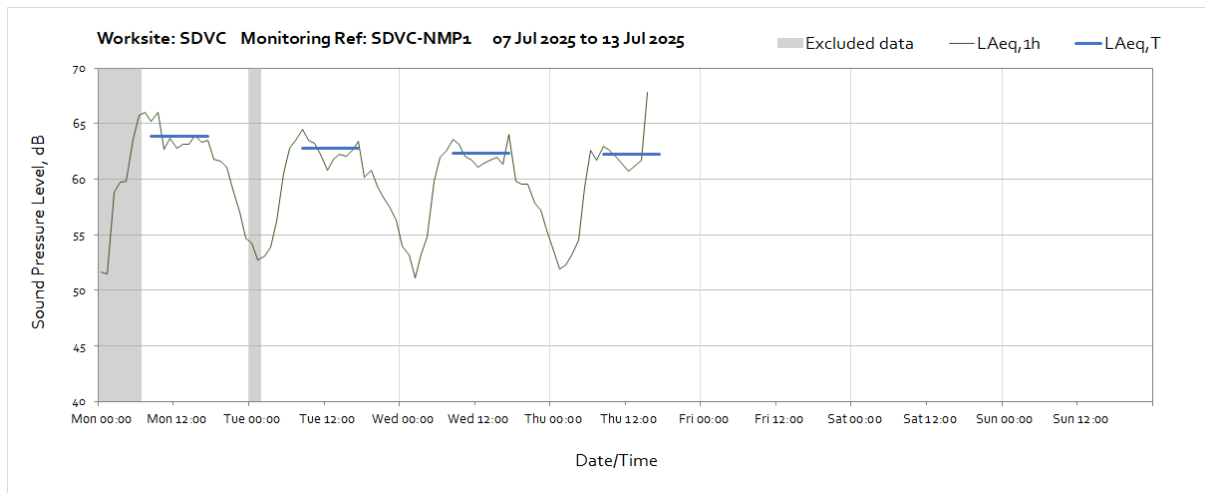




Note: Monitor was retrieved at 08:00 on Monday 14<sup>th</sup> July.

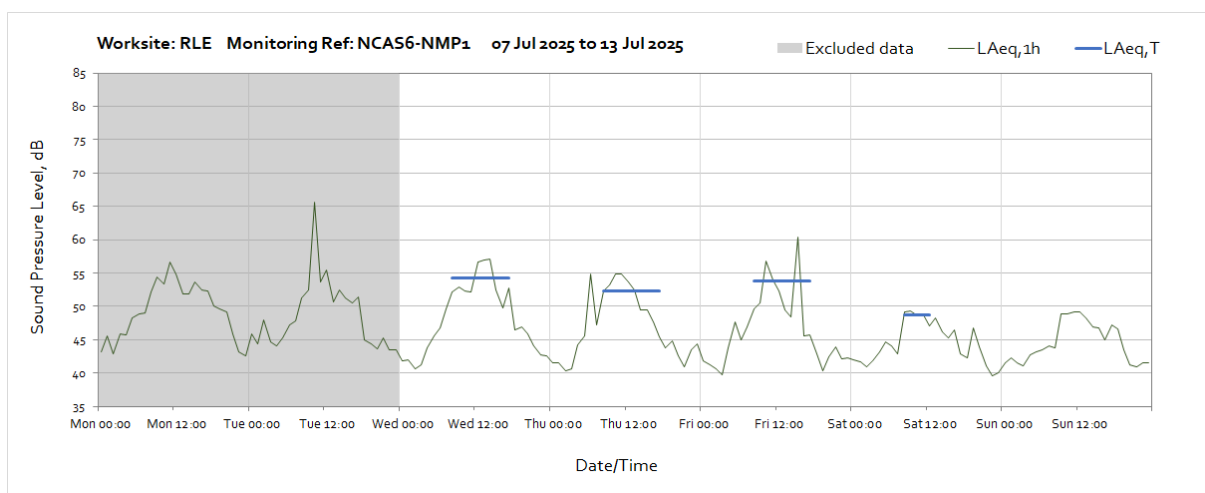
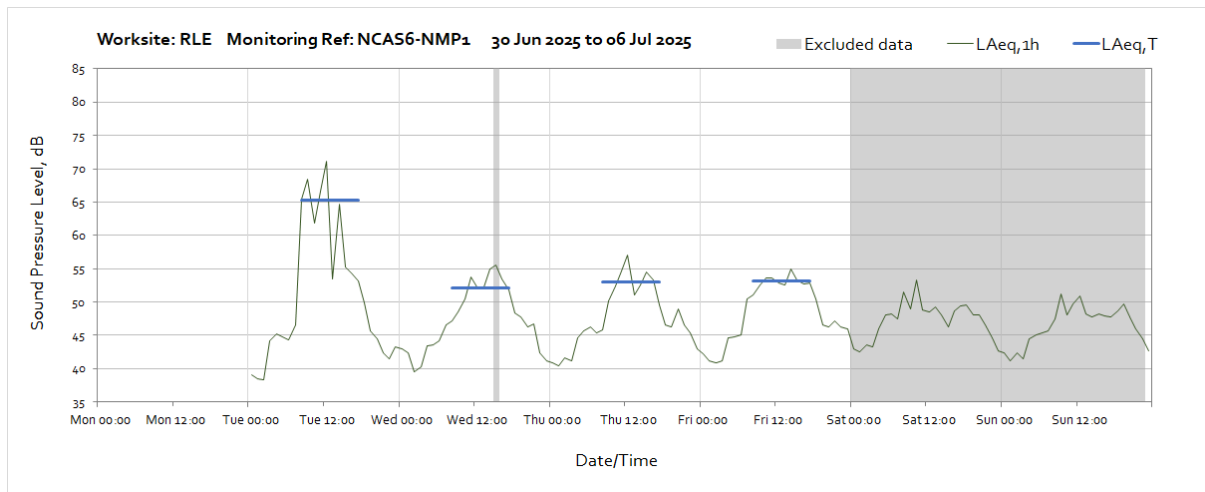
## Worksite: SDVC – Monitoring Ref: SDVC-NMP1

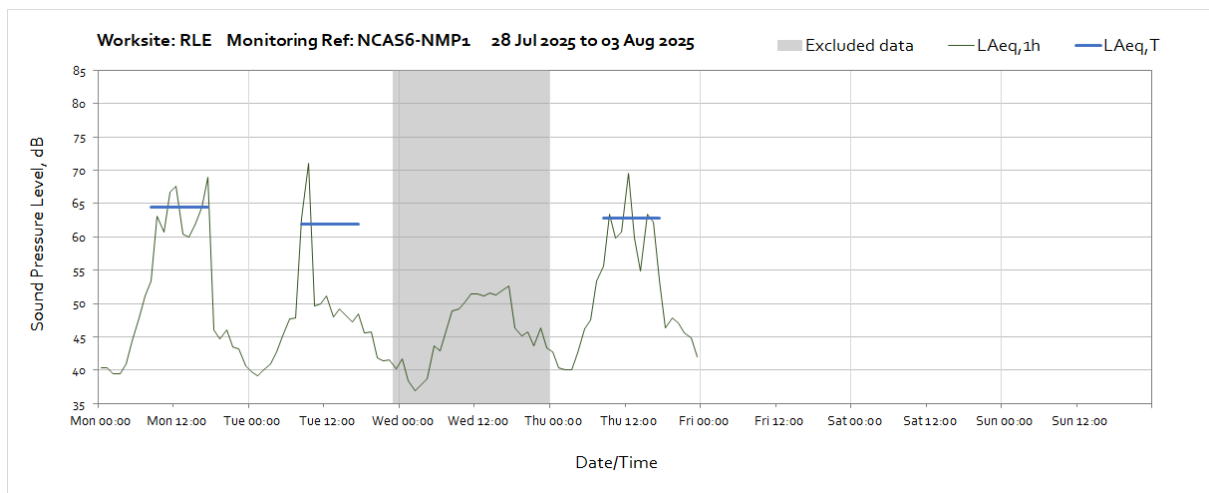
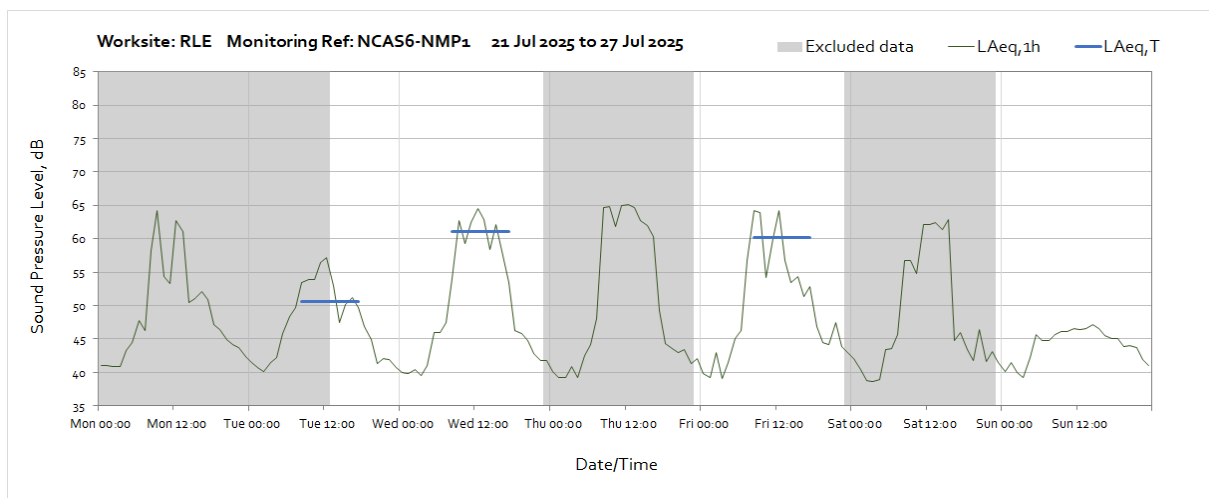
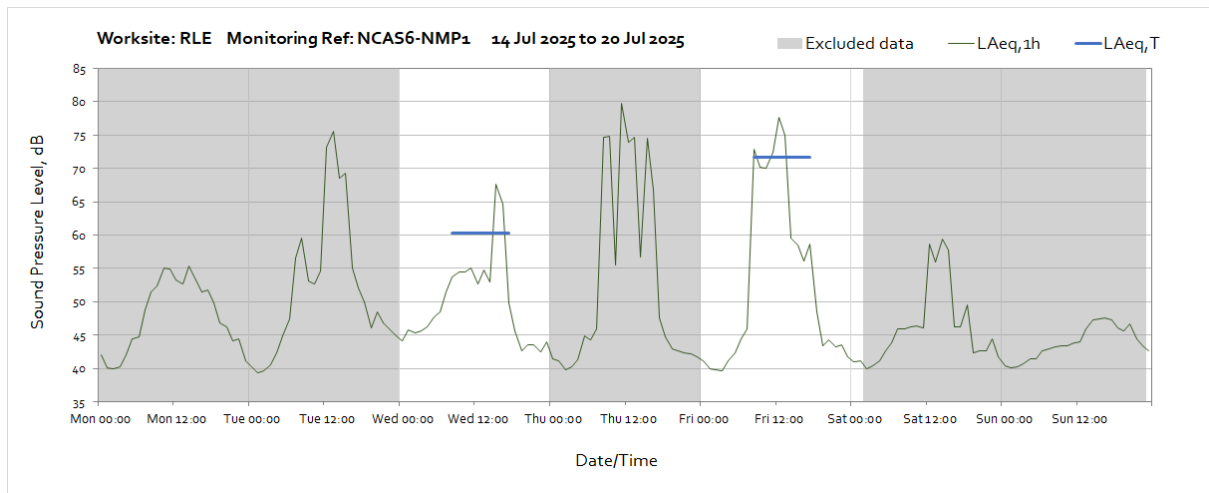




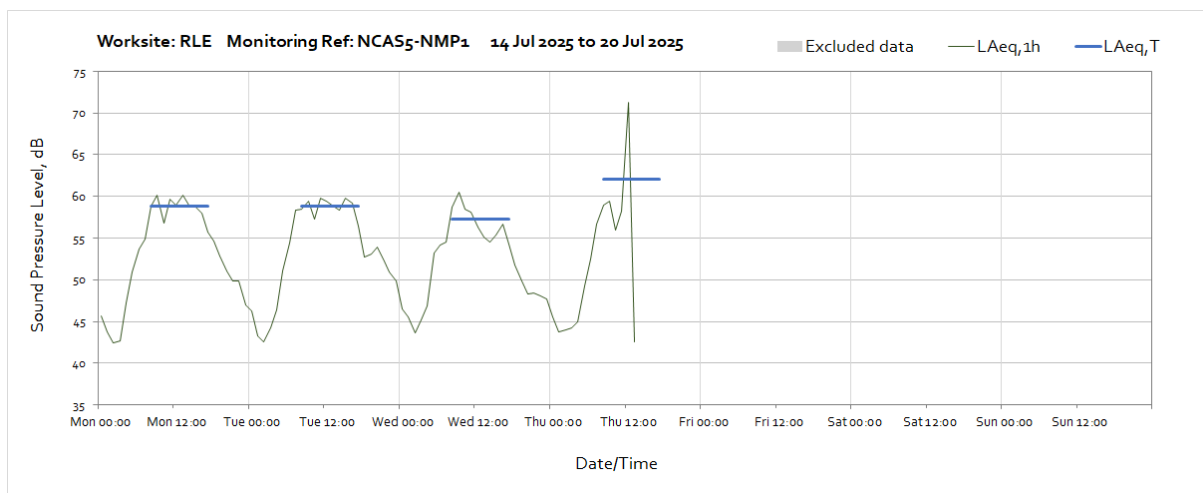
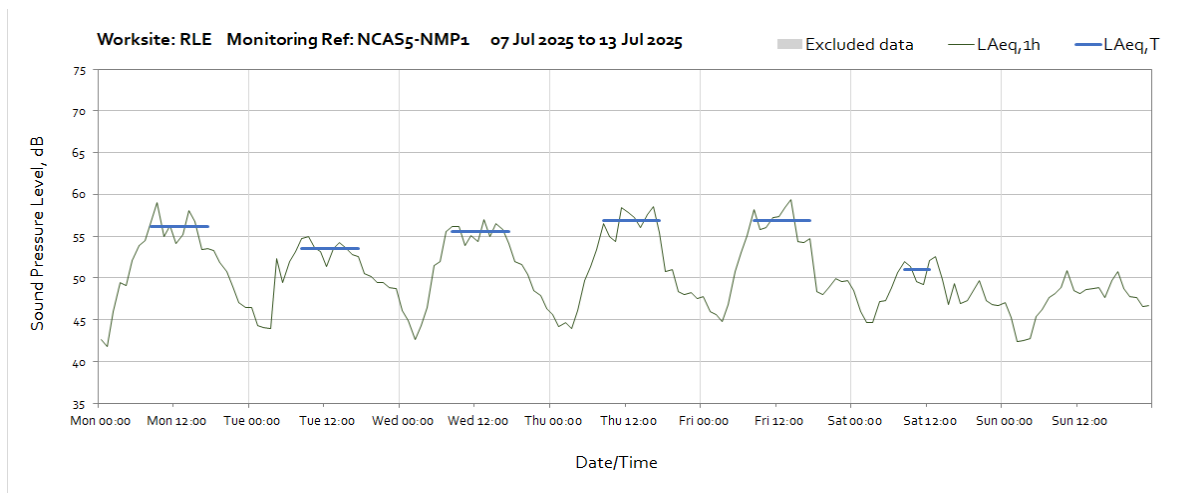
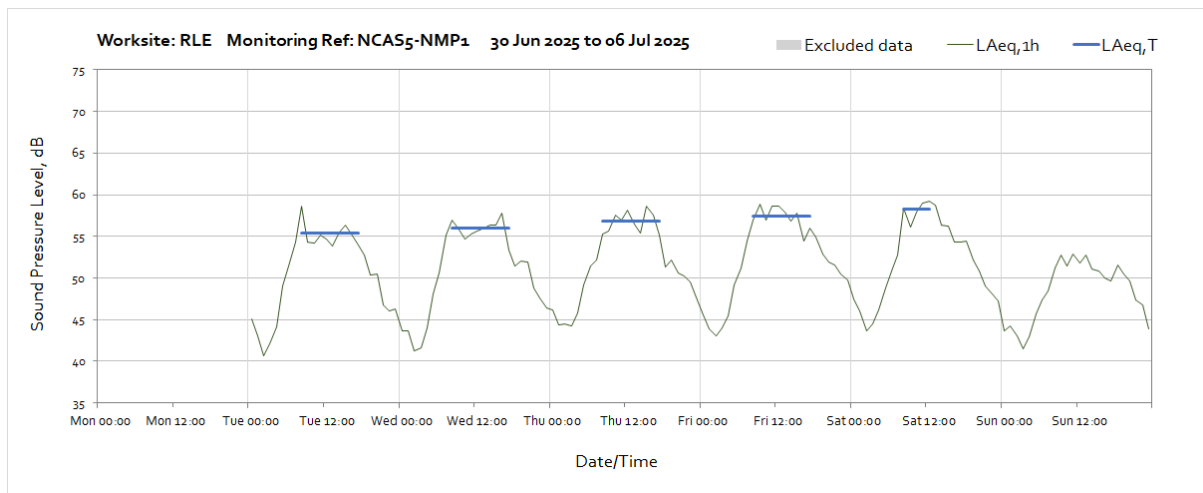
Note: Monitor was retrieved at 16:00 on Thursday 10<sup>th</sup> July.

## Worksite: RLE – Monitoring Ref: NCAS6-NMP1





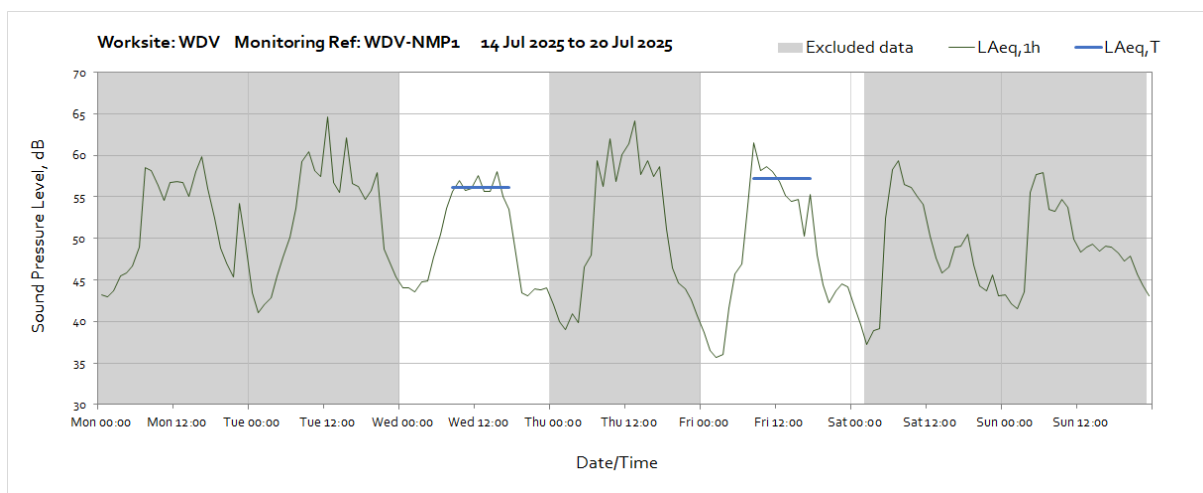
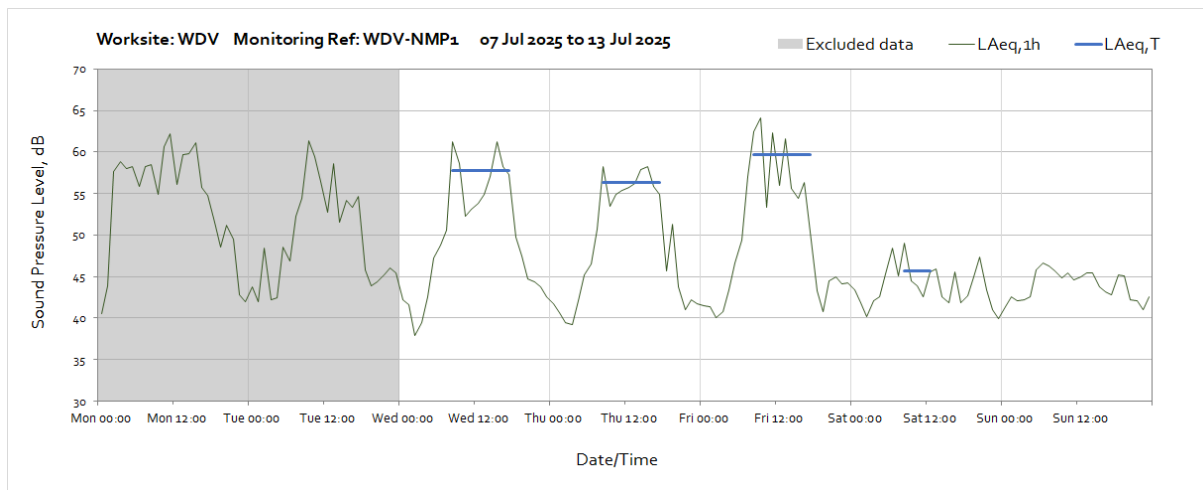
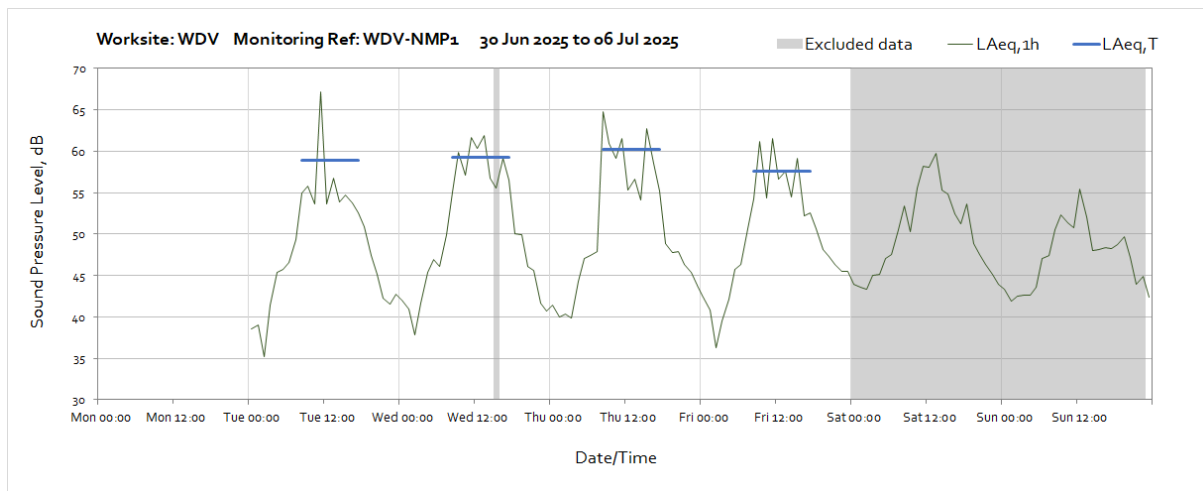
## Worksite: RLE – Monitoring Ref: NCAS5-NMP1



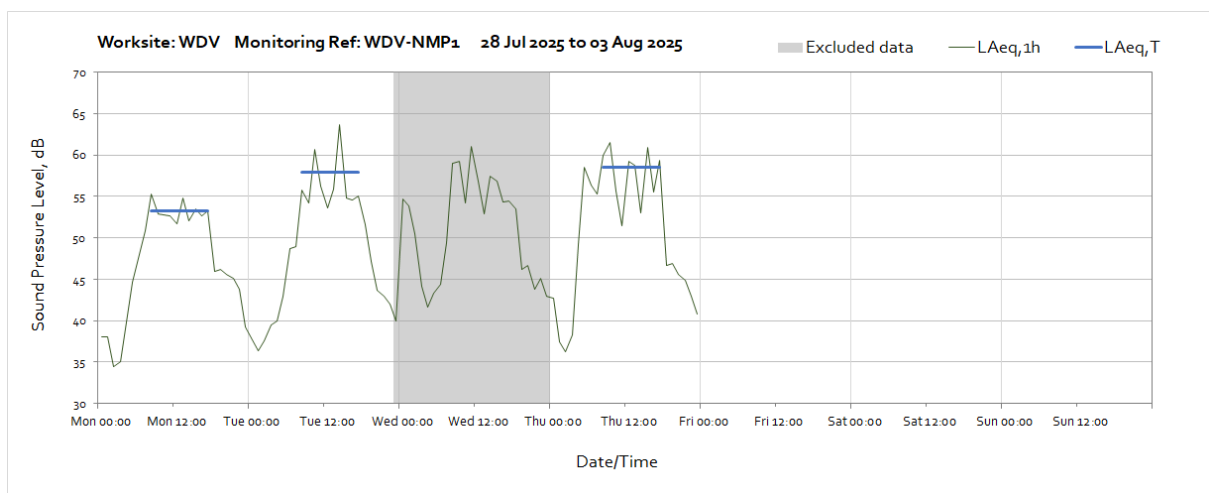
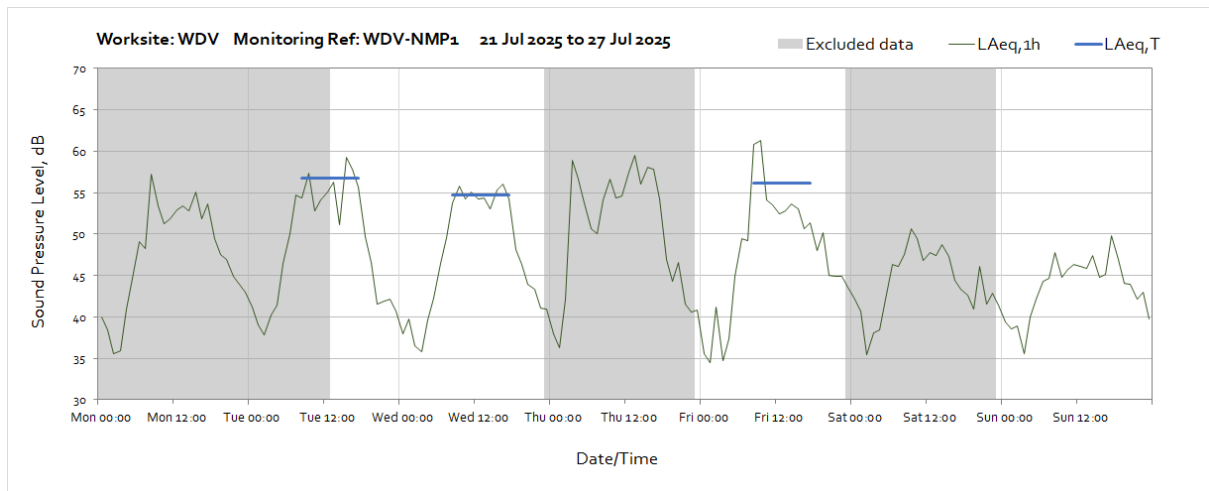
Note: Monitor was retrieved at 14:00 on Thursday 17<sup>th</sup> July.

OFFICIAL

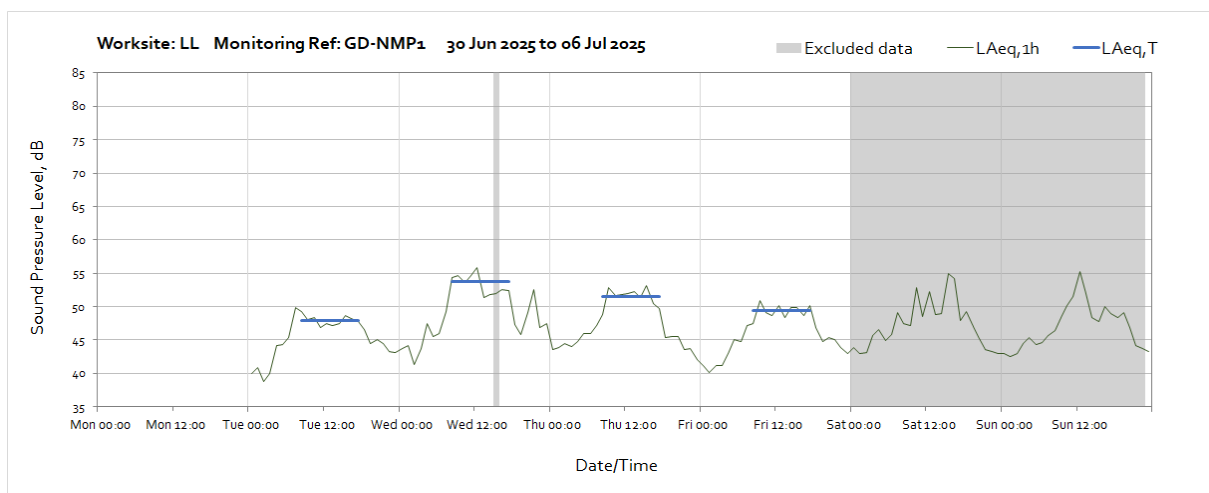
## Worksite: WDV – Monitoring Ref: WDV-NMP1



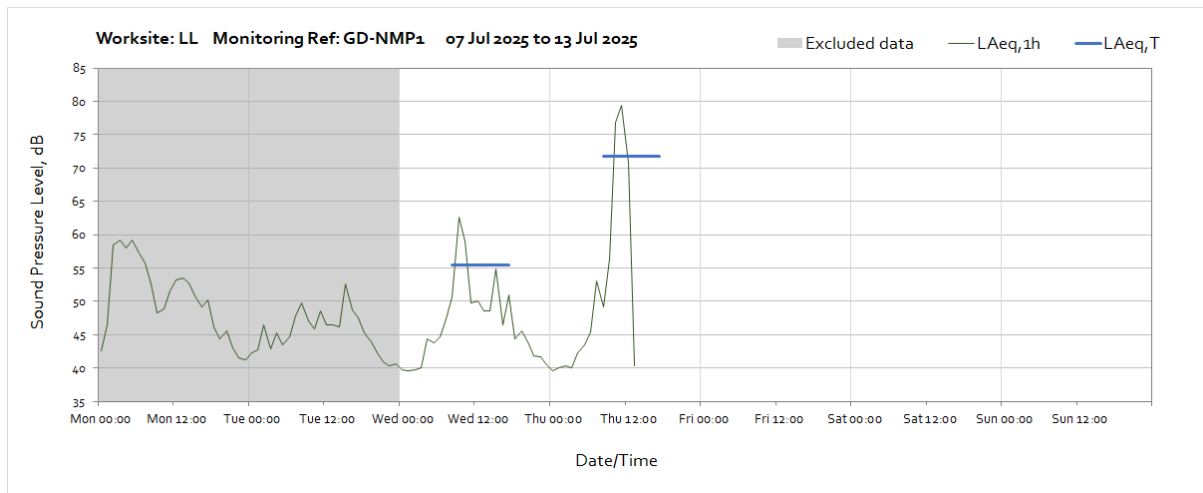
OFFICIAL



## Worksite: LL – Monitoring Ref: GD-NMP1

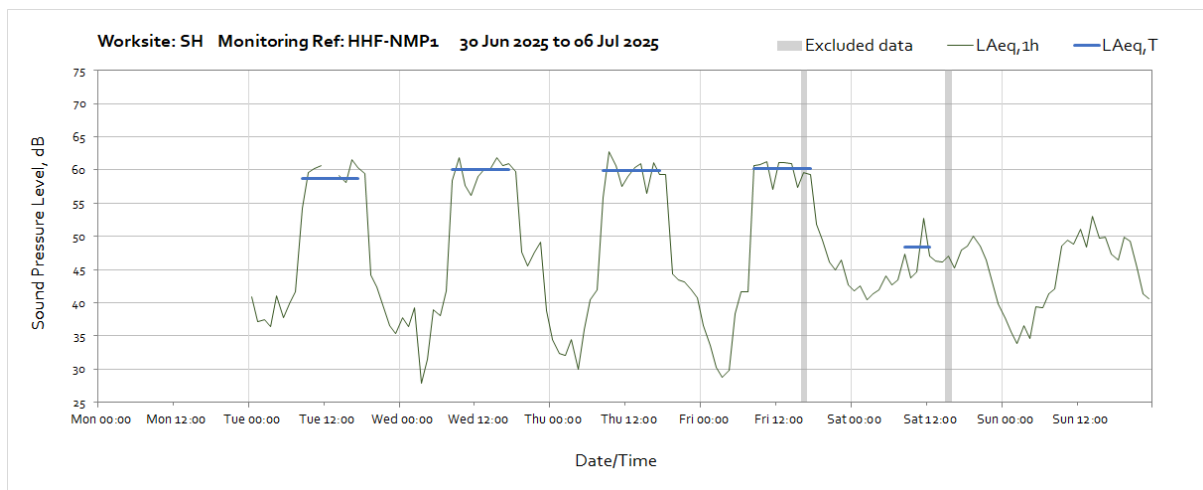




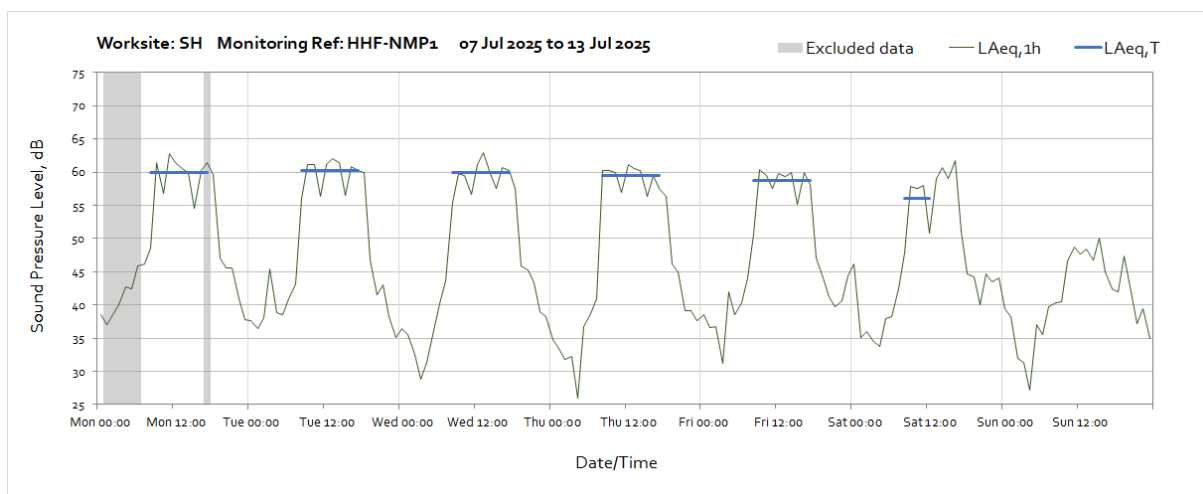


Note: Monitor was retrieved at 14:00 on Thursday 10<sup>th</sup> July.

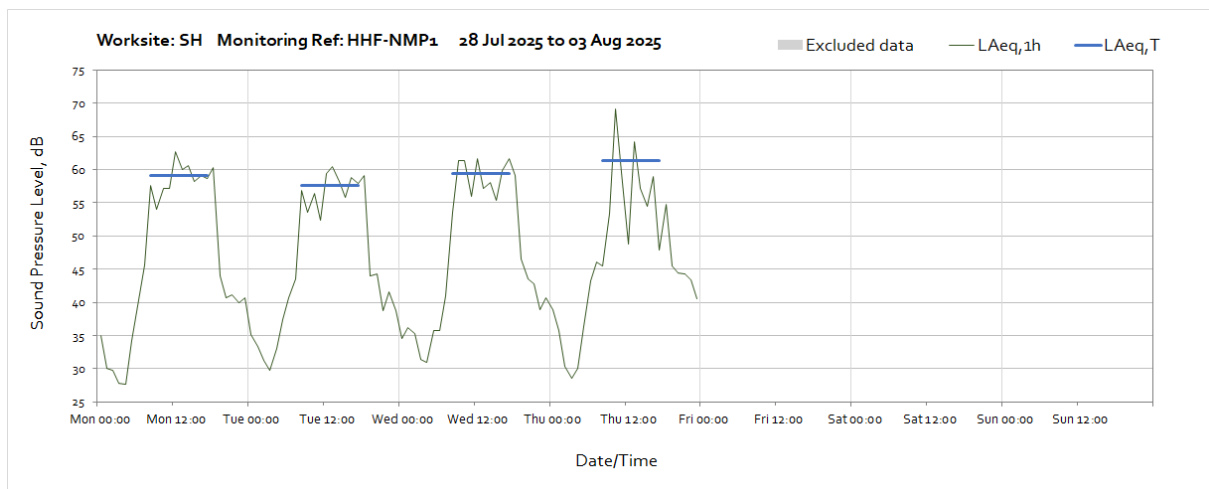
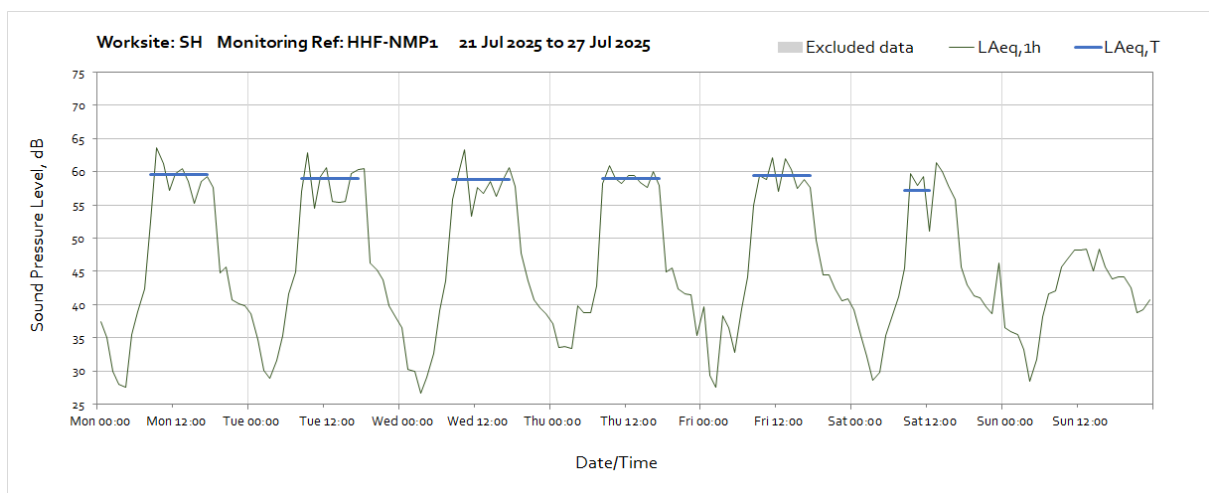
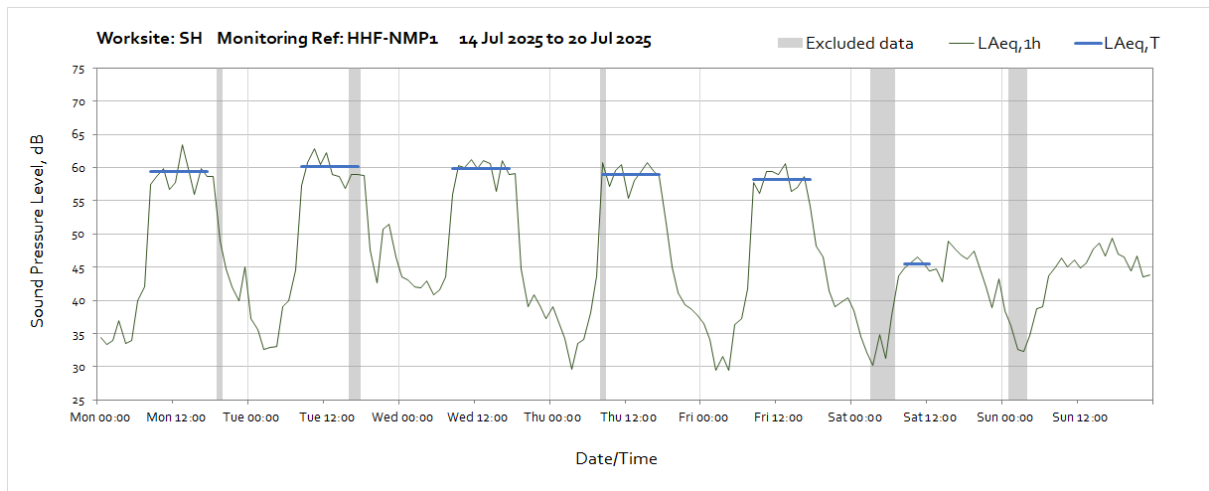
## Worksite: SH – Monitoring Ref: HHF-NMP1



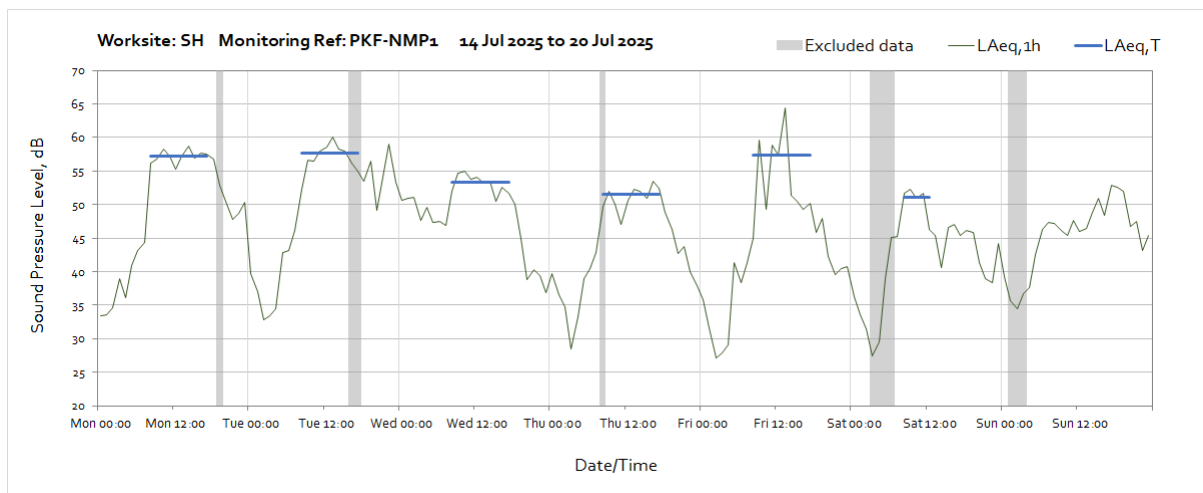
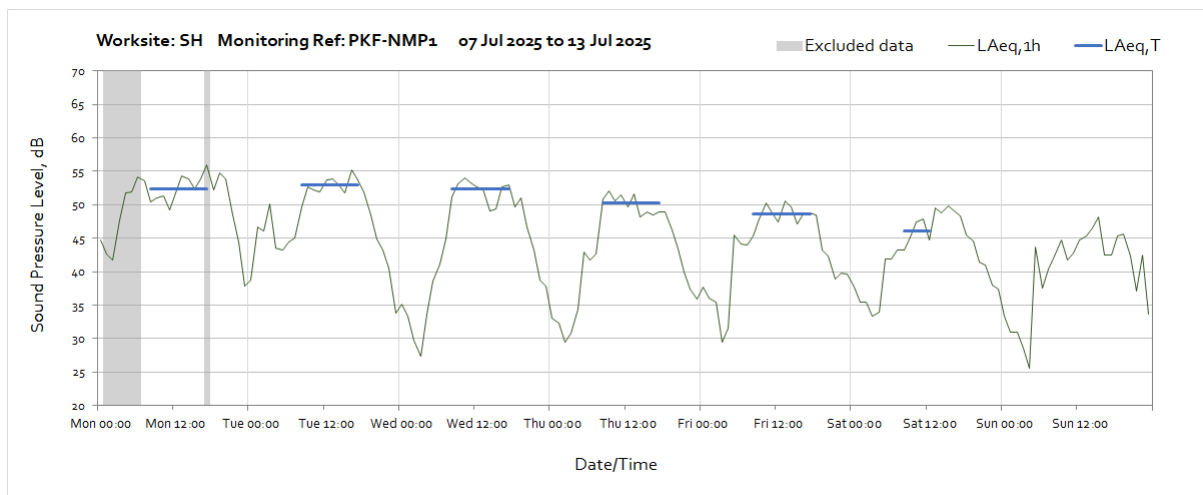
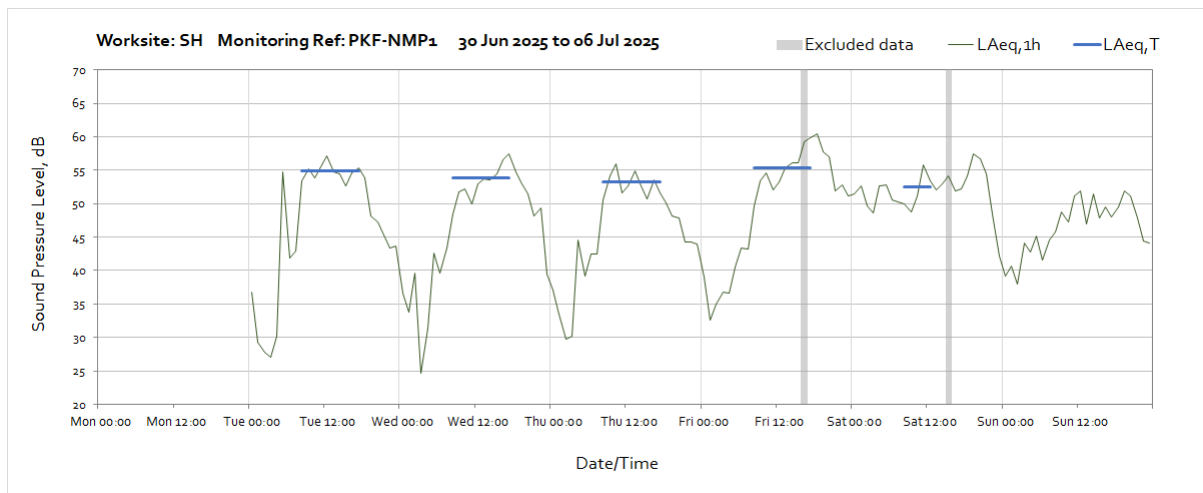
Note: Missing data between 12:00 and 14:00 on Tuesday 1<sup>st</sup> July was due to monitor maintenance.



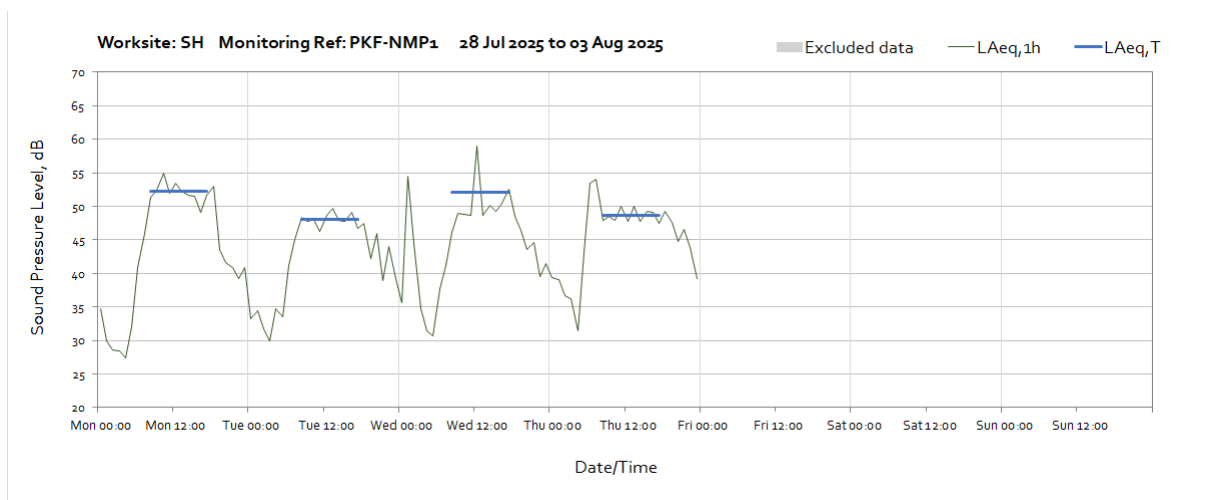
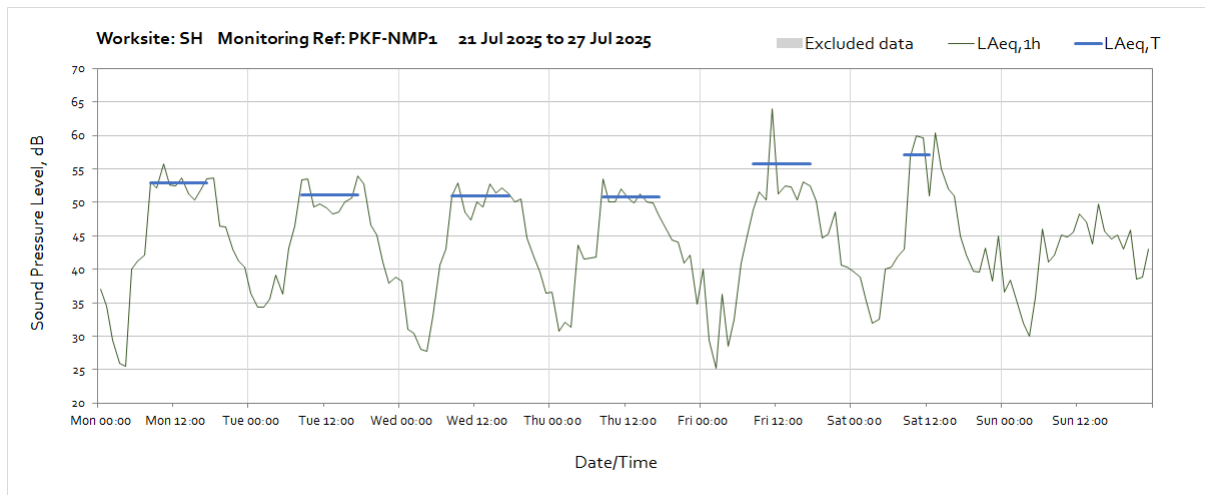
OFFICIAL



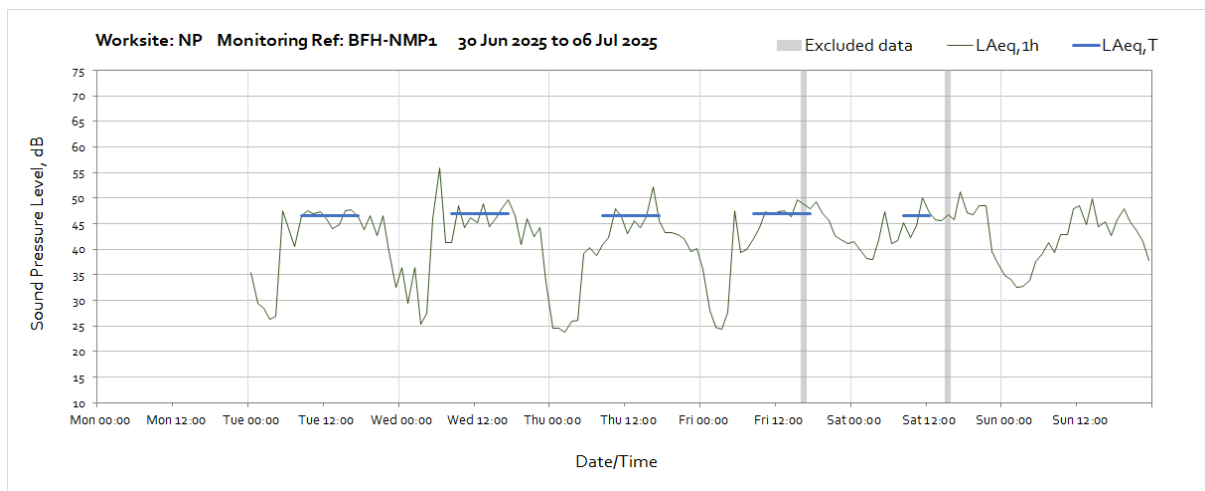
## Worksite: SH – Monitoring Ref: PKF-NMP1

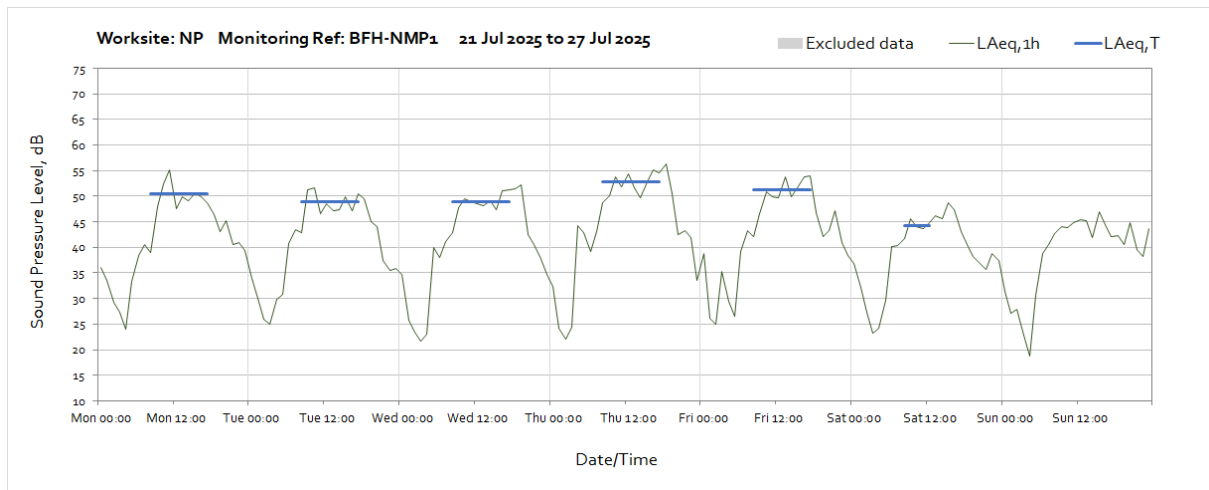
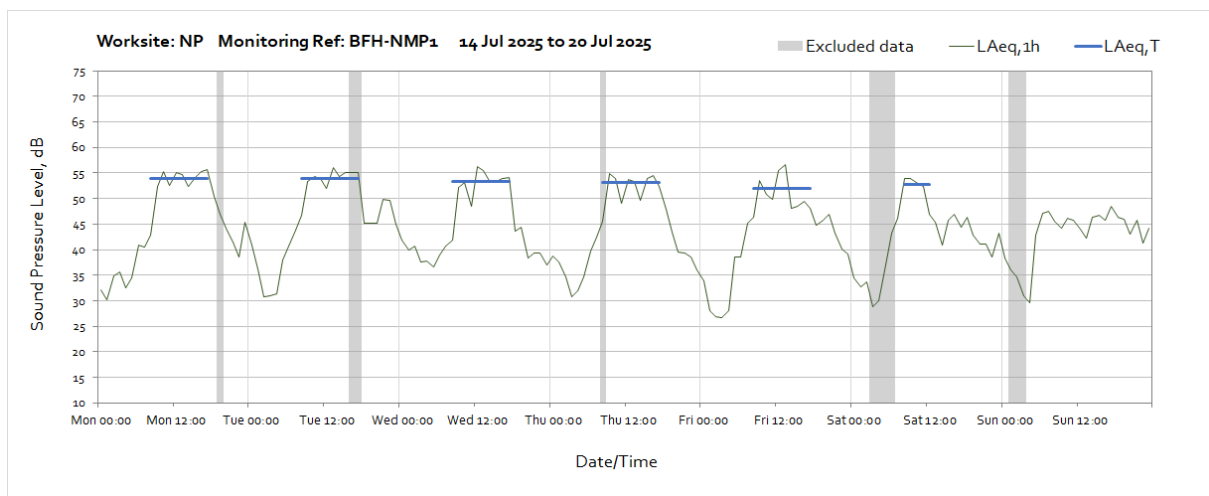
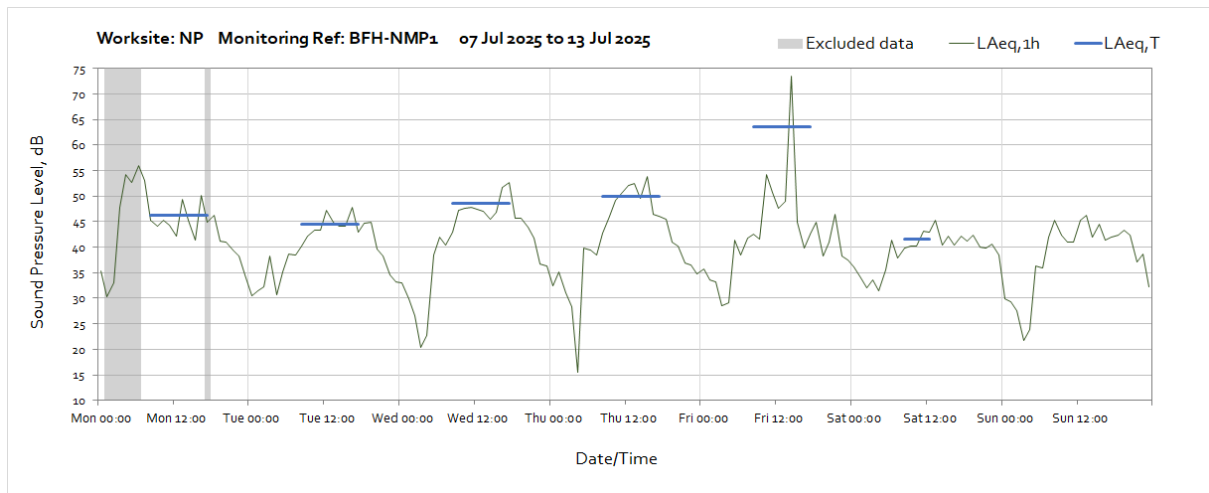


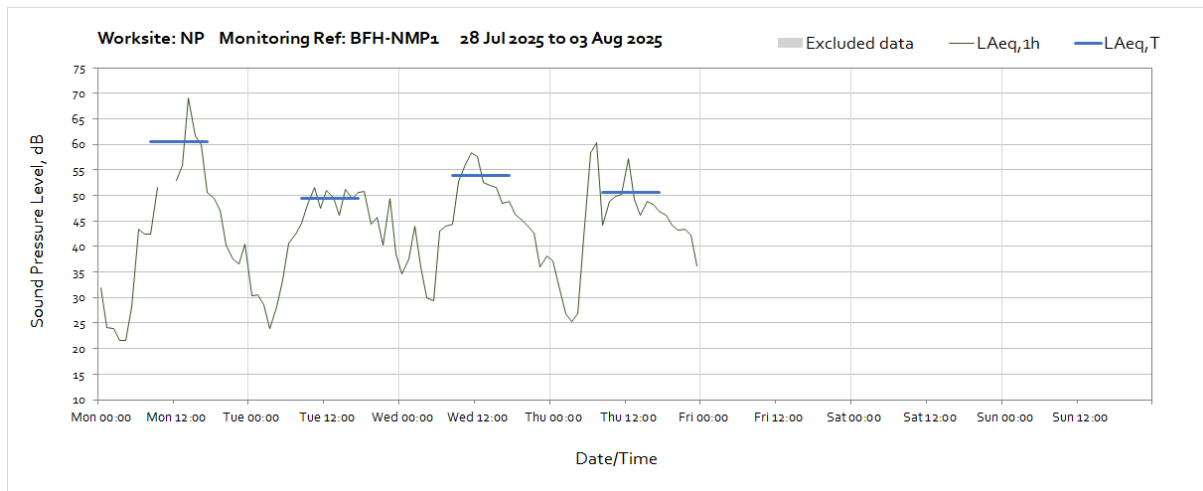
OFFICIAL



## Worksite: NP – Monitoring Ref: BFH-NMP1

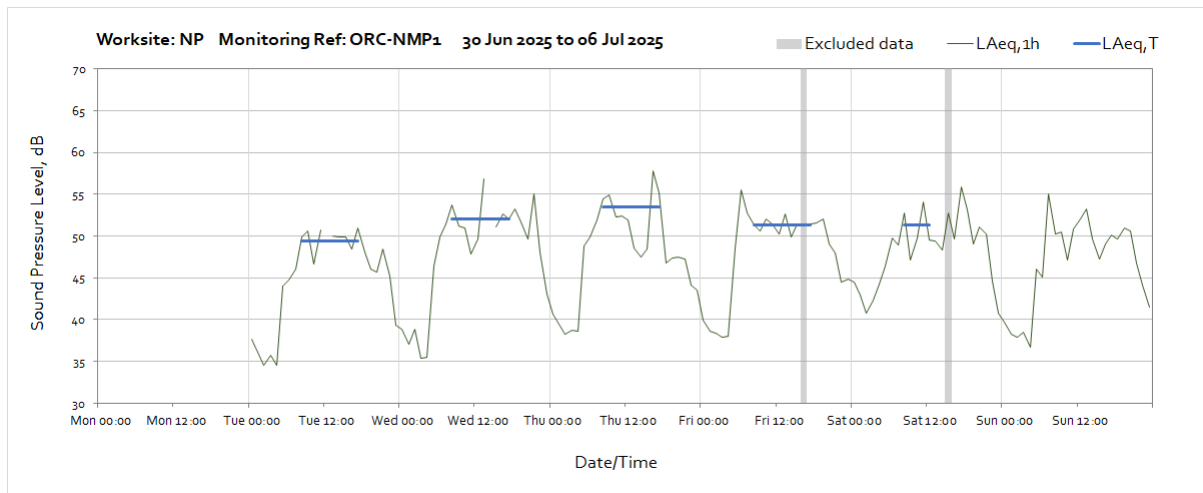




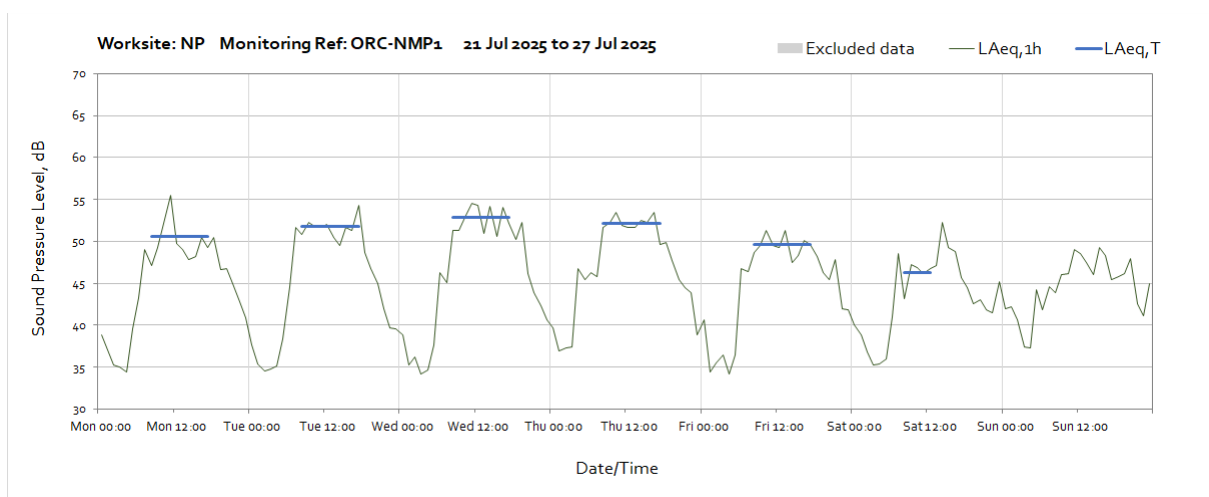
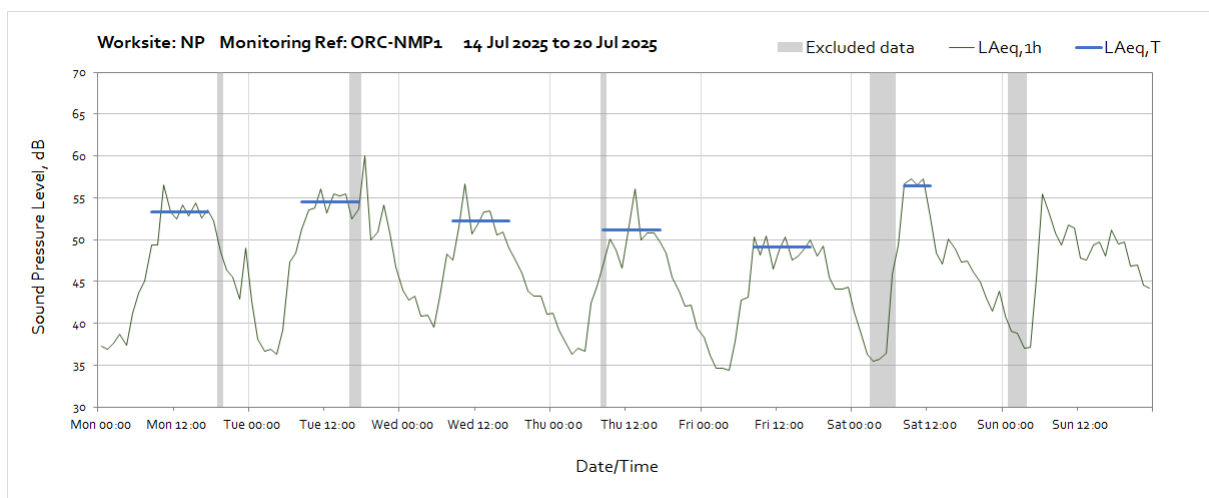
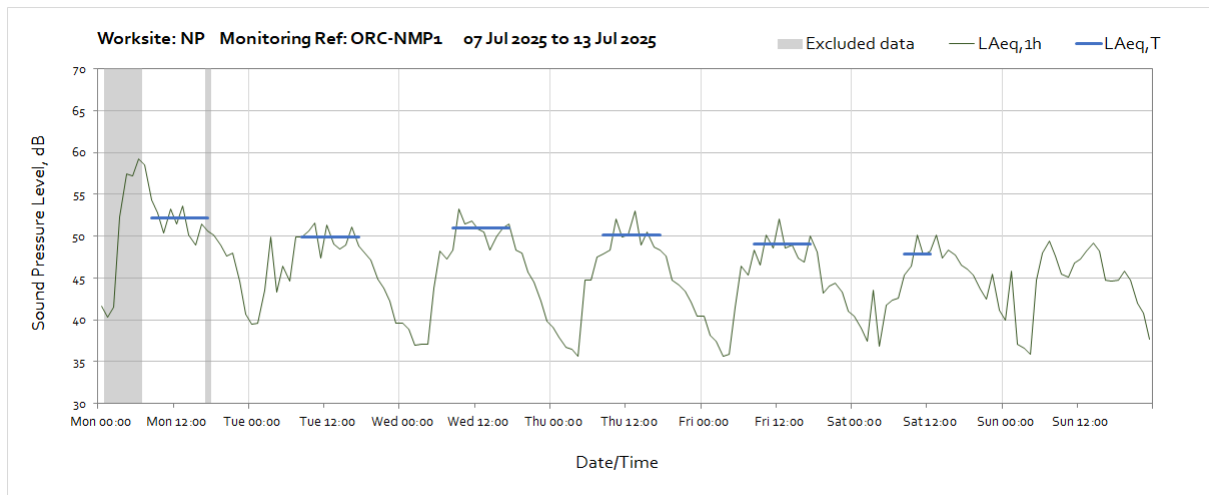


Note: Missing data between 10:00 and 12:00 on Monday 28<sup>th</sup> July was due to a communication error between the monitoring station and server.

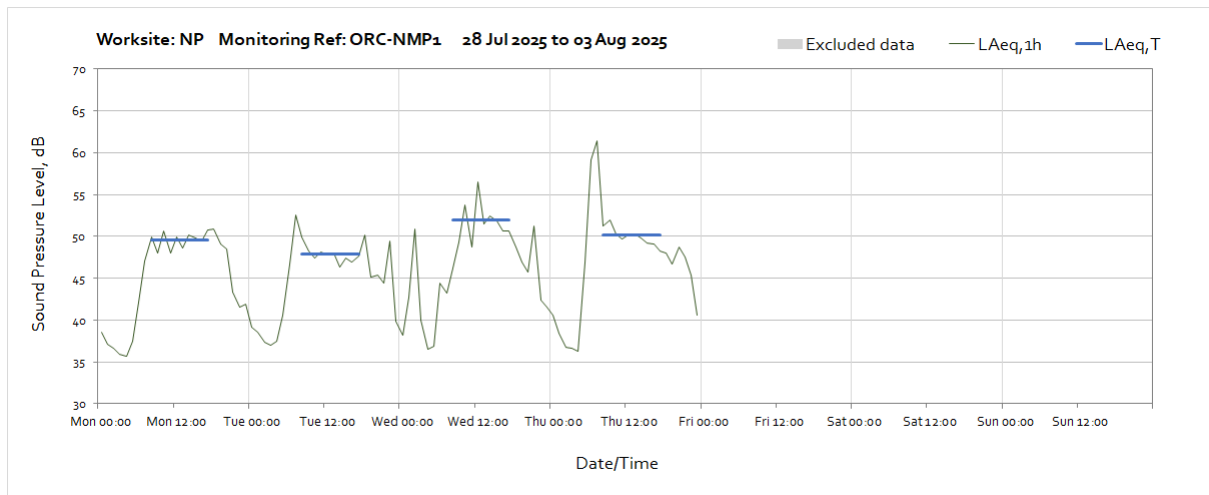
### Worksite: NP – Monitoring Ref: ORC-NMP1



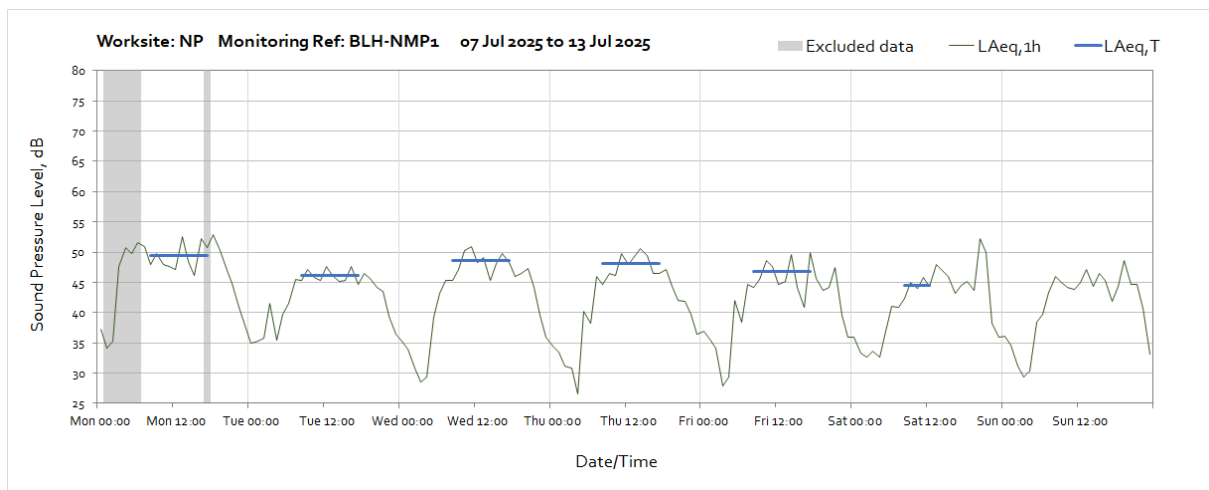
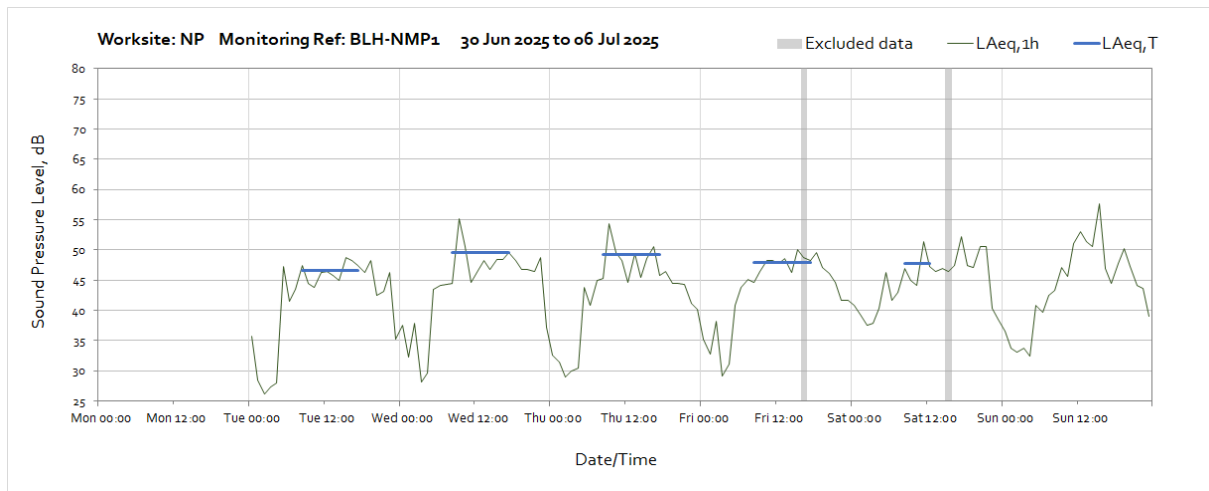
Note: Missing data between 12:00 and 13:00 on Tuesday 1<sup>st</sup> July was due to monitor field calibration.  
Missing data between 14:00 and 15:00 on Wednesday 2<sup>nd</sup> July was due to a communication error between the monitoring station and server.

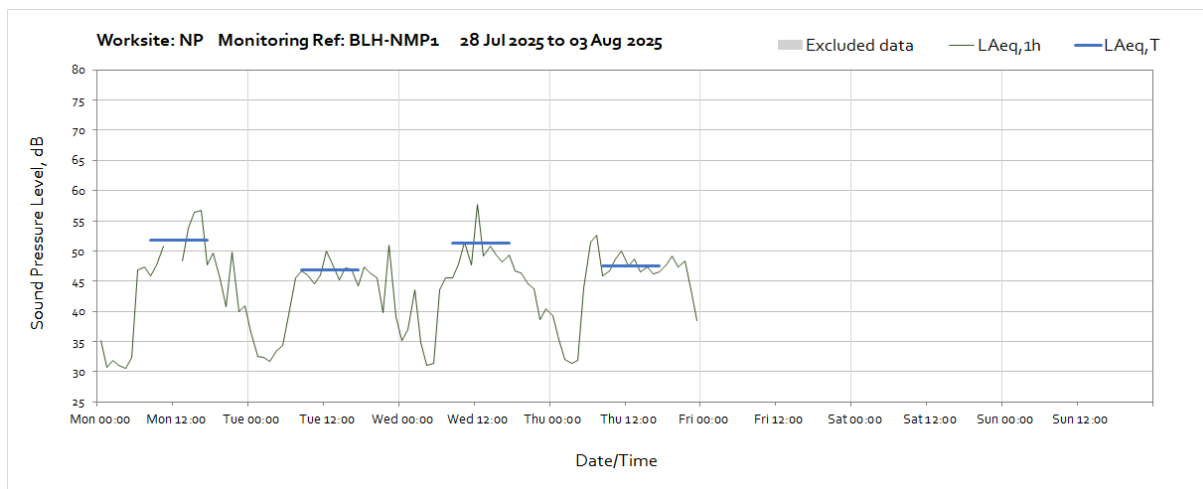
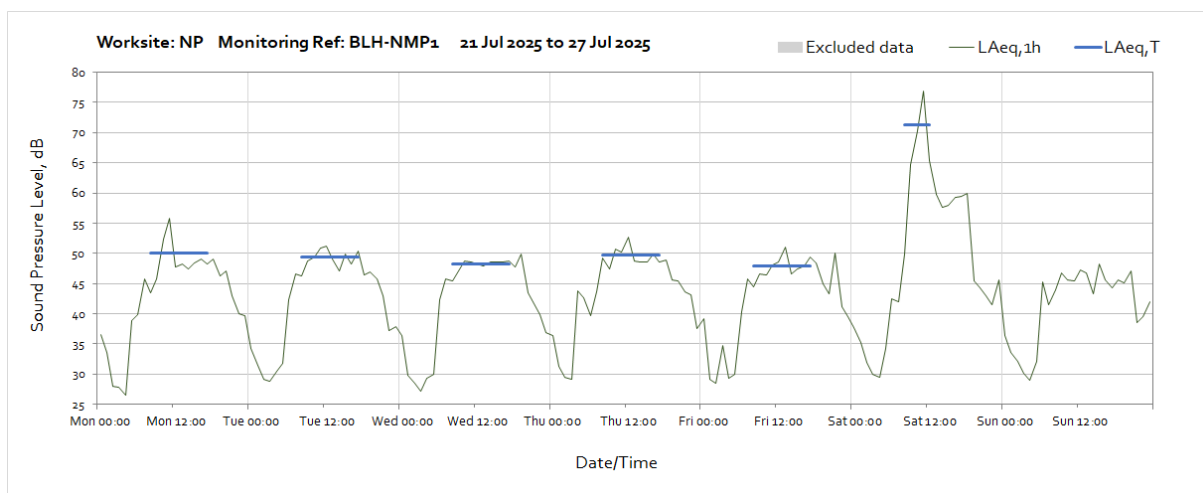
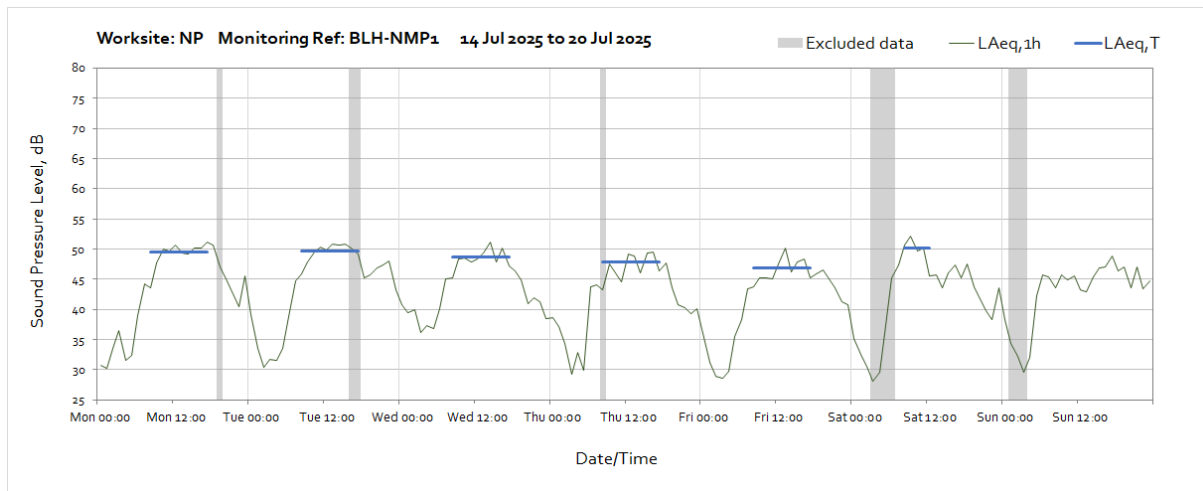






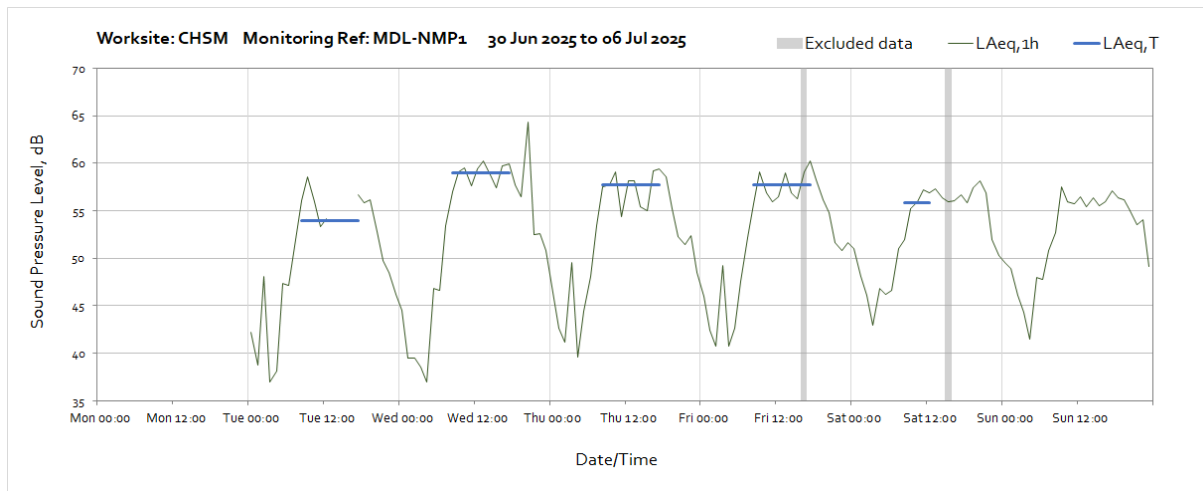
## Worksite: NP – Monitoring Ref: BLH-NMP1



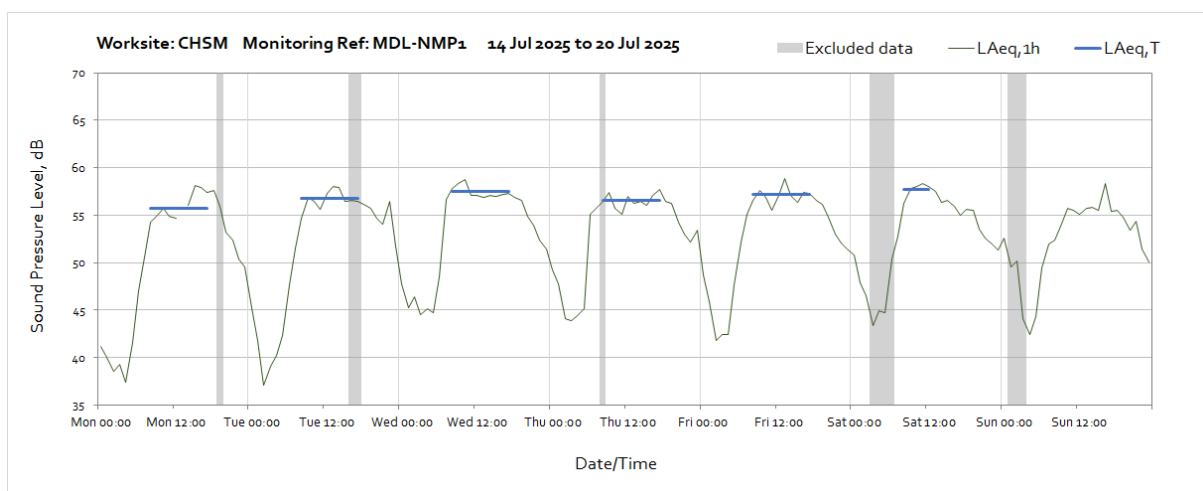
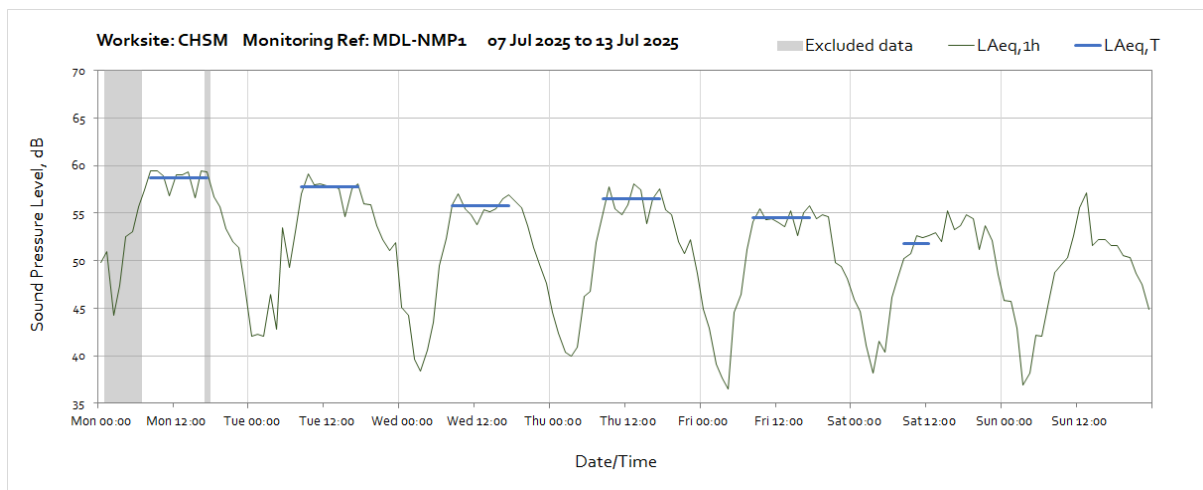


Note: Missing data between 11:00 and 13:00 on Monday 28<sup>th</sup> July was due to monitor field calibration.

## Worksite: CHSM – Monitoring Ref: MDL-NMP1

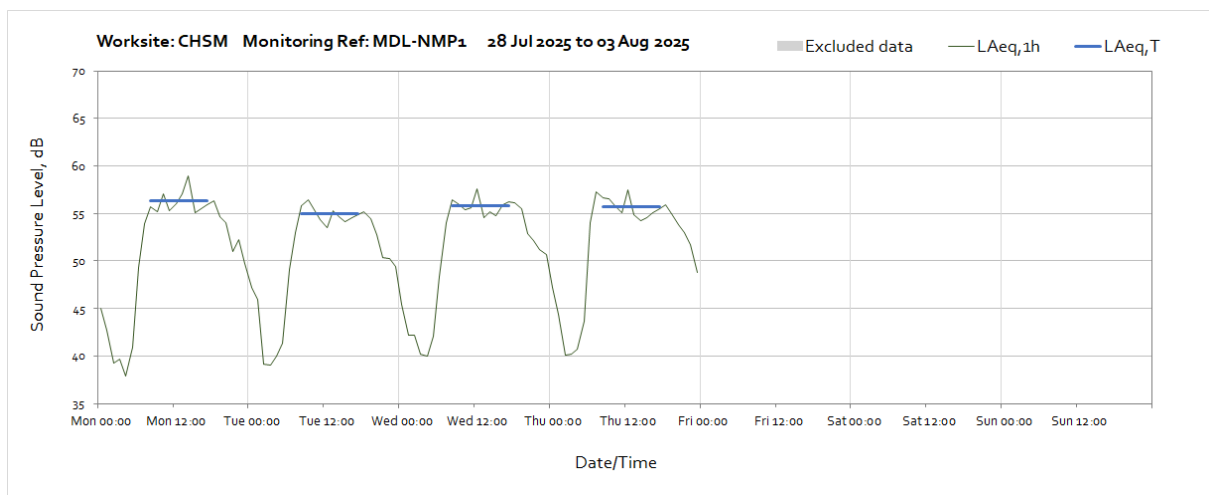
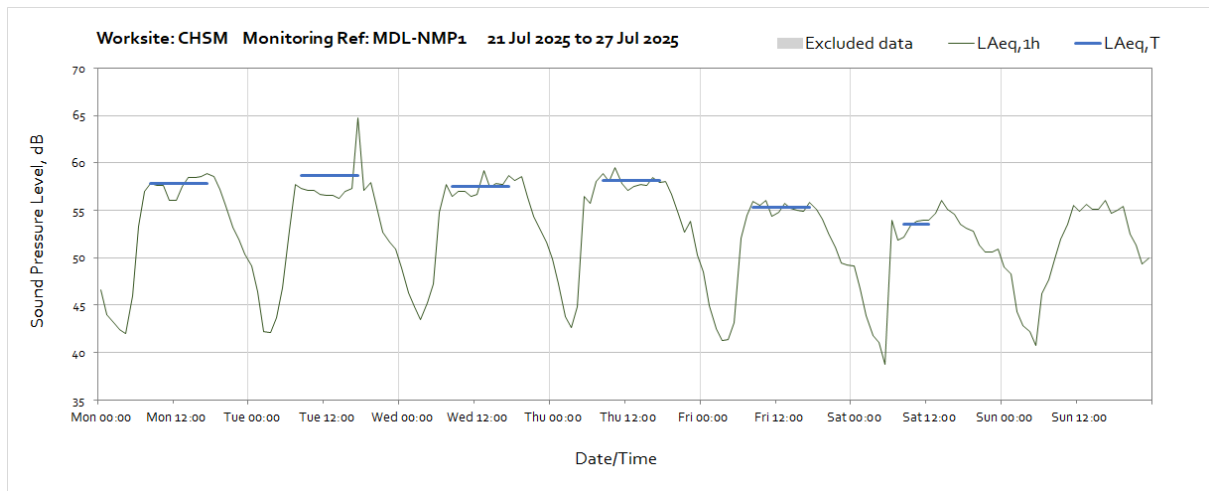


Note: Missing data between 13:00 and 17:00 on Tuesday 1<sup>st</sup> July was due to monitor maintenance and swapping of monitors for laboratory calibration.

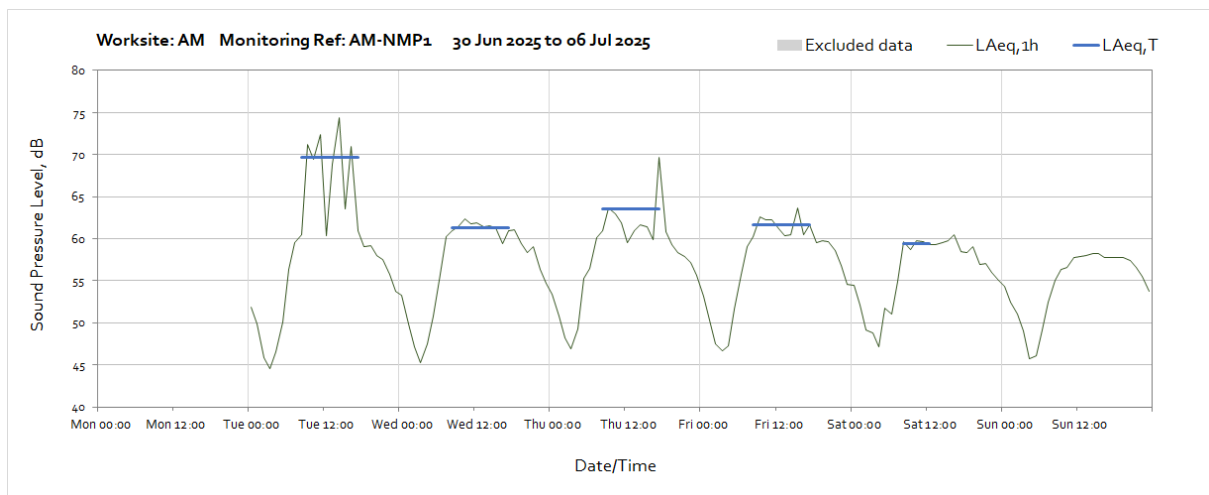


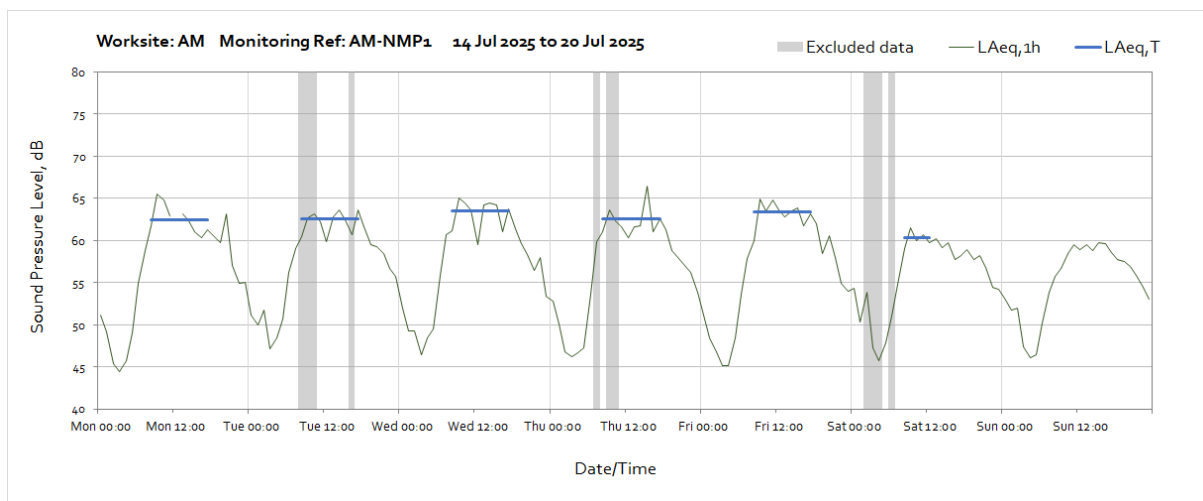
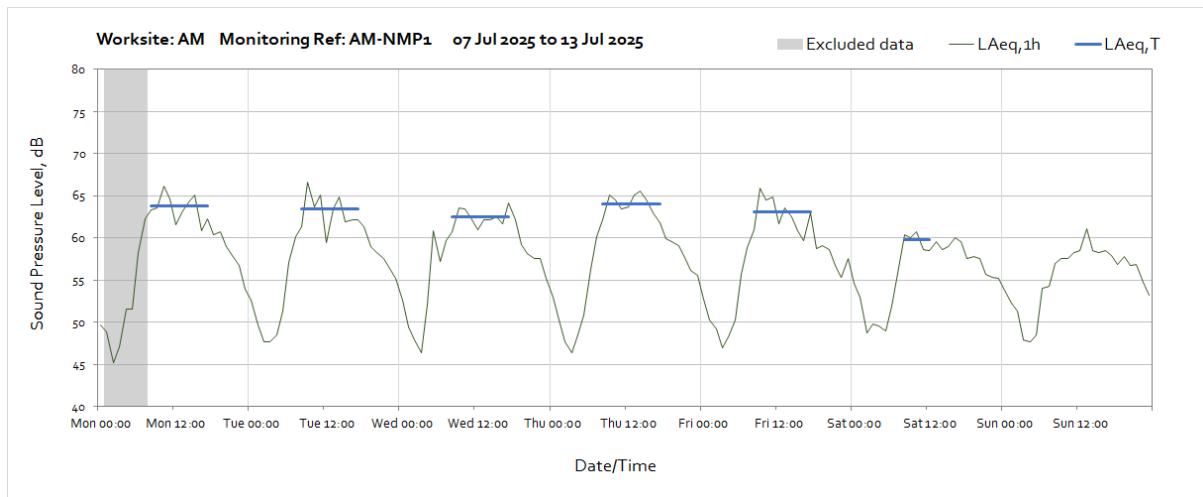
Note: Missing data between 13:00 and 14:00 on Monday 14<sup>th</sup> July was due to a communication error between the monitoring station and server.

OFFICIAL

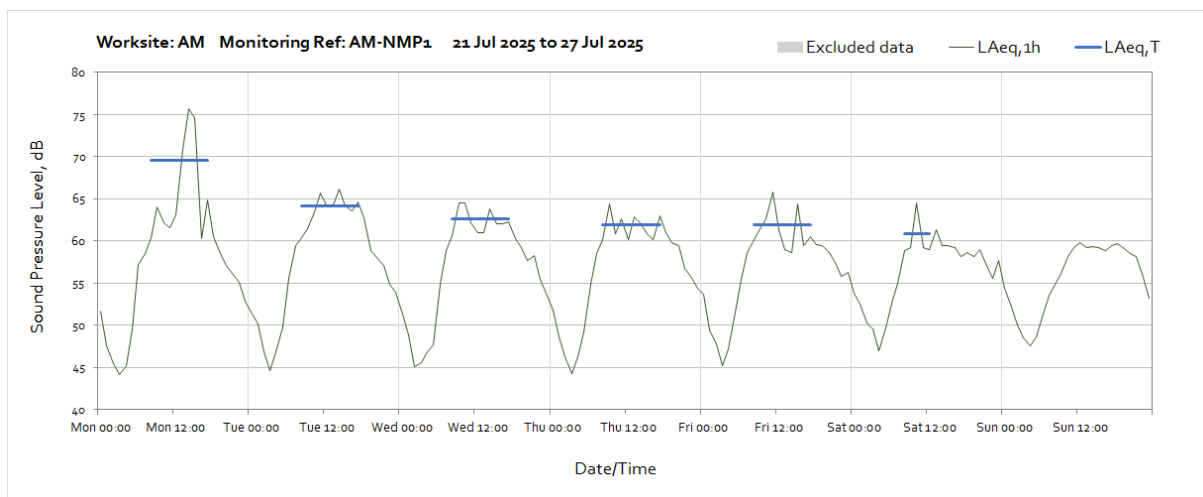


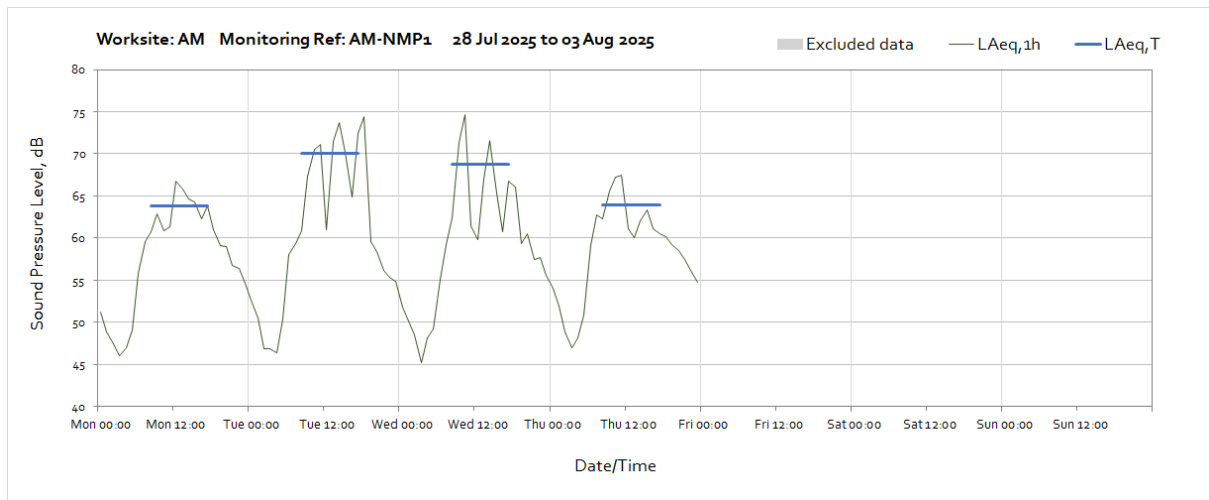
## Worksite: AM – Monitoring Ref: AM-NMP1



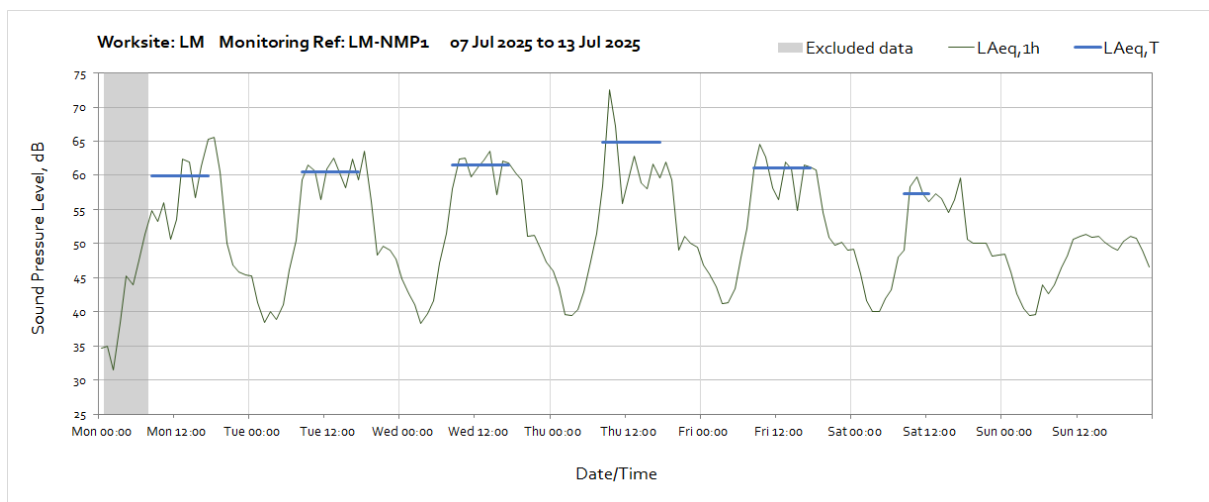
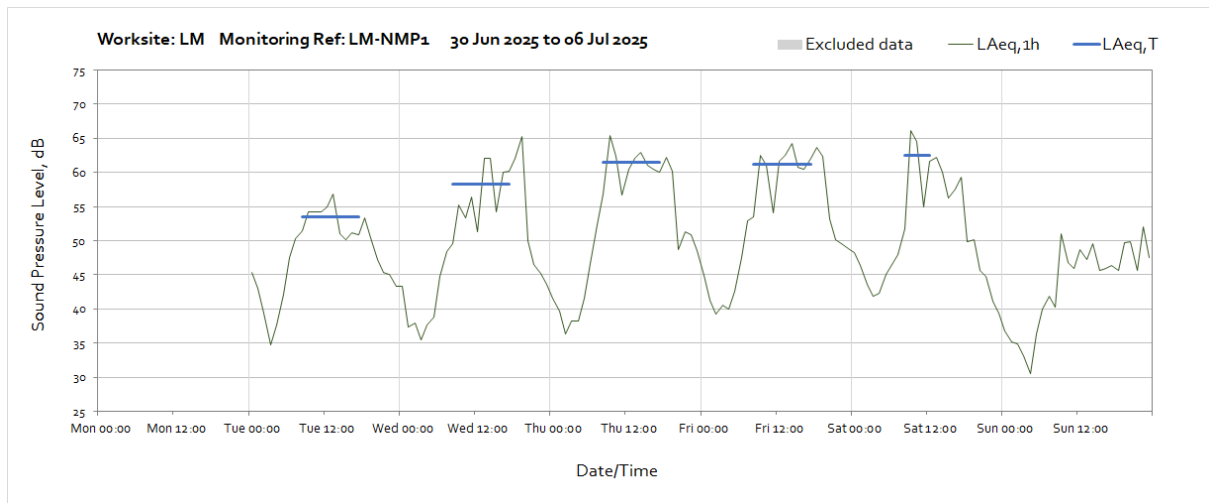


Note: Missing data between 12:00 and 13:00 on Monday 14<sup>th</sup> July was due to a communication error between the monitoring station and server.

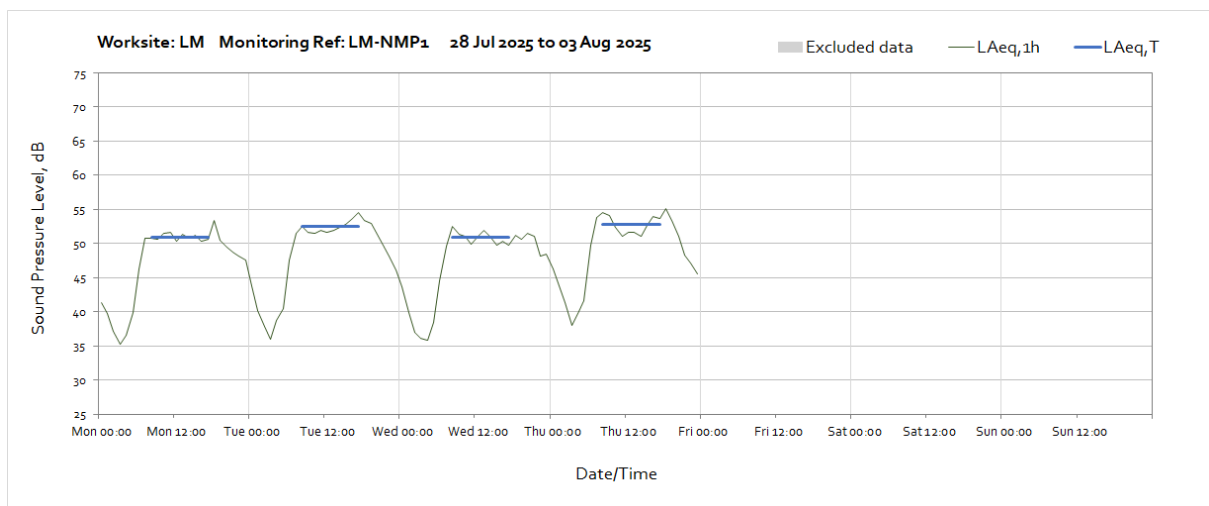
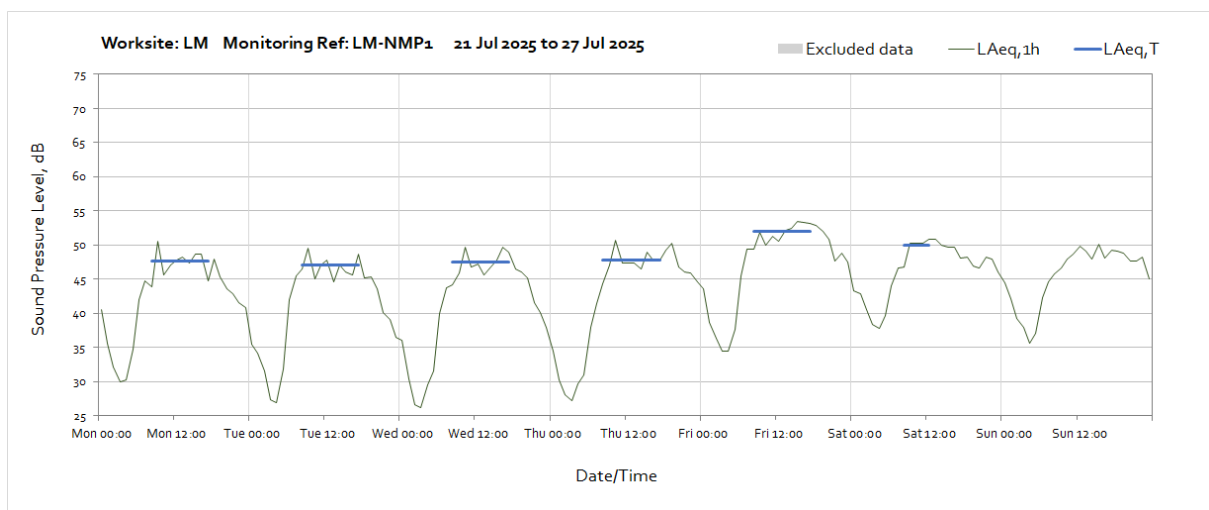
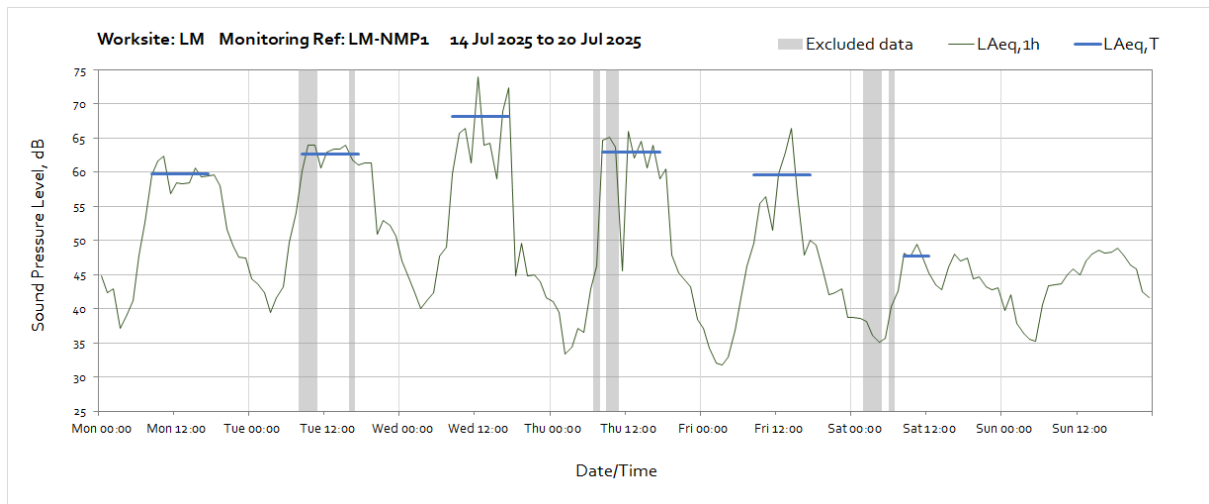




## Worksite: LM – Monitoring Ref: LM-NMP1

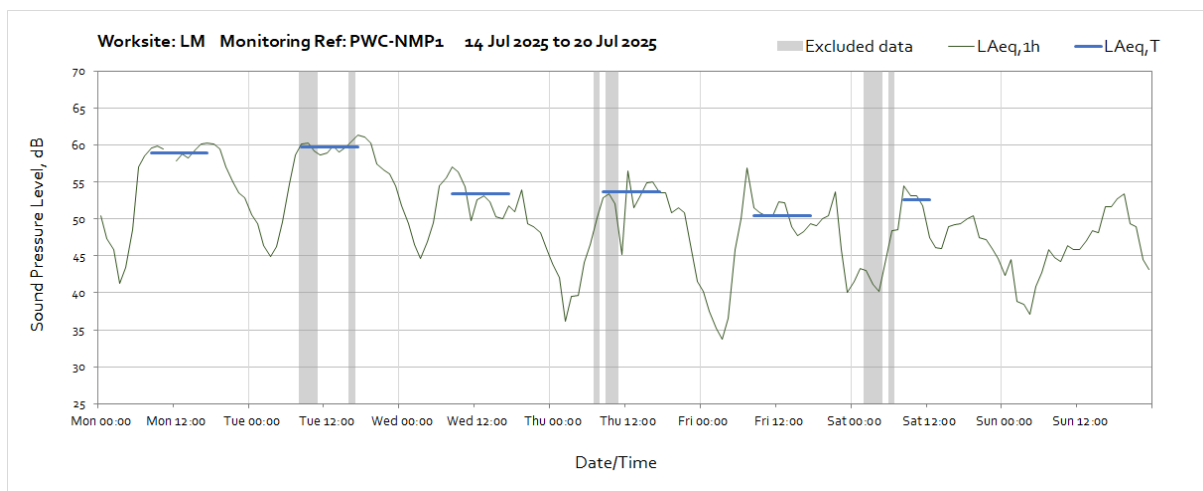
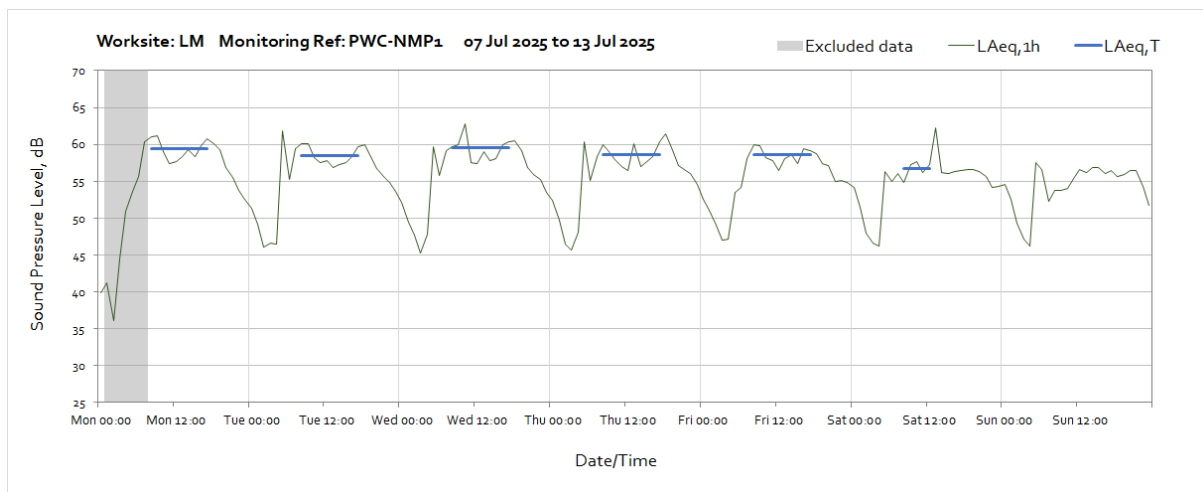
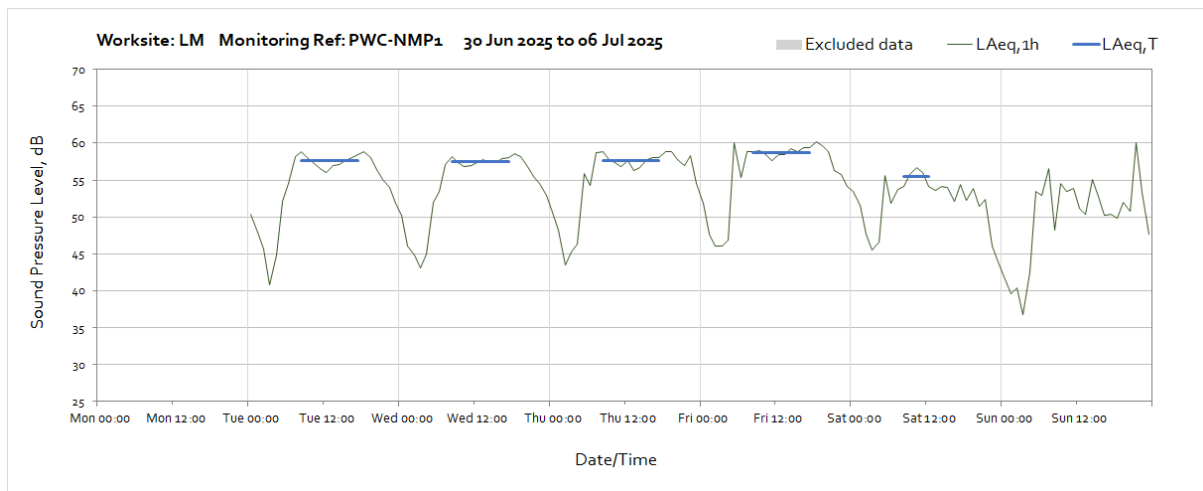


OFFICIAL



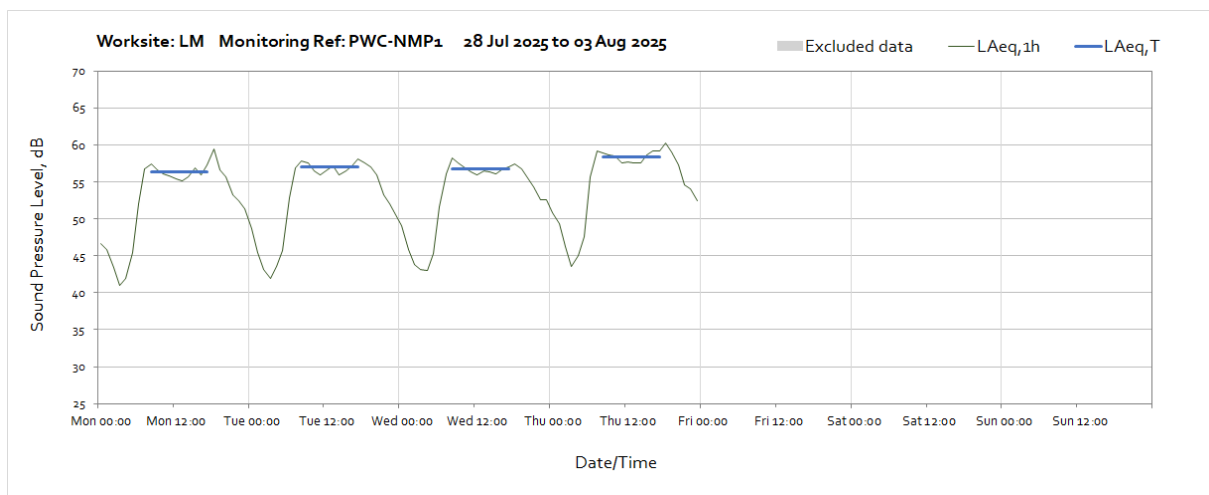
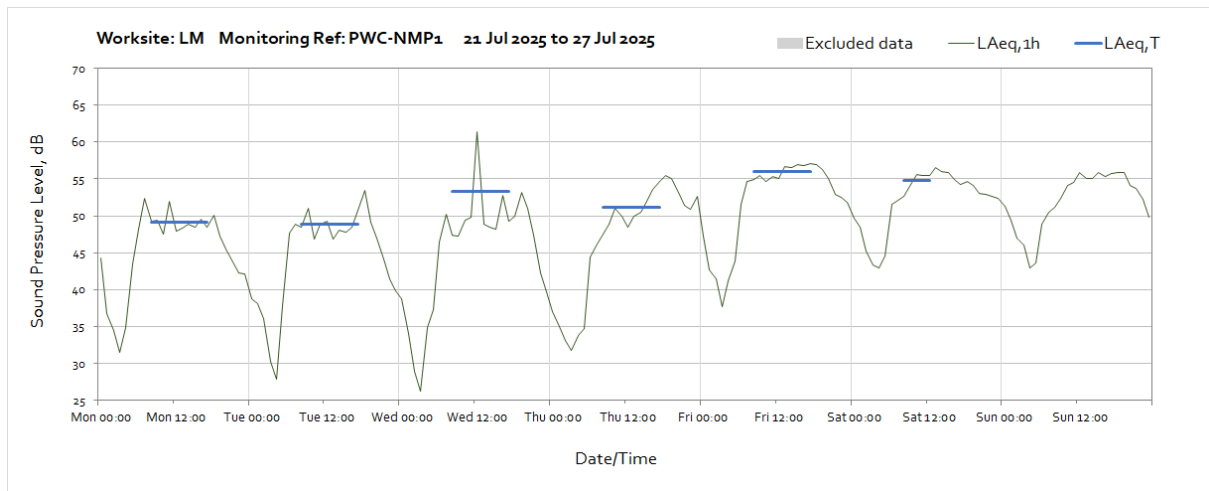


## Worksite: LM – Monitoring Ref: PWC-NMP1

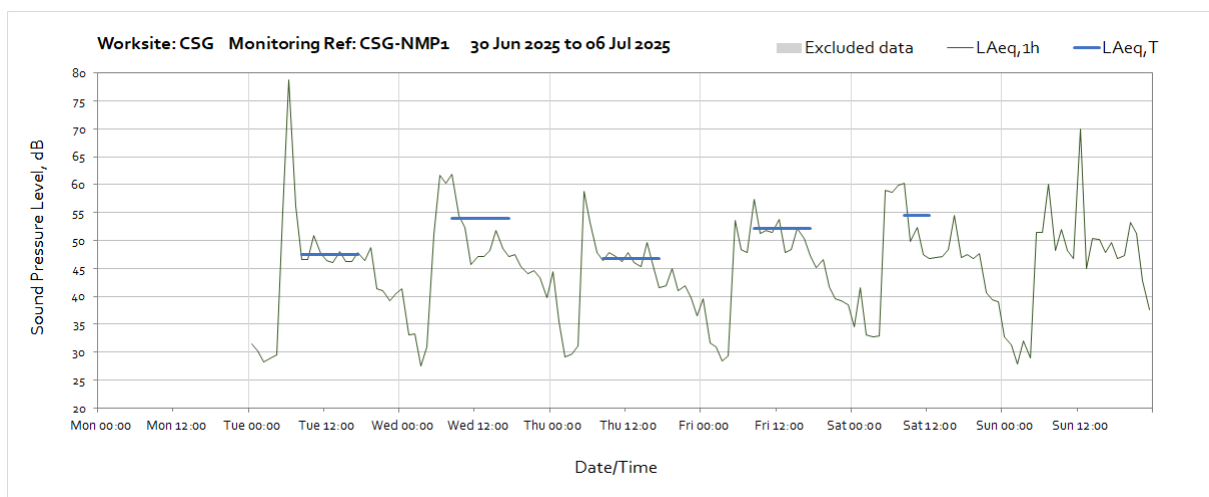


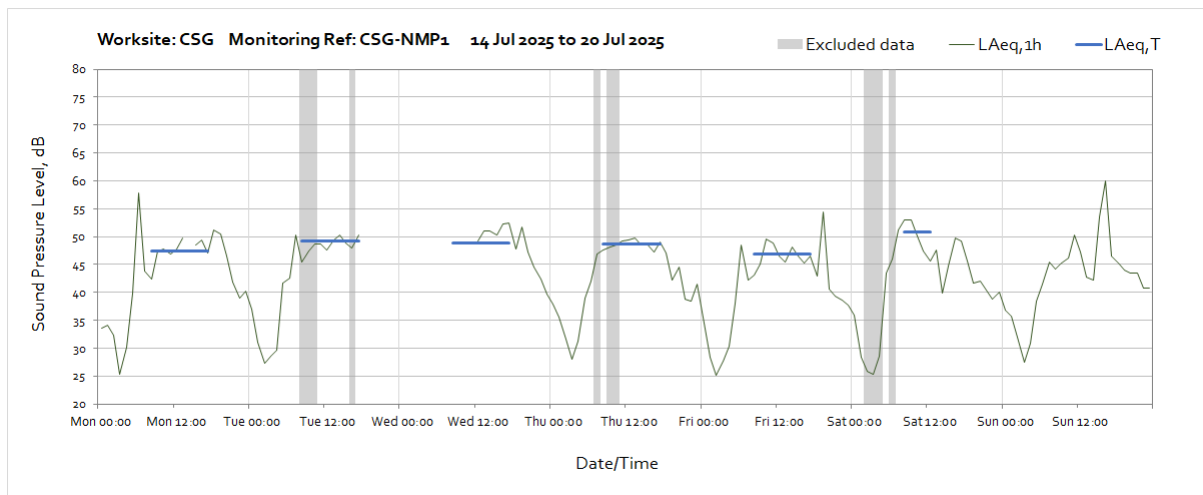
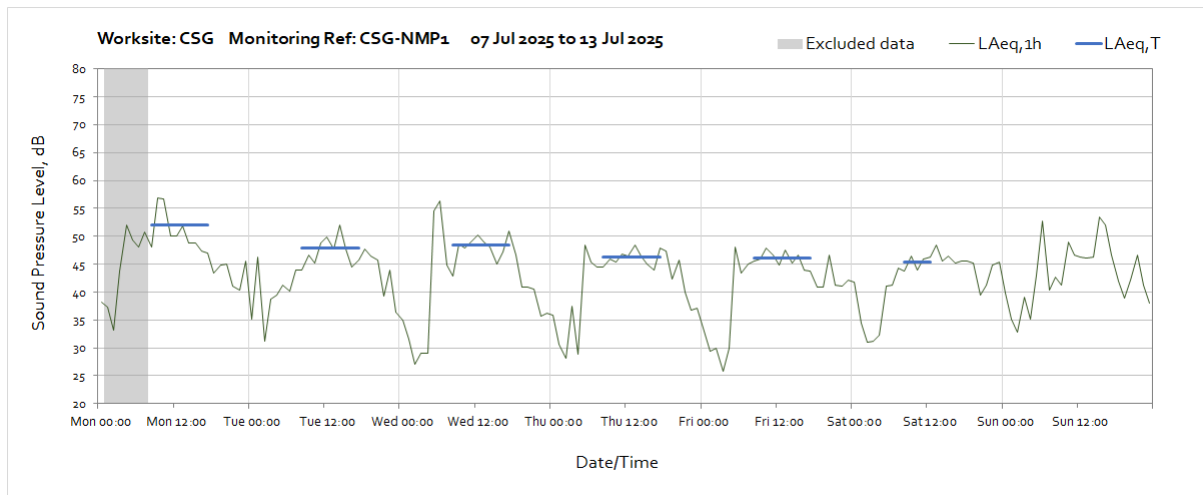
Note: Missing data between 11:00 and 12:00 on Monday 14<sup>th</sup> July was due to monitor field calibration.

OFFICIAL

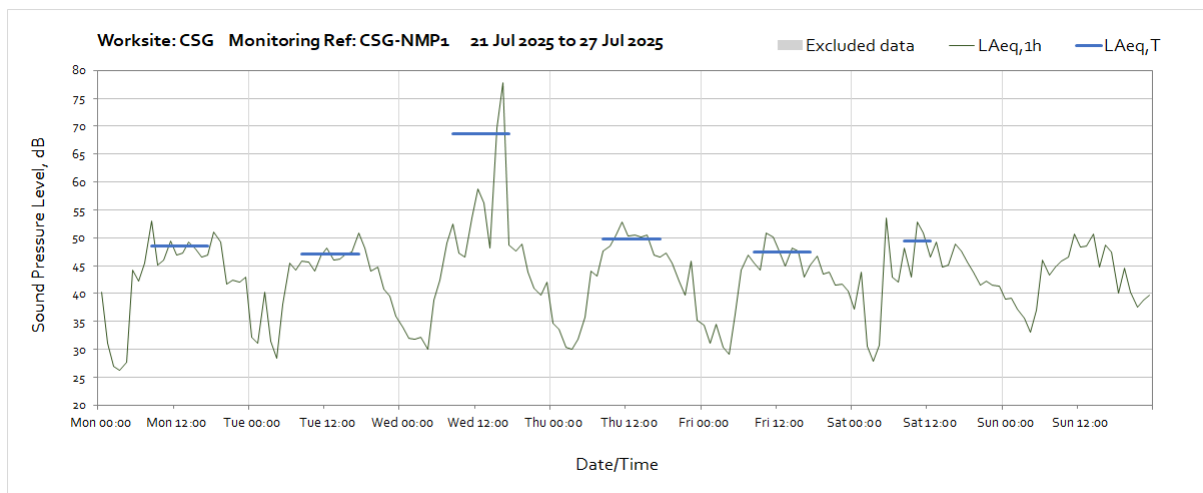


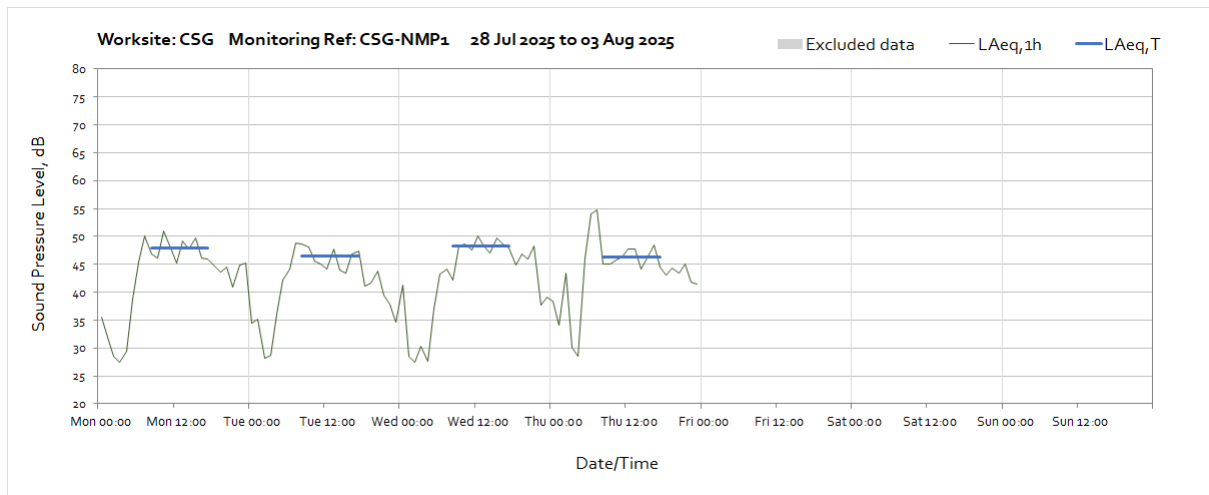
## Worksite: CSG – Monitoring Ref: CSG-NMP1



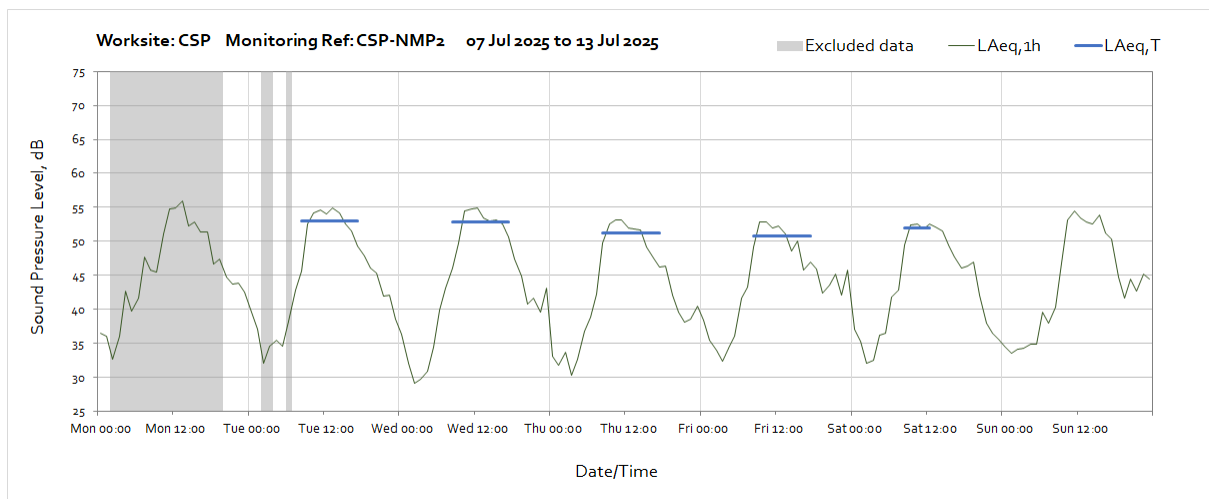
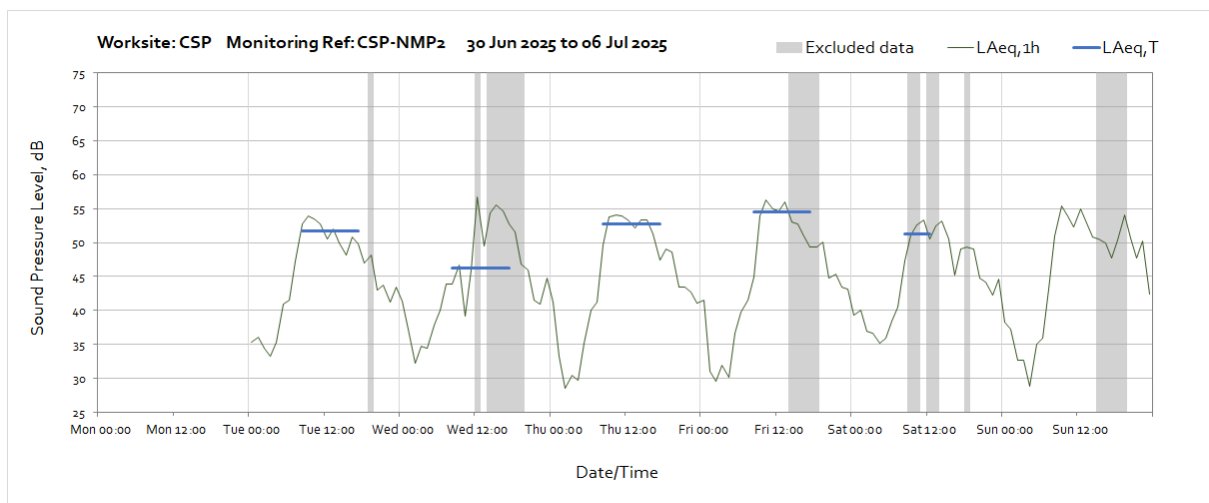


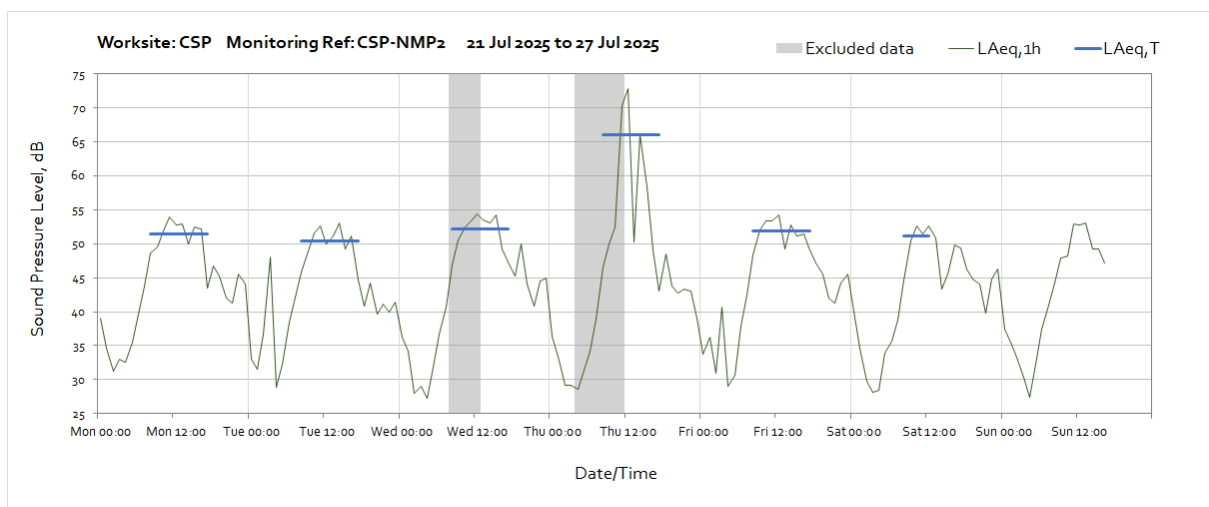
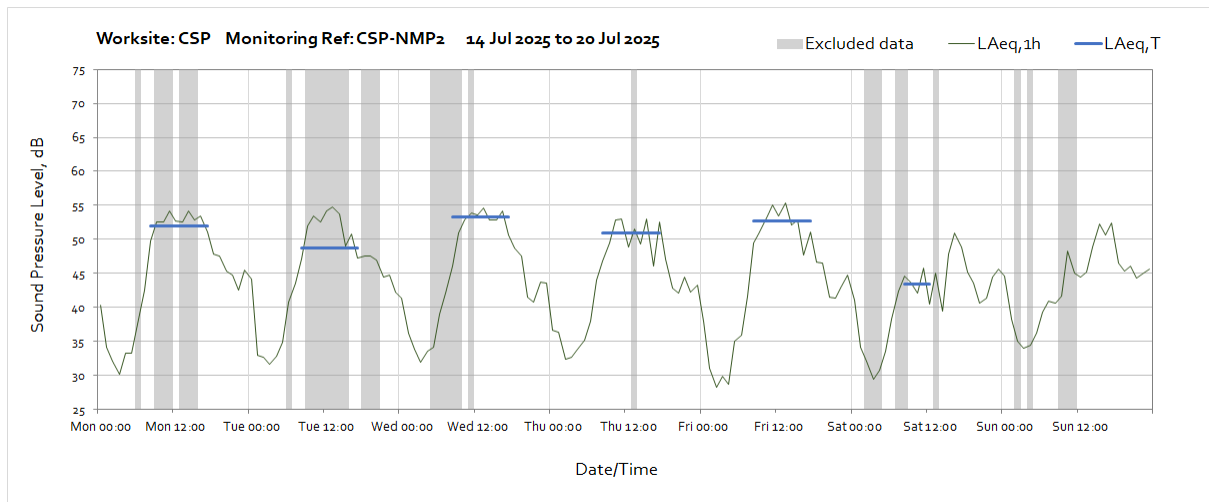
Note: Missing data between 14:00 and 15:00 on Monday 14<sup>th</sup> July was due to monitor field calibration. Missing data between 18:00 on Tuesday 15<sup>th</sup> July and 12:00 on Wednesday 16<sup>th</sup> July was due to loss of power.





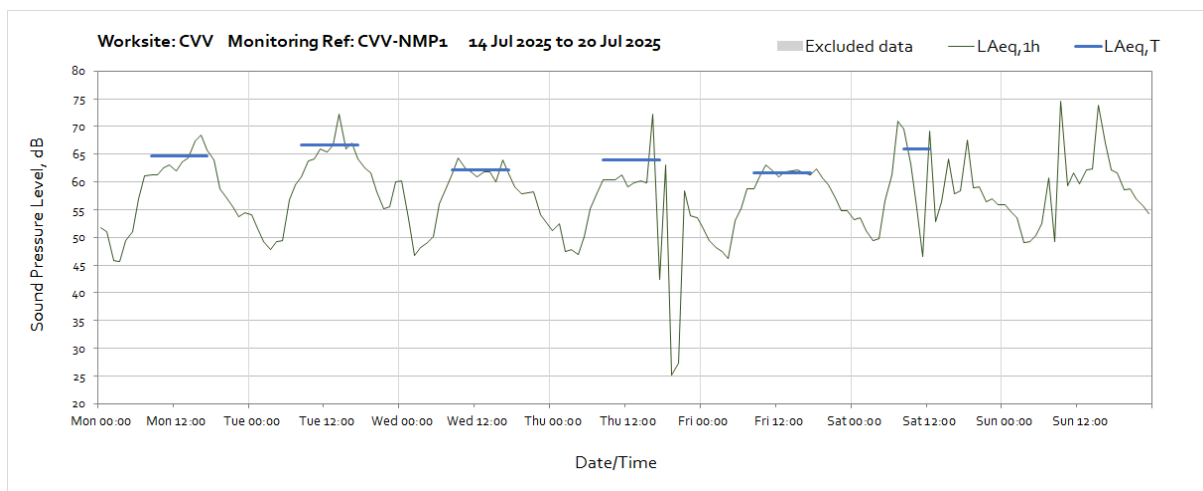
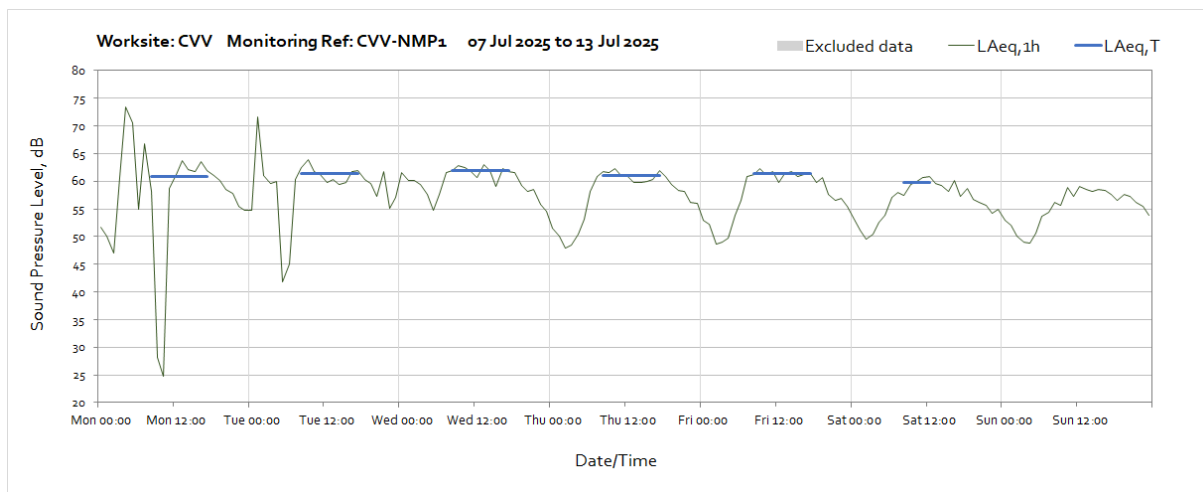
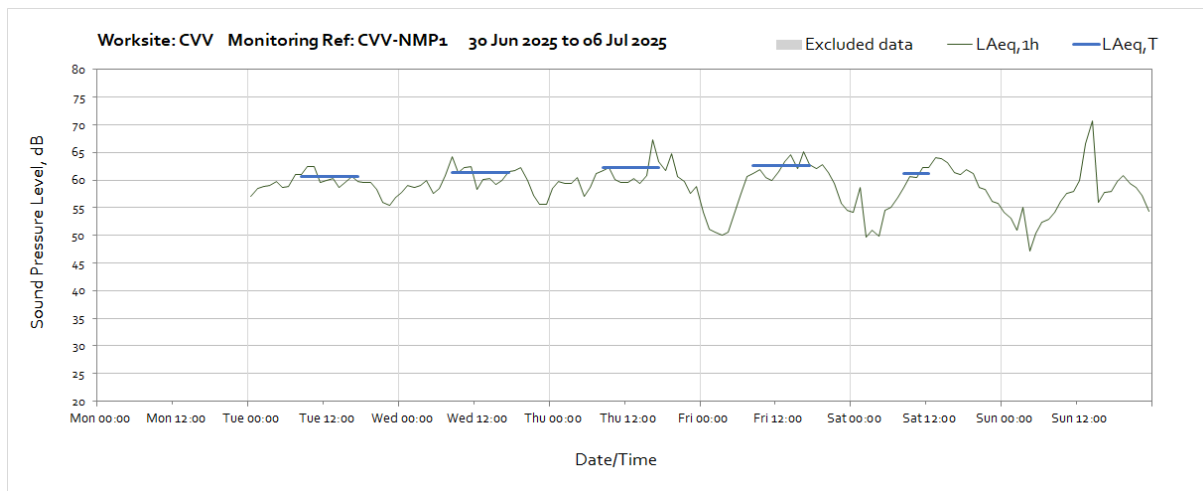
## Worksite: CSP – Monitoring Ref: CSP-NMP2



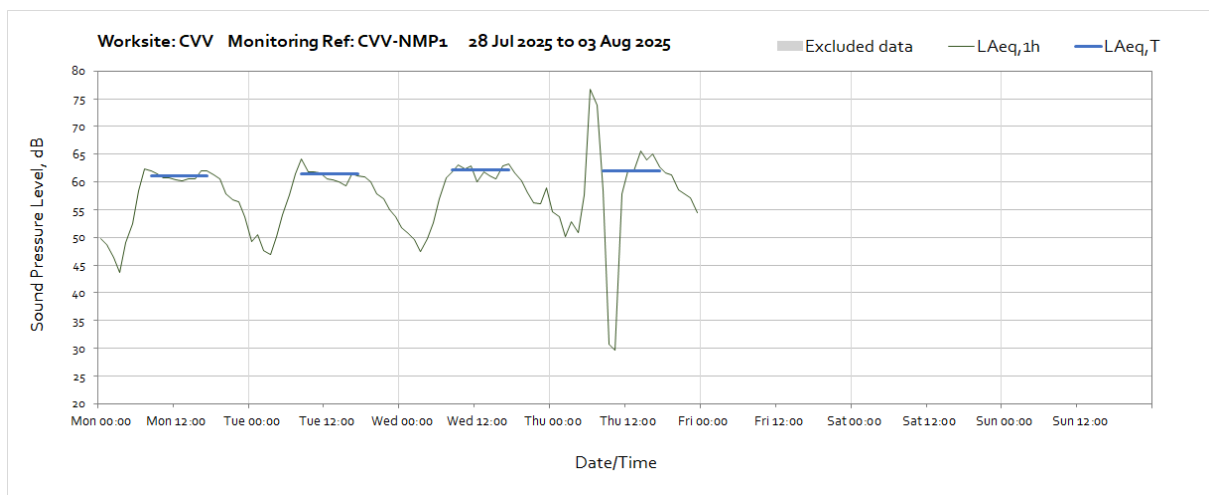
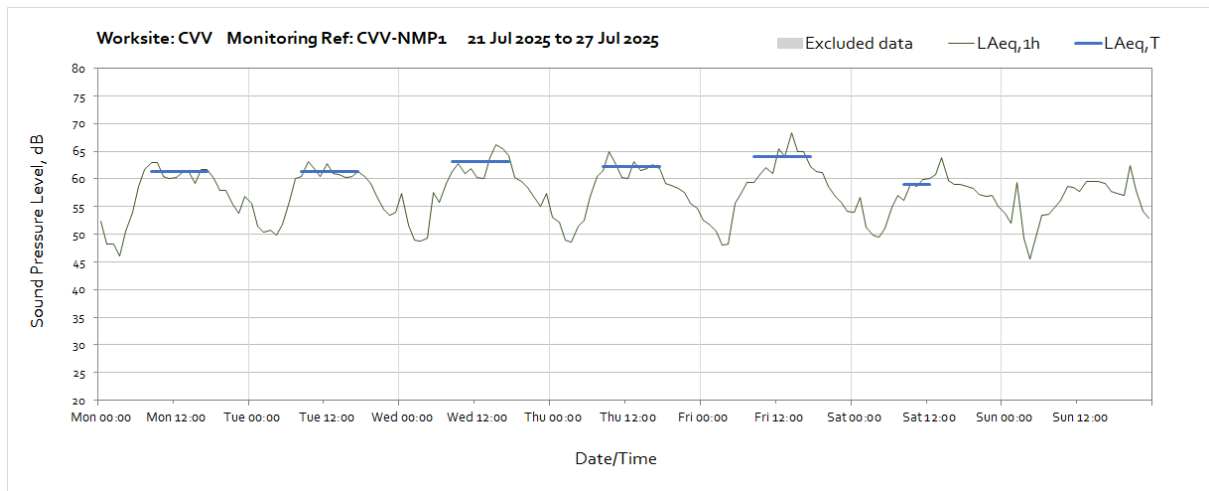


Note: Missing data from 17:00 on Sunday 27<sup>th</sup> July until month end was due to damage to the monitoring station cabling.

## Worksite: CVV- Monitoring Ref: CVV-NMP1



OFFICIAL

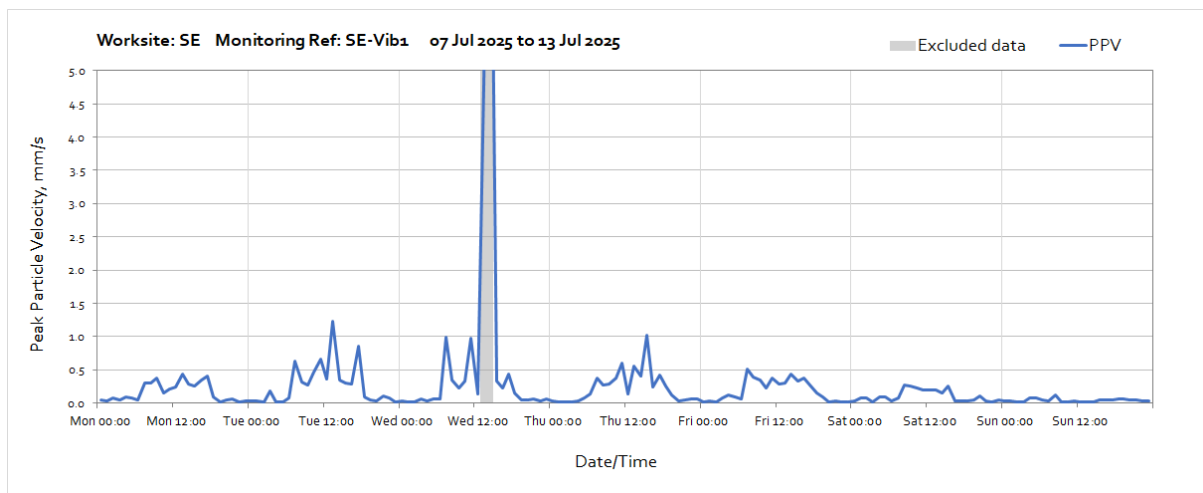
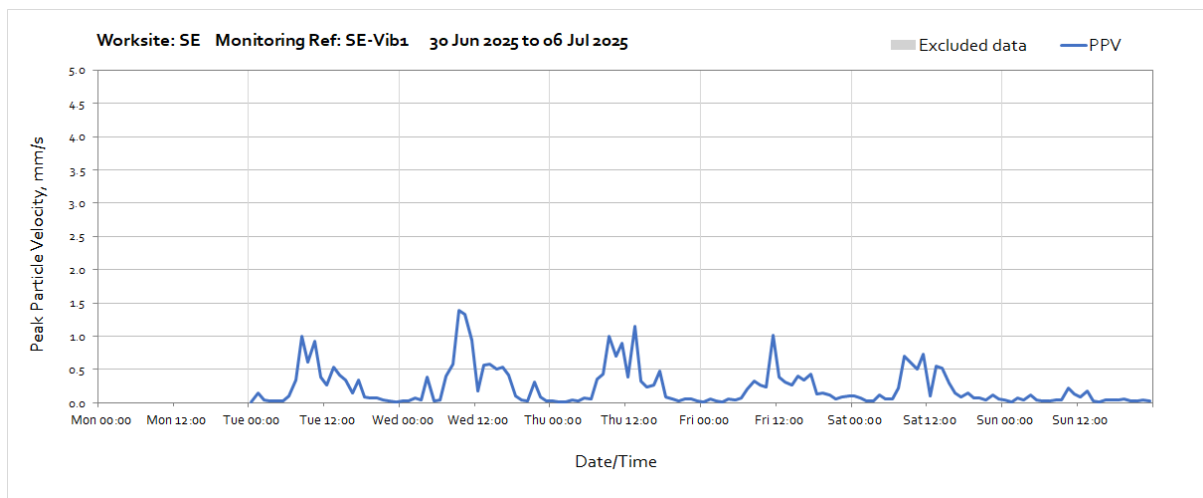


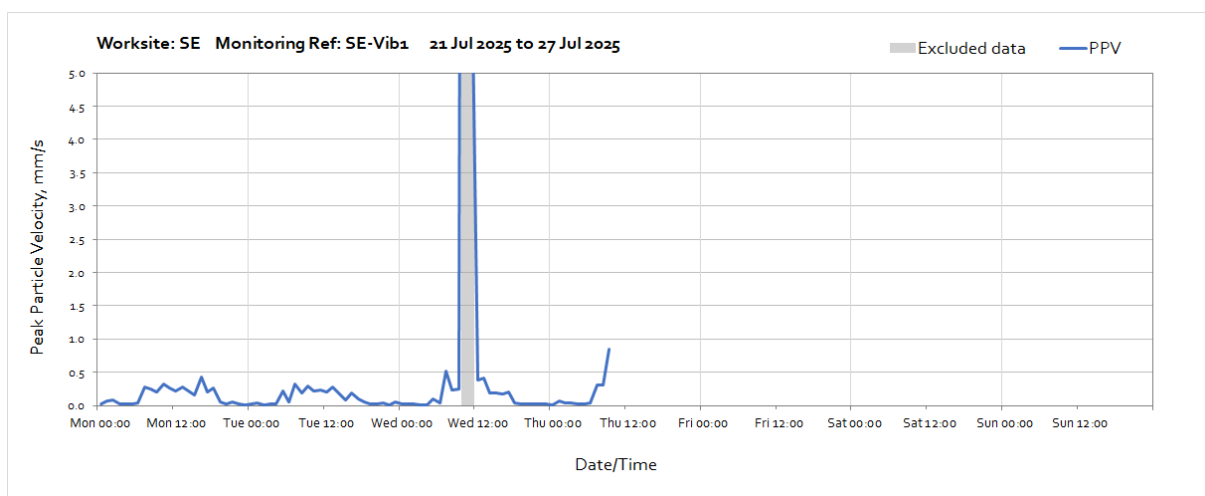
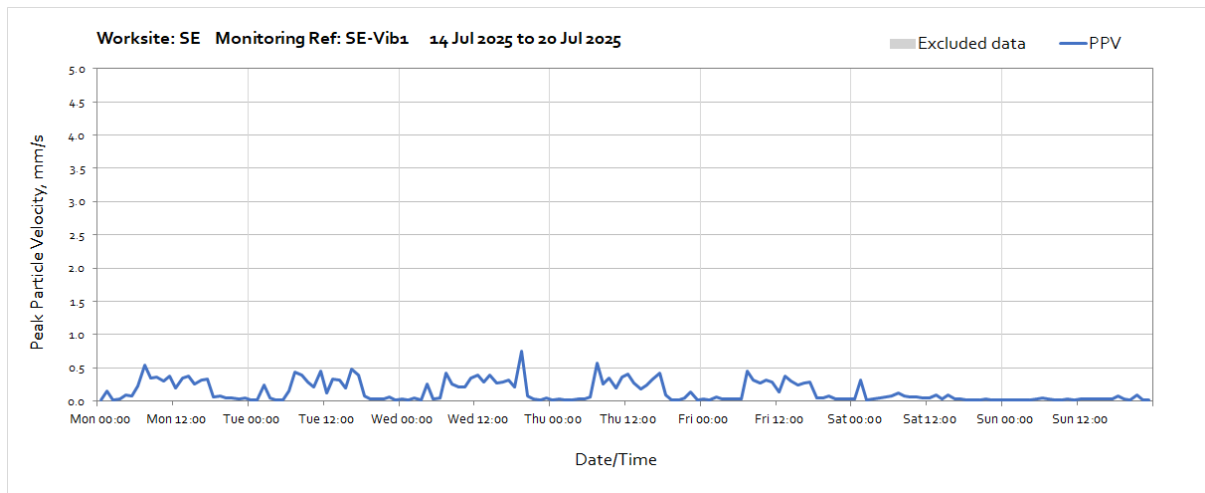


## Vibration

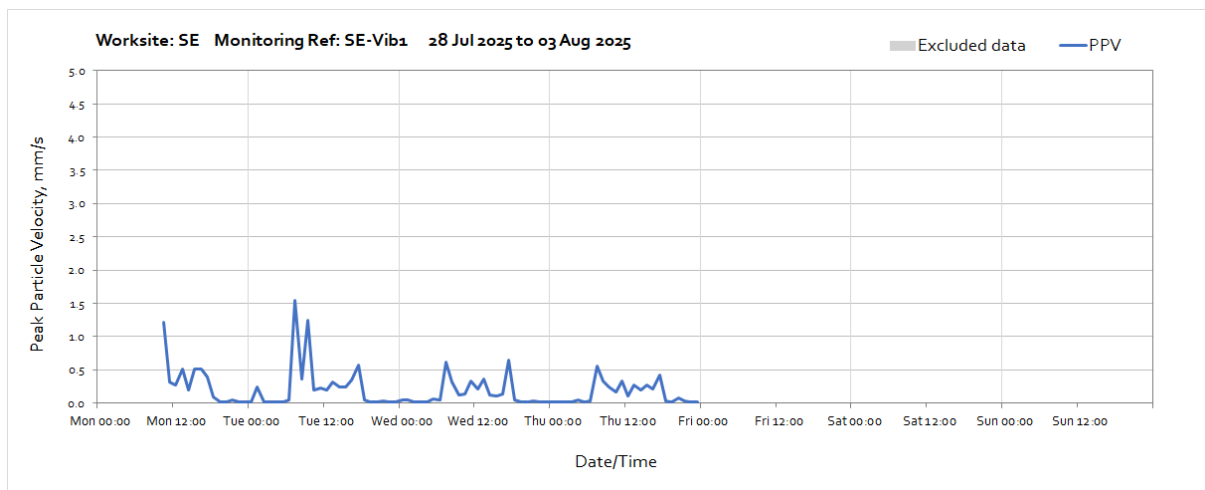
The following graphs show the hourly measured peak particle velocity PPV recorded during the monitoring period. The graphs show the highest PPV of the three orthogonal axes x, y and z. Periods where PPV values have been affected by local interference with the vibration monitor or only measured for part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





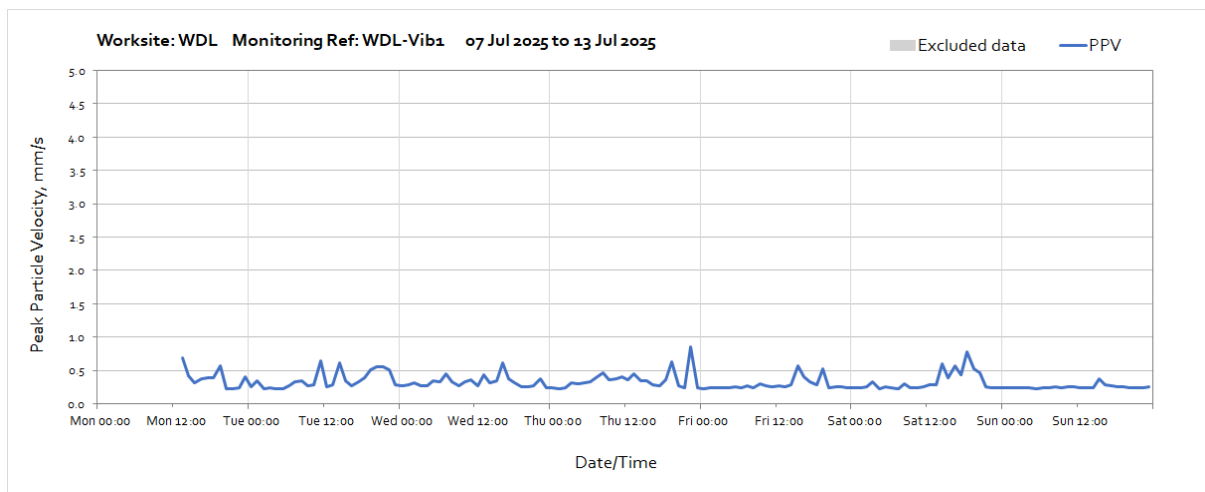
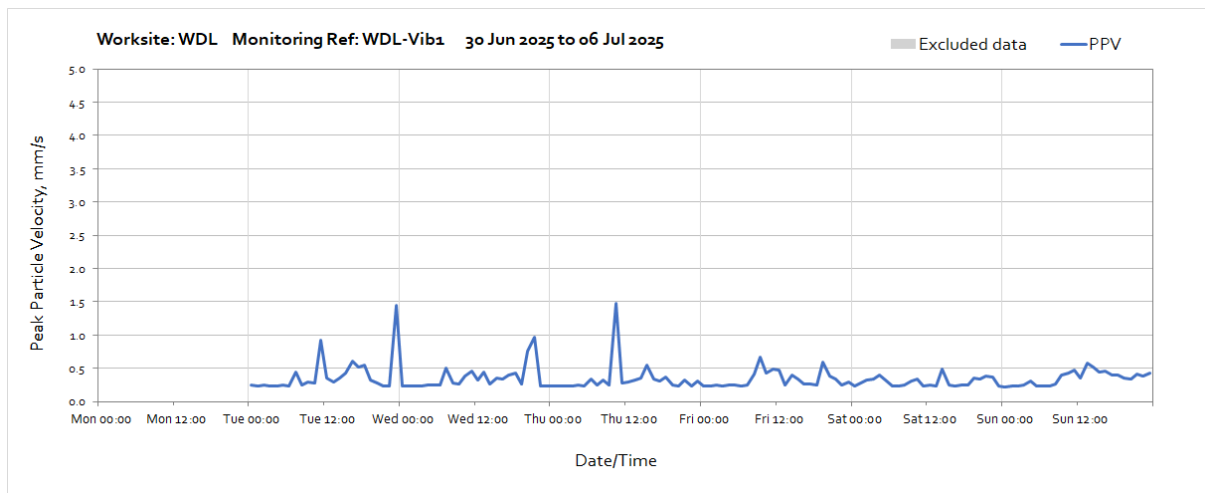
Note: Missing data between 10:00 on Thursday 24<sup>th</sup> July and 10:00 on Monday 28<sup>th</sup> July was due to monitor retrieval for a monitor firmware update.



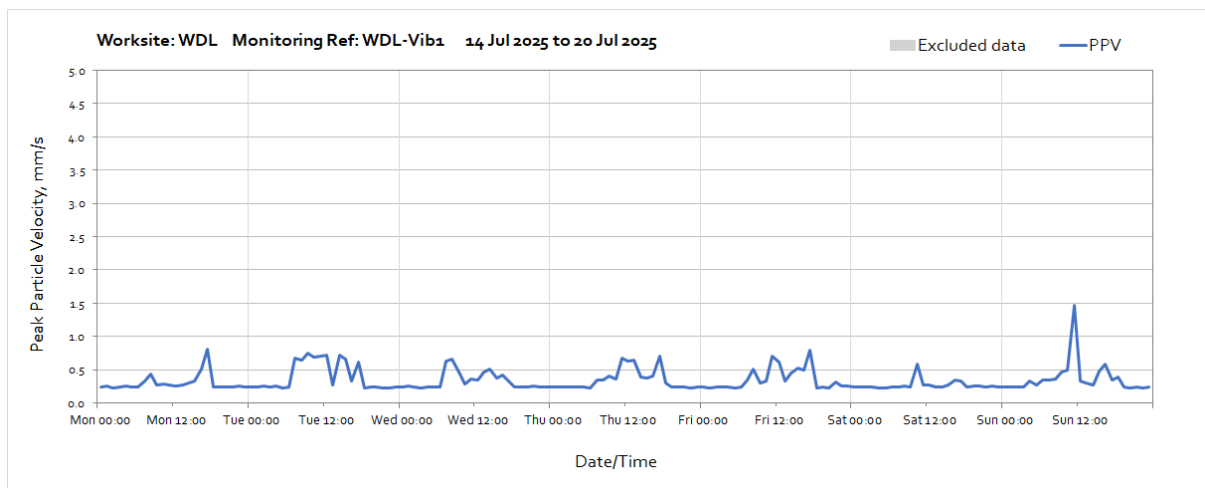
Note: Missing data between 10:00 on Thursday 24<sup>th</sup> July and 10:00 on Monday 28<sup>th</sup> July was due to monitor retrieval for a monitor firmware update.

OFFICIAL

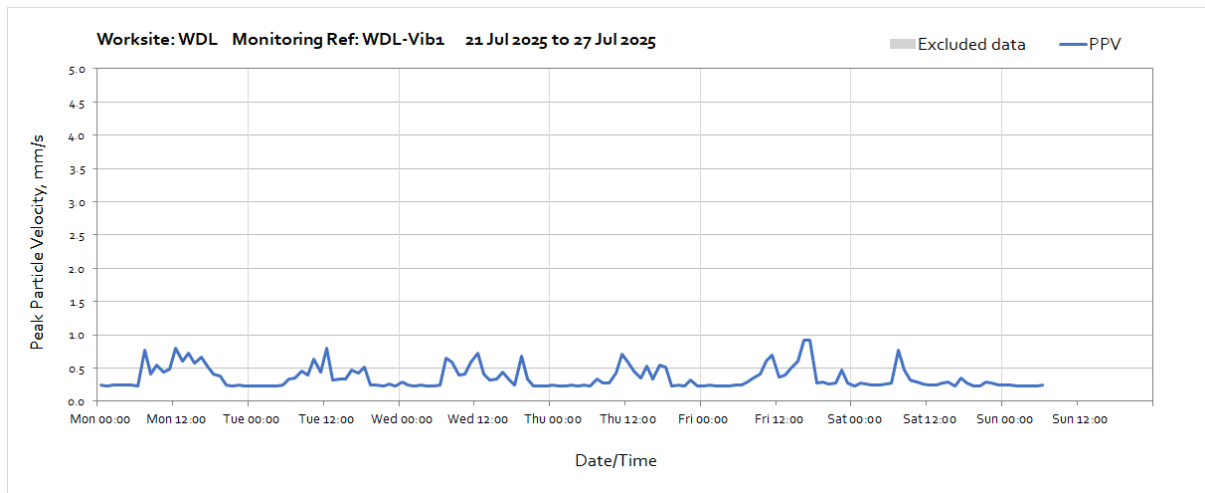
## Worksite: WDL – Monitoring Ref: WDL-Vib1



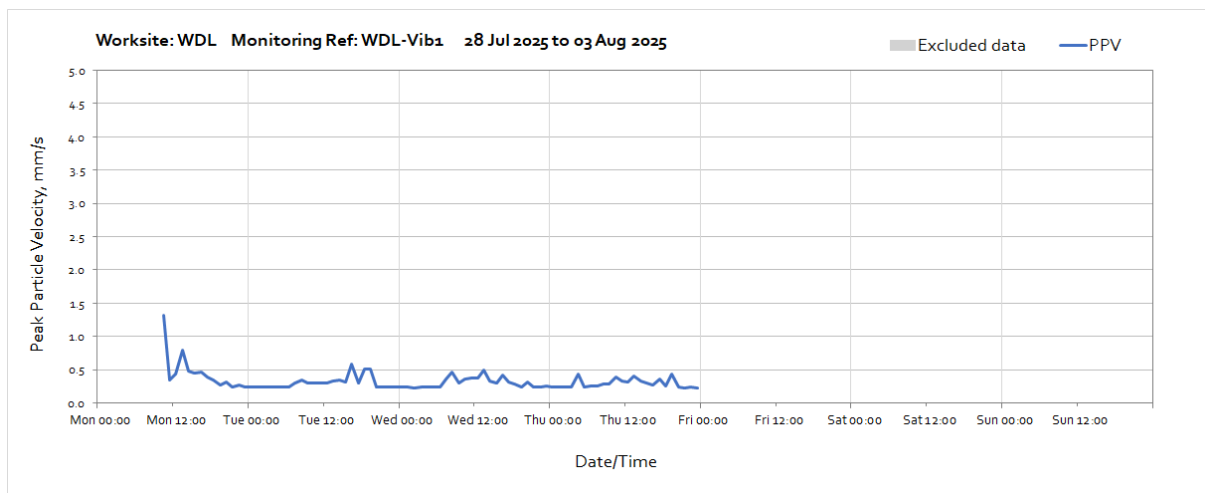
Note: Missing data between 01:00 and 13:00 on Monday 7<sup>th</sup> July was due to a depleted monitor battery.



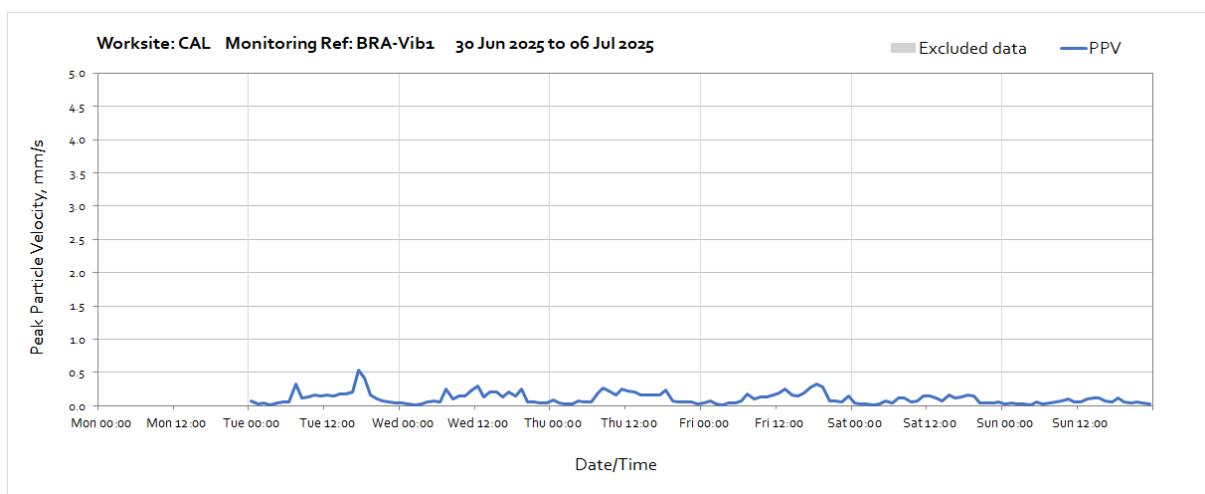
OFFICIAL

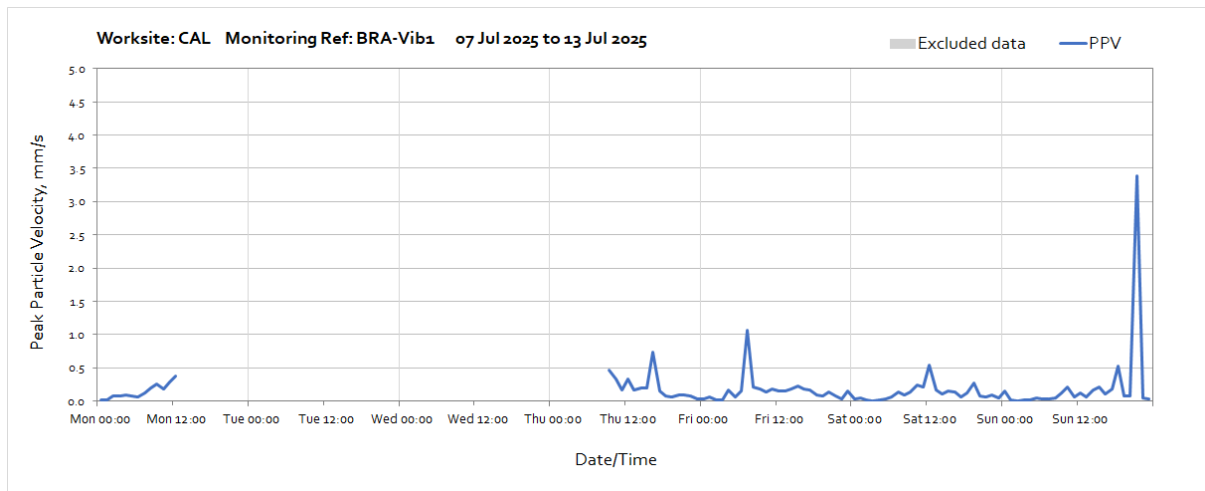


Note: Missing data between 07:00 on Sunday 27<sup>th</sup> July and 10:00 on Monday 28<sup>th</sup> July was due to a depleted monitor battery.

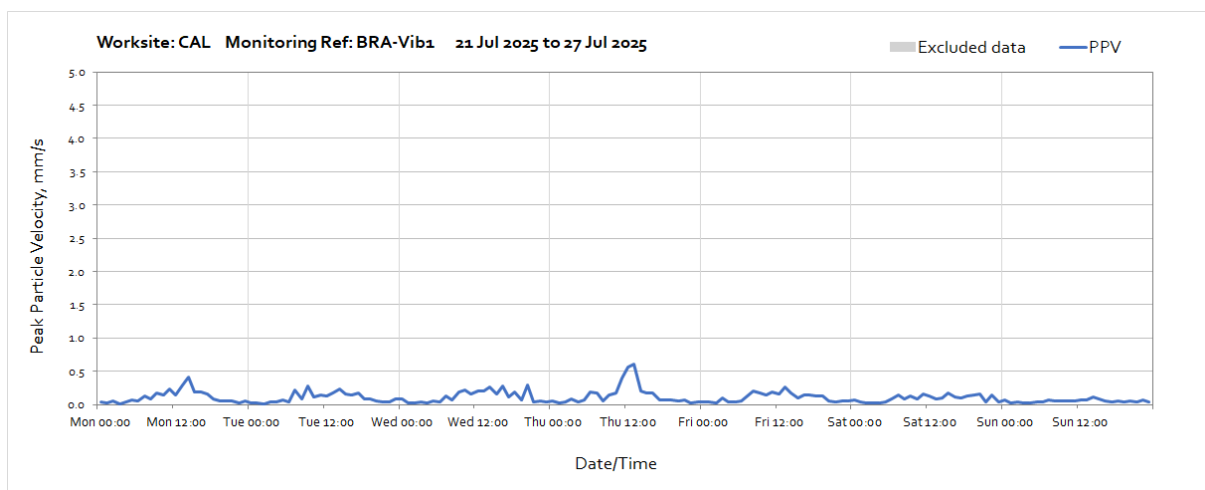
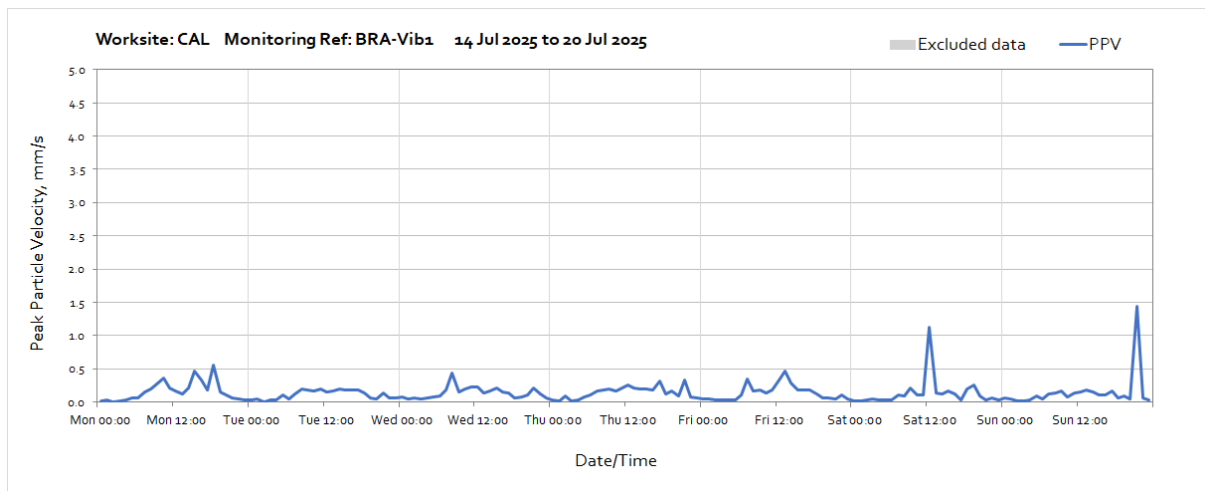


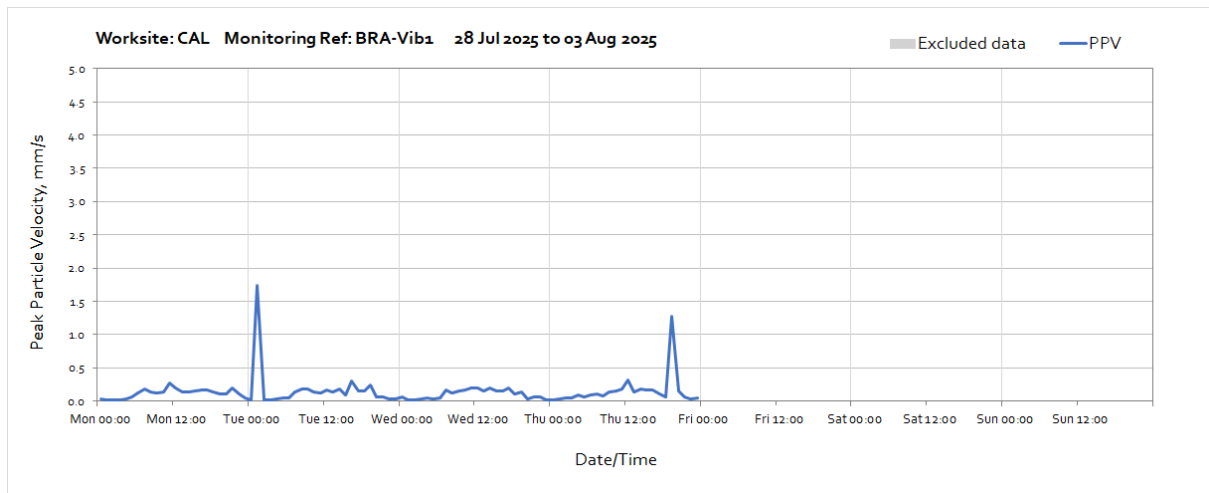
## Worksite: CAL – Monitoring Ref: BRA-Vib1



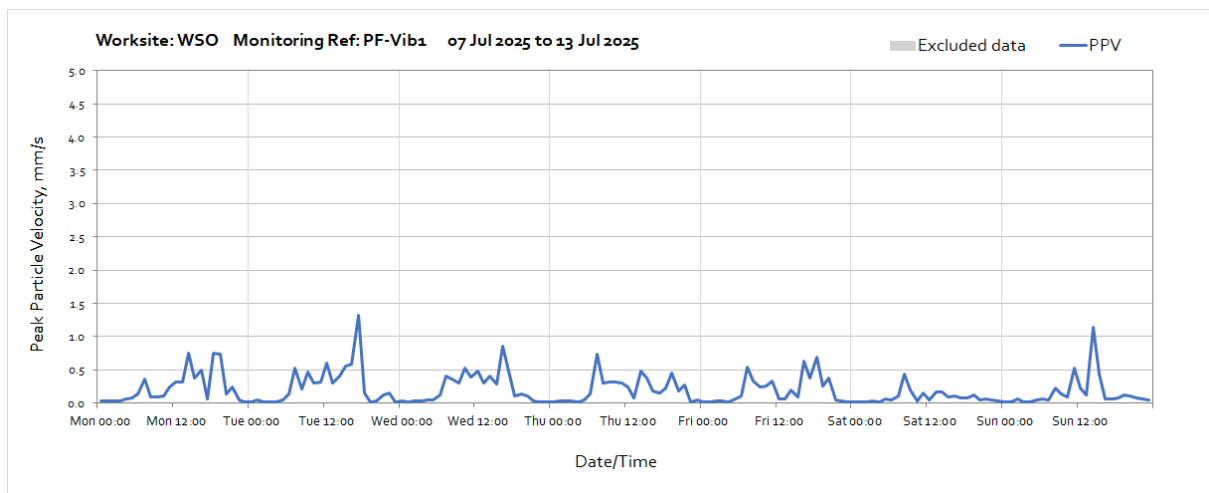
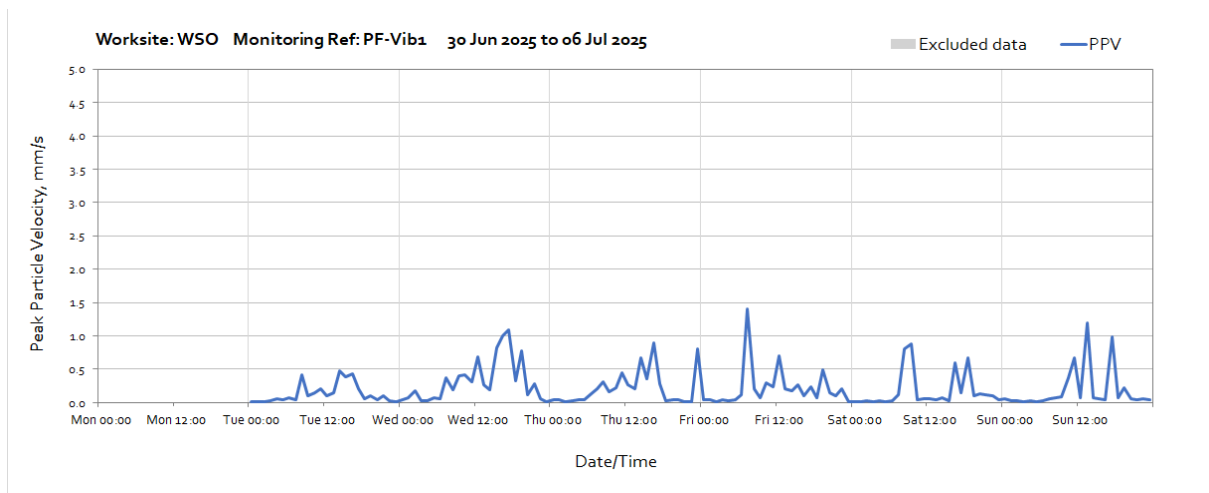


Note: Missing data between 13:00 on Monday 7<sup>th</sup> July and 09:00 on Thursday 10<sup>th</sup> July was due to monitor retrieval for monitor laboratory calibration.

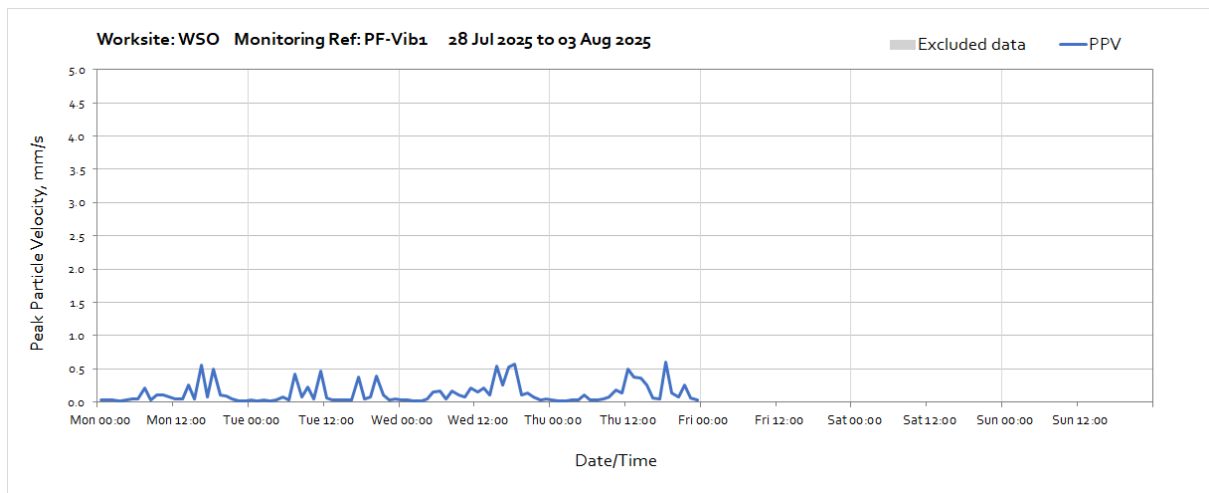
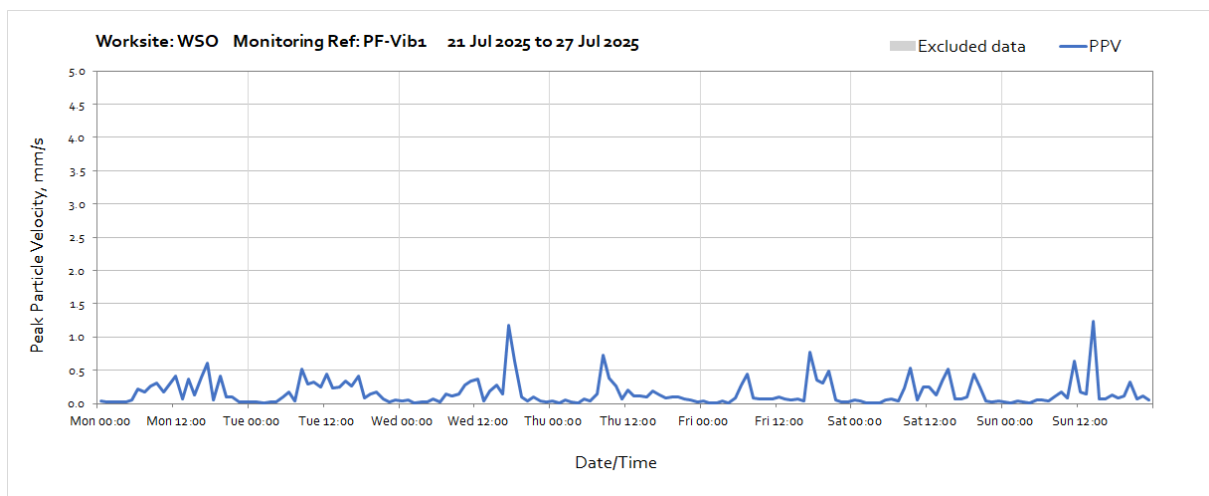
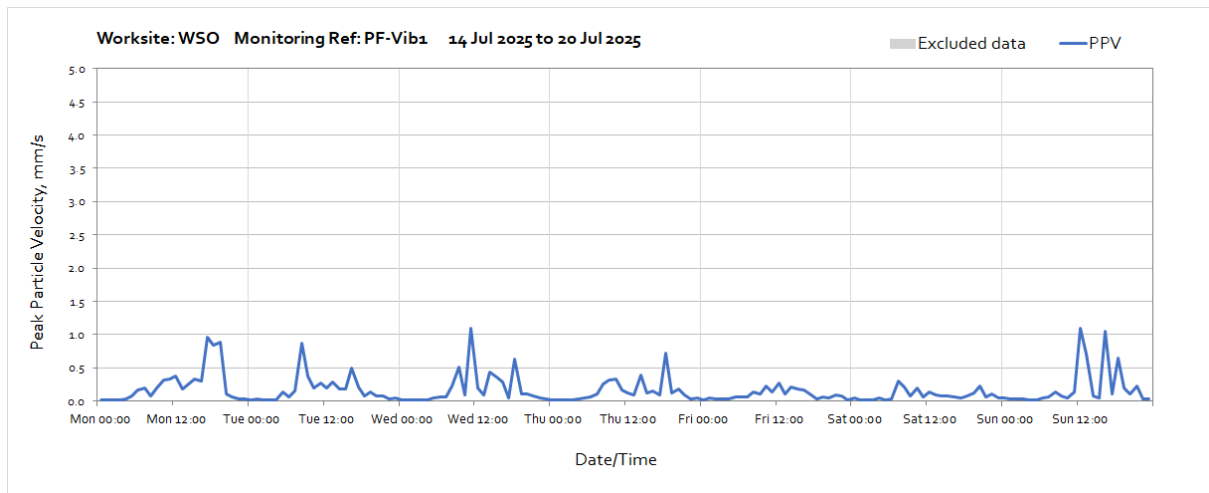




### Worksite: WSO – Monitoring Ref: PF-Vib1

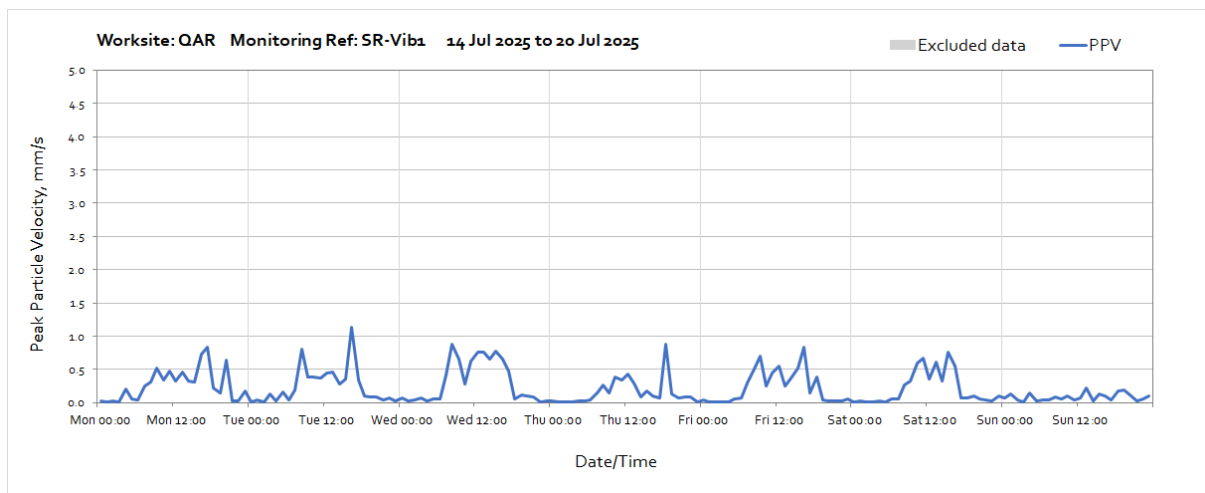
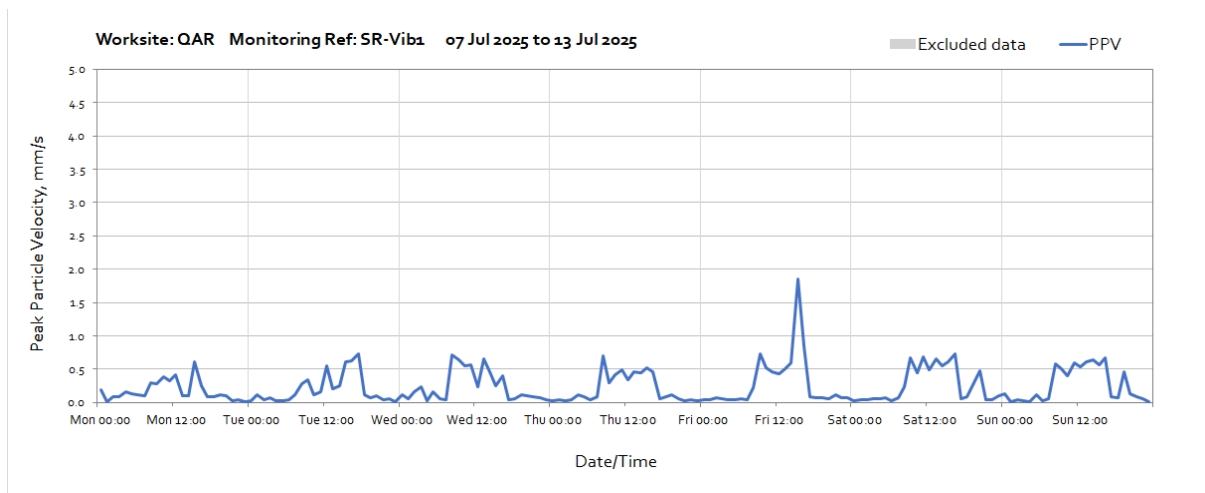
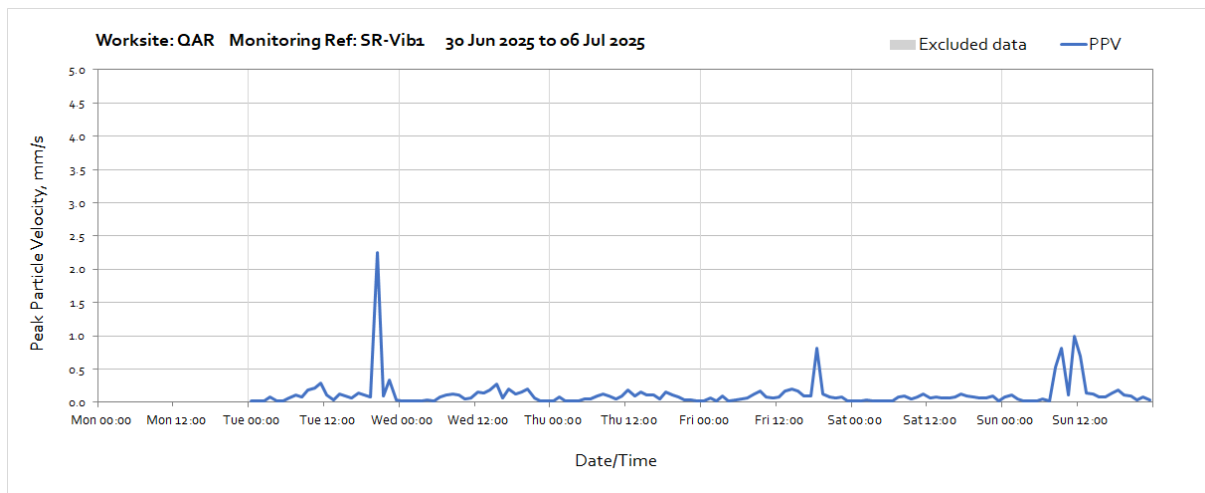


OFFICIAL



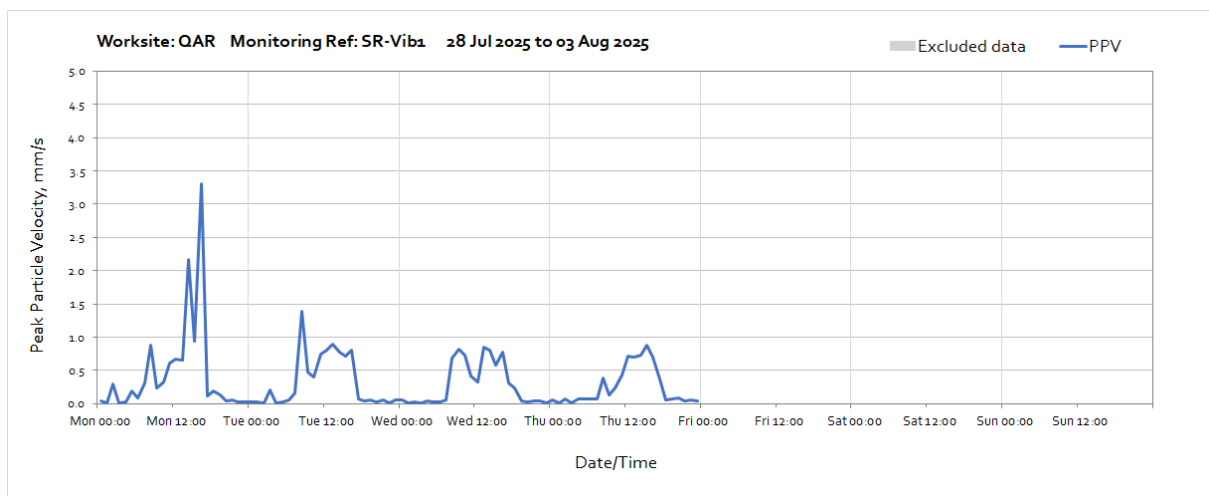
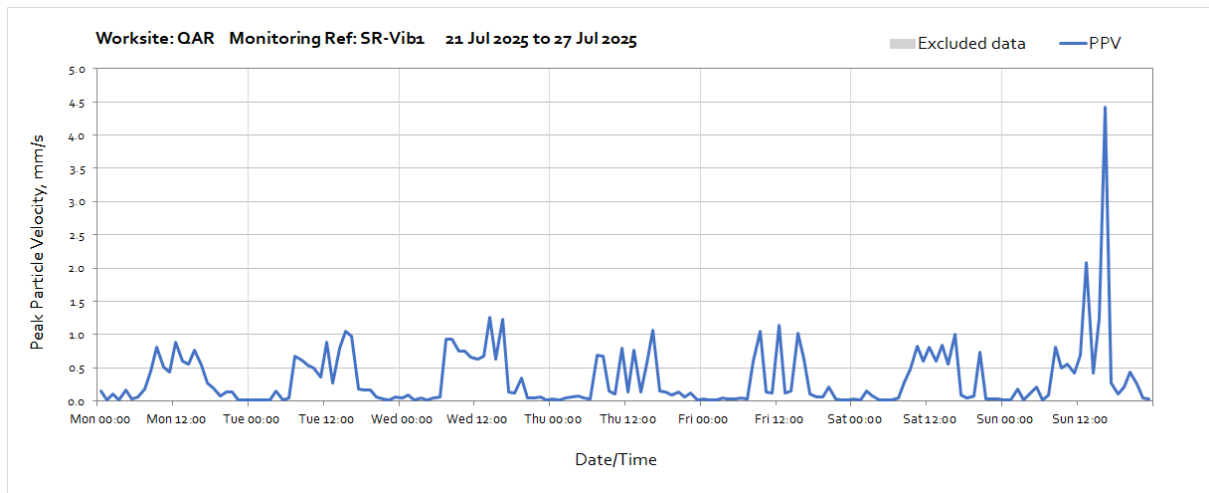
OFFICIAL

## Worksite: QAR – Monitoring Ref: SR-Vib1

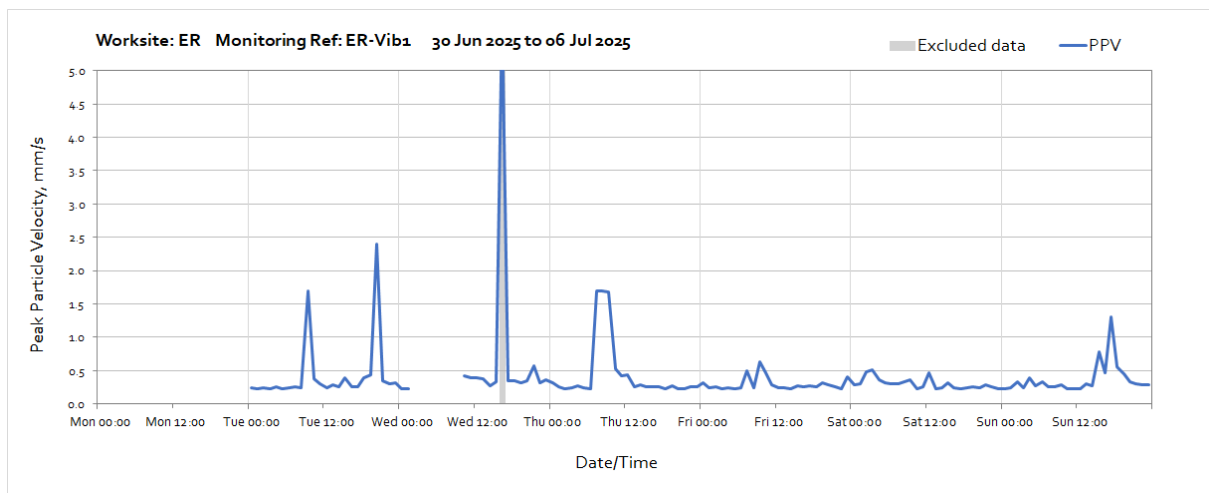


OFFICIAL

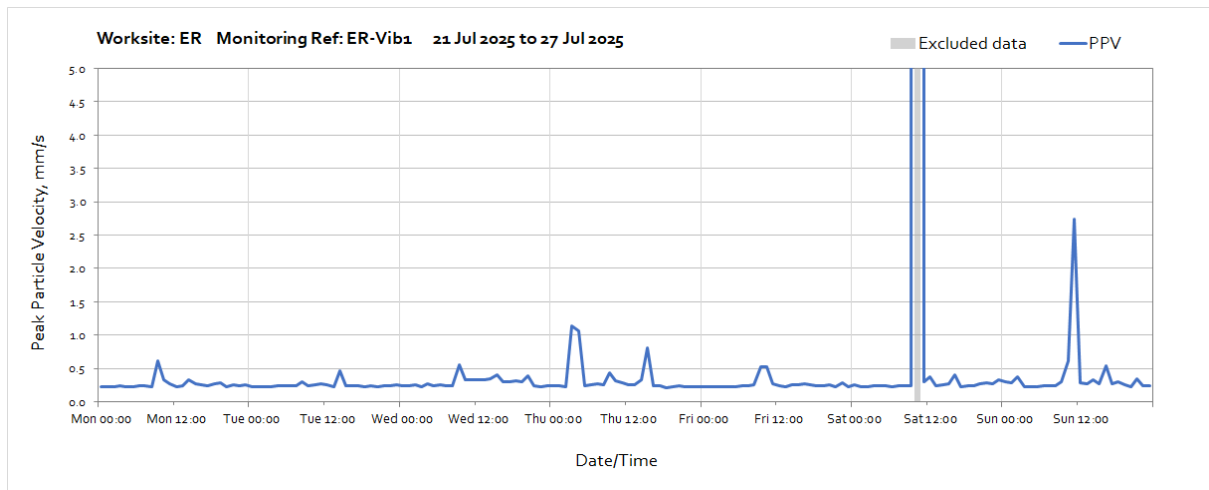
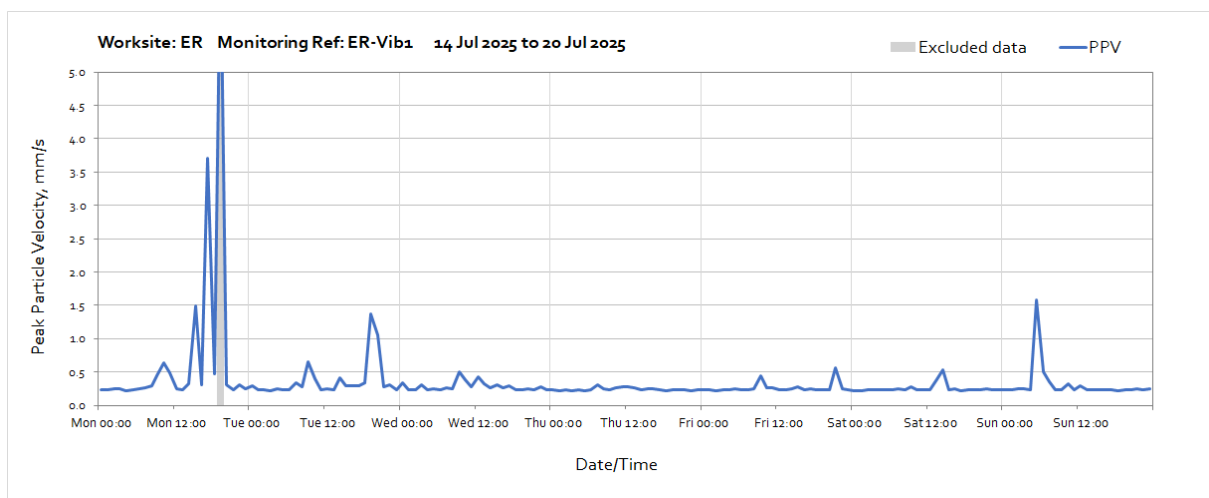
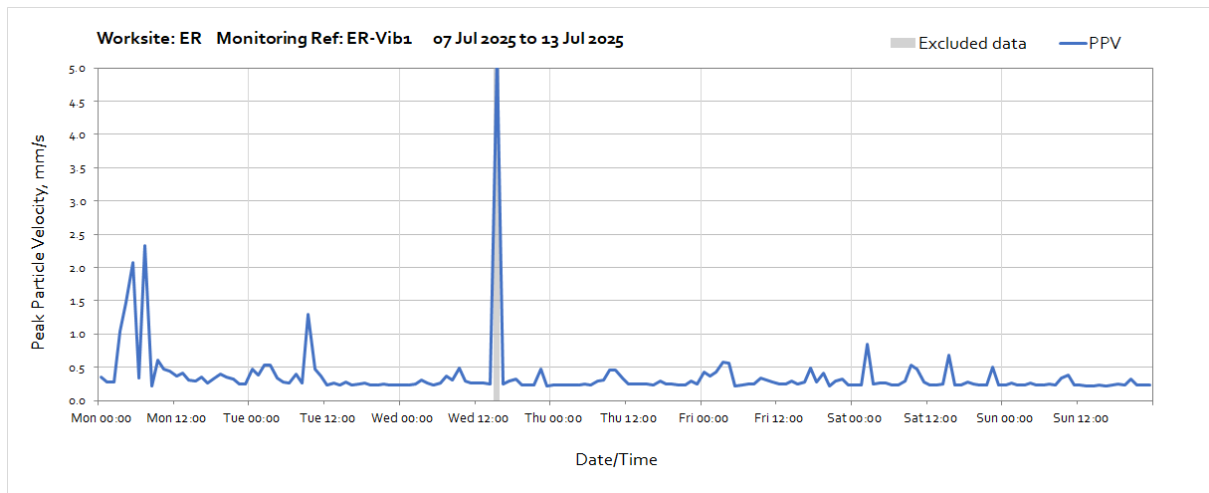


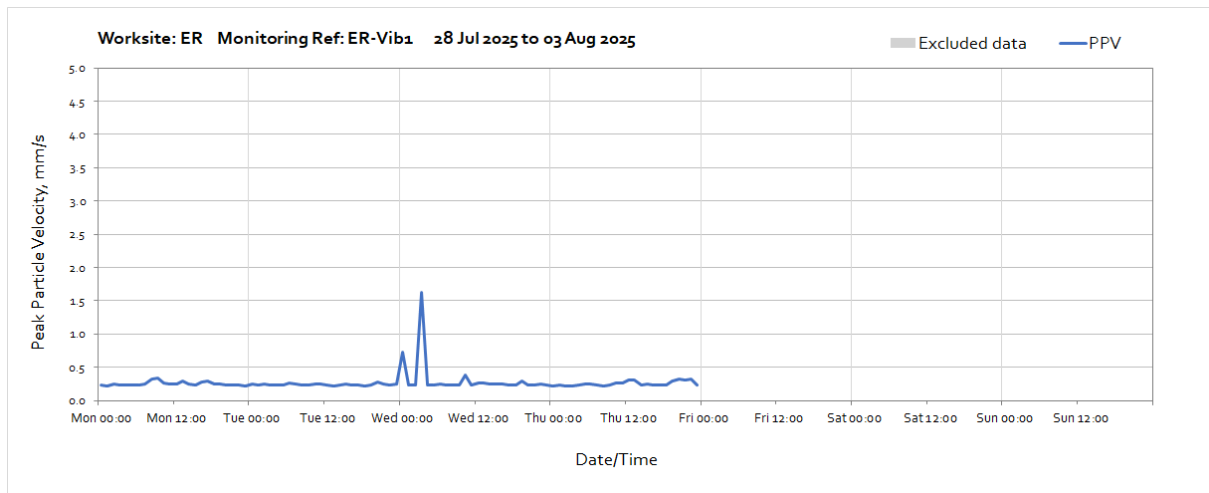


## Worksite: WGT – Monitoring Ref: ER-Vib1

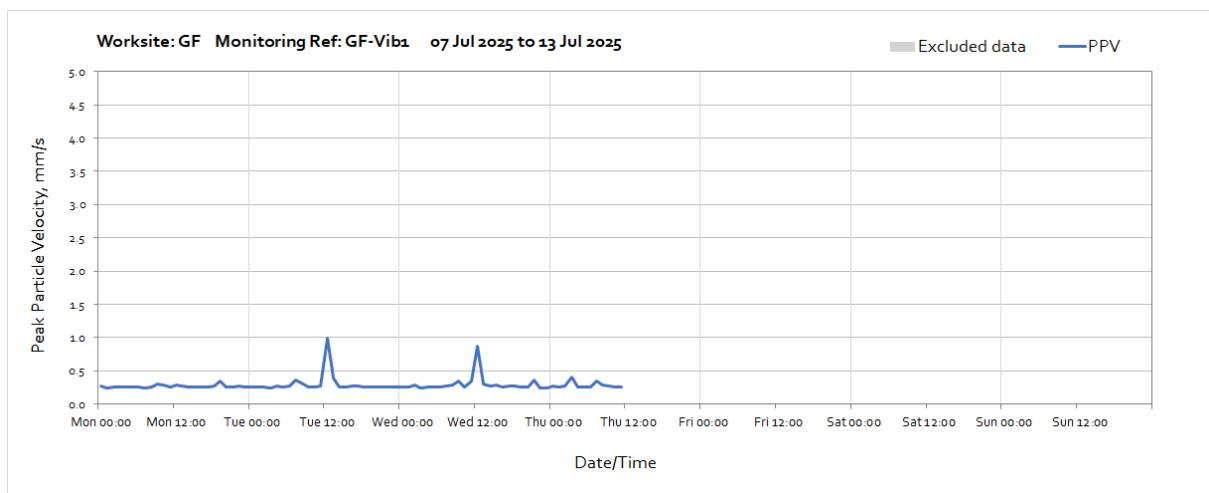
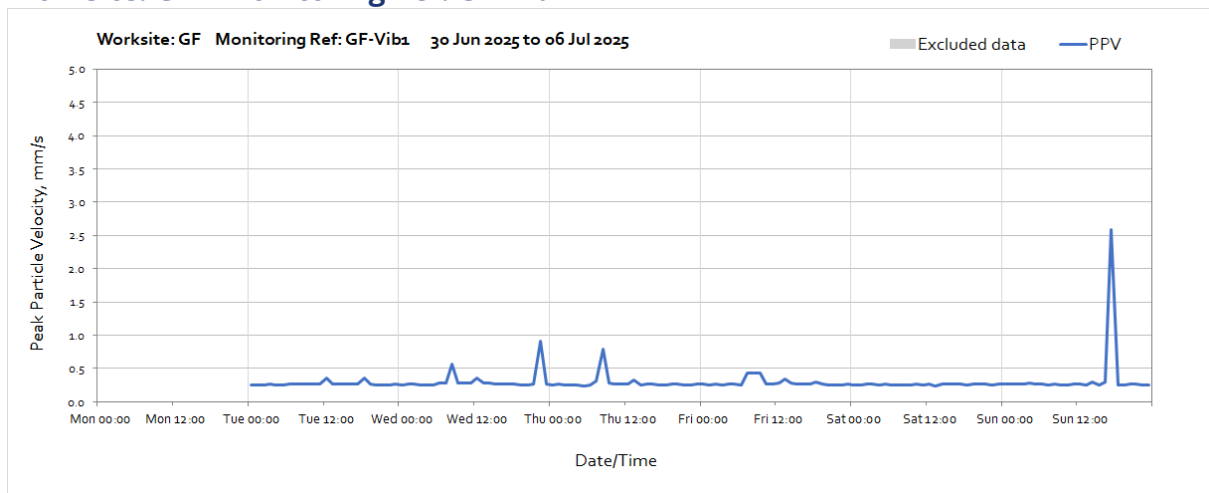


Note: Missing data between 02:00 and 10:00 on Wednesday 2<sup>nd</sup> July was due to depleted monitor battery.





### Worksite: GF – Monitoring Ref: GF-Vib1



Note: Monitor was retrieved at 12:00 on Thursday 10<sup>th</sup> July.

OFFICIAL