



Air Quality, Odour and Environmental Noise

**Environmental Noise Assessment
for Proposed Haulage Facility
Shillford Uplawmoor**

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Record of changes

Version	Date	Change
1	29 th May 2023	Baseline - for internal review
2	18 th August 2023	Full assessment – internal review
3	21 st August 2023	For client review
4	26 th September 2023	Revised predictions following survey of noise from truck movements and idling trucks – for internal review
5	28 th October 2023	For client review
6	21 st November 2023	Amended following minor changes to layout

Executive Summary

J&M Murdoch, Crofthead Industrial Estate, Lochlibo Road, Neilston, Glasgow G78 3NE is proposing to redevelop the site of a former bus depot at Shillford, Uplawmoor, East Renfrewshire, for a new haulage depot. The proposed development will include a transport depot, office, museum, workshops, drainage works, landscape works, access, parking, and associated development.

The application site is in a rural area adjacent to the A736 on an existing industrial/commercial site. There are isolated dwellings located nearby. These include Lagavulin and Woodend Cottage to the west (south of the A736), Viewfield to the north-west (north of the A736), a single dwelling immediately to the west of the development (south of the A736), four dwellings to the south-east at Cowdenmill Cottages, and two dwellings at Cowdenmoor Farm to the south. Haulage operations may operate at night, mainly between 05:30 and 07:00 hours. Sound sources associated with the proposed development will include:

- Breakout from the proposed workshop and welding buildings;
- Vehicle movements within the site; and
- Idling vehicles in the lorry park and at the fuel pumps.

Sound from the proposed development has the potential to affect the health of nearby residents, mainly through risk of sleep disturbance at night, and to cause loss of amenity, mainly during the daytime when residents may be enjoying their gardens and other outdoor living areas.

A baseline sound survey was conducted at four locations in May 2023 to obtain typical existing ambient and background sound exposure during the daytime (07:00 – 19:00), evening (19:00 – 23:00) and at night (23:00 – 07:00). Road traffic on the A736 was the dominant noise source affecting existing noise-sensitive receptors. A further survey was conducted in September 2023 within the site to measure typical sound levels from HGVs.

Sound from the proposed development has been predicted in accordance with ISO 9613. Sound sources are based on measurements of HGV at the proposed development site, similar operations elsewhere and procurement specifications. The impacts have been assessed in accordance with the Scottish Government's TAN and BS 4142:2014+A1:2019.

Daytime sound from the proposed installation is predicted to be of Low significance at all noise-sensitive receptors in terms of BS 4142:2014+A1:2019.

The worst-case impact is predicted to be of Neutral/ Slight Adverse significance in terms of the TAN assessment framework for both daytime and night-time operations.

Noise from the proposed scheme is predicted to be well below the WHO's night-time criterion inside bedrooms.

The proposed mitigation measures include controlling yard activities at night to minimise adverse impacts, the specification of smooth, low-noise surfaces to reduce rolling tyre noise and minimise noise from vehicle suspension, the erection of an acoustic barrier and bund, the specification of maximum sound power levels for fixed plant, and acoustic insulation for the buildings to reduce noise breakout.

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Acronyms

ATC	Automatic Traffic Counter
BS	British Standard
CRTN	Calculation of Road Traffic Noise (a method specified by the UK Department of Transport)
dB	decibels – the logarithmic scale used to measure noise
dBA	A weighted dB – measured levels adjusted for the effect on human hearing
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment (a series of organised activities – a process)
EPA	Environmental Protection Act 1990
ES	Environmental Statement (a document or documents)
ISO	International Standards Organisation
$LA_{eq T}$	The equivalent (eq) A weighted (A) average noise level (L) over a given period of time (T)
$LA_{90 T}$	The A weighted (A) noise level (L) exceeded over 90% ($_{90}$) of a given period of time (T)
L_{WA}	Sound Power Level – a convenient unit of noise measurement independent of distance
m/s	metres per second
WHO	World Health Organisation

GLOSSARY

Acoustic studies make use of terminology that is specific to this type of assessment. The terminology employed in the report is discussed in this section.

dB

Noise is defined as unwanted sound. The range of audible sound is from 0 dB to 140 dB. The frequency response of the ear is usually taken to be about 18 Hz (number of oscillations per second) to 18000 Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than the lower and higher frequencies and because of this, the low and high frequency components of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most widely used and which correlates best with subjective response to noise is the dB(A) weighting. This is an internationally accepted standard for noise measurements.

Loudness

For variable noise sources such as traffic, a difference of 3 dB(A) is just perceptible by most people. In addition, a doubling of traffic flow will increase the overall noise by 3 dB(A). The "loudness" of a noise is a purely subjective parameter but it is generally accepted that an increase/decrease of 10 dB(A) corresponds to a doubling/halving in perceived loudness. Road traffic noise changes as flow varies during the day and will also fluctuate within shorter time periods as vehicles pass the reception point.

Free Field

Free field measurements are taken at least 3.5m from any building or other hard reflecting surface. Noise standards within the UK are normally specified as external free field limits for ease of enforcement e.g. to avoid the necessity of gaining access to people's houses late at night. Noise standards at sensitive receptors can be expressed as the noise level measured or predicted inside a habitable room as in the case of the World Health Organisation sleep disturbance criteria; or as an external level where it is considered important to protect the amenity of the garden. Some noise standards are specified as façade levels as in the case of road traffic noise.

Statistical Level, L_N

The most commonly used statistical levels are the LA₁₀ and LA₉₀.

The LA₁₀ is a statistical sound level, being the dBA level exceeded for 10% of a given time. For example, if the hourly LA₁₀ is 70 then during that hour the noise level was greater than 70dBA for 6 minutes (10%) and less than or equal to 70dBA for the remaining 54 minutes.

LA₉₀ is the level exceeded for 90% of the time, which corresponds to the "quieter" periods. The LA₉₀ is defined in *BS4142: 1990 Rating Industrial Noise Affecting Mixed Residential and Industrial Areas*, as the background noise level.

LA_{eq}

The LA_{eq} is used to describe ambient sound. The Noise Advisory Council Guide to the measurement and prediction of the Equivalent Continuous sound level, defined the LA_{eq} as follows:

The equivalent continuous noise level, LA_{eq}, is the level of notional steady sound which, at a given position and over a defined period of time would have the same A-weighted acoustic energy as the fluctuating noise.

A-Weighted

The "A" in LA_{eq} (or LA₉₀) refers to the A-weighted sound pressure level of the noise in decibels. Weighting is a filter contained in the sound level meter which is designed to produce the relative response of the human ear to sound at different frequencies.

1.0 INTRODUCTION

Background to Report

- 1.1. J&M Murdoch, Crofthead Industrial Estate, Lochlibo Road, Neilston, Glasgow G78 3NE, is proposing to redevelop the site of a former bus depot at Shillford, Uplawmoor, East Renfrewshire, for a new haulage depot, office, museum, workshops, drainage works, landscape works, access, parking, and associated development. The location of the proposed development site is shown in Figure 1. Further details on the project description are presented in Appendix 1. The applicant has appointed Airshed to conduct the environmental noise impact assessment for the scheme.

Potential Adverse Impacts

- 1.2. The application site is in a rural area adjacent to the A736 on an existing industrial/commercial site. The application site was used as a bus depot until recently, but is not currently in use. There are isolated dwellings located nearby. These include Lagavulin and Woodend Cottage to the west (south of the A736), Viewfield to the north-west (north of the A736), a single dwelling immediately to the west of the development (south of the A736), four dwellings to the south-east at Cowdenmill Cottages, and two dwellings at Cowdenmoor Farm to the south. The two-storey dwelling known as Shillford Mill is within the application site boundary and is not considered to be noise-sensitive.
- 1.3. The assessment assumes that all vehicle movements and associated operations may occur at night, as a worst-case assessment.¹ Sound sources associated with the proposed development will include:
- Breakout from the proposed workshop and welding buildings;
 - Vehicle movements within the site; and
 - Idling vehicles in the lorry park and at the fuel pumps.
- 1.4. Sound from the proposed development has the potential to affect the health (mainly through the risk of sleep disturbance) and amenity of existing noise-sensitive receptors near the development. In practice, the fuel pumps and workshop buildings will only be used during the daytime. The assessment assumes that the fuel pumps, and workshop buildings may be occasionally used at night and these sources have been assessed on that basis.

Scope of Assessment

- 1.5. The assessment includes survey measurements at existing sensitive receptor locations adjacent to the proposed development site conducted

¹ Airshed has been advised by the applicant that the following assumptions should be adopted: 80 HGV trucks leaving the depot from 5.30am - 7.30am with 65 rigid vehicles ranging from 18-ton 4-wheeler type trucks to 32-ton rigid tipper 8-wheeler trucks and the remaining 15 being articulated (16.5m); HGVs will work away from the depot all day, some will be away overnight and only return at the end of the week; Most HGVs will return to the depot from 3.30pm - 8pm, with the majority between 4pm - 6 pm; 24-hour access and egress is required as vehicles sometimes operate on night shifts – (on the basis of one or two now and again); Staff cars will be in the region of 100, arriving from 5.30am - 8am and leaving from 3.30pm - 7pm; and daily deliveries will be in the region of about 20 per day, at various times.

by Airshed in May 2023 to obtain representative ambient and background sound levels and to help determine the baseline sound in accordance with BS 4142:2014.² Sound from the proposed development has been assessed in accordance with BS 4142:2014. The assessment also has regard to the assessment method in the Technical Advice Note (TAN)³ which forms part of the Scottish Government's Planning and Noise Advice 1/2011⁴.

- 1.6. Current non-statutory professional Guidance⁵ suggests that noise from road traffic generated by a project is likely to be insignificant where road traffic is predicted to increase by <33% (as this would result in an increase of <1 dB). A change in predicted noise of <1 dB is considered to be of Negligible significance in the Scottish Government TAN. The scheme traffic will feed directly onto the A736. This assessment therefore assumes that the change in road traffic noise on the public road network as a consequence of the proposed scheme is likely to be of negligible significance. This aspect has therefore not been considered further. The consequences of changes in noise from vehicle movements within the development site have been considered.
- 1.7. This report describes the potential noise impacts likely to arise from the proposal, based on the outline design. The assessment sets out the assessment criteria that have been used to consider the impacts and reports the results of a baseline sound survey at the nearest existing dwellings. Sound levels from the proposed development are based on recent measurements of HGVs when idling and moving at low speeds within the site. Sound levels from the proposed operations have been predicted at the nearest noise-sensitive receptors and assessed against appropriate environmental noise criteria intended to protect residential amenity and prevent sleep disturbance at night.
- 1.8. The predicted impacts are based on the proposed design and include the mitigation measures to be included within the scheme. The results from interim design iterations have not been included, to help simplify the communication of results.
- 1.9. This noise assessment has been conducted by Steve Fraser BSc MPhil MIOA CEnv who has more than 40 years of professional experience as an environmental consultant, Environmental Health Officer and Environmental Protection Officer. The baseline survey was conducted by survey technicians who have (IoA) Certificates of Competence for Measurement of Environmental Noise.

Report Layout

- 1.10. Relevant noise standards are discussed in Section 2. Baseline noise is described in Section 3. The noise prediction methodology is outlined in Section 4. The results from the prediction exercise are presented in Section 5. Mitigation measures are proposed in Section 6. The overall significance of the noise arising from the proposed development is considered in Section 7.

² BSI 2014. Methods for rating and assessing industrial and commercial sound BS 4142:2014: +A1:2019.

³ Scottish Government 2011. Technical Advice Note. Assessment of Noise

⁴ Scottish Government 2011. Planning Advice Note 1/2011 Planning and Noise

⁵ IEMA Version 1.2 (November 2014) Guidelines for Environmental Noise Impact Assessment.

2.0 ENVIRONMENTAL NOISE CRITERIA

Planning Advice Note (PAN)

- 2.1. PAN 1/2011 Planning and Noise provides advice to planning authorities in Scotland on how they must seek to minimise the adverse impact of noise arising from new development. This Guidance is not prescriptive with respect to specific noise standards and is mainly concerned with the advising on good practice for environmental noise assessment. The noise impact assessment method set out in PAN 1/2011 Technical Guidance states: *"The choice of appropriate criteria noise levels and relevant time periods are the responsibility of the local authority. Although this may lead to inconsistencies between different local authorities and, indeed, across areas within a given local authority, it does provide flexibility, allowing particular circumstances to be taken into account and the use of the latest guideline values to be included where appropriate."*
- 2.2. The Technical Advice Note (TAN) issued to accompany the PAN for the assessment of noise proposes a methodology where the noise from the proposed operations is compared to existing ambient noise levels. The TAN refers to the (now superseded) ratings used in BS 4142:1997 to describe environmental noise but proposes a different assessment framework. The change in ambient noise level resulting from the proposed scheme is used to determine the magnitude of the impact, as described in Table 2.1 below.

Magnitude	Change in Noise Level dB LA _{eq T} (After – Before)
Major	>5
Moderate	3 – 4.9
Minor	1 – 2.9
Negligible	0.1 – 0.9
No Change	0

- 2.3. The significance of these effects is assessed according to the magnitude of the impacts and the difference between the specific rated noise level LA_{rT} and the pre-existing background noise level LA₉₀. The scheme suggested by the TAN is set out in Table 2.2 below. This provides a useful framework for assessment.

Magnitude (Table 2.1)	Sensitivity of Receptor based on likelihood of complaint $x = \text{rating level LA}_{rT} - \text{background LA}_{90}$		
	Low ($x < 5$)	Medium ($5 \leq x < 10$)	High ($x \geq 10$)
Major	Slight/Moderate	Moderate/Large	Large/Very Large
Moderate	Slight	Moderate	Moderate/Large
Minor	Neutral/Slight	Slight	Slight/Moderate
Negligible	Neutral/Slight	Neutral/Slight	Slight
No Change	Neutral	Neutral	Neutral

Statutory Nuisance

- 2.4. The Environmental Protection Act 1990 (EPA) imposes a duty on local authorities to periodically survey environmental noise levels and to investigate noise complaints. The Act requires local authorities to serve notice when noise nuisance exists. Under this regime the investigation and response to noise complaints would be the responsibility of East

Renfrewshire Council. The EPA requires that the process operator adopts the best practicable means to prevent or minimise nuisance.

BS 4142

2.5. British Standard BS 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* describes methods for determining sound from industrial and commercial operations from fixed installations, and from the loading and unloading of goods and materials at industrial and commercial premises. The Standard includes procedures for quantifying noise from tonal, intermittent and impulsive noise. Use of this Standard for predicting noise from the proposed development is appropriate. Noise during the daytime should be based on a 1-hour average exposure and at night-time over a period of 15 minutes⁶. The Standard also includes a procedure to determine the significance of the rated noise from an installation where, typically, the greater the difference between the background sound level and the specific sound, the greater the magnitude of the impact. According to the Standard:

- An increase of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context;
- An increase of around +5 dB is likely to be an indication of an adverse impact, depending on the context; and
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

World Health Organisation Guidelines for Community Noise

2.6. The World Health Organisation (WHO) has published Guidelines for Community Noise, the outcome of a WHO expert task force meeting in 1999.⁷ The WHO Guidelines advise that noise impacts within dwellings include sleep disturbance, annoyance and speech interference. The criteria relevant to this assessment are summarised in Table 2.3 below.

Environment	Critical Health Effect	Sound Level dB LA _{eq T}	Time (hours)
Inside dwellings	Speech intelligibility	35	16
Inside dwellings	Sleep disturbance	45	dB LA _{max}
Outside dwellings	Sleep disturbance	45	8
Inside dwellings	Sleep disturbance	30	8

Noise Assessment Criteria

2.7. The following assessment criteria have been adopted to help determine the significance of the environmental noise impacts. These criteria are based on the method in BS 4142:2014+A1:2019, and WHO criteria as set out in Table 2.4 below. This assessment assumes that the frequency of any peak

⁶ According to both BS 4142:2014 and WHO, night-time is defined as between 23:00 and 07:00 hours.

⁷ World Health Organisation Geneva 1999. Guidelines for Community Noise.

⁸ <http://www.who.int/mediacentre/factsheets/fs258/en/>

noise events at night would not be sufficient to trigger the requirement to assess the impacts of peak noise (LA_{max}) on sleep disturbance.

Table 2.4 - Environmental Noise Assessment Criteria	
Predicted Noise Level	Justification
35 dB LA_{eq} 1 hour	Noise level inside habitable rooms during the daytime based on WHO criteria.
30 dB LA_{eq} 8 hours	To protect against sleep disturbance inside bedrooms.
Relative to background	Relevant when considering impact from the proposed development, based on protecting daytime residential amenity. (BS 4142 and TAN).

Noise and Sound

- 2.8. This report uses the term **noise** when referring to WHO criteria used to assess noise from transport sources.⁹ Noise from industry is assessed using a different standard (BS 4142) and follows the conventions of that Standard which refers to **sound** from industrial or commercial activities.

Attenuation Provided by Open Windows

- 2.9. Traditionally acousticians have used a value of 10 – 15 dBA based on the WHO 1999 Community Noise Guidelines. The estimate of attenuation proposed in the WHO's latest Guidance (published in 2018) is based on more recent research¹⁰, which reflects improvements in standard window attenuation over the last 20 years. WHO rule-of-thumb estimates a reduction of 15 dBA between external and internal noise levels, assuming partially open windows. In considering the attenuation provided by windows, the latest WHO Guidance states: *'The differences between indoor and outdoor levels are usually estimated at around 10 dB for open, 15 dB for tilted or half-open and about 25 dB for closed windows.'*¹¹
- 2.10. The professional guidance published jointly by the Institute of Acoustics and the Association of Noise Consultants states that *'...it is assumed that a partially open window will provide an outside to-inside level difference of 13 dB. This level difference is considered representative of typical domestic rooms with simple façade openings of around 2% of the floor area.'*¹² On the basis of the findings reported by WHO and the joint IoA/ANC design guide, this assessment assumes 15 dB attenuation through a partially open window.

⁹ Department of Transport 1988. Calculation of Road Traffic Noise.

¹⁰ Barbara Locher et al. 2018. Differences between Outdoor and Indoor Sound Levels for Open, Tilted and Closed Windows. International Journal of Environmental Research and Public Health 2018 15,149. This reported a mean value of 16 dBA for tilted windows.

¹¹ WHO 2018. Environmental Noise Guidelines for the European Region Section 2.2.2 page 9

¹² IoA / ANC January 2020. Acoustics Ventilation and Overheating – Residential Design Guide Version 1.1

3.0. BASELINE SOUND

Baseline Sound Survey

- 3.1. A baseline sound survey was conducted at four locations during the daytime between 17th May and 23rd May 2023. The aim of the baseline survey was to assess existing ambient and background sound levels. The locations of the four survey sites are shown in Figure 2.
- 3.2. The measurements at Baseline Site 1 were obtained using a mainly unattended sound level meter along with simultaneous meteorological measurements over the seven days of the survey. Sound levels were recorded at 15-minute intervals.
- 3.3. Measurements were obtained at Baseline Sites 2 – 4 at 1-minute intervals during the daytime to obtain ambient and background sound levels at the nearest noise-sensitive residential uses adjacent to the proposed scheme.
- 3.4. The survey locations at Baseline Sites 2 and 3 quantified baseline sound at the dwellings near the A736. Baseline Sites 1 and 4 were located well away from the A736 and are likely to have lower background sound levels.
- 3.5. Measurements were taken using Norsonic Type 1 sound level meters. The parameters LA_{eq}, LA_{max}, and LA₉₀ are reported. The instrumentation was calibrated at the beginning and end of the survey periods. The instrumentation was contained within sealed weather-proof cases with full outdoor microphone protection. Wind speed, wind direction and other meteorological conditions were recorded during the survey. Further detail of the sound characteristics at the survey sites is set out in Table 3.1 below.

Site	Site Conditions
Site 1	This site was located in the yard at Cowdenmill House with continuous measurements over a 7-day period. The site was ~15m from the nearside kerb of Uplawmoor Road. The dominant sound was from road traffic on Uplawmoor Road. Road traffic on the A736 to the north also contributed to the ambient sound.
Site 2	This site was located to the west of the proposed development area, ~3m from the nearside kerb of the minor road and ~45m from the A736. The dominant sound was from traffic on the A736 with occasional vehicles on the minor road. Sound from running trains was occasionally audible.
Site 3	This site was located to the west of the proposed development area, 4m from the nearside kerb of the A736. The dominant sound was from road traffic on the A736. Sound from running trains was occasionally audible.
Site 4	This site was located 50m to the west of Cowdenmill Cottages and 4m from the nearside kerb of Uplawmoor Road. The dominant sound was from traffic on Uplawmoor Road. Traffic on the A736 was audible.

- 3.6. The survey data from Baseline Site 1 is summarised in Table 3.2 below. The ambient and background sound levels at Baseline Site 1 are plotted in Chart 1 and exhibit a typical diurnal pattern, and reducing at night, which is typical in acoustic environments where the ambient sound is dominated by transport sources. This plot shows peak sound levels, which are associated with road traffic movements. The baseline survey data is presented in Appendix 2. All Charts are located at the end of the text.

- 3.7. The results from Baseline Site 1 indicate that there were 65 (11%) 15-minute periods where the ultra-sonic anemometer recorded wind gusts exceeding 5m/s. There were 28 (5%) 15-minute periods where the tipping bucket recorded precipitation. The results in Table 3.2 below indicate that removing survey data with wind speed >5m/s or rainfall only marginally affects the overall ambient or background sound levels.

Table 3.2 – Summary of Baseline Survey Data – Baseline Site 1			
All Data	LA_{eq}	LA_{max}	LA₉₀
Day	50	83	32
Evening	48	80	31
Night	45	82	21
Filtered Data	LA_{eq}	LA_{max}	LA₉₀
Day	49	83	32
Evening	48	80	31
Night	45	82	19

N.B. where units = dB LA_T and filtered data excludes periods of high winds and any rain

- 3.8. Charts 2 and 3 show the diurnal variation in ambient and background sound levels at Baseline Site 1. The background sound level during the survey typically increases significantly between 03:00 and 04:00 which is likely to be due to the dawn chorus. The night-time background between midnight and 03:00 is typically in the low 20's. The relationship between the measured sound levels and meteorological data is plotted in Charts 4 and 5. There is a weak relationship between wind speed (gusts) and background levels (see Chart 6), which is typical of acoustic environments with a significant contribution from diurnally varying transport sources.

- 3.9. The data for Baseline Sites 2 – 4 are summarised in Table 3.3 below and presented in detail in Appendix 2. This shows that the daytime background sound levels at Baseline Sites 2 – 4 are significantly higher than the equivalent reported daytime background at Baseline Site 1. The data from Baseline Site 1 is likely to be conservative when assessing impacts on the dwellings closer to the A736. The time series of sound levels for Baseline Sites 2 - 4 are plotted in Charts 7 - 9. The main night-time impacts are likely to occur between 05:30 and 07:00 when the background sound levels from road traffic are slightly higher than the typical levels over the entire night-time period.

Table 3.3 – Summary of Baseline Sound - Baseline Sites 2 - 4						
Site	Date	Time start	Time end	LA_{eq}	LA_{max}	LA₉₀
2	17/05/2023	11:10	12:10	54	84	44
3	23/05/2023	11:30	12:30	70	89	41
4	23/05/2023	12:50	13:50	54	76	43

N.B. where units = dB LA_T

Proposed Design Criteria

- 3.10. Pragmatically this assessment adopts a design criterion that minimises the potential adverse impacts from the proposed development in terms of the Scottish Government's TAN. The ambient sound levels assumed for this assessment are as presented in Table 3.4 below. The noise-sensitive receptors further away from the A736 e.g. Cowdenmoor Farm and

Cowdenmill Cottages are likely to be the more sensitive due to the lower background and ambient sound levels.

Table 3.4 – Summary of Ambient and Background Sound Levels		
Parameters for Baseline Site 1	Ambient Sound dB LA _{eq} T	Background Sound dB LA ₉₀ T
Daytime	49	32
Evening	48	31
Night-time	45	20
Night-time (05:30 – 07:00)	47	31

Sound Source Survey

- 3.11. Two surveys were conducted in the yard at the proposed development site with a modern HGV (SJ73 FX0) to determine: the typical sound level emitted from a moving vehicle; and with the engine idling. Measurements of the moving vehicle were conducted using two sound level meters 12m apart with the truck moving in a regular track. The locations of the test track and sound level meters are shown in Figure 3.3. The measured levels are plotted in Chart 10. This Chart plots the 1-second LA_{eq} sound levels at the two measurement locations. The measurements at meter 1, 5m from the centre of the HGV track (shown in blue) exhibit a distinct peak level (typically >75 dB LA_{eq} 1-second) for each pass-by and a secondary minor peak around 10 seconds later as the vehicle passed behind meter 2 on the northern part of its circuit. These secondary peaks are typically ~10 dBA below the main peaks and thus unlikely to significantly affect the overall measurements.
- 3.12. The 18 events plotted in Chart 10 from meter 1 have been used to calculate the single event level (SEL) for an HGV pass-by.¹³ The calculated SEL for an HGV truck pass-by is 85 dB LA_{eq} 1-second. The peak sound level measured close to the vehicle pass-by measurements did not exceed 82 dB LA_{max} at any time during the course of the survey (at a distance of 5m from the nearside track centre-line). The calculated SEL has been used to calculate the equivalent LA_{eq} values for daytime and night-time based on a maximum of 40 vehicle movements within the lorry park in any hour. The typical 1/3rd octave spectra for HGV pass-by sound are plotted in Chart 11.
- 3.13. The measured 1-minute LA_{max} and LA_{eq} values for an idling HGV at a distance of 1m are summarised in Table 3.5 below. These have been used to calculate the sound from idling trucks. The typical 1/3rd octave spectra from idling trucks are plotted in Chart 12. The data from these measurements have been used to predict the noise impact.

Table 3.5 – Summary of Sound Levels from Idling Truck				
parameter	Front of Cab	Left of Cab	Right of cab	Back of truck
dB LA _{eq}	79	79	77	63
dB LA _{max}	80	79	78	67

¹³ The sound levels obtained at meter 2 included measurements for two peaks north and south of meter 2 with slightly different distances and have therefore not been used in this analysis.

4.0 METHODOLOGY

Justification for Approach

- 4.1 Sound levels were measured at four locations adjacent to the proposed development in suitable weather conditions. These sound levels provide a reasonable representation of existing ambient and background sound. Sound from the proposed development is based on typical measured levels from HGVs, typical sound levels inside vehicle workshops, and acoustic specifications for the proposed buildings. Sound from the proposed development has been predicted using a computer-based model, to help assess the likely impacts and inform the requirements for mitigation.

Sound from Proposed Activities

- 4.2 The modelling technique adopted in this study is based on the procedure set out in ISO 9613¹⁴ as implemented by SoundPlan 9 ®. ISO 9613 specifies an engineering method for calculating the attenuation of sound to predict noise levels at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level (LA_{eq}) under meteorological conditions favourable to propagation from sources of known sound emission. This prediction technique is considered to be appropriate in practice for modelling a great variety of noise sources and environments. ISO 9613 may be applied to the prediction of noise from industry and many other ground-based sources. This prediction technique is considered to be appropriate for the noise sources under consideration in this assessment.
- 4.3 The model includes for geometrical divergence, atmospheric absorption, ground effects, reflection from surfaces and screening by obstacles. The model allows for the use of correction factors for ground cover. For hard surfaces such as water or tarmac, the correction is applied simply as 3 dB for all frequencies and distances. Where the ground cover is soft, such as grass, woodland, or other less reflective material, an empirical relationship between ground attenuation and frequency and distance may be used. Hard ground has been assumed within the development area and soft ground elsewhere. These predictions assume downwind meteorological conditions which are favourable for sound propagation from the source to a receiver, where the predicted sound level is seldom exceeded. The estimated accuracy using this method is ± 3 dBA. The estimate of error in the ISO Standard is based on situations where there are no effects of attenuation due to screening. The traffic flows used in these predictions are based on the estimated flows set out in Section 1 and the measured levels reported in Section 3.
- 4.4 The layout was obtained from the planning drawings provided by the applicant as presented in Appendix 1. The details of surrounding noise-sensitive receptors and ground conditions were obtained from a site centred OS map at 1:10,000, a site walkover and OS Terrain 5 spot ground levels. Variations in local ground heights were taken into account. A digital model of the ground and buildings was constructed using the plans shown in Appendix 1. The model layouts are shown in Figures 3.1 and 3.2.

¹⁴ ISO 9613:1996 (E) Acoustics – Attenuation of sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere; and Part 2 : General method of calculation.

Scenario Considered

- 4.5. This assessment considers a single Scenario:
- Scenario 1 – assesses sound from breakout from the workshop and the welding building, vehicles idling within the lorry park, and on the internal roads to allow assessment in terms of BS 4142 and the TAN assessment framework set out in Tables 2.1 – 2.2.
- 4.6. The acoustic mitigation design was developed using numerous intermediate iterations to identify practicable measures to minimise adverse impacts.

5.0 ASSESSMENT RESULTS

Sound from Proposed Installation (Scenario 1)

- 5.1 Night-time sound levels have been assessed using WHO sleep disturbance criteria inside dwellings as these are likely to have the greatest potential for adverse significance. Daytime impacts have been assessed for the impacts on residential amenity including outdoors.
- 5.2 The results have been calculated at 5m intervals across the study area. These noise predictions are at 1.5m height above ground level. The predictions include the proposed acoustic mitigation measures.
- 5.3 The sound levels for Scenario 1 are plotted in Figure 4. The detailed results are presented in Appendix 3.
- 5.4 The dominant sound assessed is from the lorry park, which includes vehicle engine idling and vehicle movements within the yards. These sounds are likely to be typical of the character in the area, due to the proximity of the A736. Sound breakout from the vehicle workshop and welding buildings is predicted to be insignificant due to the high specification of the building wall and roof panels and fast-closing doors. The predicted rated sound levels at the worst-case receptors are summarised in Table 5.1 below.

Parameter/Receptor	Lagavulin	Viewfield	Cowdenmoor Farm	Cowdenmill Cottages
Rated dB LA _r 1-hour	32	34	33	37
Background dB LA ₉₀	44	44	32	43
Source – Background dB	-12	-10	+1	-6
BS 4142 Significance	Low	Low	Low	Low
TAN Significance	Neutral	Neutral	Neutral/Slight Adverse	Neutral/Slight Adverse

- 5.5 The worst-case predicted daytime sound levels are up to +1 dBA above the typical daytime background sound level. This is likely to be of Low significance in terms of BS 4142.
- 5.6 The impacts at the closest noise-sensitive receptors are predicted to be of Neutral/Slight Adverse significance in terms of the Scottish Government's TAN assessment framework (see assessment framework in Tables 2.1 and 2.2). These impacts are summarised in Table 5.2 (daytime) and Table 5.3 (night-time) at the end of the text.
- 5.7 The predicted sound from the proposed development is unlikely to cause sleep disturbance in terms of WHO criteria, where the worst-case predicted sound level is 37 dB LA_{eq} 15-minutes at Cowdenmill Cottages (external free-field). The predicted noise level inside any bedroom is therefore predicted to be 8 dBA below the WHO's criterion of 30 dB LA_{eq} 23:00 – 07:00 for bedrooms at night, assuming a reduction of -15 dBA for a partially open window.

Uncertainty

- 5.8 Prediction errors within ISO 9613:1996 are ± 3 dB. The model predictions are based on a widely validated prediction algorithm, the proposed design layout, recent measurements of vehicles, and specifications for building fabric. The sound levels for vehicle pass-bys are based on measurements

conducted on an ash surface which is likely to be slightly noisier than the finished surface within the scheme. Even with the potential prediction errors, the significance of the impacts is likely to be Low in terms of BS 4142 and of Neutral / Slight Adverse significance as a worst-case in terms of the TAN assessment methods.

- 5.9 The assessment of background sound levels does not take account of the recent and currently approved use as a bus depot. It is likely that the ambient and background sound levels will have been affected by those operations. This has not been taken into account in the present study, so that the assessment is likely to be slightly pessimistic.

Operational Noise

6.1 The noise mitigation measures proposed at the development are listed in Table 6.1 below. The overall noise mitigation strategy for the development includes:

- The construction of high quality, insulated buildings with rapid-closing doors to minimise sound breakout from the workshop and welding buildings;
- The specification of maximum noise limits for fixed plant and the sound insulation properties of the walls and roofs of the proposed industrial buildings;
- The specification of maximum noise limits for fixed plant including local exhaust ventilation (LEV) units serving the workshop and welding buildings;
- The specification of maximum noise limits for fixed plant including heating, ventilation and air conditioning (HVAC) units serving the museum, workshop and welding buildings;
- The sound power levels from all LEVs and HVAC systems shall be selected to ensure that the combined sound from these units shall not exceed the typical night-time background sound level at any noise-sensitive receptor;
- The erection of an acoustic bund/barrier to the north-west of the development site to reduce noise from vehicle movements affecting adjacent noise-sensitive receptors; and
- Managing the operation of the depot in accordance with a documented Noise Management Plan (NMP) to minimise the number of HGV engines idling at any one time, and to ensure that the doors to the workshop and welding buildings are kept closed at all times except to permit access and egress.

Table 6.1 - Proposed Noise Mitigation	
Issue	Mitigation
Fixed Plant	
All Fixed Plant	The location of all fixed plant shall be selected to minimise adverse impacts on noise-sensitive receptors. The sound power levels for all fixed plant shall be selected to ensure that the combined noise from all fixed plant including LEVs, HVAC and breakout from any louvres shall be less than the typical daytime and night-time background sound level at all noise-sensitive receptors.
All Fixed Plant	All plant and equipment shall be free from tonal, intermittent or impulsive characteristics.
Vehicles and Mobile Plant	
Transport Noise	All roadways within the development site shall be smooth to reduce noise from any road vehicles moving within the access roads and service yards.
Vehicle Reversing Alarms	Where practicable, HGVs and other mobile plant within the site shall be fitted with broadband directional sound reversing alarms which are designed to target the danger area immediately behind the vehicle.

Table 6.1 - Proposed Noise Mitigation	
Issue	Mitigation
Building Elements	
Walls and Roofs	All wall and roof panels within the scheme shall have a minimum noise reduction of 35 dB R _w . All doors to the workshop and welding buildings shall be fitted with rapid-closing doors.
Other Measures	
Acoustic Barrier	The erection of an acoustic barrier/bund to protect the amenity of the nearest noise-sensitive receptors [see Figure 5].

Construction Noise

6.2 Noise during construction has the potential to cause annoyance. The following procedures shall be adopted to ensure that noise impacts from construction operations are minimised to protect local amenity:

- Prior to the commencement of development, the appointed contractors shall prepare a construction method statement for the project. This shall include an assessment of potentially noisy operations and outline the noise mitigation measures proposed. The construction noise impact assessment shall be used to help inform the development of the detailed construction methods.
- The contractors shall be required to select the quietest item of suitable plant available for all site operations. The work programme on site shall also be phased to reduce the combined impacts arising from several noisy construction operations to reduce adverse impacts. Where practicable, noise from fixed plant and equipment shall be contained within suitable acoustic enclosures or behind acoustic screens.
- Any plant and equipment required for operation at night (23:00 – 07:00) e.g. for security lighting, shall be mains electric powered where practicable.
- The site contractors shall conduct all site operations in accordance with accredited documented procedures. This shall include a complaint investigation procedure.
- All sub-contractors appointed by the main contractor shall be formally required through contract to comply with all environmental noise conditions.

7.0 CONCLUSIONS

- 7.1 The results from the baseline survey indicate that ambient (LA_{eq}) and background (LA_{90}) sound levels are higher at receptors closest to the A736 and are lower at the dwellings to the south at Cowdenmoor Farm and Cowdenmill Cottages which are on elevated ground and overlook the proposed development site.
- 7.2 The typical daytime background sound at Cowdenmoor Farm is 32 dB LA_{90} 07:00 – 19:00. This reduces significantly at night, to 20 dB LA_{90} 23:00 – 07:00. The main impact from the proposed development is likely to occur when operations will commence at 05:30, when the typical background sound level is 31 dB LA_{90} 05:30 – 07:00 at this receptor. The ambient daytime sound is typically 48 - 49 dB LA_{eq} 07:00 – 23:00, reducing only slightly to 47 dB LA_{eq} 05:30 – 07:00 in the early morning at this receptor.
- 7.3 The dominant sound in the study area is from road traffic on the A736.
- 7.4 The results from the noise prediction exercise indicate that sound from the proposed development has the potential to affect the residential amenity of the existing dwellings at Viewfield on the A736 and dwellings on Lagavulin Road. These will be partially screened by the existing and proposed buildings. The receptors at Cowdenmill Cottages and Cowdenmoor Farm are located at a greater distance from the development site, but are on elevated ground which cannot be effectively screened by the erection of acoustic barriers.
- 7.5 Sound from the proposed development has been assessed in accordance with BS 4142:2014 + A1:2019 and the assessment framework from the Scottish Government's TAN as set out in Tables 2.1 and 2.2.
- 7.6 Sound from the proposed installation is predicted to be of Low significance in terms of BS 4142:2014+A1:2019, when assessed for potential impacts on residential amenity.
- 7.7 The worst-case impact is predicted to be of Neutral/Slight Adverse significance in terms of the TAN assessment framework.
- 7.8 Sound from the proposed scheme is predicted to be well below the WHO's criterion to prevent sleep disturbance.
- 7.9 The proposed mitigation measures include controlling yard activities at night to minimise adverse impacts, the specification of smooth, low-noise surfaces to reduce rolling tyre noise and minimise noise from vehicle suspension, the erection of an acoustic barrier and bund, the specification of maximum sound power levels for fixed plant, and acoustic insulation for the buildings to reduce noise breakout.

Tables

Table 5.2

Receptor	Environmental Noise Exposure				Assessment in Accordance with TAN					
	Specific sound dB LA _{eq}	rated sound dB LA _r	Baseline Ambient dB LA _{eq}	Baseline Background dB LA ₉₀	X	Likelihood of complaint	combined noise	after - before	Magnitude	Significance
Shillford Mill (not noise sensitive)	45	45	70	41	4	Low	70	0.0	No Change	Neutral
Barrhead Leather (Cottage)	35	35	70	41	-6	Low	70	0.0	No Change	Neutral
Lagavullan	32	32	54	44	-12	Low	54	0.0	No Change	Neutral
Viewfield House	34	34	54	44	-10	Low	54	0.0	No Change	Neutral
Cowdenmoor Farm	33	33	49	32	1	Low	49	0.1	Negligible	Neutral/Slight Adverse
Cowdenmill Cottages	37	37	54	43	-6	Low	54	0.1	Negligible	Neutral/Slight Adverse

Notes

Predicted exposure at worst-case opening window

where background and ambient sound are from Table 3.4 (daytime) for Baseline Site 1 and from Table 3.3 for Baseline Sites 2 - 4.

impacts in outdoor areas are relevant during the daytime where the main consideration is to minimise adverse impacts on residential amenity

Table 5.3

Receptor	Environmental Noise Exposure				Assessment in Accordance with TAN					
	Specific sound dB LA _{eq}	rated sound dB LA _r	Baseline Ambient dB LA _{eq}	Baseline Background dB LA ₉₀	X	Likelihood of complaint	combined noise	after - before	Magnitude	Significance
Shillford Mill (not noise sensitive)	45	45	47	31	14	High	49	2.1	Minor	Slight / Moderate Adverse
Barrhead Leather (Cottage)	35	35	47	31	4	Low	47	0.3	Negligible	Neutral/Slight Adverse
Lagavullan	32	32	47	31	1	Low	47	0.1	Negligible	Neutral/Slight Adverse
Viewfield House	34	34	47	31	3	Low	47	0.2	Negligible	Neutral/Slight Adverse
Cowdenmoor Farm	33	33	47	31	2	Low	47	0.2	Negligible	Neutral/Slight Adverse
Cowdenmill Cottages	37	37	47	31	6	Medium	47	0.4	Negligible	Neutral/Slight Adverse

Notes

Predicted exposure at worst-case opening window


where background and ambient sound are from Table 3.4 (05:30 - 07:00)

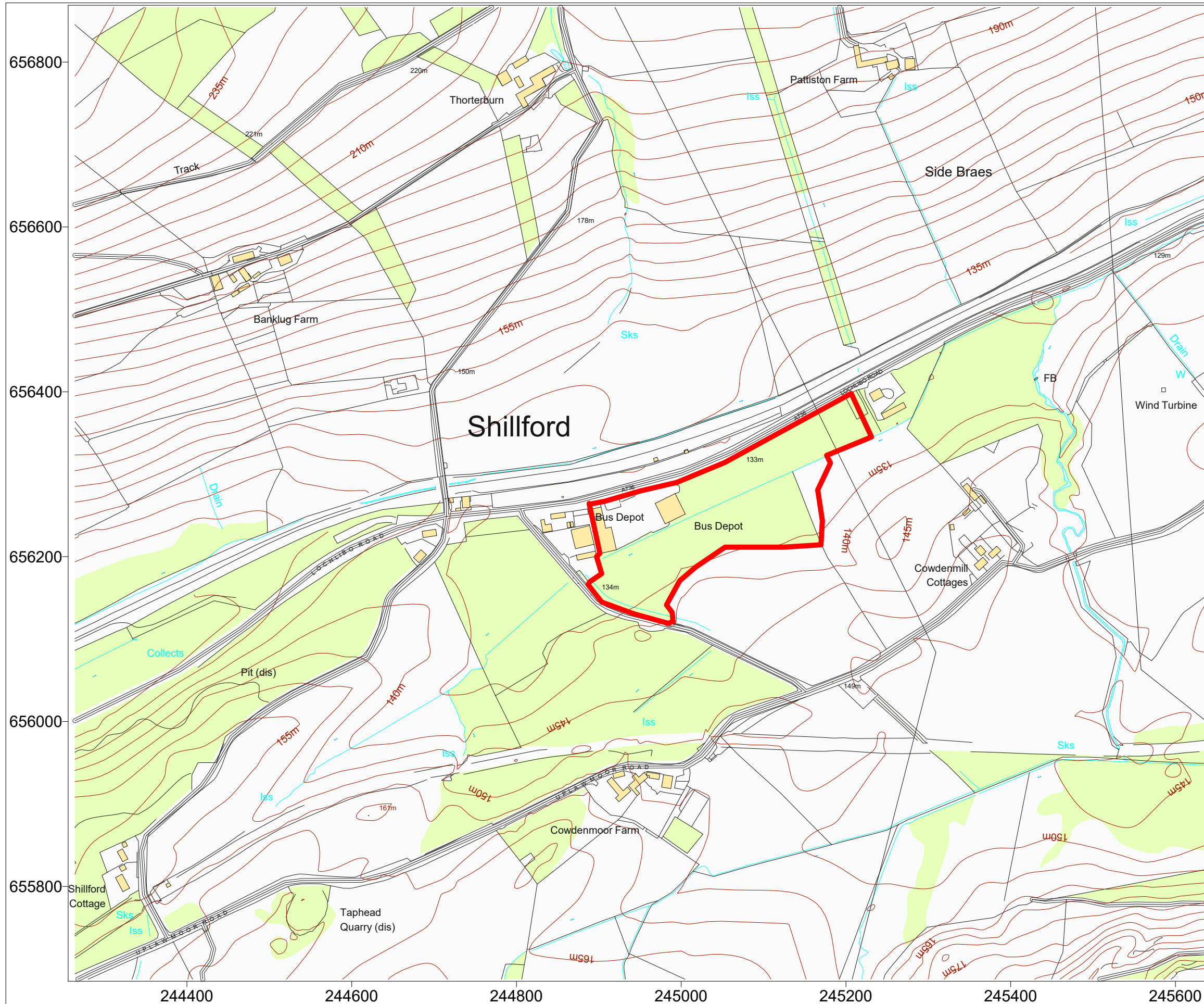
impacts in outdoor areas are less relevant at night where the main consideration is to prevent sleep disturbance.

Figures

Shillford Uplawmoor

Figure 1 Site Location


 indicative development boundary

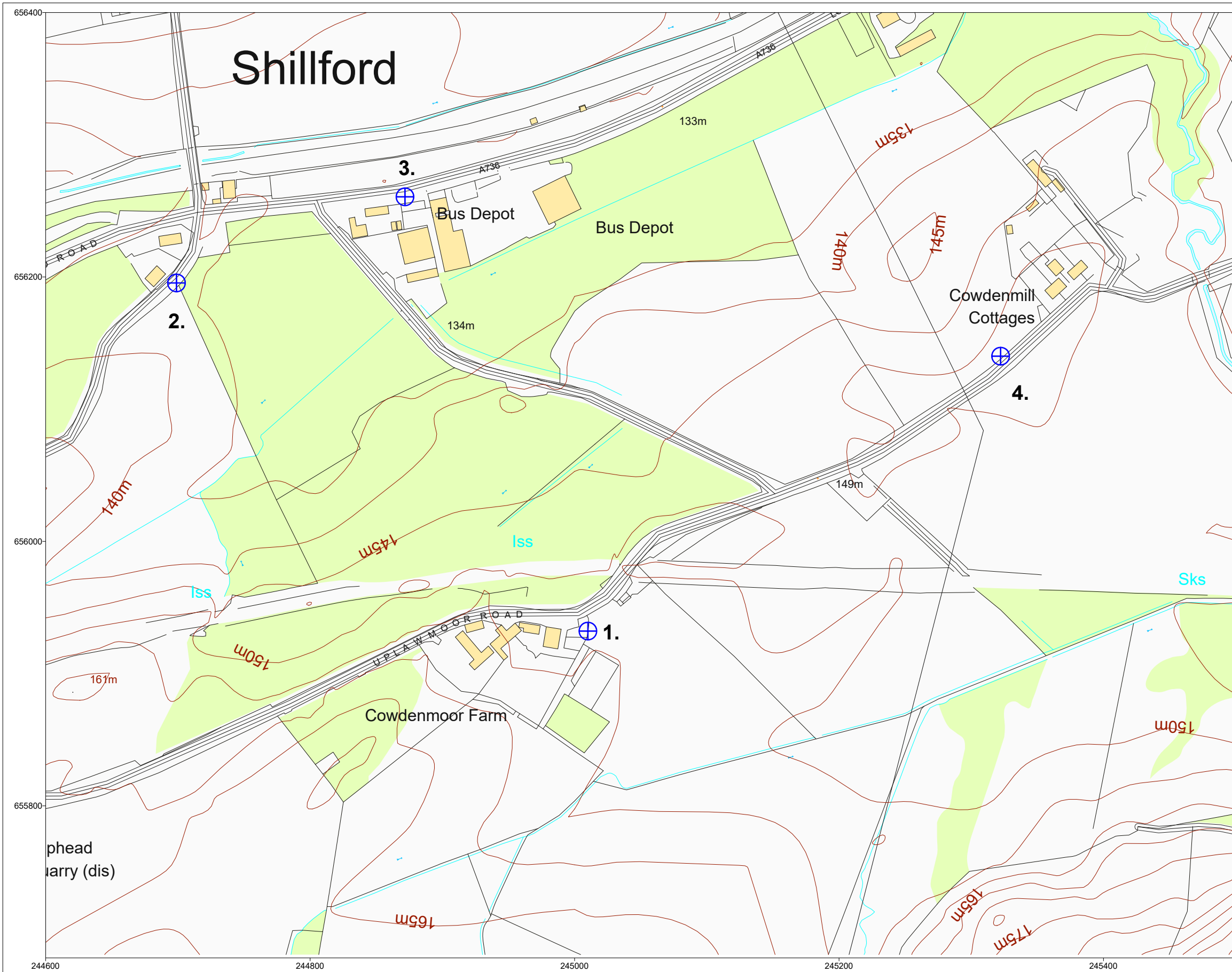


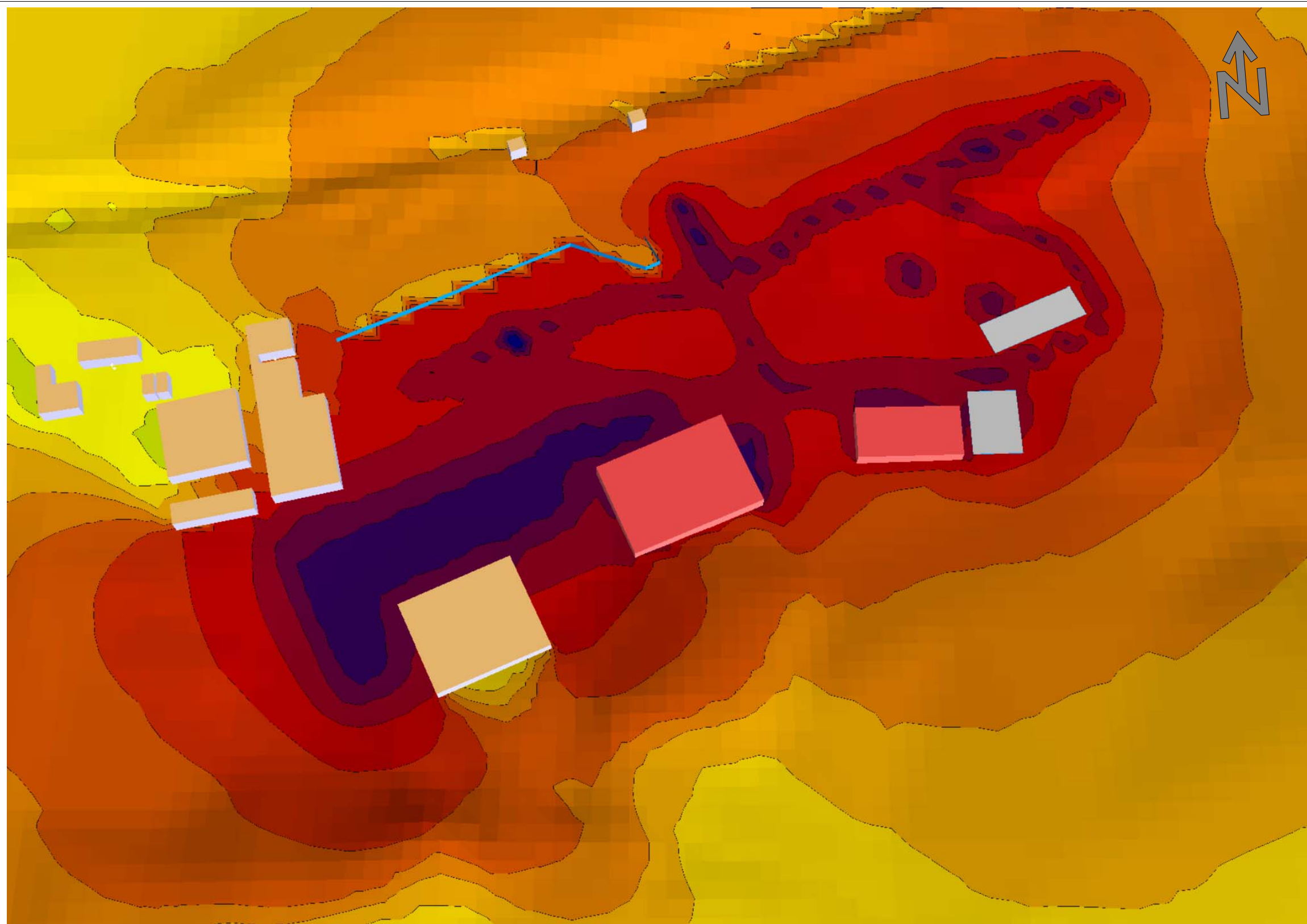
AS 0985 Shillford - 29 May 2023: Crown copyright Ordnance Survey 0100031673



Figure 2
Baseline Surveys

 location of baseline survey





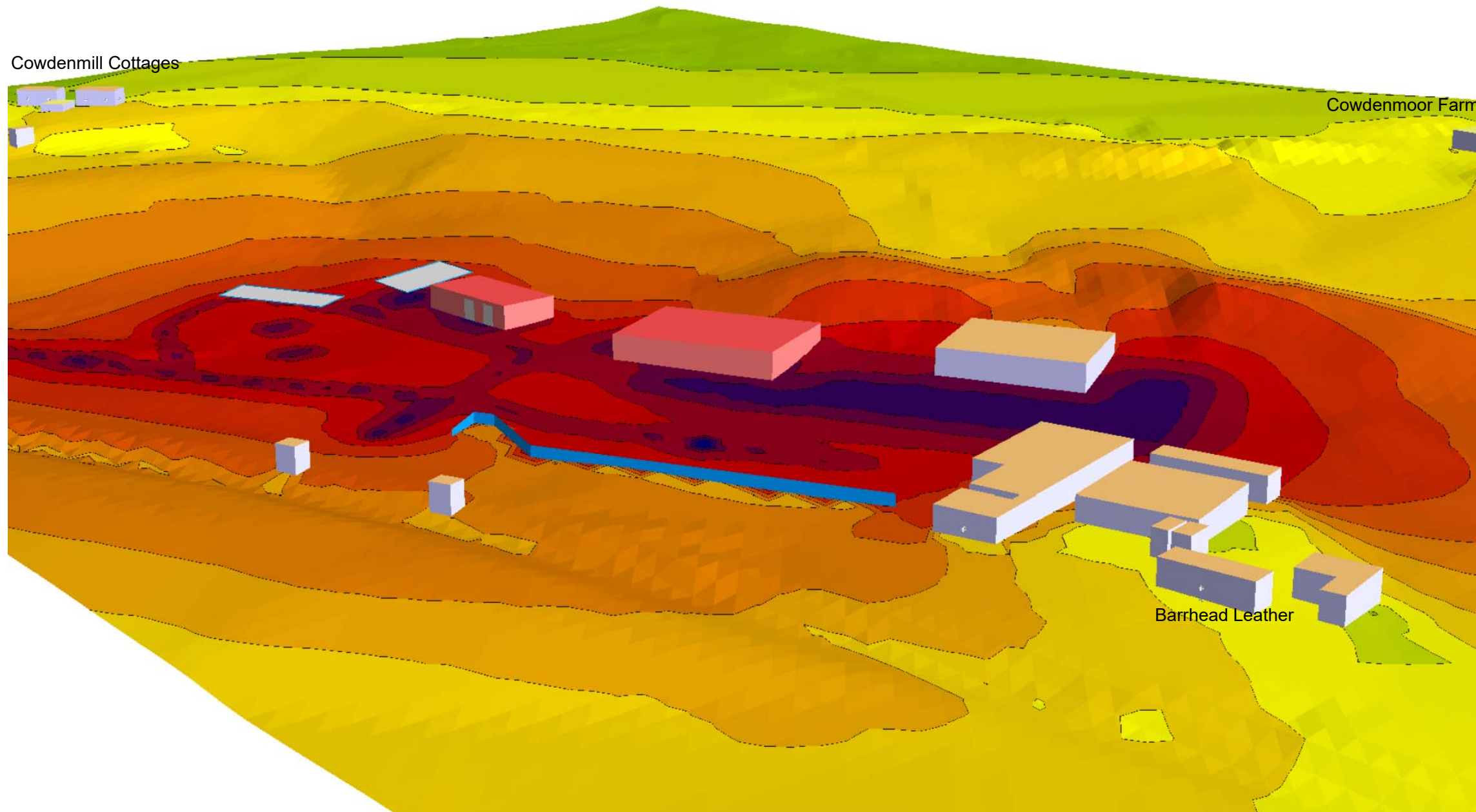
Shillford
Uplawmoor

Figure 3.1
Model Layout

AS 0985 Shillford - 16 November 2023: Crown copyright Ordnance Survey 0100031673



Figure 3.2
Model Layout



Shillford
Uplawmoor

Figure 3.3
Source Survey



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Figure 4
Daytime Sound Levels

Prediction Model - Scenario 1 - Workshop
Welding Shop and Fueling station
Idling and vehicle pass-bys
SoundPlan 9.0
Model includes existing and proposed buildings
mixed reflecting ground across domain
Topography
based on OS Terrain 5
prediction grid 5m
contours dB LAeq 07:00 - 23:00
1.5m above ground level
units = dB LAeq daytime

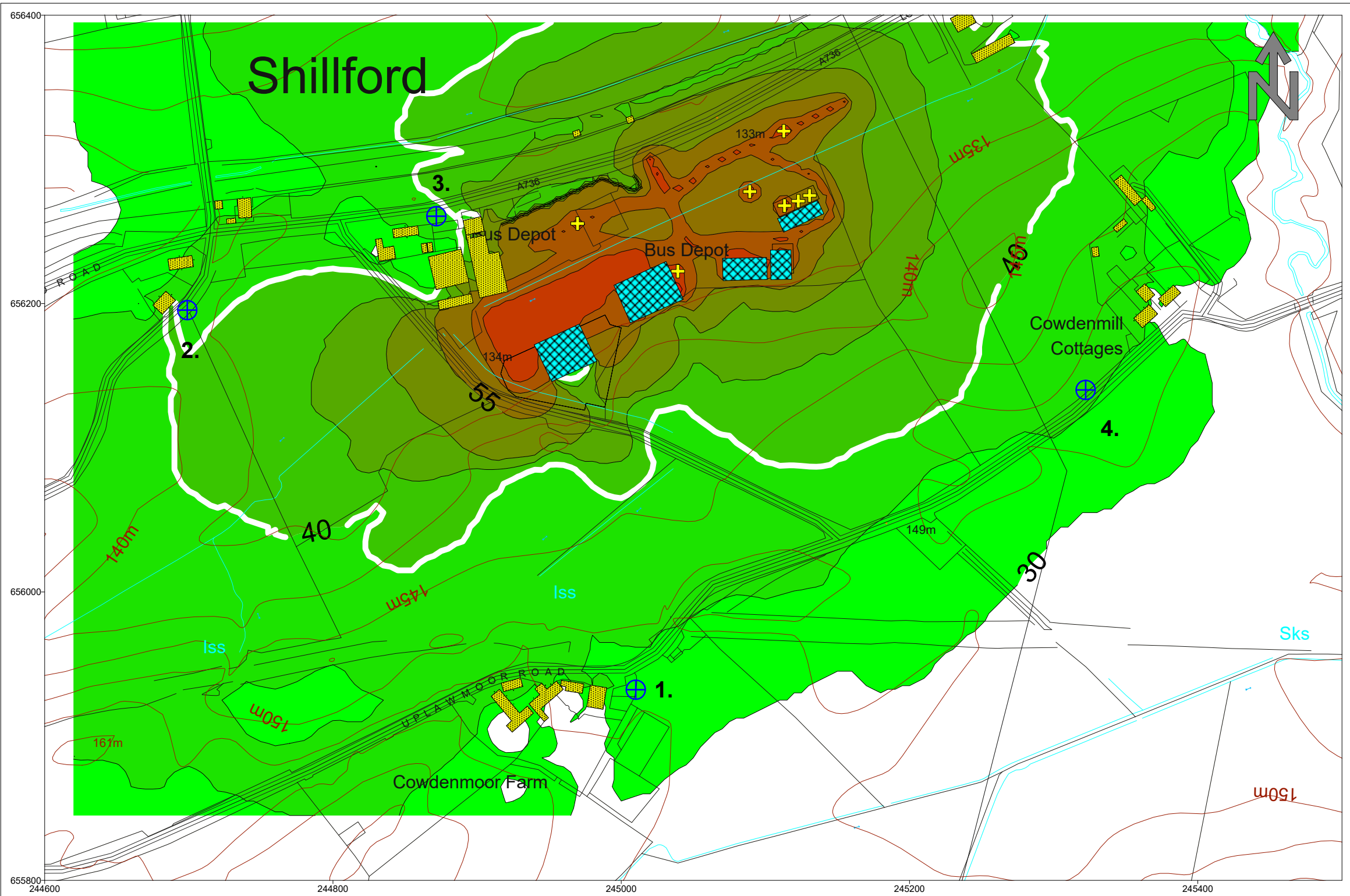
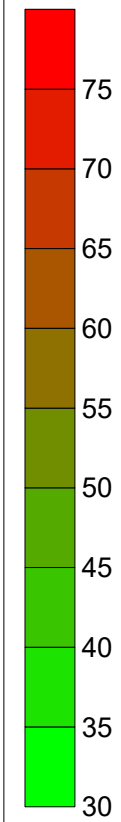
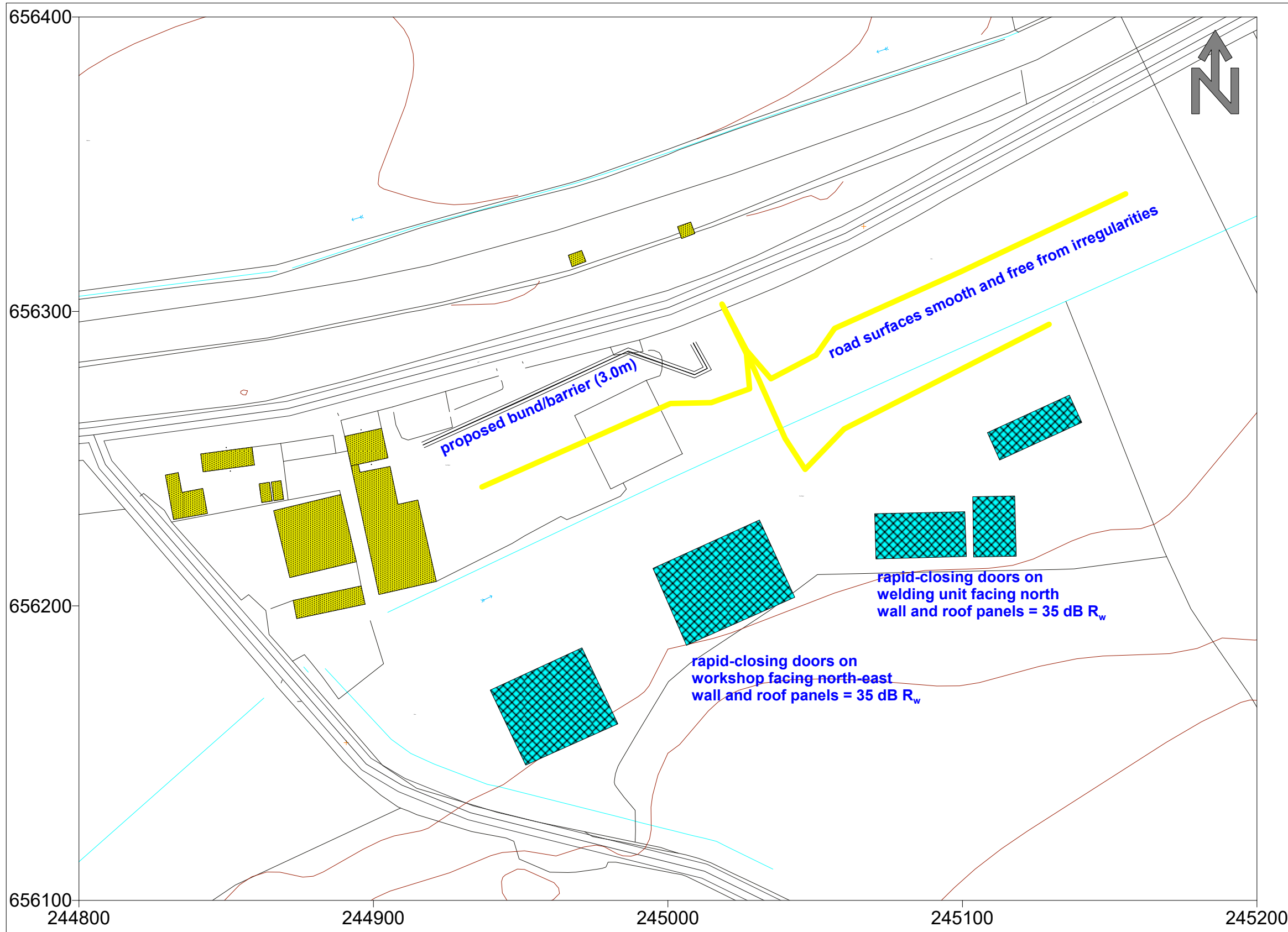
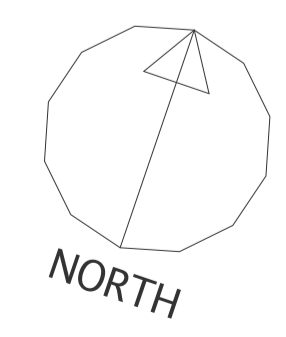
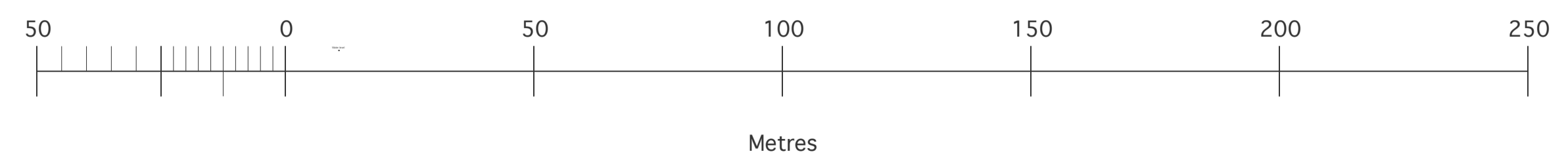
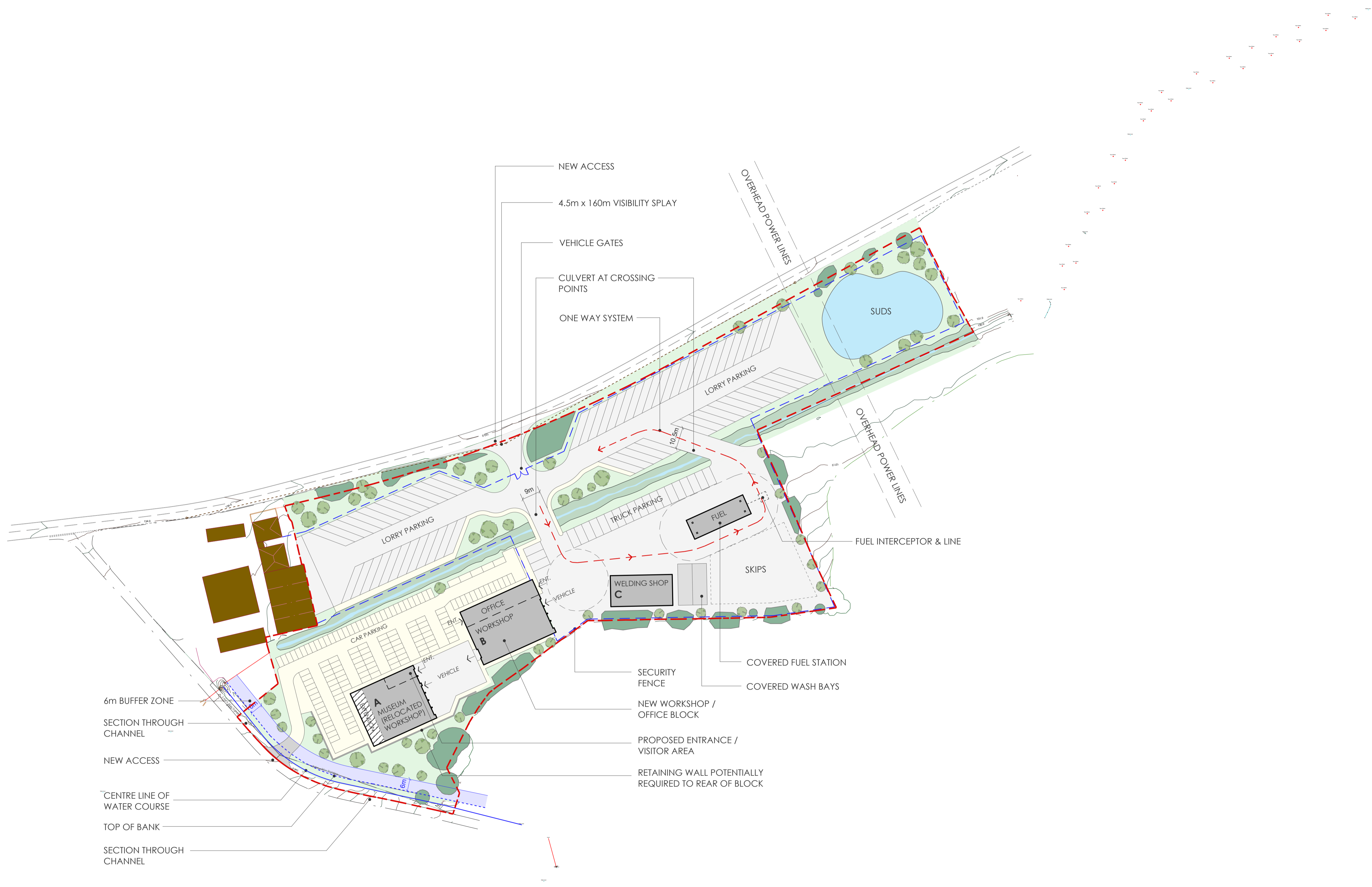


Figure 5
Proposed Mitigation



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Appendix 1 – Project Description



Appendix 2 – Baseline Survey

Noise Survey



Project Number: AS 0985	Project Name: Shilford Haulage
Log Book Number: 116	
Site No: 1	Date/Time: Wednesday 17th May 2023: 10:45 till Tuesday 23rd May 2023: 14:00
Location: Uplawmoor Road	Weather Station
	Sound Level Meter: 5
	Calibration at End: 113.6
Site No: 2	Date/Time: Wednesday 17th May 2023: 11:10
Location: Lagavulin Road	Temperature (C): 12
	Wind Speed/Dir.: 0
	Cloud Cover (Okta): 3
	Sound Level Meter: 7
	Calibration at End: 113.7
Site No: 3	Date/Time: Tuesday 23rd May 2023: 11:30
Location: Shilford Mill A736	Temperature (C): 13
	Wind Speed/Dir.: 2-3m/s SW
	Cloud Cover (Okta): 8
	Sound Level Meter: 5
	Calibration at End: 113.7
Site No: 4	Date/Time: Tuesday 23rd May 2023: 12:50
Location: Cowdenmill Cottages	Temperature (C): 14
	Wind Speed/Dir.: 2-3m/s SW
	Cloud Cover (Okta): 8
	Sound Level Meter: 5
	Calibration at End: 113.7
Norsonic Nor-140 Sound Level Meter 5	Serial No. 1406913
Norsonic Nor-1251 Acoustic Calibrator A	Serial No. 31060
Norsonic Nor-1225 Microphone	Serial No. 208201
Norsonic Nor-1217 Outdoor Protection Kit	Serial No. 12175402
Calibration Factor 113.8	
Norsonic Nor-140 Sound Level Meter 7	Serial No. 1405074
Norsonic Nor-1251 Acoustic Calibrator A	Serial No. 31060
Gras 40AF Microphone	Serial No. 1144655
Norsonic Nor-1217 Outdoor Protection Kit	Serial No. 12175404
Calibration Factor 113.8	
Weather Station	Date/Time: Wednesday 17th May 2023: 10:45 till Tuesday 23rd May 2023: 14:00
Davis Vantage Pro 2 6152UK	



Site 1 and Weather Station



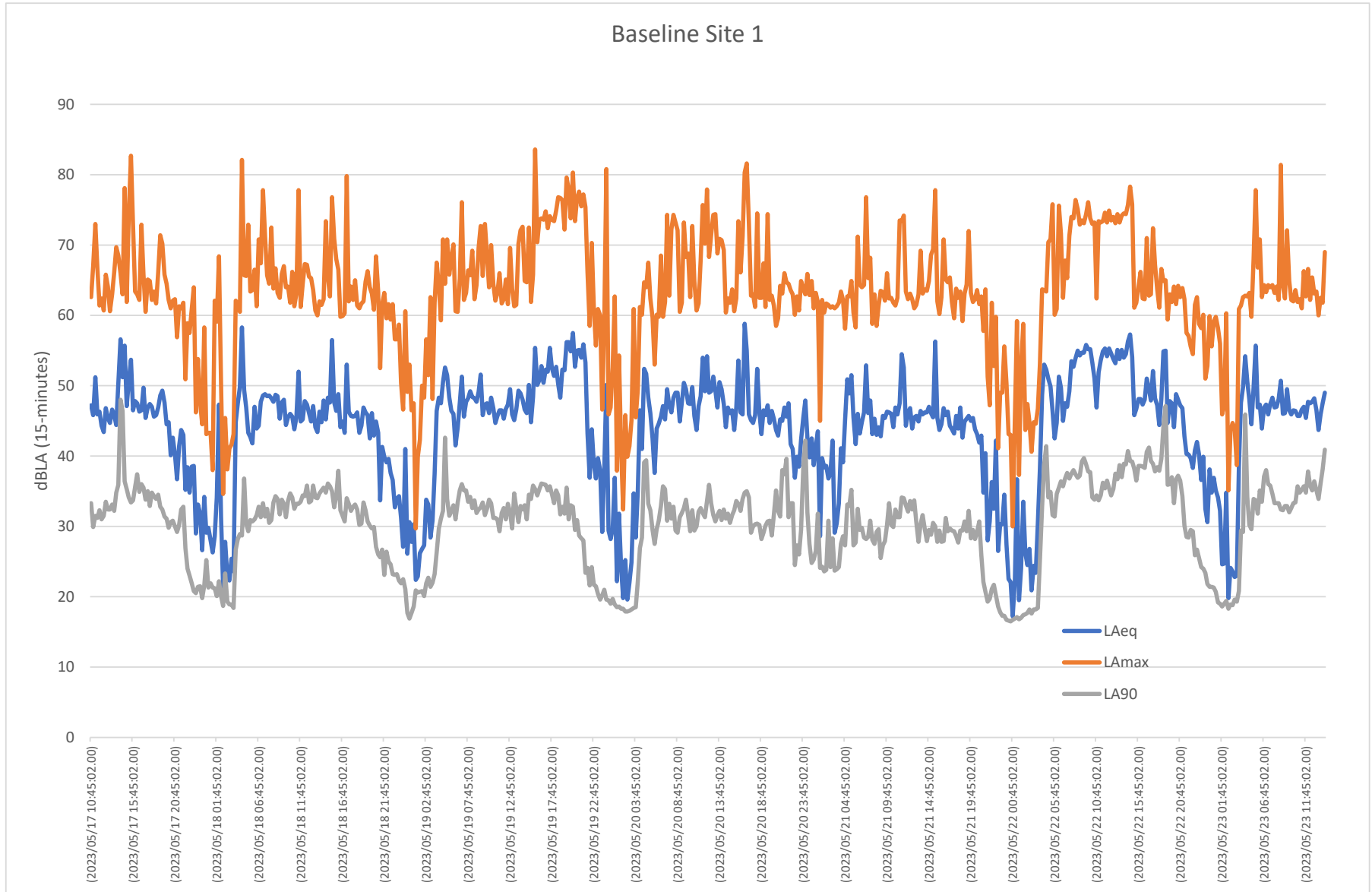
Site 2

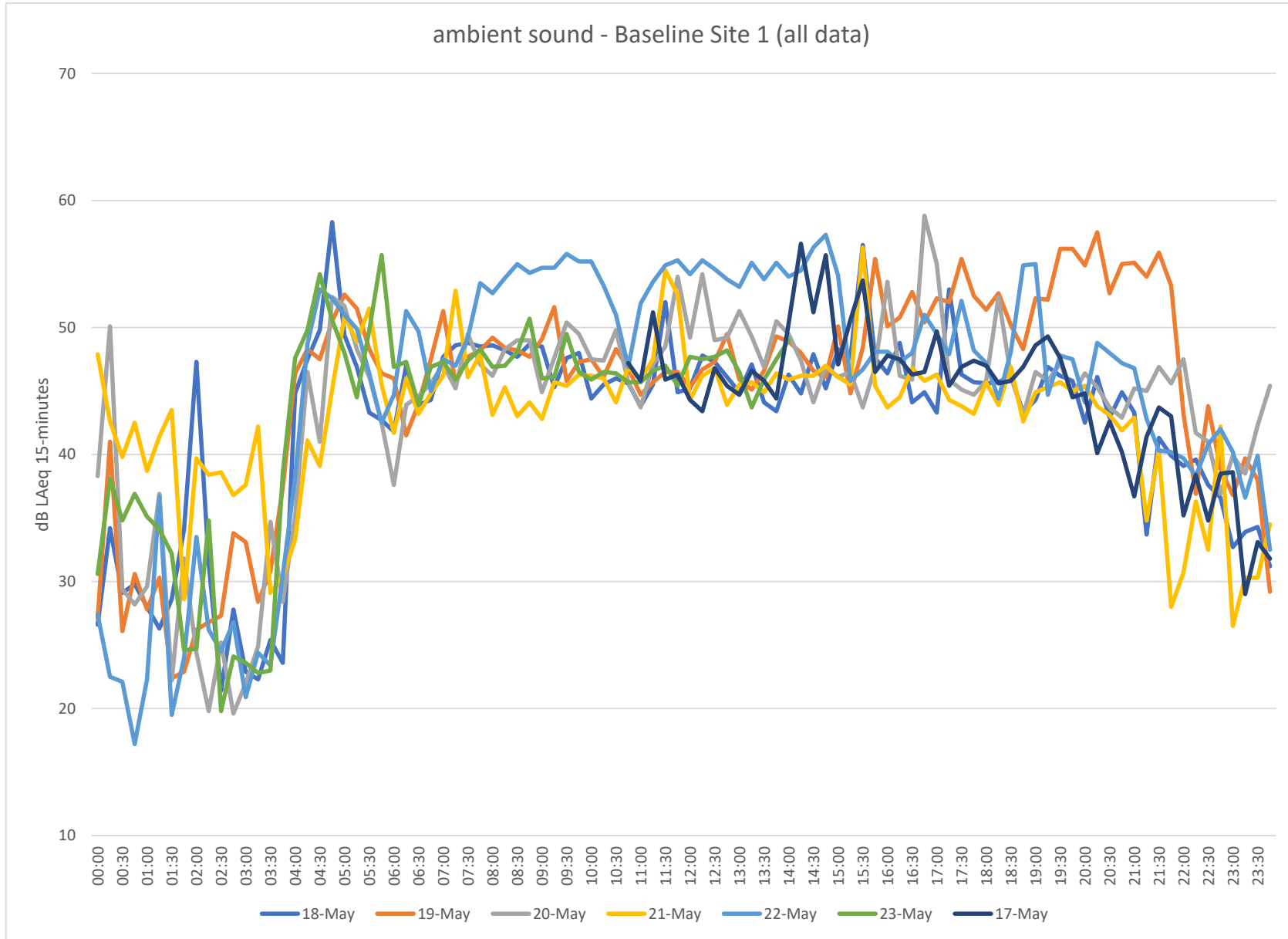


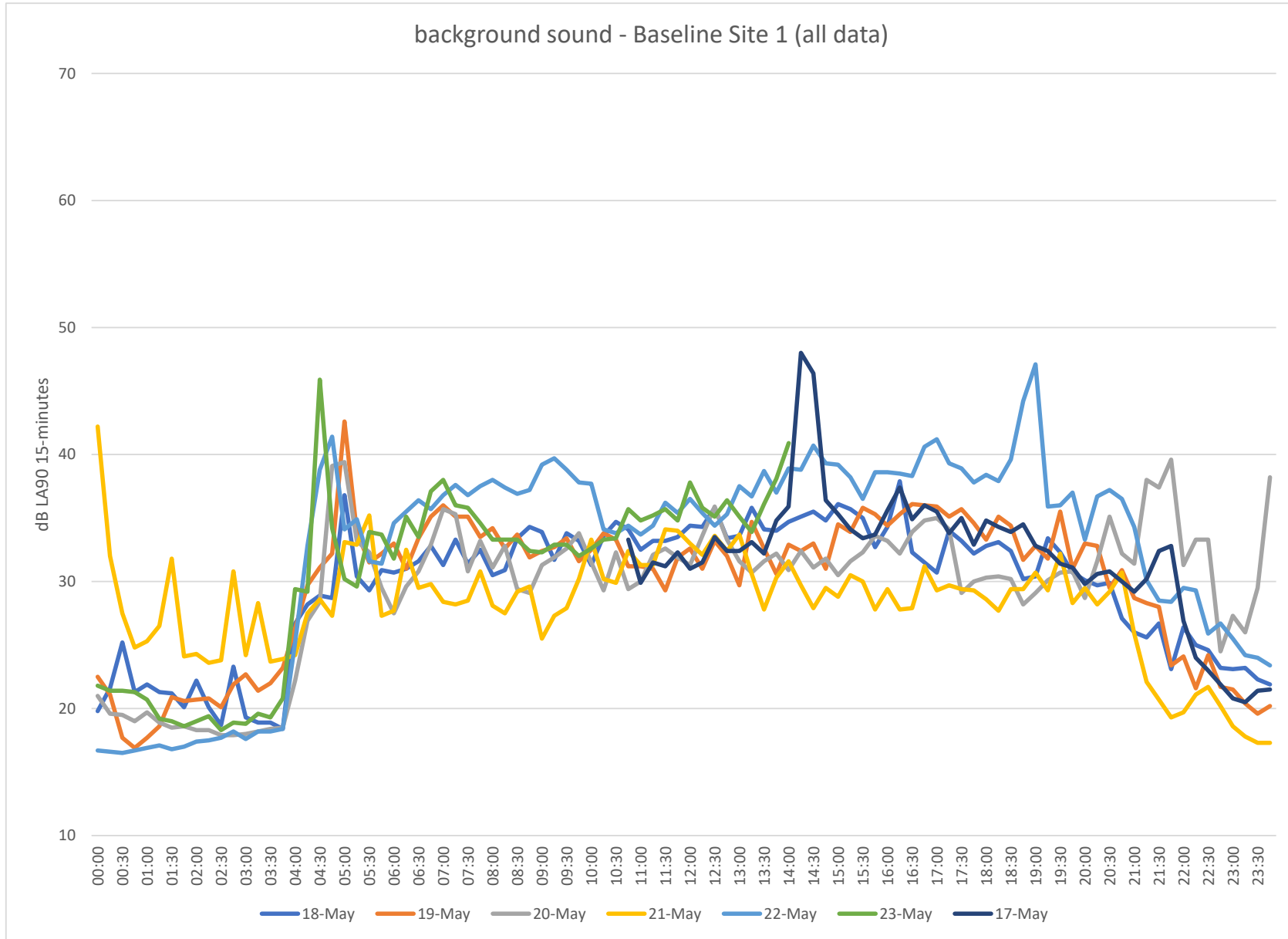
Site 3

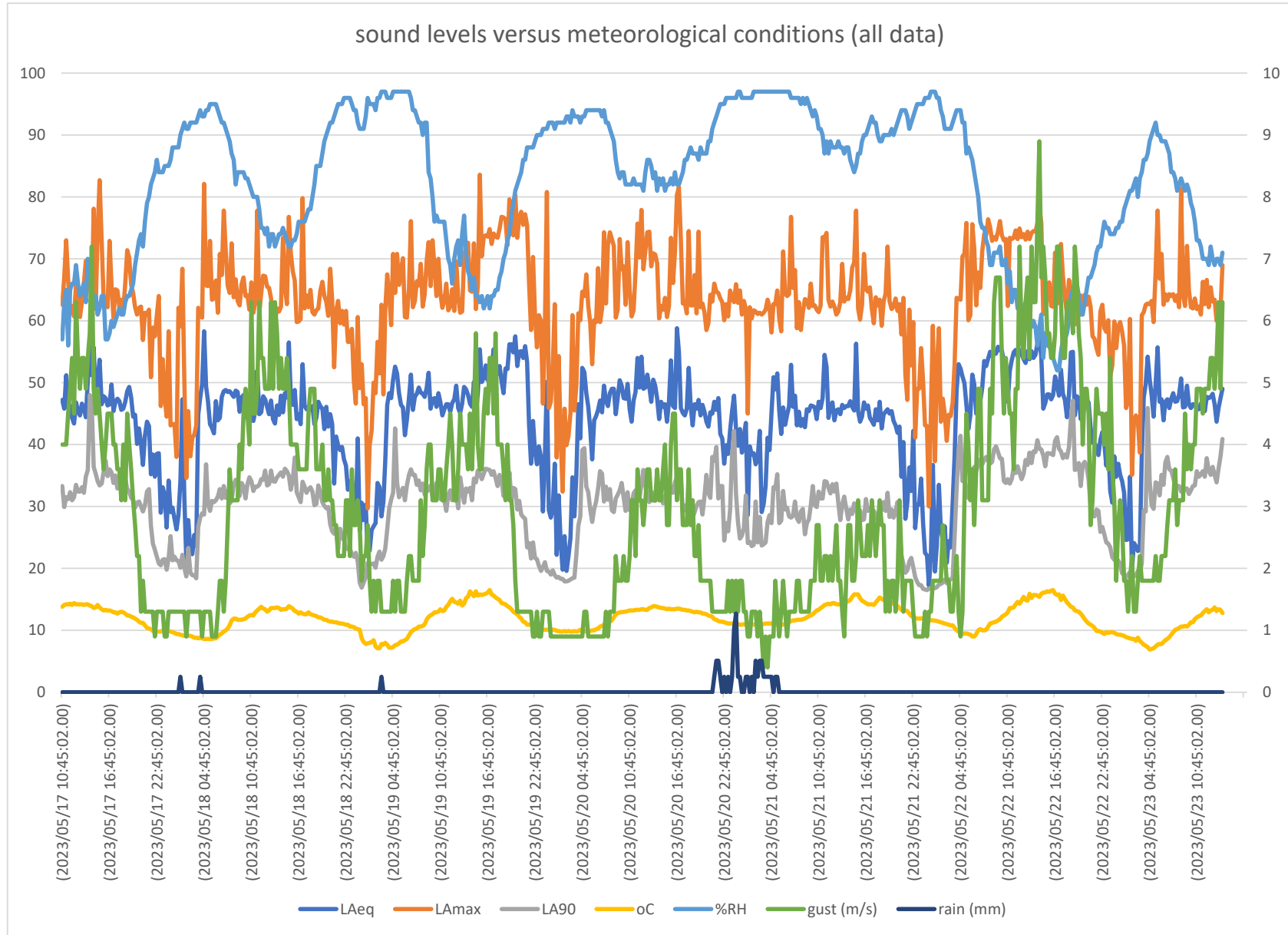


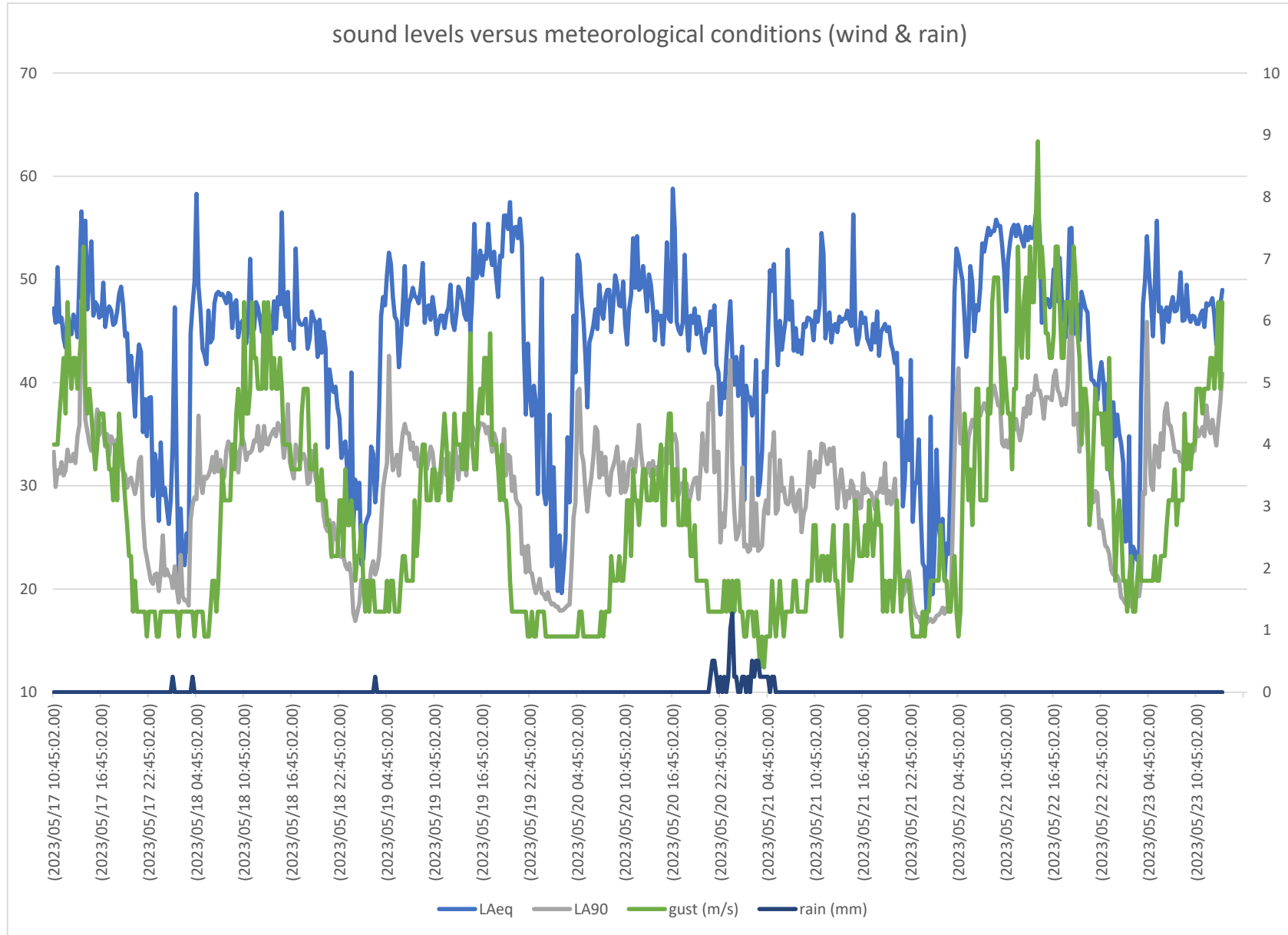
Site 4

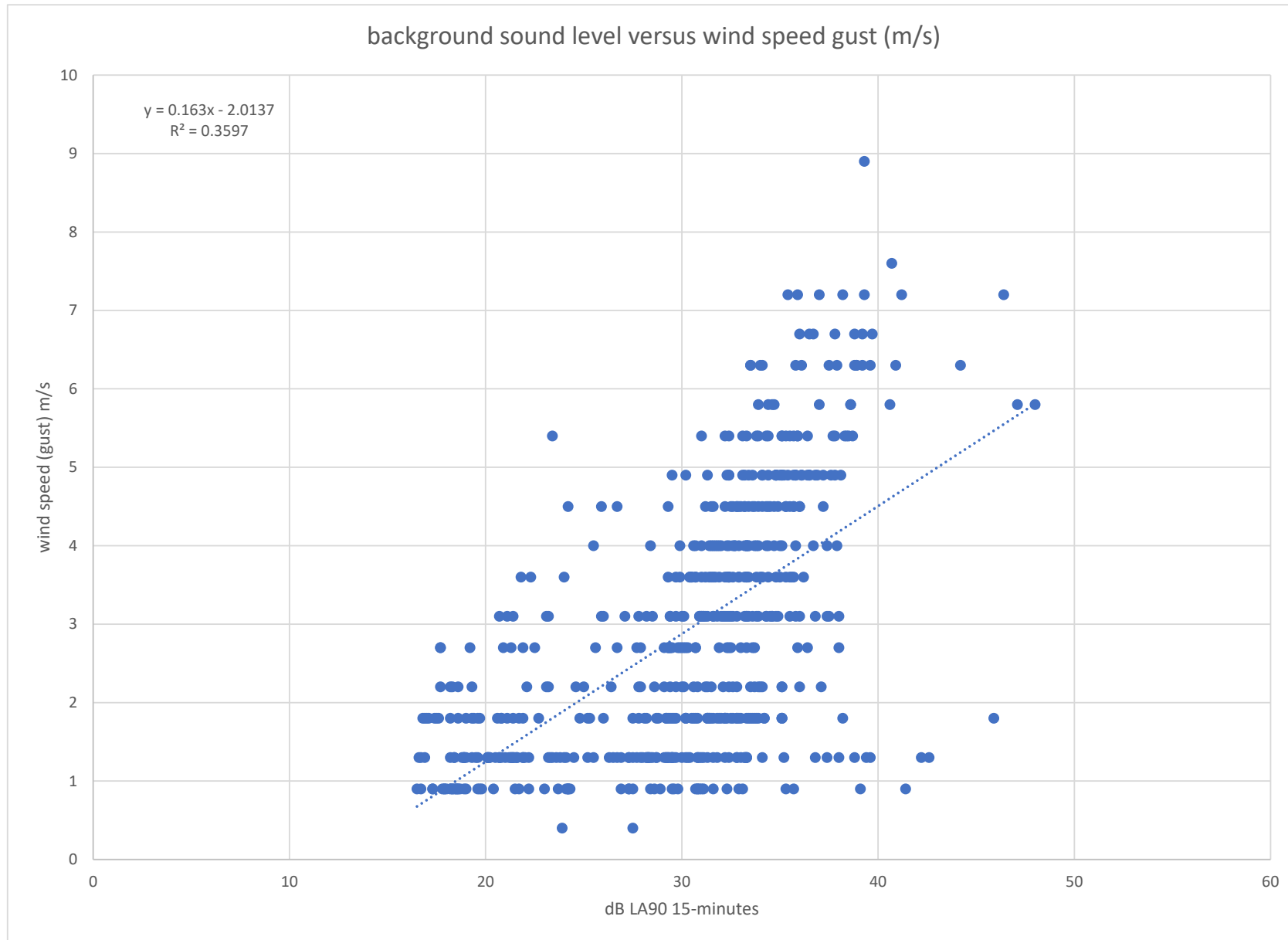


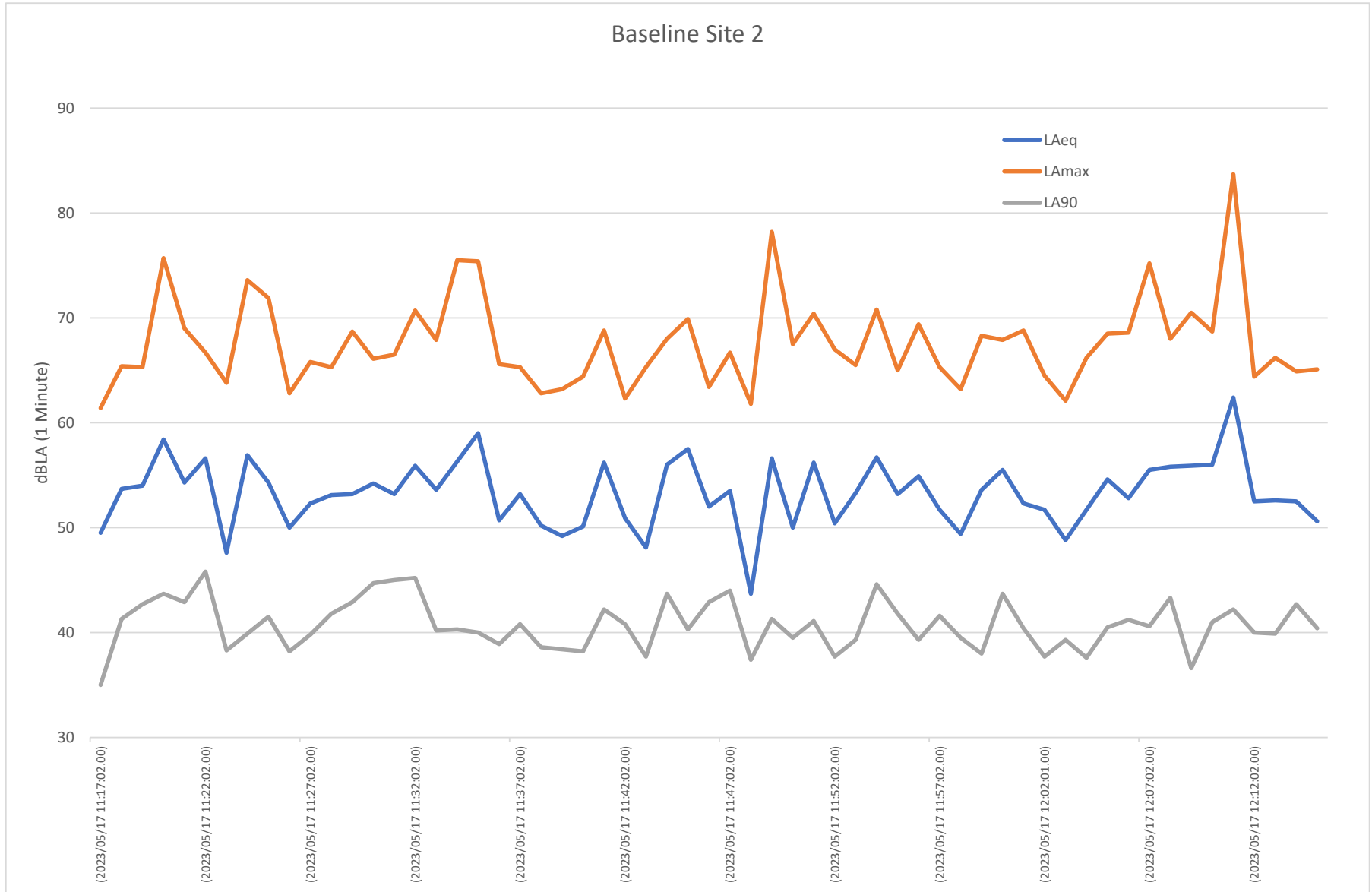


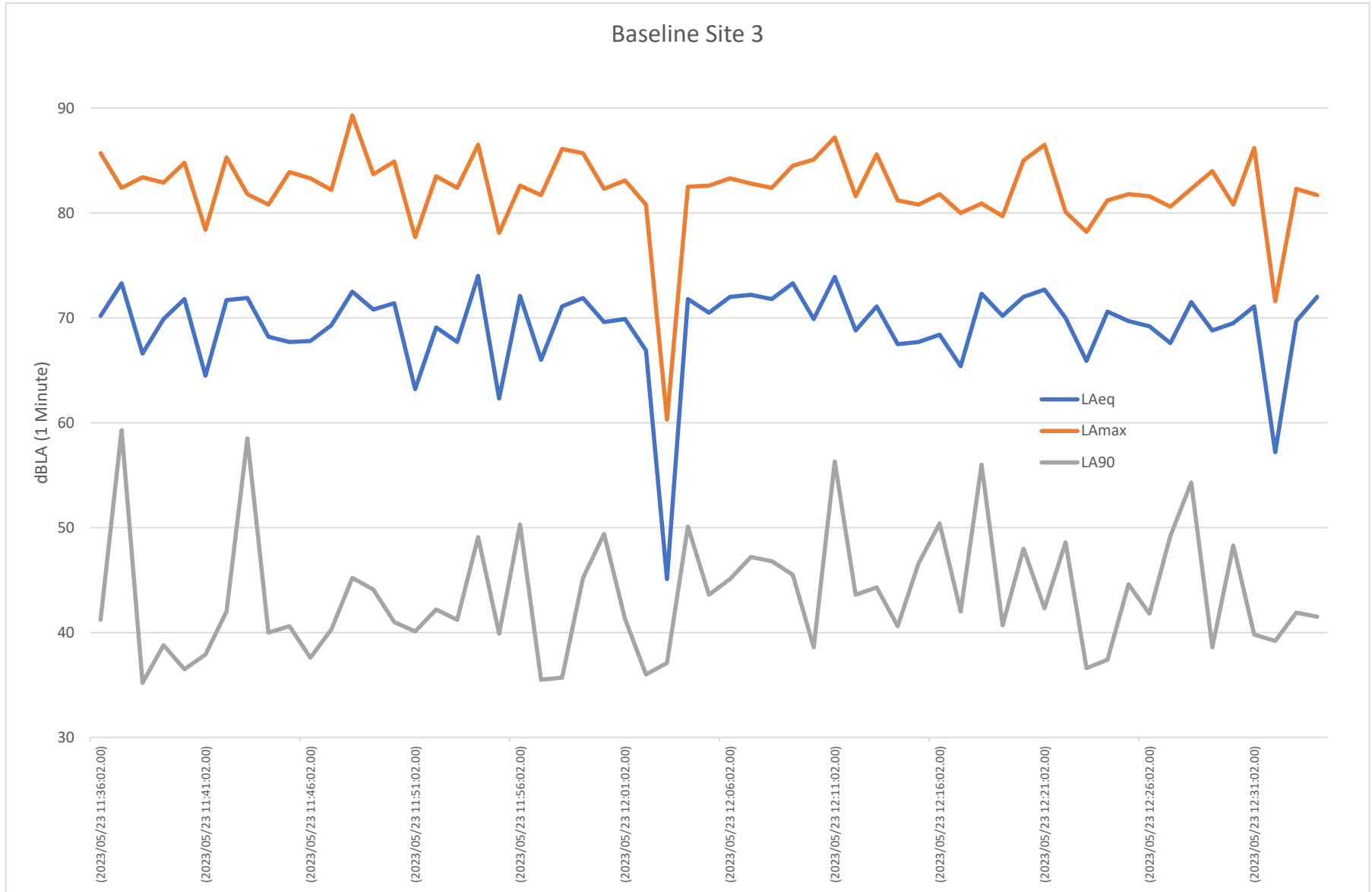


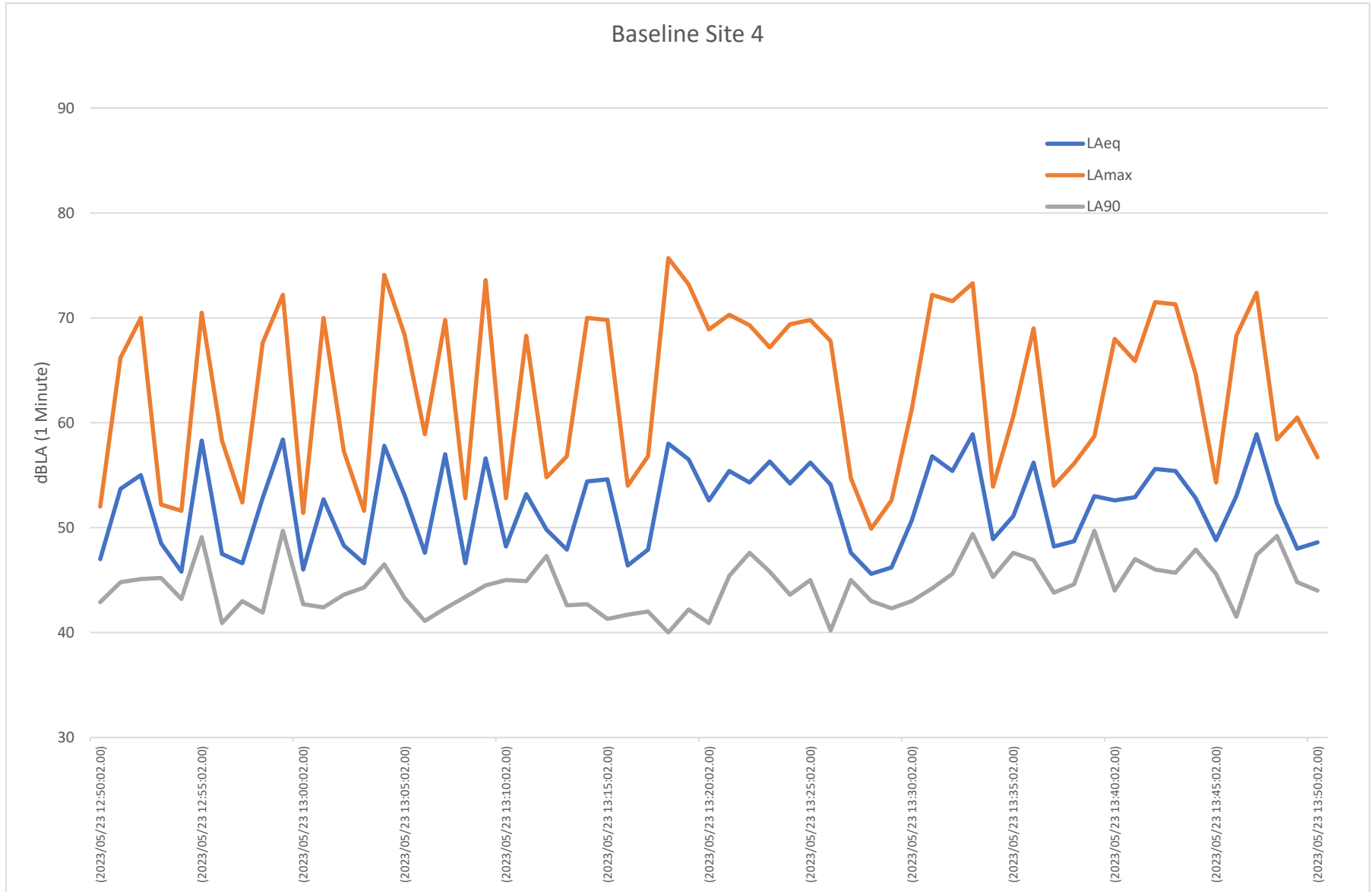












Noise Survey

Project Number: AS 0985 **Project Name:** Shilford Haulage
Log Book Number: J001

Site No: 1 **Start Date/Time:** Tuesday 22nd September 2023 11.17
Location : South **End Date/Time:** Tuesday 22nd September 2023 11.17
 6m south of centre line of lorry path
 Sound Level Meter: 9
 Calibration at End: 113.8

Site No: 2 **Start Date/Time:** Tuesday 22nd September 2023 11.09
Location : North **End Date/Time:** Tuesday 22nd September 2023 11.17
 6m north of centre line of lorry path
 Sound Level Meter: 8
 Calibration at End: 113.8

Site No: 3 **Start Date/Time:** Tuesday 12th September 2023 17.40
Location : Site boundary, South **End Date/Time:**
 24 West of façade of garage, at southern site boundary
 Sound Level Meter: 5
 Calibration at End: 113.8

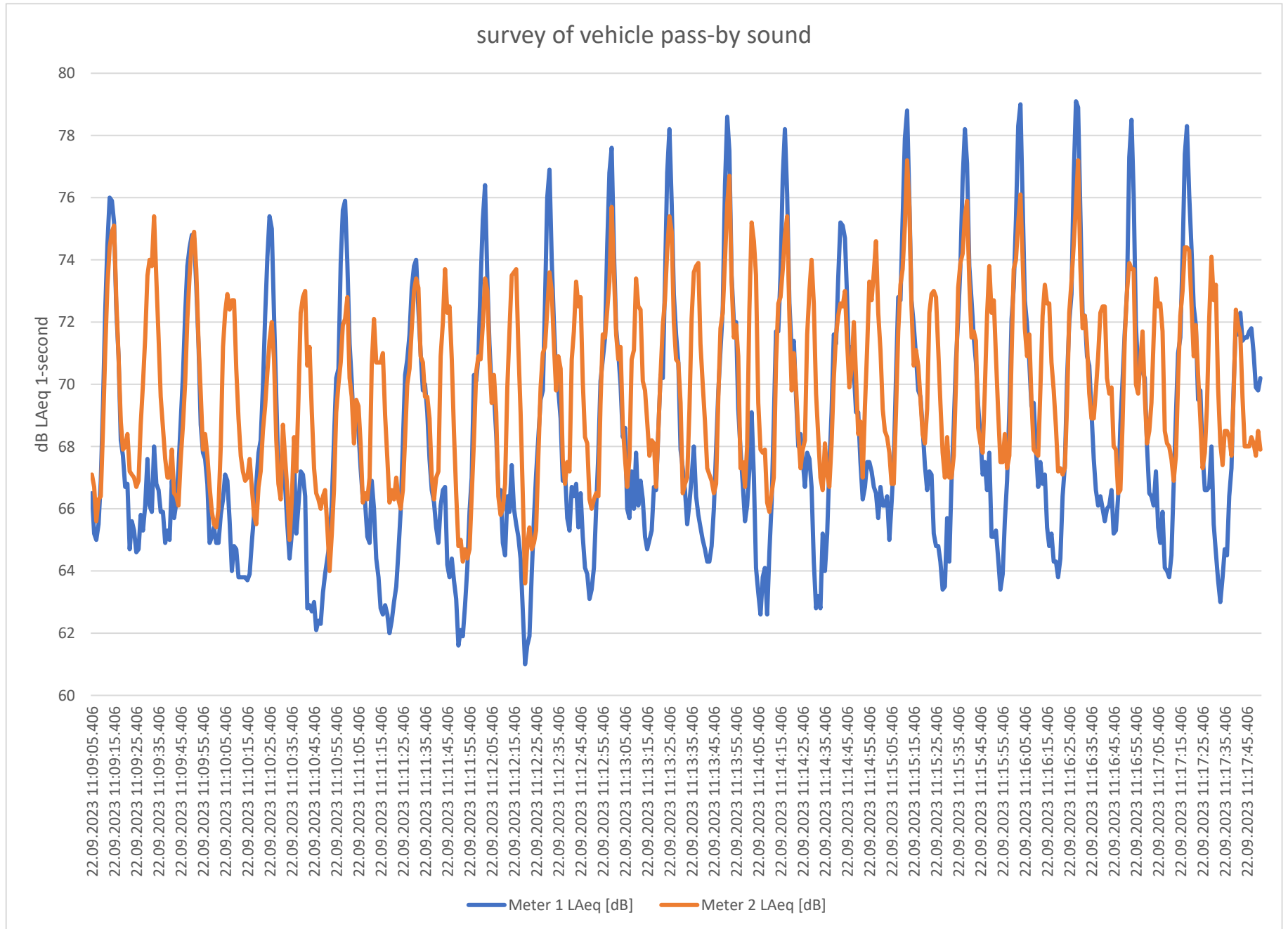
Norsonic Nor-1251 Acoustic Calibrator B Serial No. 34961

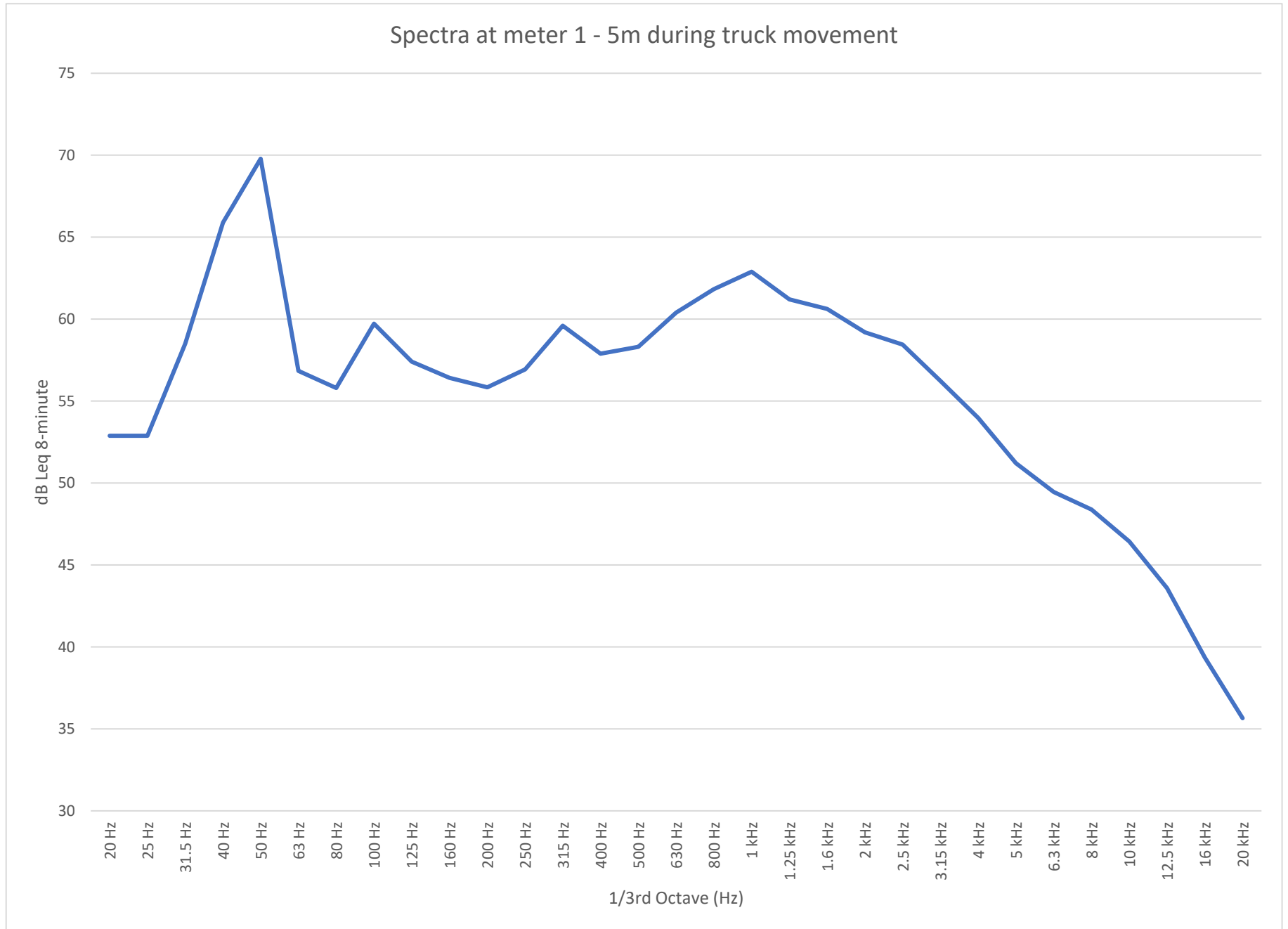
Norsonic Nor-140 Sound Level Meter 5 Serial No. 1406913
 Norsonic Nor-1225 Microphone Serial No. 208201
 Norsonic Nor-1217 Outdoor Protection Kit Serial No. 12175402
 Calibration Factor 113.8

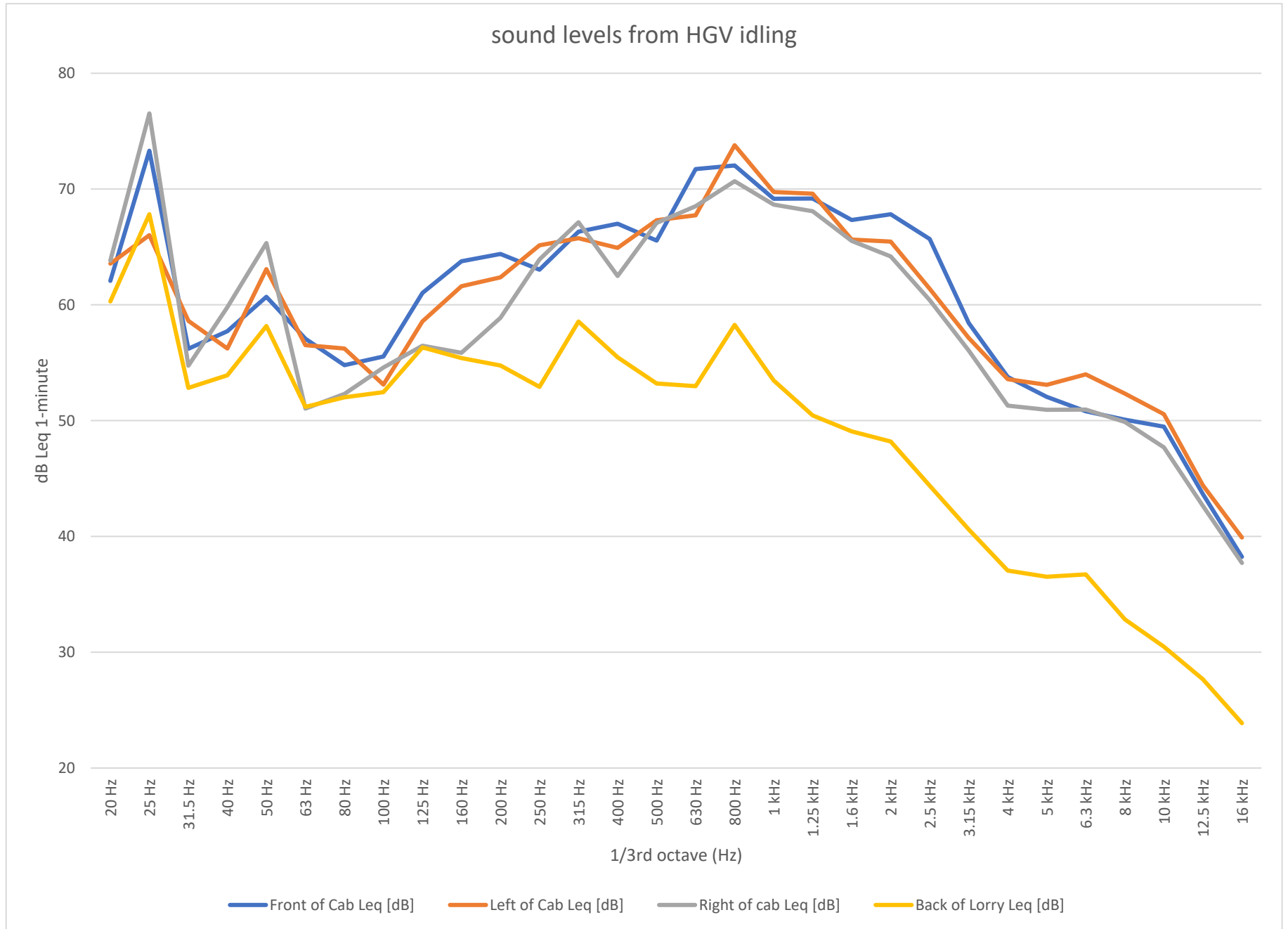
Norsonic Nor-145 Sound Level Meter 8 Serial No. 14530080
 Norsonic Nor-1227 Microphone Serial No. 526963
 Norsonic Nor-1217 Outdoor Protection Kit Serial No. 12176001
 Calibration Factor 113.8

Norsonic Nor-145 Sound Level Meter 9 Serial No. 14530081
 Norsonic Nor-1227 Microphone Serial No. 516648
 Norsonic Nor-1217 Outdoor Protection Kit Serial No. 12176002
 Calibration Factor 113.8

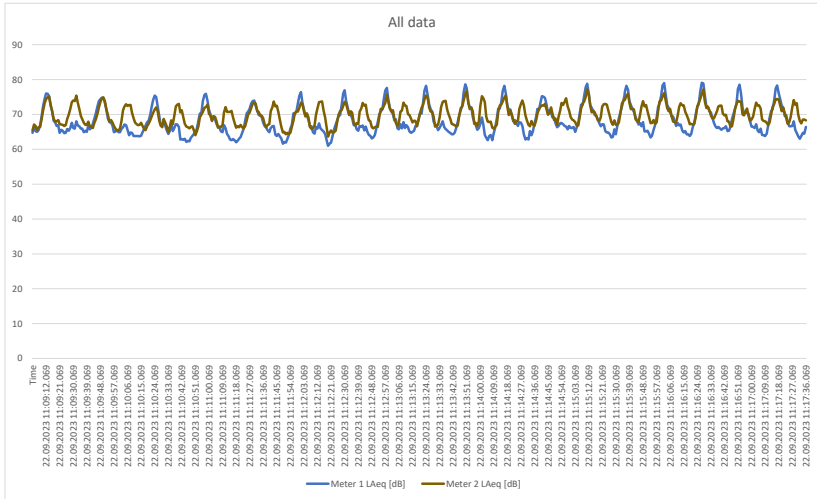








Time	Meter 1 LAeq [dB]	Meter 2 LAeq [dB]	M1 antilog	M2 antilog
22.09.2023 11:09:05.069	64.7	65.4	2951209	3311311
22.09.2023 11:09:06.069	66.5	67.1	4468336	5888437
22.09.2023 11:09:07.069	65.2	66.7	3111311	4365158
22.09.2023 11:09:08.069	65	65.6	3162278	3467368
22.09.2023 11:09:09.069	65.5	66.3	3548134	4073803
22.09.2023 11:09:10.069	66.9	66.4	4897788	6309573
22.09.2023 11:09:11.069	69.4	68.6	8709636	10471285
22.09.2023 11:09:12.069	72.3	71	16982437	21877616
22.09.2023 11:09:13.069	74.5	73.2	28183829	34673685
22.09.2023 11:09:14.069	76	74.4	39810717	46773514
22.09.2023 11:09:15.069	75.9	74.9	38904514	45708819
22.09.2023 11:09:16.069	75.2	75.1	33113112	40738028
22.09.2023 11:09:17.069	72.4	72.7	17378008	28840315
22.09.2023 11:09:18.069	70.9	70.9	12302488	15135632
22.09.2023 11:09:19.069	68.2	68.8	6060934	9325443
22.09.2023 11:09:20.069	67.7	67.9	5888437	7585776
22.09.2023 11:09:21.069	66.7	68	4677351	6025596
22.09.2023 11:09:22.069	66.8	68.4	4786303	5888437
22.09.2023 11:09:23.069	64.7	67.2	2951209	5128614
22.09.2023 11:09:24.069	65.6	67.1	3630781	5011872
22.09.2023 11:09:25.069	65.3	67	3388442	4365795
22.09.2023 11:09:26.069	64.6	66.7	2884032	3388442
22.09.2023 11:09:27.069	64.7	66.9	2951209	3388442
22.09.2023 11:09:28.069	65.8	68.7	3801894	4570882
22.09.2023 11:09:29.069	65.3	70	3388442	4365158
22.09.2023 11:09:30.069	66.1	71.5	4073803	4677351
22.09.2023 11:09:31.069	67.6	73.5	5754399	6309573
22.09.2023 11:09:32.069	66.1	74	4073803	5754399
22.09.2023 11:09:33.069	65.9	73.8	3890451	4365795
22.09.2023 11:09:34.069	68	75.4	6309573	7413102
22.09.2023 11:09:35.069	66.8	73.4	4786303	5888437
22.09.2023 11:09:36.069	66.6	71.5	4570882	5011872
22.09.2023 11:09:37.069	65.9	69.6	3890451	4570882
22.09.2023 11:09:38.069	65.9	68.6	3890451	4365795
22.09.2023 11:09:39.069	64.9	67.6	3090295	3881072
22.09.2023 11:09:40.069	65.3	67	3388442	4168994
22.09.2023 11:09:41.069	65	67	3162278	4168994
22.09.2023 11:09:42.069	66.9	67.9	4897788	5754399
22.09.2023 11:09:43.069	65.7	66.5	3715352	5248075
22.09.2023 11:09:44.069	66.2	66.4	4368994	4677351
22.09.2023 11:09:45.069	67.3	66.1	5370318	6165930
22.09.2023 11:09:46.069	68.8	67.6	7885776	8511380
22.09.2023 11:09:47.069	70.3	68.7	10715193	13489929
22.09.2023 11:09:48.069	72.3	70.1	16884337	20447979
22.09.2023 11:09:49.069	73.8	72.1	23888239	28183829
22.09.2023 11:09:50.069	74.4	73.5	27542297	3235937
22.09.2023 11:09:51.069	74.8	74.6	30909517	36307805
22.09.2023 11:09:52.069	74.7	74.9	29512092	35481339
22.09.2023 11:09:53.069	73.2	73.7	20802961	25932092
22.09.2023 11:09:54.069	71.3	71.4	13489929	15488166
22.09.2023 11:09:55.069	68.7	69.7	7413102	9326088
22.09.2023 11:09:56.069	67.8	67.9	6025596	7244340
22.09.2023 11:09:57.069	67.6	68.4	5754399	7085776
22.09.2023 11:09:58.069	66.8	67.7	4786303	5888437
22.09.2023 11:09:59.069	64.9	66.7	3090295	5248075
22.09.2023 11:10:00.069	65.1	65.9	3135917	3715352
22.09.2023 11:10:01.069	65.4	65.5	3427369	3881072
22.09.2023 11:10:02.069	64.9	65.4	3090295	3715352
22.09.2023 11:10:03.069	64.9	66	3090295	3548134
22.09.2023 11:10:04.069	65.8	68	3801894	5248075
22.09.2023 11:10:05.069	66.3	71.2	4368994	5011872
22.09.2023 11:10:06.069	67.1	72.3	5128614	6025596
22.09.2023 11:10:07.069	66.9	72.9	4897788	5120518
22.09.2023 11:10:08.069	65.6	72.4	3630781	4677351
22.09.2023 11:10:09.069	64	72.7	2511886	3090935
22.09.2023 11:10:10.069	64.8	72.7	3019952	3235937
22.09.2023 11:10:11.069	64.7	70.5	2951209	3311311
22.09.2023 11:10:12.069	63.8	68.9	2388813	2754229
22.09.2023 11:10:13.069	63.8	67.7	2388813	2630948
22.09.2023 11:10:14.069	63.8	67.2	2388813	2818383
22.09.2023 11:10:15.069	63.8	66.9	2388813	2570936
22.09.2023 11:10:16.069	63.7	67	2344229	2570936
22.09.2023 11:10:17.069	63.9	67.6	2454709	3090935
22.09.2023 11:10:18.069	64.9	66.7	3090295	3630781
22.09.2023 11:10:19.069	65.8	65.8	3801894	4365795
22.09.2023 11:10:20.069	66.8	65.5	4786303	5011872
22.09.2023 11:10:21.069	67.8	66.7	6025596	7413102
22.09.2023 11:10:22.069	68.2	67.2	6060934	8317638
22.09.2023 11:10:23.069	69.9	68.5	9772372	12022644
22.09.2023 11:10:24.069	72.2	69.3	16895869	21877616
22.09.2023 11:10:25.069	74.1	70.4	25709368	31622777
22.09.2023 11:10:26.069	75.4	71.4	34673685	38018940
22.09.2023 11:10:27.069	75	72	31622777	40738028
22.09.2023 11:10:28.069	72.2	70.8	16895869	25118864
22.09.2023 11:10:29.069	69.6	68.2	9120108	11220185
22.09.2023 11:10:30.069	67.1	66.8	5128614	6918310
22.09.2023 11:10:31.069	67.1	66.3	5128614	5888437
22.09.2023 11:10:32.069	68	68.7	6309573	8709636
22.09.2023 11:10:33.069	66.7	67.6	4677351	6025596
22.09.2023 11:10:34.069	65.5	66.6	3548134	4897788
22.09.2023 11:10:35.069	64.4	65	2754229	3235937
22.09.2023 11:10:36.069	65.2	66.3	3311311	3630781
22.09.2023 11:10:37.069	67.7	68.3	5888437	8128305
22.09.2023 11:10:38.069	65.2	67.2	3311311	4365795
22.09.2023 11:10:39.069	66.1	69.5	4073803	4786303
22.09.2023 11:10:40.069	67.2	72.3	5248075	5888437
22.09.2023 11:10:41.069	67.1	72.8	5128614	6025596
22.09.2023 11:10:42.069	66.4	73	4365158	5623413
22.09.2023 11:10:43.069	62.8	70.6	1905461	3467369
22.09.2023 11:10:44.069	62.9	71.2	1949845	2238721
22.09.2023 11:10:45.069	62.7	69.1	1862087	2041738
22.09.2023 11:10:46.069	63	67.3	1995262	2208668
22.09.2023 11:10:47.069	62.1	66.5	1621810	2041738
22.09.2023 11:10:48.069	62.4	66.3	1737803	1949845
22.09.2023 11:10:49.069	62.3	66	1688244	1949845
22.09.2023 11:10:50.069	63.3	66.4	2137962	2884032
22.09.2023 11:10:51.069	63.9	66.6	2454709	3311311
22.09.2023 11:10:52.069	64.4	65.4	2754229	3235937
22.09.2023 11:10:53.069	64.9	64	3090295	3630781
22.09.2023 11:10:54.069	66.2	65.2	4188894	4677351



Time	Meter 1 LAeq [dB]	Meter 2 LAeq [dB]	M1 antilog	M2 antilog
22.09.2023 11:10:55.069	68.2	66.6	6609534	8511380
22.09.2023 11:10:56.069	70.2	69.1	10471295	11748976
22.09.2023 11:10:57.069	70.5	70	11220185	14125375
22.09.2023 11:10:58.069	73.9	70.7	24547088	35481339
22.09.2023 11:10:59.069	75.6	71.9	36307805	40738028
22.09.2023 11:11:00.069	75.9	72.1	38904514	44668359
22.09.2023 11:11:01.069	73.9	72.8	24547088	40738028
22.09.2023 11:11:02.069	71.3	70.2	13489629	18197009
22.09.2023 11:11:03.069	70.1	69.6	10222830	15135612
22.09.2023 11:11:04.069	68.4	68.1	6918310	8511380
22.09.2023 11:11:05.069	69.4	69.5	8709636	10222830
22.09.2023 11:11:06.069	68.5	69.3	7079458	10715193
22.09.2023 11:11:07.069	67.3	68.1	5370318	6809573
22.09.2023 11:11:08.069	66.3	66.2	4365795	5370318
22.09.2023 11:11:09.069	66.2	66.5	4188894	6025596
22.09.2023 11:11:10.069	65.1	66.3	3135937	3715352
22.09.2023 11:11:11.069	64.9	67	3090295	3890451
22.09.2023 11:11:12.069	66.9	70.6	4897788	6309573
22.09.2023 11:11:13.069	66	72.1	3981072	5011872
22.09.2023 11:11:14.069	64.4	70.7	2754229	3311311
22.09.2023 11:11:15.069	63.8	70.7	2398833	3311311
22.09.2023 11:11:16.069	62.8	70.7	1505461	2187762
22.09.2023 11:11:17.069	62.6	71	1819701	2089296
22.09.2023 11:11:18.069	62.9	69	1549845	2041738
22.09.2023 11:11:19.069	62.6	67.6	1819701	2187762
22.09.2023 11:11:20.069	62	66.2	1584893	1737801
22.09.2023 11:11:21.069	62.4	66.6	1737801	1985262
22.09.2023 11:11:22.069	63	66.3	1995262	2570596
22.09.2023 11:11:23.069	63.5	67	2138721	2630268
22.09.2023 11:11:24.069	64.6	66.3	2884032	3801894
22.09.2023 11:11:25.069	65.9	66	3890451	4466836
22.09.2023 11:11:26.069	68.1	66.6	6455542	7078458
22.09.2023 11:11:27.069	70.3	68.3	10715193	12589254
22.09.2023 11:11:28.069	70.8	70	12022644	14454398
22.09.2023 11:11:29.069	71.6	70.5	14454398	16982437
22.09.2023 11:11:30.069	73.1	71.8	20417379	22906777
22.09.2023 11:11:31.069	73.8	73	23888329	27542287
22.09.2023 11:11:32.069	74	73.4	25118864	27542287
22.09.2023 11:11:33.069	72.4	73.1	17378028	24547088
22.09.2023 11:11:34.069	71	70.9	12589254	13803843
22.09.2023 11:11:35.069	69.8	70.7	9549926	12589254
22.09.2023 11:11:36.069	70	69.6	10000000	13803843
22.09.2023 11:11:37.069	69.1	69.6	8128305	9772372
22.09.2023 11:11:38.069	67.6	68.9	5754299	60000000
22.09.2023 11:11:39.069	66.6	67	4570882	5888437
22.09.2023 11:11:40.069	66.2	66.3	4188894	5370318
22.09.2023 11:11:41.069	65.4	67	3487369	4188894
22.09.2023 11:11:42.069	64.9	67.2	3090295	3801894
22.09.2023 11:11:43.069	66.1	70.9	4073801	4570882
22.09.2023 11:11:44.069	66.6	72	4570882	5126614
22.09.2023 11:11:45.069	66.7	73.7	4677351	5888437
22.09.2023 11:11:46.069	64.2	72.3	3630268	3467369
22.09.2023 11:11:47.069	63.8	72.5	2398833	2570596
22.09.2023 11:11:48.069	64.4	70.8	2754229	3050295
22.09.2023 11:11:49.069	63.7	68.5	2344229	3162278
22.09.2023 11:11:50.069	63.1	66.5	2041738	2344229
22.09.2023 11:11:51.069	61.6	64.8	1445440	1949845
22.09.2023 11:11:52.069	62.1	65	1621810	1949845
22.09.2023 11:11:53.069	61.9	64.3	1548817	1808244
22.09.2023 11:11:54.069	62.9	64.7	1949845	2290628
22.09.2023 11:11:55.069	64.1	64.4	2570596	2884032
22.09.2023 11:11:56.069	65.9	64.7	3890451	4466836
22.09.2023 11:11:57.069	67	66.4	5011872	5498409
22.09.2023 11:11:58.069	70.3	68.2	10715193	16218101
22.09.2023 11:11:59.069	70.1	70.4	10222830	13803843
22.09.2023 11:12:00.069	70.9	70.9	12022644	14454398
22.09.2023 11:12:01.069	73.2	70.8	20892961	27542287
22.09.2023 11:12:02.069	75.3	71.9	33884416	39810717
22.09.2023 11:12:03.069	76.4	73.4	43651583	50118723
22.09.2023 11:12:04.069	73.4	73	21877616	41866038
22.09.2023 11:12:05.069	71.3	70.8	13489629	20417379
22.09.2023 11:12:06.069	69.8	69.4	9549926	12022644
22.09.2023 11:12:07.069	69.7	70.3	9325543	11481536
22.09.2023 11:12:08.069	68.4	69.1	6918310	8912509
22.09.2023 11:12:09.069	66.6	66.4	4570882	6309573
22.09.2023 11:12:10.069	66.6	65.8	4570882	7585776
22.09.2023 11:12:11.069	64.9	66	3090295	3630781
22.09.2023 11:12:12.069	64.5	66.8	2818383	3162278
22.09.2023 11:12:13.069	66.4	69.9	4365158	5888437
22.09.2023 11:12:14.069	65.9	71.7	3890451	4786301
22.09.2023 11:12:15.069	67.4	73.5	5495409	6309573
22.09.2023 11:12:16.069	66	73.6	3981072	5011872
22.09.2023 11:12:17.069	65.5	73.7	3548134	3981072
22.09.2023 11:12:18.069	65.1	71.2	3135937	3630781
22.09.2023 11:12:19.069	64.4	69.1	2754229	3467369
22.09.2023 11:12:20.069	62.7	66.4	1862087	2454709
22.09.2023 11:12:21.069	61	63.6	1258925	1348963
22.09.2023 11:12:22.069	61.6	64.8	1445440	1778279
22.09.2023 11:12:23.069	61.9	65.4	1548817	1862087
22.09.2023 11:12:24.069	63.9	64.7	2454709	2884032
22.09.2023 11:12:25.069	65.7	64.9	3715352	4365795
22.09.2023 11:12:26.069	67.1	65.3	5128614	6309573
22.09.2023 11:12:27.069	68.3	67.7	6760830	8128305
22.09.2023 11:12:28.069	69.5	69.9	8912509	10000000
22.09.2023 11:12:29.069	69.8	71	9549926	12589254
22.09.2023 11:12:30.069	72.6	71.2	18197009	25703958
22.09.2023 11:12:31.069	76	72.4	39810717	51266138
22.09.2023 11:12:32.069	76.9	73.6	48977882	56234133
22.09.2023 11:12:33.069	74	73	25118864	45708819
22.09.2023 11:12:34.069	72	71.3	15848932	21877616
22.09.2023 11:12:35.069	70.3	69.8	10715193	13803843
22.09.2023 11:12:36.069	69.8	70.9	9549926	11481536
22.09.2023 11:12:37.069	68.9	70.5	7762471	10964782
22.09.2023 11:12:38.069	66.9	67.6	4897788	7585776
22.09.2023 11:12:39.069	67.2	66.8	5248075	6918310
22.09.2023 11:12:40.069	65.7	67.5	3715352	4786301
22.09.2023 11:12:41.069	65.3	67.2	3388442	4677351
22.09.2023 11:12:42.069	66.7	70.8	4677351	5248075
22.09.2023 11:12:43.069	66.4	71.7	4365158	5623413
22.09.2023 11:12:44.069	66.8	73.3	4786301	7585776

Time	Meter 1 LAeq [dB]	Meter 2 LAeq [dB]	M1 antilog	M2 antilog
22.09.2023 11:12:45.069	65.4	72.5	3467369	3981072
22.09.2023 11:12:46.069	66.5	72.8	4468336	5248075
22.09.2023 11:12:47.069	65.1	70.1	3235937	5128614
22.09.2023 11:12:48.069	64.1	68.3	2570396	3162278
22.09.2023 11:12:49.069	63.9	68.1	2454709	2818383
22.09.2023 11:12:50.069	63.1	66.3	2041738	2344229
22.09.2023 11:12:51.069	63.4	66	2187762	2630268
22.09.2023 11:12:52.069	64.1	66.3	2570396	3162278
22.09.2023 11:12:53.069	66	66.5	3981072	4677351
22.09.2023 11:12:54.069	67.8	66.4	6025596	7762471
22.09.2023 11:12:55.069	70.1	69.4	10222930	13182567
22.09.2023 11:12:56.069	70.8	71.6	12022644	14454398
22.09.2023 11:12:57.069	71.5	71.5	14125375	16982437
22.09.2023 11:12:58.069	74.5	72.4	28183829	38018040
22.09.2023 11:12:59.069	76.8	73.3	47863009	54954087
22.09.2023 11:13:00.069	77.6	75.7	57543994	77624712
22.09.2023 11:13:01.069	74.3	73.6	26915348	4468339
22.09.2023 11:13:02.069	71.8	71.6	15135612	2570398
22.09.2023 11:13:03.069	71	70.8	12589254	14791084
22.09.2023 11:13:04.069	70	71.2	10000000	14791084
22.09.2023 11:13:05.069	68.3	68.7	6769830	932543
22.09.2023 11:13:06.069	68.6	67.6	7244300	10222930
22.09.2023 11:13:07.069	66	66.7	3981072	6309573
22.09.2023 11:13:08.069	65.7	67.6	3715352	5370318
22.09.2023 11:13:09.069	67.2	70.8	5348075	6060934
22.09.2023 11:13:10.069	66	71.1	3981072	4786301
22.09.2023 11:13:11.069	67.8	73.4	6025596	7762471
22.09.2023 11:13:12.069	66.1	72.5	4073803	6769830
22.09.2023 11:13:13.069	66.9	72.4	4897788	6025596
22.09.2023 11:13:14.069	66.3	70.1	4369796	4897788
22.09.2023 11:13:15.069	65.1	69.8	3235937	3981072
22.09.2023 11:13:16.069	64.7	68.8	2951209	3630781
22.09.2023 11:13:17.069	65	67.7	3162278	4677351
22.09.2023 11:13:18.069	65.3	68.2	3388442	4570882
22.09.2023 11:13:19.069	66.7	68.1	4677351	5495409
22.09.2023 11:13:20.069	66.6	66.7	4570882	5623412
22.09.2023 11:13:21.069	68.5	68.5	7079458	8317638
22.09.2023 11:13:22.069	70.3	70.3	10715193	11748976
22.09.2023 11:13:23.069	70.2	71.9	10672380	13481636
22.09.2023 11:13:24.069	73.3	72.7	21378622	38840315
22.09.2023 11:13:25.069	76.8	74.3	47863009	61879500
22.09.2023 11:13:26.069	78.2	75.4	60609340	73431696
22.09.2023 11:13:27.069	75.8	74.9	38018040	64303423
22.09.2023 11:13:28.069	72.9	72	19486446	32359366
22.09.2023 11:13:29.069	71.6	70.8	14454398	20417079
22.09.2023 11:13:30.069	70.7	70.7	11748976	14791084
22.09.2023 11:13:31.069	67.9	69.4	6160950	8511380
22.09.2023 11:13:32.069	67.3	66.5	5370318	6309573
22.09.2023 11:13:33.069	66.6	66.8	4570882	6160950
22.09.2023 11:13:34.069	65.5	67	3548134	4265795
22.09.2023 11:13:35.069	66.2	69.2	4168694	5623413
22.09.2023 11:13:36.069	67	72.1	5011872	6160950
22.09.2023 11:13:37.069	68	73.6	6309573	7805776
22.09.2023 11:13:38.069	66.4	73.8	4365158	6309573
22.09.2023 11:13:39.069	65.8	73.9	3801804	4468336
22.09.2023 11:13:40.069	65.4	71.3	3467369	3715352
22.09.2023 11:13:41.069	65	70	3162278	3630781
22.09.2023 11:13:42.069	64.7	68.8	2951209	3467369
22.09.2023 11:13:43.069	64.3	67.3	3681535	3036035
22.09.2023 11:13:44.069	64.3	67.1	3681535	3048134
22.09.2023 11:13:45.069	64.8	66.9	3618962	3715352
22.09.2023 11:13:46.069	66	66.5	3981072	4677351
22.09.2023 11:13:47.069	67.9	66.8	6160950	7762471
22.09.2023 11:13:48.069	69.8	69.6	9549926	10964782
22.09.2023 11:13:49.069	71.1	71.8	12882496	14125375
22.09.2023 11:13:50.069	72.4	72.3	17278008	23442288
22.09.2023 11:13:51.069	76.4	74	43651583	63095734
22.09.2023 11:13:52.069	78.6	75.8	72443596	81283032
22.09.2023 11:13:53.069	77.5	76.7	56234133	117489755
22.09.2023 11:13:54.069	73.5	73.3	22387211	30902034
22.09.2023 11:13:55.069	72	71.5	15848832	23442288
22.09.2023 11:13:56.069	72	71.9	15848832	19054607
22.09.2023 11:13:57.069	69.2	70.9	8317638	14125375
22.09.2023 11:13:58.069	67.9	67.3	6160950	8317638
22.09.2023 11:13:59.069	66.8	67.5	4786301	7079458
22.09.2023 11:14:00.069	65.6	66.7	3630781	4365158
22.09.2023 11:14:01.069	66.1	68	4073803	6060934
22.09.2023 11:14:02.069	67.3	72.4	5370318	6160950
22.09.2023 11:14:03.069	69.1	75.2	8128305	10000000
22.09.2023 11:14:04.069	67	74.6	5011872	8317638
22.09.2023 11:14:05.069	64.1	73.5	2570396	3890451
22.09.2023 11:14:06.069	63.3	69.4	2137962	2630268
22.09.2023 11:14:07.069	62.6	67.9	1819701	2187762
22.09.2023 11:14:08.069	63.8	67.8	2398833	2884032
22.09.2023 11:14:09.069	64.1	67.9	2570396	2884032
22.09.2023 11:14:10.069	62.6	66.2	1819701	2238721
22.09.2023 11:14:11.069	64.6	65.9	2884032	3890451
22.09.2023 11:14:12.069	66.2	66.5	4168694	4786301
22.09.2023 11:14:13.069	68.8	67	7985776	10000000
22.09.2023 11:14:14.069	71.7	70.7	14791084	17782794
22.09.2023 11:14:15.069	71.7	72.6	14791084	17782794
22.09.2023 11:14:16.069	73.5	72.8	22387211	31622777
22.09.2023 11:14:17.069	76.7	73.7	46773514	54954087
22.09.2023 11:14:18.069	78.2	74.8	60609345	107151931
22.09.2023 11:14:19.069	76.1	75.4	40738038	83176377
22.09.2023 11:14:20.069	72.6	72.2	18197009	28840315
22.09.2023 11:14:21.069	71.1	69.8	12882496	16218101
22.09.2023 11:14:22.069	71.4	71	13803843	17782794
22.09.2023 11:14:23.069	69.6	69.9	5120308	12882496
22.09.2023 11:14:24.069	68	68.4	6309573	8709636
22.09.2023 11:14:25.069	68.4	67.3	6918310	7762471
22.09.2023 11:14:26.069	67.6	67.9	5754399	7244360
22.09.2023 11:14:27.069	66.7	68.2	4677351	5495409
22.09.2023 11:14:28.069	67.8	71.6	6025596	7244360
22.09.2023 11:14:29.069	67.6	73	5754399	7413102
22.09.2023 11:14:30.069	66.7	74	4677351	8511380
22.09.2023 11:14:31.069	64.3	72.6	2691535	3162278
22.09.2023 11:14:32.069	62.8	69.7	1905461	2137962
22.09.2023 11:14:33.069	63.2	68.3	2692296	2630268
22.09.2023 11:14:34.069	62.8	67	1905461	2238721

Time	Meter 1 LAeq [dB]	Meter 2 LAeq [dB]	M1 antilog	M2 antilog
22.09.2023 11:14:35.069	65.2	66.6	3311311	9549926
22.09.2023 11:14:36.069	64	68.1	2511886	5011872
22.09.2023 11:14:37.069	65.2	67.1	3311311	3981072
22.09.2023 11:14:38.069	67.3	66.7	5370318	6008934
22.09.2023 11:14:39.069	69.1	68.1	8128305	8709636
22.09.2023 11:14:40.069	71.6	70.2	14454398	17378008
22.09.2023 11:14:41.069	71.3	71.6	13489629	15135612
22.09.2023 11:14:42.069	73.4	72.2	21877616	26302680
22.09.2023 11:14:43.069	75.2	72.6	33113112	38904514
22.09.2023 11:14:44.069	75.1	72.5	32359366	39810717
22.09.2023 11:14:45.069	74.7	73	29512092	38018940
22.09.2023 11:14:46.069	72.8	71.4	19054607	22386777
22.09.2023 11:14:47.069	70.2	69.9	10471285	17782794
22.09.2023 11:14:48.069	71.2	70.5	13182567	15135612
22.09.2023 11:14:49.069	70.4	72	10964782	15848932
22.09.2023 11:14:50.069	69.1	70.2	8128305	13182567
22.09.2023 11:14:51.069	69.1	68.4	8128305	10232930
22.09.2023 11:14:52.069	67.5	68.8	5633413	8511380
22.09.2023 11:14:53.069	66.3	67	4369796	6025596
22.09.2023 11:14:54.069	66.7	69.3	4677351	6389573
22.09.2023 11:14:55.069	67.5	71.1	5633413	6456542
22.09.2023 11:14:56.069	67.5	73.3	5633413	6456542
22.09.2023 11:14:57.069	67.2	72.7	5248075	6165950
22.09.2023 11:14:58.069	66.7	73.6	4677351	5370318
22.09.2023 11:14:59.069	66.5	74.6	4468836	5011872
22.09.2023 11:15:00.069	65.7	72.3	3735352	4265796
22.09.2023 11:15:01.069	66.7	71.1	4677351	5888437
22.09.2023 11:15:02.069	66.1	69.2	4079803	5370318
22.09.2023 11:15:03.069	66.1	68.5	4079803	5011872
22.09.2023 11:15:04.069	66.4	68.3	4385158	5623413
22.09.2023 11:15:05.069	65	67.8	3182378	4677351
22.09.2023 11:15:06.069	66.2	66.8	4386094	5011872
22.09.2023 11:15:07.069	67.5	66.8	5623413	6760830
22.09.2023 11:15:08.069	70.2	69.1	10471285	13182567
22.09.2023 11:15:09.069	72.8	71.7	19054607	22386777
22.09.2023 11:15:10.069	72.7	73.2	18620872	21877616
22.09.2023 11:15:11.069	75.3	73.7	23884416	4468836
22.09.2023 11:15:12.069	77.9	75.1	6165950	76121024
22.09.2023 11:15:13.069	78.8	77.2	75857758	98499258
22.09.2023 11:15:14.069	75.9	75.7	38904514	69183097
22.09.2023 11:15:15.069	72.7	72.5	18620872	33113112
22.09.2023 11:15:16.069	71.9	70.6	15488166	18054607
22.09.2023 11:15:17.069	70.9	71.1	1202088	15384092
22.09.2023 11:15:18.069	69.8	70.6	9549926	14791094
22.09.2023 11:15:19.069	69.6	69.5	9120108	11882496
22.09.2023 11:15:20.069	68.6	68.4	7344360	8709636
22.09.2023 11:15:21.069	67.4	68.1	5495409	6608934
22.09.2023 11:15:22.069	66.6	69.2	4570882	5495409
22.09.2023 11:15:23.069	67.2	72.3	5248075	6760830
22.09.2023 11:15:24.069	67.1	72.9	5128614	6918110
22.09.2023 11:15:25.069	65.2	73	3311311	6608934
22.09.2023 11:15:26.069	64.8	72.8	3019952	3548134
22.09.2023 11:15:27.069	64.8	71.1	3019952	3388442
22.09.2023 11:15:28.069	64.3	69.4	3691535	3311311
22.09.2023 11:15:29.069	63.4	67.8	2187762	2630383
22.09.2023 11:15:30.069	63.5	67	2138721	2454705
22.09.2023 11:15:31.069	65.7	68.3	3735352	7244360
22.09.2023 11:15:32.069	64.3	67	3691535	3388442
22.09.2023 11:15:33.069	66.9	67	4897788	6456542
22.09.2023 11:15:34.069	68.7	67.7	7613102	10000000
22.09.2023 11:15:35.069	70.8	70.1	12020644	14454398
22.09.2023 11:15:36.069	72.1	73.1	16218101	19488446
22.09.2023 11:15:37.069	73.8	73.9	23988529	30020954
22.09.2023 11:15:38.069	76.6	74.2	45708819	57543094
22.09.2023 11:15:39.069	78.2	75.4	66089545	79432023
22.09.2023 11:15:40.069	77.1	75.9	51286138	85125094
22.09.2023 11:15:41.069	73.8	73.3	23988529	31622777
22.09.2023 11:15:42.069	72.7	71.5	18620871	25118804
22.09.2023 11:15:43.069	71.5	71.7	14125375	16395809
22.09.2023 11:15:44.069	70.7	71.4	11748876	18620871
22.09.2023 11:15:45.069	69.3	68.6	8511380	14302088
22.09.2023 11:15:46.069	68.3	68.1	6760830	8317638
22.09.2023 11:15:47.069	67.1	67.8	5128614	6165950
22.09.2023 11:15:48.069	67.5	69.8	5623413	7079458
22.09.2023 11:15:49.069	66.6	72.2	4570882	6389573
22.09.2023 11:15:50.069	67.8	73.8	6025596	8128305
22.09.2023 11:15:51.069	65.1	72.3	3235937	4786301
22.09.2023 11:15:52.069	65.1	72.7	3235937	3735352
22.09.2023 11:15:53.069	65.3	70.9	3388442	3981072
22.09.2023 11:15:54.069	64.4	69.1	2754229	3630781
22.09.2023 11:15:55.069	63.4	67.5	2187762	2884032
22.09.2023 11:15:56.069	63.9	67.5	2454709	3019952
22.09.2023 11:15:57.069	65.6	68.4	3630781	5248075
22.09.2023 11:15:58.069	66.9	67.3	4897788	5495409
22.09.2023 11:15:59.069	69.1	67.7	8128305	10232930
22.09.2023 11:16:00.069	72.1	70.9	16218101	22908677
22.09.2023 11:16:01.069	73.1	73.7	20417379	26915348
22.09.2023 11:16:02.069	75.3	74	33884416	50118723
22.09.2023 11:16:03.069	78.3	75.2	67608298	77624712
22.09.2023 11:16:04.069	79	76.1	79432023	9325430
22.09.2023 11:16:05.069	75.9	74.1	38904514	63095734
22.09.2023 11:16:06.069	72.7	71.8	18620871	30020954
22.09.2023 11:16:07.069	71.9	70.9	15488166	19488446
22.09.2023 11:16:08.069	70.7	71.6	11748876	15848932
22.09.2023 11:16:09.069	69.3	69.5	8511380	10964782
22.09.2023 11:16:10.069	69.4	67.9	8709636	11748876
22.09.2023 11:16:11.069	67.9	67.8	6165950	7943282
22.09.2023 11:16:12.069	66.7	67.7	4677351	5370318
22.09.2023 11:16:13.069	67.5	69.8	5623413	7413102
22.09.2023 11:16:14.069	66.8	72.2	4786301	6608934
22.09.2023 11:16:15.069	67.1	73.2	5128614	6165950
22.09.2023 11:16:16.069	65.4	72.6	3467369	5248075
22.09.2023 11:16:17.069	64.8	72.6	3019952	3311311
22.09.2023 11:16:18.069	65.2	70.7	3311311	3801894
22.09.2023 11:16:19.069	64.3	69.8	2691535	3388442
22.09.2023 11:16:20.069	64.3	68.6	2691535	3388442
22.09.2023 11:16:21.069	63.8	67.2	2398833	3311311
22.09.2023 11:16:22.069	64.4	67.3	2754229	2951209
22.09.2023 11:16:23.069	66.4	67.1	4385158	5128614
22.09.2023 11:16:24.069	67.4	67.3	5495409	6608934

Time	Meter 1 LAeq [dB]	Meter 2 LAeq [dB]	M1 antilog	M2 antilog
22.09.2023 11:16:25.069	70.2	69.4	10472295	13803843
22.09.2023 11:16:26.069	72	72.3	15848932	19054607
22.09.2023 11:16:27.069	72.9	73.3	19488446	26302680
22.09.2023 11:16:28.069	76.7	74.5	45773514	61659500
22.09.2023 11:16:29.069	79.1	75.8	81283052	97233722
22.09.2023 11:16:30.069	78.9	77.2	77624712	147910839
22.09.2023 11:16:31.069	75.5	73.8	35481330	46773514
22.09.2023 11:16:32.069	72.2	71.8	16595869	25703958
22.09.2023 11:16:33.069	72.2	72.2	16595869	21877616
22.09.2023 11:16:34.069	70.9	71.3	12302688	17782794
22.09.2023 11:16:35.069	70.6	69.7	11481536	15135612
22.09.2023 11:16:36.069	69.1	68.9	8128305	11481536
22.09.2023 11:16:37.069	67.6	68.9	5754399	6918310
22.09.2023 11:16:38.069	66.6	69.8	4570882	5370318
22.09.2023 11:16:39.069	66.1	70.9	4073803	4466836
22.09.2023 11:16:40.069	66.4	72.3	4365158	5128614
22.09.2023 11:16:41.069	66	72.5	3981072	4365158
22.09.2023 11:16:42.069	65.6	72.5	3630781	4365158
22.09.2023 11:16:43.069	66	70.2	3981072	4677351
22.09.2023 11:16:44.069	66.1	69.7	4073803	5370318
22.09.2023 11:16:45.069	66.6	69.9	4570882	6760830
22.09.2023 11:16:46.069	65.2	68	3113111	3801894
22.09.2023 11:16:47.069	65.3	67.9	3188442	3715352
22.09.2023 11:16:48.069	66.4	66.5	4365158	4897788
22.09.2023 11:16:49.069	68.7	66.6	7413102	9120108
22.09.2023 11:16:50.069	70.1	68.7	10232930	13182587
22.09.2023 11:16:51.069	71.7	71.5	14791084	16982437
22.09.2023 11:16:52.069	73	73	19852623	27542287
22.09.2023 11:16:53.069	77.3	73.9	53205180	73443596
22.09.2023 11:16:54.069	78.5	73.7	70784578	81383052
22.09.2023 11:16:55.069	76.1	73.7	40738038	74121024
22.09.2023 11:16:56.069	71.9	70	15488166	25703958
22.09.2023 11:16:57.069	70.4	69.7	10864792	16223101
22.09.2023 11:16:58.069	70.5	70.8	11220185	13803843
22.09.2023 11:16:59.069	70.4	71.7	10864792	13409628
22.09.2023 11:17:00.069	70.2	69.6	10472280	14125275
22.09.2023 11:17:01.069	68	68.1	6309573	8012039
22.09.2023 11:17:02.069	66.5	68.5	4668896	6465642
22.09.2023 11:17:03.069	66.4	69.4	4861168	5348075
22.09.2023 11:17:04.069	66.1	71.5	4073803	5011872
22.09.2023 11:17:05.069	67.2	73.4	5348075	6760830
22.09.2023 11:17:06.069	65.4	72.5	3467369	4786301
22.09.2023 11:17:07.069	64.9	72.6	3090295	3630781
22.09.2023 11:17:08.069	65.9	71.7	3890451	6465642
22.09.2023 11:17:09.069	64.1	68.5	3570396	3235937
22.09.2023 11:17:10.069	64	68.1	3511886	2818383
22.09.2023 11:17:11.069	63.8	68	2988833	2818383
22.09.2023 11:17:12.069	64.5	67.6	3818383	3467369
22.09.2023 11:17:13.069	66.8	66.9	4786301	5754399
22.09.2023 11:17:14.069	69	67.7	7948282	9120108
22.09.2023 11:17:15.069	71	70.1	12089254	15848932
22.09.2023 11:17:16.069	71.5	72.2	14125275	16595869
22.09.2023 11:17:17.069	74.1	73	25703958	35481339
22.09.2023 11:17:18.069	77.4	74.4	54954087	67608298
22.09.2023 11:17:19.069	78.3	74.4	67608298	70784578
22.09.2023 11:17:20.069	76.1	74.3	40738038	67608298
22.09.2023 11:17:21.069	74.4	72.6	27542287	36318040
22.09.2023 11:17:22.069	72.5	70.9	17782794	22868677
22.09.2023 11:17:23.069	71.9	71.9	15488166	18620871
22.09.2023 11:17:24.069	69.5	70.3	8012509	14125275
22.09.2023 11:17:25.069	69.8	68.9	9548926	13803843
22.09.2023 11:17:26.069	67.8	67.3	6025986	7085776
22.09.2023 11:17:27.069	66.6	67.8	4570882	5623413
22.09.2023 11:17:28.069	66.6	69.3	4570882	6089834
22.09.2023 11:17:29.069	66.7	72.1	4677351	5370318
22.09.2023 11:17:30.069	68	74.1	6309573	8013380
22.09.2023 11:17:31.069	65.5	72.7	3548134	5128614
22.09.2023 11:17:32.069	64.6	73.2	2884632	3388442
22.09.2023 11:17:33.069	63.7	69.9	2444229	2513886
22.09.2023 11:17:34.069	63	68.1	1995262	2484709
22.09.2023 11:17:35.069	63.8	67.4	2388833	3235937
22.09.2023 11:17:36.069	64.7	68.5	2951209	3467369
22.09.2023 11:17:37.069	64.5	68.5	2818383	3182276
22.09.2023 11:17:38.069	66.4	68.3	4365158	5784399

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: U44105

Test Object: Sound Calibrator

Producer: Norsonic AS.
Type: 1251
Serial number: 31060
Customer: The Airshed Limited
Address: 5 Lauder Place,
East Linton. EH40 3DB.

Contact Person: Hilary Fraser.
Order No: AS-23-03

Measurement Results	Level dB	Level Stability dB	Frequency Hz	Distortion %
Measurement 1	114.11	0.06	1000.14	0.37
Measurement 2	114.13	0.04	1000.13	0.37
Measurement 3	114.10	0.06	1000.13	0.37
Result (Average):	114.11	0.05	1000.13	0.37
Expanded Uncertainty:	0.1	0.03	1	0.25
Degree of Freedom:	>100	21	>100	>100
Coverage Factor:	2	2.13	2	2

The stated level is relative to 20 μ Pa. The level is traceable to National Standards. The stated level is valid at reference conditions. The following correction factors have been applied during the measurement

Pres:0.0005 dB/kPa Temp:0.003 dB/ $^{\circ}$ C Humi:0 dB/%RH Load volume: 0.0003 dB/mm³

Conditions	Pressure kPa	Temperature $^{\circ}$ C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	101.27 \pm 0.042	22.8 \pm 0.1	37.2 \pm 1.8

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of k=2, providing a level of confidence of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level. The uncertainty has been determined in accordance with UKAS requirements.

Records: K:\C A\Calibration\Nor-1504\Nor-1018 CalCal\Current Year\NOR1251_31060_M1.nmf

Preconditioning

The equipment was preconditioned for more than 4 hours in the specified calibration environment.

Method

Calibration has been performed as set out in the current version of CA Technical procedure TP01

Calibration Dates:

Received date:	18/04/2023	Reviewed date:	26/04/2023
Calibration date:	25/04/2023	Issued date:	26/04/2023

Technicians: (Electronic certificate)

Calibrated by: *Michael Tickner*
Reviewed by: *Jenny Crawford*

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Doc ref: Calb-Cert-Master-V3-06

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration

Certificate number: U44107

Test Object: Sound Level Meter, BS EN IEC 61672-1:2013 Class 1

Producer: Norsonic AS.
Type: 140
Serial number: 1406913
Customer: The Airshed Limited
Address: 5 Lauder Place,
East Linton. EH40 3DB.
Contact Person: Hilary Fraser.
Order No: AS-23-03

Introduction:

Calibration has been performed as set out in CA Technical Procedures which are based on the procedures for periodic verification of sound level meters as per the **Test Object** listed above. Results and conformance statement are overleaf and detailed results, where appropriate, are provided in the attached Measurement Report.

Tested:	Producer	Type	Serial No	Certificate No
Microphone	Norsonic	1225	208201	44106
Calibrator*	Norsonic	1251	31060	U44105
Preamplifier	Norsonic	1209	21061	Included

* The calibrator was complete with any required coupler for the microphone specified.

Additional items that have also been submitted for verification:

Wind shield N/A
Attenuator N/A
Extension cable N/A

These items have been taken into account wherever appropriate.

Instruction Manual: Im140_1Ed8R0En Firmware Version: 4.0.1430 The test object is a single channel instrument.

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	101.28 ±0.01	23.18 ±0.3	36.73 ±1.05

Calibration Dates:

Received date: 18/04/2023 Reviewed date: 26/04/2023
Calibration date: 25/04/2023 Issued date: 26/04/2023

Technicians: (Electronic certificate)

Calibrated by: *Michael Tichner*

Reviewed by: *Jenny Crawford*

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Doc ref: SIm-Cert-Master-V3-07

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration

Certificate number: **44106**

Test Object: **Measurement Microphone**

Producer: **Norsonic AS.**
Type: **1225**
Serial number: **208201**
Customer: **The Airshed Limited**
Address: **5 Lauder Place,
East Linton. EH40 3DB.**
Contact Person: **Hilary Fraser.**
Order No: **AS-23-03**

Measurement Results	Sensitivity (dB re 1V/Pa)	Sensitivity (mV/Pa)	Capacitance (pF)
Measurement 1	-25.80	51.27	22.61
Measurement 2	-25.80	51.28	22.61
Measurement 3	-25.80	51.28	22.59
Result (Average):	-25.80	51.28	22.60
Expanded Uncertainty:	0.10		1.00
Degree of Freedom:	>100		>100
Coverage Factor:	2		2

The stated sensitivity is the pressure sensitivity at 250Hz, S₂₅₀, and is valid at reference conditions. The following correction factors have been applied during the measurement:

Pressure:uncertainty dB/kPa Temperature:-0.005 dB/°C Humidity:0 dB/%RH

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	101.275 ± 0.042	23.2 ± 0.1	35.5 ± 1.2

The calibration test report shown on the next page gives details of the response at other frequencies relative to this 250 Hz reference sensitivity. Results ≥100 Hz are obtained using an electrostatic actuator as described in BS EN 61094-6 and those below 100 Hz are obtained in a reference pressure chamber. Detailed results are available from the calibration laboratory upon request.

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of k=2, providing a coverage probability of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level.

Calibration Dates:

Received date: 18/04/2023 Reviewed date: 26/04/2023
Calibration date: 25/04/2023 Issued date: 26/04/2023

Technicians: (Electronic certificate)

Calibrated by: *Michael Tickner*
Reviewed by: *Jenny Crawford*

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Doc ref: Mic-Cert-Master-V3-04

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: U38655

Test Object: Sound Level Meter, BS EN IEC 61672-1:2003 Class 1

Producer: Norsonic
Type: 140
Serial number: 1405074
Customer: The Airshed Ltd
Address: 5 Lauder Place, East Linton,
East Lothian. EH40 3DB.
Contact Person: Hilary Fraser
Order No: AS 21-08

Introduction:

Calibration has been performed as set out in CA Technical Procedures which are based on the procedures for periodic verification of sound level meters as per the **Test Object** listed above. Results and conformance statement are overleaf and detailed results, where appropriate, are provided in the attached Measurement Report.

Tested:	Producer	Type	Serial No	Certificate No
Microphone	GRAS	40AF	114655	38654
Calibrator*	Norsonic	1251	31060	U37894
Preamplifier	Norsonic	1209	21254	included

* The calibrator was complete with any required coupler for the microphone specified.

Additional items that have also been submitted for verification:

Wind shield - -
Attenuator -
Extension cable -

These items have been taken into account wherever appropriate.

Instruction Manual: Im140_1Ed8R0En. Firmware Version: v2.1.670. The test object is a single channel instrument.

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	99.28 +/-0.03	22.73 +/-0.1	39.00 +/-1.2

Calibration Dates:

Received date: 27/07/2021 Reviewed date: 06/08/2021
Calibration date: 06/08/2021 Issued date: 06/08/2021

Technicians: (Electronic certificate)

Calibrated by: *Palanivel Marappan B.Eng (Hons), M.Sc*

Reviewed by: *Darren Batten*

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Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration

Certificate number: **38654**

Test Object: **Measurement Microphone**

Producer: **GRAS**
Type: **40AF**
Serial number: **114655**
Customer: **The Airshed Ltd**
Address: **5 Lauder Place, East Linton,
East Lothian. EH40 3DB.**
Contact Person: **Hilary Fraser**
Order No: **AS 21-08**

Measurement Results	Sensitivity (dB re 1V/Pa)	Sensitivity (mV/Pa)	Capacitance (pF)
Measurement 1	-26.57	46.94	22.56
Measurement 2	-26.56	46.99	22.63
Measurement 3	-26.56	47.01	22.67
Result (Average):	-26.56	46.98	22.62
Expanded Uncertainty:	0.10		1.01
Degree of Freedom:	>100		>100
Coverage Factor:	2		2

The stated sensitivity is the pressure sensitivity at 250Hz, S₂₅₀, and is valid at reference conditions. The following correction factors have been applied during the measurement:

Pressure:-0.011 dB/kPa Temperature:-0.01 dB/°C Humidity:-0.001 dB/%RH

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	99.257 ± 0.043	22.8 ± 0.1	39.1 ± 0.8

The calibration test report shown on the next page gives details of the response at other frequencies relative to this 250 Hz reference sensitivity. Results ≥100 Hz are obtained using an electrostatic actuator as described in BS EN 61094-6 and those below 100 Hz are obtained in a reference pressure chamber. Detailed results are available from the calibration laboratory upon request.

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of k=2, providing a coverage probability of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level.

Calibration Dates:

Received date: 27/07/2021 Reviewed date: 06/08/2021
Calibration date: 06/08/2021 Issued date: 06/08/2021

Technicians: (Electronic certificate)

Calibrated by: *Palanivel Marappan BEng (Hons), MSc*
Reviewed by: *Darren Batten*

This certificate is issued in accordance with the CA Quality Management system. It provides traceability of measurement to recognized national standards, and to the units of measurement realized at the National Physical Laboratory or other recognized national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Appendix 3 – Noise Model Outputs

AS 0985 Shilford
Run info
scenario 04 - layout november 2023 lorry idling

Project info

Project title: AS 0985 Shilford
Project No.:
Project engineer: Steve Fraser
Customer: Ironside Farrar

Description:
noise impact assessmet for proposed haulage depot

Run description

Calculation type: Single Point Sound
Title: scenario 04 - layout november 2023 lorry idling
Group
Run file: RunFile.runx
Result number: 7
Local calculation (ThreadCount=4)
Calculation start: 21/11/2023 14:23:38
Calculation end: 21/11/2023 14:23:45
Calculation time: 00:04:358 [m:s.ms]
No. of points: 25
No. of calculated points: 25
Kernel version: SoundPLANnoise 9.0 (15/11/2023) - 64 bit

Run parameters

Reflection order: 3
Maximum reflection distance to receiver 200 m
Maximum reflection distance to source 50 m
Search radius 5000 m
Weighting: dB(A)
Allowed tolerance (per individual source): 0.100 dB
Create ground effect areas from road surfaces: No
Treat roads as terrain following: No

Standards:

Industry: ISO 9613-2: 1996
Air absorption: ISO 9613-1
regular ground effect (chapter 7.3.1), for sources without a spectrum automatically alternative ground effect
Limitation of screening loss:
single/multiple 20.0 dB /25.0 dB
Side diffraction: ISO/TR 17534-3:2015 compliant: no side diffraction if terrain blocks line of sight
Use Eqn (Abar=Dz-Max(Agr,0)) instead of Eqn (12) (Abar=Dz-Agr) for insertion loss
Environment:
Air pressure 1013.3 mbar
rel. humidity 70.0 %
Temperature 10.0 °C
Meteo. corr. C0(7-23h)[dB]=0.0; C0(23-7h)[dB]=0.0;
Ignore Cmet for Lmax industry calculation: No

The Airshed

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AS 0985 Shilford

Run info

scenario 04 - layout november 2023 lorry idling

Parameter for screening: C2=20.0
 Dissection parameters:
 Distance to diameter factor 8
 Minimal distance 1 m
 Max. difference ground effect + diffraction 1.0 dB
 Max. number of iterations 4

Attenuation
 Foliage: ISO 9613-2
 Built-up area: ISO 9613-2
 Industrial site: ISO 9613-2

Assessment: PPG24 (day/night)
 Reflection of "own" facade is suppressed

Geometry data

scenario 04 - layout november 2023 lorry idling.sit	21/11/2023 14:23:20
- contains:	
calc area.geo	16/11/2023 11:25:06
existing buildings for august 2023.geo	16/11/2023 10:58:56
ground conditions scheme august 2023.geo	16/11/2023 10:46:30
idling lorries.geo	26/09/2023 09:36:52
lorry movements line sources.geo	16/11/2023 11:01:06
museum november 2023.geo	16/11/2023 11:25:06
north bund.geo	16/08/2023 13:54:34
OS vectormap.geo	15/08/2023 15:22:58
sources november 2023.geo	21/11/2023 14:23:20
welding shop.geo	16/11/2023 11:25:06
Workshop november 2023.geo	16/11/2023 11:25:06
RDGM0001.dgm	29/05/2023 14:48:48

AS 0985 Shilford
Assessed receiver levels
scenario 04 - layout november 2023 lorry idling

2

RNo	Receiver	Fl	Dir	X	Y	Z	LrD	
				m	m	m	dB(A)	
19	Shillford Mill (within scheme)	F 1	S	244899	656248	137.2	45	
19	Shillford Mill (within scheme)	GF	S	244899	656248	134.7	45	
4	Cowdenmill Cottages west	F 1	NW	245363	656197	154.8	37	
3	Cowdenmill Cottages west	F 1	NW	245357	656193	154.8	37	
20	Shillford Mill (within scheme)	F 1	N	244896	656260	137.2	36	
5	Cowdenmill Cottages west	F 1	SW	245356	656188	154.8	36	
4	Cowdenmill Cottages west	GF	NW	245363	656197	152.3	36	
15	House at Barrhead Leather	F 1	S	244851	656246	138.0	35	
3	Cowdenmill Cottages west	GF	NW	245357	656193	152.3	35	
20	Shillford Mill (within scheme)	GF	N	244896	656260	134.7	34	
1	Cowdenmill Cottages east	F 1	NW	245379	656211	154.5	34	
14	House at Barrhead Leather	F 1	N	244850	656254	138.0	34	
22	Viewfield	F 1	S	244739	656259	138.8	34	
5	Cowdenmill Cottages west	GF	SW	245356	656188	152.3	34	
22	Viewfield	GF	S	244739	656259	136.3	34	
25	Woodend Cottage	F 1	E	244703	656230	139.6	33	
24	Woodend Cottage	F 1	S	244695	656223	139.6	33	
14	House at Barrhead Leather	GF	N	244850	656254	135.5	33	
6	Cowdenmoor Farm	F 1	NW	244912	655931	159.9	33	
15	House at Barrhead Leather	GF	S	244851	656246	135.5	33	
8	Cowdenmoor Farm	GF	NW	244951	655936	155.7	32	
7	Cowdenmoor Farm	GF	NE	244947	655935	155.7	32	
24	Woodend Cottage	GF	S	244695	656223	137.1	32	
1	Cowdenmill Cottages east	GF	NW	245379	656211	152.0	32	
21	Viewfield	F 1	N	244737	656274	138.8	32	
25	Woodend Cottage	GF	E	244703	656230	137.1	32	
2	Cowdenmill Cottages east	F 1	NW	245374	656206	154.5	32	
18	Lagavulin	GF	SE	244687	656197	137.6	32	
17	Lagavulin	GF	NE	244688	656206	137.6	32	
9	Cowdenmoor Farm	GF	NE	244957	655937	155.7	32	
6	Cowdenmoor Farm	GF	NW	244912	655931	157.4	32	
21	Viewfield	GF	N	244737	656274	136.3	31	
23	Woodend Cottage	F 1	N	244693	656233	139.6	30	
23	Woodend Cottage	GF	N	244693	656233	137.1	29	
11	Cowdenmoor Farm	F 1	NE	244925	655922	159.9	29	
11	Cowdenmoor Farm	GF	NE	244925	655922	157.4	27	
2	Cowdenmill Cottages east	GF	NW	245374	656206	152.0	27	
13	Cowdenmoor Farm west	F 1	S	244925	655932	159.7	26	
12	Cowdenmoor Farm	GF	NW	244939	655926	155.7	26	
10	Cowdenmoor Farm	F 1	NE	244921	655928	159.9	25	
13	Cowdenmoor Farm west	GF	S	244925	655932	157.2	24	

	The Airshed	1
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AS 0985 Shilford
 Assessed receiver levels
 scenario 04 - layout november 2023 lorry idling

RNo	Receiver	Fl	Dir	X m	Y m	Z m	LrD dB(A)	
10	Cowdenmoor Farm	GF	NE	244921	655928	157.4	23	
16	Lagavulin	GF	NW	244679	656205	137.6	22	

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	The Airshed	2
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AS 0985 Shilford

Octave spectra of the sources in dB(A) - scenario 04 - layout november 2023 lorry idling

3

Name	Source type	X	Y	Z	l or A	Li	R'w	L'w	Lw	KI	KT	DO-Wall	Time histogram	Emission spectrum	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz
		m	m	m	m,m ²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
car doors	Area	244953	656198	132.5	3331.59			56.0	91.2	0.0	0.0	0	100%/24h	Closing Car Doors	67.8	77.0	83.9	87.5	84.7	81.8
fuel station pump	Point	245123	656271	132.4				70.9	70.9	0.0	0.0	0	idling on time	fuel station pump	63.0	59.1	56.3	57.8	52.0	46.6
lorry at fuel station	Point	245113	656268	132.2				88.0	88.0	0.0	0.0	0	idling on time	idling lorry (1m from front measured at	55.9	69.1	77.0	85.0	83.3	76.8
lorry idling east parking	Point	245113	656320	133.6				88.0	88.0	0.0	0.0	0	idling on time	idling lorry (1m from front measured at	55.9	69.1	77.0	85.0	83.3	76.8
lorry idling outside workshop	Point	245039	656222	134.0				88.0	88.0	0.0	0.0	0	idling on time	idling lorry (1m from front measured at	55.9	69.1	77.0	85.0	83.3	76.8
lorry idling south parking	Point	245089	656278	132.5				88.0	88.0	0.0	0.0	0	idling on time	idling lorry (1m from front measured at	55.9	69.1	77.0	85.0	83.3	76.8
lorry idling west parking	Point	244970	656255	133.6				88.0	88.0	0.0	0.0	0	idling on time	lorry in motion (5m from centre of path	64.3	71.5	78.2	84.4	83.1	77.6
Lorry Park East	Line	245082	656306	133.6	167.76			73.0	95.2	0.0	0.0	0	idling on time	lorry in motion (5m from centre of path	71.6	78.7	85.4	91.6	90.3	84.9
Lorry park South	Line	245089	656266	133.1	247.87			70.4	94.3	0.0	0.0	0	idling on time	tractor unit idle	88.2	78.6	75.0	74.5	70.9	65.8
Lorry Park West	Line	244992	656266	133.4	128.54			71.2	92.3	0.0	0.0	0	idling on time	lorry in motion (5m from centre of path	68.6	75.8	82.5	88.7	87.4	81.9
pressure washer	Point	245112	656232	134.7				93.0	93.0	0.0	0.0	0	idling on time	High-pressure cleaner	70.0	77.1	83.1	86.0	87.0	87.1
Welding Shop-East Access Door	Area	245084	656232	136.2	24.02	88.6	20.0	68.7	82.5	0.0	0.0	3	100%/24h	1550_East Access_	66.4	70.0	72.6	79.1	78.0	
Welding Shop-East Access Door	Area	245077	656231	136.2	24.02	88.3	20.0	68.3	82.1	0.0	0.0	3	100%/24h	1549_East Access_	66.1	69.8	72.3	78.7	77.6	
Welding Shop-Facade 01	Area	245101	656224	136.7	106.44	91.0	35.0	56.3	76.6	0.0	0.0	3	100%/24h	1555_Facade 01_	71.0	74.0	67.8	61.7	54.1	56.5
Welding Shop-Facade 02	Area	245087	656232	136.8	166.25	91.3	35.0	59.6	81.8	0.0	0.0	3	100%/24h	1556_Facade 02_	76.2	79.1	73.0	66.9	59.3	61.7
Welding Shop-Facade 03	Area	245070	656224	136.7	107.92	90.3	35.0	55.6	76.0	0.0	0.0	3	100%/24h	1557_Facade 03_	70.4	73.3	67.2	61.0	53.4	55.8
Welding Shop-Facade 04	Area	245086	656216	136.7	215.08	90.9	35.0	56.2	79.5	0.0	0.0	3	100%/24h	1558_Facade 04_	73.9	76.9	70.7	64.6	57.0	59.6
Welding Shop-Roof 01	Area	245086	656224	140.2	469.57	90.8	35.0	56.1	82.9	0.0	0.0	0	100%/24h	1553_Roof 01_	77.2	80.2	74.1	68.0	60.3	62.8
Workshop-East Access	Area	245037	656215	136.4	24.02	88.6	20.0	68.4	82.2	0.0	0.0	3	100%/24h	1903_East Access_	59.7	70.0	72.0	76.9	79.5	
Workshop-East Access	Area	245041	656209	136.4	24.02	88.4	20.0	68.2	82.0	0.0	0.0	3	100%/24h	1904_East Access	59.5	69.9	71.9	76.7	79.4	
Workshop-Facade 01	Area	245025	656195	136.9	281.54	90.5	35.0	54.7	79.2	0.0	0.0	3	100%/24h	1936_Facade 01	73.1	76.5	71.0	63.3	59.9	63.2
Workshop-Facade 02	Area	245036	656217	137.1	153.93	91.3	35.0	58.4	80.3	0.0	0.0	3	100%/24h	1937_Facade 02	74.2	77.6	72.1	64.5	61.1	64.5

The Airshed

1

AS 0985 Shilford
Octave spectra of the sources in dB(A) - scenario 04 - layout november 2023 lorry idling

3

Name	Source type	X	Y	Z	l or A	Li	R'w	L'w	Lw	KI	KT	DO-Wall	Time histogram	Emission spectrum	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz
		m	m	m	m,m ²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Workshop-Facade 03	Area	245013	656221	136.9	278.06	90.9	35.0	55.0	79.5	0.0	0.0	3	100%/24h	1938_Facade 03	73.5	76.8	71.2	63.6	60.2	63.5
Workshop-Facade 04	Area	245001	656200	136.9	199.67	90.2	35.0	54.5	77.5	0.0	0.0	3	100%/24h	1939_Facade 04	71.5	74.9	69.3	61.6	58.1	61.1
Workshop-Roof 01	Area	245019	656208	140.4	1146.70	90.8	35.0	55.0	85.6	0.0	0.0	0	100%/24h	1934_Roof 01_	79.5	82.9	77.4	69.7	66.3	69.7

The Airshed

2

AS 0985 Shilford
Assessed level of source groups
scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Shillford Mill (within scheme) FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 45 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	28.6	28.6	
fuel station	30.1	30.1	
lorry park	44.5	44.5	
wash station	30.8	30.8	
welding shop	35.2	35.2	
Workshop	27.8	27.8	
Receiver Shillford Mill (within scheme) FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 45 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	27.8	27.8	
fuel station	29.6	29.6	
lorry park	44.1	44.1	
wash station	30.2	30.2	
welding shop	33.9	33.9	
Workshop	24.9	24.9	
Receiver Cowdenmill Cottages west FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 37 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	20.1	20.1	
fuel station	21.7	21.7	
lorry park	35.2	35.2	
wash station	28.9	28.9	
welding shop	25.9	25.9	
Workshop	29.2	29.2	
Receiver Cowdenmill Cottages west FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 37 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	20.1	20.1	
fuel station	20.5	20.5	
lorry park	34.4	34.4	
wash station	28.7	28.7	
welding shop	24.8	24.8	
Workshop	28.4	28.4	
Receiver Shillford Mill (within scheme) FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 36 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	22.4	22.4	
fuel station	15.4	15.4	
lorry park	35.5	35.5	
wash station	10.3	10.3	
welding shop	25.3	25.3	
Workshop	23.7	23.7	
Receiver Cowdenmill Cottages west FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 36 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	18.3	18.3	
fuel station	19.6	19.6	
lorry park	33.9	33.9	
wash station	27.5	27.5	
welding shop	24.5	24.5	
Workshop	27.1	27.1	

	The Airshed	1
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AS 0985 Shilford

Assessed level of source groups

scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Cowdenmill Cottages west FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 36 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	18.8	18.8	
fuel station	20.9	20.9	
lorry park	34.0	34.0	
wash station	26.6	26.6	
welding shop	23.1	23.1	
Workshop	27.8	27.8	
Receiver House at Barrhead Leather FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 35 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	24.4	24.4	
fuel station	20.1	20.1	
lorry park	32.1	32.1	
wash station	23.2	23.2	
welding shop	28.3	28.3	
Workshop	26.8	26.8	
Receiver Cowdenmill Cottages west FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 35 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	18.3	18.3	
fuel station	18.2	18.2	
lorry park	32.5	32.5	
wash station	25.9	25.9	
welding shop	21.7	21.7	
Workshop	26.6	26.6	
Receiver Shillford Mill (within scheme) FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	20.6	20.6	
fuel station	10.4	10.4	
lorry park	34.0	34.0	
wash station	6.0	6.0	
welding shop	15.7	15.7	
Workshop	19.4	19.4	
Receiver Cowdenmill Cottages east FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	11.2	11.2	
fuel station	18.8	18.8	
lorry park	33.0	33.0	
wash station	20.7	20.7	
welding shop	22.4	22.4	
Workshop	23.5	23.5	
Receiver House at Barrhead Leather FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	17.0	17.0	
fuel station	16.0	16.0	
lorry park	33.6	33.6	
wash station	7.9	7.9	
welding shop	19.4	19.4	
Workshop	19.0	19.0	

	The Airshed	2
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AS 0985 Shilford

Assessed level of source groups

scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Viewfield FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 34.0 dB(A) S
Museum Car Park	27.4	27.4	
fuel station	16.4	16.4	
lorry park	31.3	31.3	
wash station	18.6	18.6	
welding shop	24.0	24.0	
Workshop	23.5	23.5	
Receiver Cowdenmill Cottages west FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	16.4	16.4	
fuel station	18.3	18.3	
lorry park	31.9	31.9	
wash station	23.9	23.9	
welding shop	21.7	21.7	
Workshop	25.4	25.4	
Receiver Viewfield FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 33.6 dB(A) S
Museum Car Park	25.3	25.3	
fuel station	17.8	17.8	
lorry park	31.8	31.8	
wash station	17.1	17.1	
welding shop	22.9	22.9	
Workshop	22.1	22.1	
Receiver Woodend Cottage FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.4
Museum Car Park	28.7	28.7	
fuel station	15.4	15.4	
lorry park	30.0	30.0	
wash station	2.0	2.0	
welding shop	23.2	23.2	
Workshop	22.8	22.8	
Receiver Woodend Cottage FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.3
Museum Car Park	28.7	28.7	
fuel station	14.9	14.9	
lorry park	29.9	29.9	
wash station	1.8	1.8	
welding shop	23.0	23.0	
Workshop	22.6	22.6	
Receiver House at Barrhead Leather FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 33 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	15.7	15.7	
fuel station	10.8	10.8	
lorry park	32.8	32.8	
wash station	11.7	11.7	
welding shop	17.0	17.0	
Workshop	15.7	15.7	

	The Airshed	3
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AS 0985 Shilford

Assessed level of source groups

scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Cowdenmoor Farm FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.1
Museum Car Park	28.0	28.0	
fuel station	11.4	11.4	
lorry park	30.0	30.0	
wash station	17.4	17.4	
welding shop	20.4	20.4	
Workshop	23.9	23.9	
Receiver House at Barrhead Leather FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 33 dB(A) Sigma(LrD) 0 dB(A)
Museum Car Park	21.3	21.3	
fuel station	16.3	16.3	
lorry park	30.9	30.9	
wash station	17.8	17.8	
welding shop	24.3	24.3	
Workshop	23.4	23.4	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.4
Museum Car Park	23.0	23.0	
fuel station	12.9	12.9	
lorry park	30.0	30.0	
wash station	20.3	20.3	
welding shop	21.7	21.7	
Workshop	24.5	24.5	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.4
Museum Car Park	24.4	24.4	
fuel station	12.6	12.6	
lorry park	29.8	29.8	
wash station	19.8	19.8	
welding shop	20.6	20.6	
Workshop	24.3	24.3	
Receiver Woodend Cottage FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.3
Museum Car Park	26.8	26.8	
fuel station	12.5	12.5	
lorry park	29.5	29.5	
wash station	0.5	0.5	
welding shop	21.9	21.9	
Workshop	21.2	21.2	
Receiver Cowdenmill Cottages east FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	6.2	6.2	
fuel station	18.3	18.3	
lorry park	31.5	31.5	
wash station	11.9	11.9	
welding shop	18.7	18.7	
Workshop	19.2	19.2	

	The Airshed	4
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AS 0985 Shilford

Assessed level of source groups scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Viewfield FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.1 dB(A) S
Museum Car Park	14.1	14.1	
fuel station	16.9	16.9	
lorry park	31.5	31.5	
wash station	10.6	10.6	
welding shop	19.2	19.2	
Workshop	16.1	16.1	
Receiver Woodend Cottage FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.9
Museum Car Park	24.5	24.5	
fuel station	13.5	13.5	
lorry park	29.7	29.7	
wash station	0.8	0.8	
welding shop	22.2	22.2	
Workshop	21.7	21.7	
Receiver Cowdenmill Cottages east FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	10.4	10.4	
fuel station	13.1	13.1	
lorry park	30.4	30.4	
wash station	19.2	19.2	
welding shop	21.1	21.1	
Workshop	22.6	22.6	
Receiver Lagavulin FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.8 dB(A) S
Museum Car Park	28.1	28.1	
fuel station	13.3	13.3	
lorry park	28.2	28.2	
wash station	0.4	0.4	
welding shop	17.1	17.1	
Workshop	21.3	21.3	
Receiver Lagavulin FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.8 dB(A) S
Museum Car Park	28.0	28.0	
fuel station	13.7	13.7	
lorry park	28.2	28.2	
wash station	0.6	0.6	
welding shop	16.3	16.3	
Workshop	21.5	21.5	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.7
Museum Car Park	22.9	22.9	
fuel station	11.0	11.0	
lorry park	29.4	29.4	
wash station	18.2	18.2	
welding shop	20.6	20.6	
Workshop	23.5	23.5	

	The Airshed	5
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Assessed level of source groups

scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.6
Museum Car Park	25.5	25.5	
fuel station	10.0	10.0	
lorry park	29.1	29.1	
wash station	16.4	16.4	
welding shop	18.4	18.4	
Workshop	21.4	21.4	
Receiver Viewfield FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 31 dB(A) Sigma(LrD) 0 dB(A) LrN 31.3 dB(A) S
Museum Car Park	12.3	12.3	
fuel station	16.2	16.2	
lorry park	30.9	30.9	
wash station	5.0	5.0	
welding shop	14.3	14.3	
Workshop	12.8	12.8	
Receiver Woodend Cottage FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 30 dB(A) Sigma(LrD) 0 dB(A) LrN 30.0
Museum Car Park	15.5	15.5	
fuel station	14.9	14.9	
lorry park	29.4	29.4	
wash station	-0.4	-0.4	
welding shop	13.7	13.7	
Workshop	14.7	14.7	
Receiver Woodend Cottage FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 29 dB(A) Sigma(LrD) 0 dB(A) LrN 29.1
Museum Car Park	8.0	8.0	
fuel station	13.0	13.0	
lorry park	28.8	28.8	
wash station	-2.1	-2.1	
welding shop	9.8	9.8	
Workshop	11.2	11.2	
Receiver Cowdenmoor Farm FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 29 dB(A) Sigma(LrD) 0 dB(A) LrN 28.6
Museum Car Park	21.2	21.2	
fuel station	11.2	11.2	
lorry park	25.3	25.3	
wash station	17.4	17.4	
welding shop	19.5	19.5	
Workshop	19.9	19.9	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 27 dB(A) Sigma(LrD) 0 dB(A) LrN 27.4
Museum Car Park	17.7	17.7	
fuel station	10.6	10.6	
lorry park	25.0	25.0	
wash station	17.4	17.4	
welding shop	17.8	17.8	
Workshop	16.4	16.4	

	The Airshed	6
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Assessed level of source groups

scenario 04 - layout november 2023 lorry idling

1
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Source group	LrD dB(A)	LrN dB(A)	
Receiver Cowdenmill Cottages east FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 27 dB(A) Sigma(LrD) 0 dB(A) L
Museum Car Park	4.2	4.2	
fuel station	4.1	4.1	
lorry park	26.3	26.3	
wash station	6.9	6.9	
welding shop	14.7	14.7	
Workshop	15.4	15.4	
Receiver Cowdenmoor Farm west FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 26 dB(A) Sigma(LrD) 0 dB(A) LrD
Museum Car Park	22.4	22.4	
fuel station	0.6	0.6	
lorry park	21.7	21.7	
wash station	6.8	6.8	
welding shop	14.9	14.9	
Workshop	18.2	18.2	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 26 dB(A) Sigma(LrD) 0 dB(A) LrN 26.2
Museum Car Park	19.2	19.2	
fuel station	0.9	0.9	
lorry park	23.6	23.6	
wash station	11.6	11.6	
welding shop	14.7	14.7	
Workshop	18.0	18.0	
Receiver Cowdenmoor Farm FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 25 dB(A) Sigma(LrD) 0 dB(A) LrN 24.4
Museum Car Park	12.7	12.7	
fuel station	-0.3	-0.3	
lorry park	23.0	23.0	
wash station	3.3	3.3	
welding shop	13.3	13.3	
Workshop	16.0	16.0	
Receiver Cowdenmoor Farm west FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 24 dB(A) Sigma(LrD) 0 dB(A) LrD
Museum Car Park	18.9	18.9	
fuel station	-1.5	-1.5	
lorry park	20.9	20.9	
wash station	2.4	2.4	
welding shop	12.0	12.0	
Workshop	15.7	15.7	
Receiver Cowdenmoor Farm FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 23 dB(A) Sigma(LrD) 0 dB(A) LrN 22.6
Museum Car Park	15.8	15.8	
fuel station	-2.4	-2.4	
lorry park	20.7	20.7	
wash station	-0.4	-0.4	
welding shop	9.7	9.7	
Workshop	12.6	12.6	

	The Airshed	7
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AS 0985 Shilford
 Assessed level of source groups
 scenario 04 - layout november 2023 lorry idling

1
2

Source group	LrD dB(A)	LrN dB(A)	
Receiver Lagavulin Fl GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 22 dB(A) Sigma(LrD) 0 dB(A) LrN 21.7 dB(A) 9
Museum Car Park	10.9	10.9	
fuel station	-0.6	-0.6	
lorry park	20.7	20.7	
wash station	-2.3	-2.3	
welding shop	7.6	7.6	
Workshop	11.1	11.1	

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AS 0985 Shilford
Contribution level - scenario 04 - layout november 2023 lorry

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
Receiver Shillford Mill (within scheme) FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 45 dB(A) Sigma(LrD) 0 dB(A) LrN						
18	19	Welding Shop-Facade 04	welding shop	Area	7.2	
20	19	Workshop-Facade 01	Workshop	Area	8.0	
13	19	Welding Shop-Facade 01	welding shop	Area	9.0	
23	19	Workshop-East Access	Workshop	Area	9.3	
2	19	fuel station pump	fuel station	Point	12.1	
22	19	Workshop-East Access	Workshop	Area	12.1	
21	19	Workshop-Facade 02	Workshop	Area	13.6	
4	19	lorry idling outside workshop	lorry park	Point	16.1	
19	19	Workshop-Roof 01	Workshop	Area	19.0	
12	19	Welding Shop-Roof 01	welding shop	Area	19.0	
17	19	Welding Shop-Facade 03	welding shop	Area	19.4	
25	19	Workshop-Facade 04	Workshop	Area	20.6	
6	19	lorry idling east parking	lorry park	Point	22.6	
24	19	Workshop-Facade 03	Workshop	Area	25.5	
11	19	car doors	Museum Car Park	Area	28.6	
14	19	Welding Shop-Facade 02	welding shop	Area	29.3	
5	19	lorry idling south parking	lorry park	Point	29.7	
1	19	lorry at fuel station	fuel station	Point	30.0	
15	19	Welding Shop-East Access Door	welding shop	Area	30.5	
16	19	Welding Shop-East Access Door	welding shop	Area	30.5	
3	19	pressure washer	wash station	Point	30.8	
9	19	Lorry Park East	lorry park	Line	34.2	
10	19	Lorry park South	lorry park	Line	36.2	
7	19	lorry idling west parking	lorry park	Point	39.2	
8	19	Lorry Park West	lorry park	Line	40.8	

Receiver Shillford Mill (within scheme) FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 45 dB(A) Sigma(LrD) 0 dB(A) LrN						
18	19	Welding Shop-Facade 04	welding shop	Area	5.1	
20	19	Workshop-Facade 01	Workshop	Area	6.2	
13	19	Welding Shop-Facade 01	welding shop	Area	7.5	
23	19	Workshop-East Access	Workshop	Area	7.9	
22	19	Workshop-East Access	Workshop	Area	10.0	
21	19	Workshop-Facade 02	Workshop	Area	10.9	
2	19	fuel station pump	fuel station	Point	12.6	
4	19	lorry idling outside workshop	lorry park	Point	13.5	
19	19	Workshop-Roof 01	Workshop	Area	14.6	
12	19	Welding Shop-Roof 01	welding shop	Area	16.3	
17	19	Welding Shop-Facade 03	welding shop	Area	16.8	
25	19	Workshop-Facade 04	Workshop	Area	18.0	
6	19	lorry idling east parking	lorry park	Point	21.1	
24	19	Workshop-Facade 03	Workshop	Area	22.7	

	The Airshed	1
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AS 0985 Shilford
Contribution level - scenario 04 - layout november 2023 lorry

9

SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
14	19	Welding Shop-Facade 02	welding shop	Area	27.1	
11	19	car doors	Museum Car Park	Area	27.8	
5	19	lorry idling south parking	lorry park	Point	29.5	
1	19	lorry at fuel station	fuel station	Point	29.5	
15	19	Welding Shop-East Access Door	welding shop	Area	29.6	
16	19	Welding Shop-East Access Door	welding shop	Area	29.6	
3	19	pressure washer	wash station	Point	30.2	
9	19	Lorry Park East	lorry park	Line	33.7	
10	19	Lorry park South	lorry park	Line	37.1	
7	19	lorry idling west parking	lorry park	Point	38.3	
8	19	Lorry Park West	lorry park	Line	40.1	
Receiver Cowdenmill Cottages west F I F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 37 dB(A) Sigma(LrD) 0 dB(A) LrN 3						
2	4	fuel station pump	fuel station	Point	5.9	
17	4	Welding Shop-Facade 03	welding shop	Area	6.6	
24	4	Workshop-Facade 03	Workshop	Area	8.6	
25	4	Workshop-Facade 04	Workshop	Area	11.4	
15	4	Welding Shop-East Access Door	welding shop	Area	13.0	
16	4	Welding Shop-East Access Door	welding shop	Area	14.2	
20	4	Workshop-Facade 01	Workshop	Area	17.9	
14	4	Welding Shop-Facade 02	welding shop	Area	18.2	
13	4	Welding Shop-Facade 01	welding shop	Area	18.2	
4	4	lorry idling outside workshop	lorry park	Point	18.4	
21	4	Workshop-Facade 02	Workshop	Area	19.8	
18	4	Welding Shop-Facade 04	welding shop	Area	19.9	
11	4	car doors	Museum Car Park	Area	20.1	
12	4	Welding Shop-Roof 01	welding shop	Area	20.4	
19	4	Workshop-Roof 01	Workshop	Area	21.0	
7	4	lorry idling west parking	lorry park	Point	21.1	
1	4	lorry at fuel station	fuel station	Point	21.6	
5	4	lorry idling south parking	lorry park	Point	23.7	
23	4	Workshop-East Access	Workshop	Area	24.0	
22	4	Workshop-East Access	Workshop	Area	24.3	
6	4	lorry idling east parking	lorry park	Point	24.9	
8	4	Lorry Park West	lorry park	Line	25.7	
3	4	pressure washer	wash station	Point	28.9	
10	4	Lorry park South	lorry park	Line	29.8	
9	4	Lorry Park East	lorry park	Line	31.0	
Receiver Cowdenmill Cottages west F I F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 37 dB(A) Sigma(LrD) 0 dB(A) LrN 3						
17	3	Welding Shop-Facade 03	welding shop	Area	5.7	
2	3	fuel station pump	fuel station	Point	5.9	

The Airshed

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AS 0985 Shilford
Contribution level - scenario 04 - layout november 2023 lorry

9

SNo	RNo	Source	Source group	Source ty	LrD dB(A)
24	3	Workshop-Facade 03	Workshop	Area	7.4
25	3	Workshop-Facade 04	Workshop	Area	9.3
15	3	Welding Shop-East Access Door	welding shop	Area	12.3
16	3	Welding Shop-East Access Door	welding shop	Area	13.5
20	3	Workshop-Facade 01	Workshop	Area	16.0
14	3	Welding Shop-Facade 02	welding shop	Area	17.5
13	3	Welding Shop-Facade 01	welding shop	Area	17.8
18	3	Welding Shop-Facade 04	welding shop	Area	18.2
21	3	Workshop-Facade 02	Workshop	Area	18.2
7	3	lorry idling west parking	lorry park	Point	18.5
12	3	Welding Shop-Roof 01	welding shop	Area	18.8
19	3	Workshop-Roof 01	Workshop	Area	19.3
11	3	car doors	Museum Car Park	Area	20.1
1	3	lorry at fuel station	fuel station	Point	20.3
4	3	lorry idling outside workshop	lorry park	Point	21.8
5	3	lorry idling south parking	lorry park	Point	22.0
23	3	Workshop-East Access	Workshop	Area	23.7
8	3	Lorry Park West	lorry park	Line	23.9
22	3	Workshop-East Access	Workshop	Area	24.0
6	3	lorry idling east parking	lorry park	Point	24.4
3	3	pressure washer	wash station	Point	28.7
9	3	Lorry Park East	lorry park	Line	29.4
10	3	Lorry park South	lorry park	Line	29.9

Receiver Shillford Mill (within scheme) FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 36 dB(A) Sigma(LrD) 0 dB(A) LrN					
13	20	Welding Shop-Facade 01	welding shop	Area	3.9
2	20	fuel station pump	fuel station	Point	5.6
18	20	Welding Shop-Facade 04	welding shop	Area	5.7
20	20	Workshop-Facade 01	Workshop	Area	6.7
23	20	Workshop-East Access	Workshop	Area	8.9
4	20	lorry idling outside workshop	lorry park	Point	9.6
22	20	Workshop-East Access	Workshop	Area	9.9
3	20	pressure washer	wash station	Point	10.3
21	20	Workshop-Facade 02	Workshop	Area	10.7
1	20	lorry at fuel station	fuel station	Point	14.9
17	20	Welding Shop-Facade 03	welding shop	Area	15.0
12	20	Welding Shop-Roof 01	welding shop	Area	15.1
19	20	Workshop-Roof 01	Workshop	Area	16.7
25	20	Workshop-Facade 04	Workshop	Area	16.7
7	20	lorry idling west parking	lorry park	Point	16.8
15	20	Welding Shop-East Access Door	welding shop	Area	17.1

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
16	20	Welding Shop-East Access Door	welding shop	Area	17.2
24	20	Workshop-Facade 03	Workshop	Area	20.4
14	20	Welding Shop-Facade 02	welding shop	Area	22.1
5	20	lorry idling south parking	lorry park	Point	22.3
11	20	car doors	Museum Car Park	Area	22.4
6	20	lorry idling east parking	lorry park	Point	23.4
8	20	Lorry Park West	lorry park	Line	28.1
9	20	Lorry Park East	lorry park	Line	30.7
10	20	Lorry park South	lorry park	Line	31.1

Receiver Cowdenmill Cottages west						FI	F	1	LrD,lim	dB(A)	LrN,lim	dB(A)	LrD	36	dB(A)	Sigma(LrD)	0	dB(A)	LrN	36
17	5	Welding Shop-Facade 03	welding shop	Area	5.7															
2	5	fuel station pump	fuel station	Point	5.9															
24	5	Workshop-Facade 03	Workshop	Area	7.4															
25	5	Workshop-Facade 04	Workshop	Area	8.8															
15	5	Welding Shop-East Access Door	welding shop	Area	11.3															
16	5	Welding Shop-East Access Door	welding shop	Area	12.6															
20	5	Workshop-Facade 01	Workshop	Area	15.8															
14	5	Welding Shop-Facade 02	welding shop	Area	17.2															
13	5	Welding Shop-Facade 01	welding shop	Area	17.6															
18	5	Welding Shop-Facade 04	welding shop	Area	17.9															
21	5	Workshop-Facade 02	Workshop	Area	18.1															
7	5	lorry idling west parking	lorry park	Point	18.1															
11	5	car doors	Museum Car Park	Area	18.3															
12	5	Welding Shop-Roof 01	welding shop	Area	18.7															
19	5	Workshop-Roof 01	Workshop	Area	19.2															
1	5	lorry at fuel station	fuel station	Point	19.4															
4	5	lorry idling outside workshop	lorry park	Point	21.2															
23	5	Workshop-East Access	Workshop	Area	21.7															
5	5	lorry idling south parking	lorry park	Point	21.7															
22	5	Workshop-East Access	Workshop	Area	22.0															
6	5	lorry idling east parking	lorry park	Point	22.4															
8	5	Lorry Park West	lorry park	Line	23.3															
3	5	pressure washer	wash station	Point	27.5															
9	5	Lorry Park East	lorry park	Line	28.5															
10	5	Lorry park South	lorry park	Line	30.0															

Receiver Cowdenmill Cottages west						FI	GF	LrD,lim	dB(A)	LrN,lim	dB(A)	LrD	36	dB(A)	Sigma(LrD)	0	dB(A)	LrN	36	
17	4	Welding Shop-Facade 03	welding shop	Area	5.9															
2	4	fuel station pump	fuel station	Point	6.6															
24	4	Workshop-Facade 03	Workshop	Area	8.0															
25	4	Workshop-Facade 04	Workshop	Area	8.7															

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
15	4	Welding Shop-East Access Door	welding shop	Area	8.9
16	4	Welding Shop-East Access Door	welding shop	Area	9.4
14	4	Welding Shop-Facade 02	welding shop	Area	14.3
20	4	Workshop-Facade 01	Workshop	Area	14.6
13	4	Welding Shop-Facade 01	welding shop	Area	15.9
18	4	Welding Shop-Facade 04	welding shop	Area	16.5
4	4	lorry idling outside workshop	lorry park	Point	16.6
21	4	Workshop-Facade 02	Workshop	Area	17.3
7	4	lorry idling west parking	lorry park	Point	18.0
12	4	Welding Shop-Roof 01	welding shop	Area	18.6
11	4	car doors	Museum Car Park	Area	18.8
19	4	Workshop-Roof 01	Workshop	Area	19.1
5	4	lorry idling south parking	lorry park	Point	20.2
1	4	lorry at fuel station	fuel station	Point	20.8
23	4	Workshop-East Access	Workshop	Area	23.1
22	4	Workshop-East Access	Workshop	Area	23.5
6	4	lorry idling east parking	lorry park	Point	24.1
8	4	Lorry Park West	lorry park	Line	24.1
3	4	pressure washer	wash station	Point	26.6
9	4	Lorry Park East	lorry park	Line	29.4
10	4	Lorry park South	lorry park	Line	29.5

Receiver House at Barrhead Leather FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 35 dB(A) Sigma(LrD) 0 dB(A) LrN 3

13	15	Welding Shop-Facade 01	welding shop	Area	3.1
2	15	fuel station pump	fuel station	Point	5.2
23	15	Workshop-East Access	Workshop	Area	6.4
18	15	Welding Shop-Facade 04	welding shop	Area	6.4
20	15	Workshop-Facade 01	Workshop	Area	7.9
21	15	Workshop-Facade 02	Workshop	Area	11.8
17	15	Welding Shop-Facade 03	welding shop	Area	14.1
6	15	lorry idling east parking	lorry park	Point	14.3
4	15	lorry idling outside workshop	lorry park	Point	16.8
22	15	Workshop-East Access	Workshop	Area	17.2
25	15	Workshop-Facade 04	Workshop	Area	17.4
5	15	lorry idling south parking	lorry park	Point	17.7
12	15	Welding Shop-Roof 01	welding shop	Area	19.5
1	15	lorry at fuel station	fuel station	Point	19.9
24	15	Workshop-Facade 03	Workshop	Area	20.1
7	15	lorry idling west parking	lorry park	Point	20.5
14	15	Welding Shop-Facade 02	welding shop	Area	21.6
15	15	Welding Shop-East Access Door	welding shop	Area	22.9

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
8	15	Lorry Park West	lorry park	Line	23.0	
3	15	pressure washer	wash station	Point	23.2	
16	15	Welding Shop-East Access Door	welding shop	Area	23.2	
9	15	Lorry Park East	lorry park	Line	23.7	
19	15	Workshop-Roof 01	Workshop	Area	23.8	
11	15	car doors	Museum Car Park	Area	24.4	
10	15	Lorry park South	lorry park	Line	29.7	
Receiver Cowdenmill Cottages west FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 35 dB(A) Sigma(LrD) 0 dB(A) LrN 34						
17	3	Welding Shop-Facade 03	welding shop	Area	5.1	
2	3	fuel station pump	fuel station	Point	6.6	
25	3	Workshop-Facade 04	Workshop	Area	6.7	
24	3	Workshop-Facade 03	Workshop	Area	6.9	
15	3	Welding Shop-East Access Door	welding shop	Area	8.2	
16	3	Welding Shop-East Access Door	welding shop	Area	10.3	
14	3	Welding Shop-Facade 02	welding shop	Area	13.2	
20	3	Workshop-Facade 01	Workshop	Area	13.4	
13	3	Welding Shop-Facade 01	welding shop	Area	13.9	
7	3	lorry idling west parking	lorry park	Point	15.1	
18	3	Welding Shop-Facade 04	welding shop	Area	15.2	
21	3	Workshop-Facade 02	Workshop	Area	15.7	
12	3	Welding Shop-Roof 01	welding shop	Area	16.8	
19	3	Workshop-Roof 01	Workshop	Area	17.3	
5	3	lorry idling south parking	lorry park	Point	17.5	
1	3	lorry at fuel station	fuel station	Point	17.9	
11	3	car doors	Museum Car Park	Area	18.3	
4	3	lorry idling outside workshop	lorry park	Point	20.3	
6	3	lorry idling east parking	lorry park	Point	21.0	
8	3	Lorry Park West	lorry park	Line	21.8	
23	3	Workshop-East Access	Workshop	Area	22.2	
22	3	Workshop-East Access	Workshop	Area	22.4	
9	3	Lorry Park East	lorry park	Line	25.8	
3	3	pressure washer	wash station	Point	25.9	
10	3	Lorry park South	lorry park	Line	29.7	
Receiver Shillford Mill (within scheme) FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN						
13	20	Welding Shop-Facade 01	welding shop	Area	-0.5	
18	20	Welding Shop-Facade 04	welding shop	Area	2.8	
20	20	Workshop-Facade 01	Workshop	Area	4.7	
2	20	fuel station pump	fuel station	Point	4.7	
17	20	Welding Shop-Facade 03	welding shop	Area	5.4	
21	20	Workshop-Facade 02	Workshop	Area	6.0	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
15	20	Welding Shop-East Access Door	welding shop	Area	6.0
16	20	Welding Shop-East Access Door	welding shop	Area	6.0
3	20	pressure washer	wash station	Point	6.0
23	20	Workshop-East Access	Workshop	Area	7.4
4	20	lorry idling outside workshop	lorry park	Point	7.5
22	20	Workshop-East Access	Workshop	Area	7.9
1	20	lorry at fuel station	fuel station	Point	9.1
12	20	Welding Shop-Roof 01	welding shop	Area	9.7
14	20	Welding Shop-Facade 02	welding shop	Area	11.3
19	20	Workshop-Roof 01	Workshop	Area	12.2
7	20	lorry idling west parking	lorry park	Point	13.1
25	20	Workshop-Facade 04	Workshop	Area	14.0
24	20	Workshop-Facade 03	Workshop	Area	14.2
5	20	lorry idling south parking	lorry park	Point	18.4
6	20	lorry idling east parking	lorry park	Point	20.5
11	20	car doors	Museum Car Park	Area	20.6
8	20	Lorry Park West	lorry park	Line	24.5
9	20	Lorry Park East	lorry park	Line	27.8
10	20	Lorry park South	lorry park	Line	31.5

Receiver Cowdenmill Cottages east F I F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 34					
17	1	Welding Shop-Facade 03	welding shop	Area	1.0
24	1	Workshop-Facade 03	Workshop	Area	4.3
25	1	Workshop-Facade 04	Workshop	Area	4.4
2	1	fuel station pump	fuel station	Point	5.3
15	1	Welding Shop-East Access Door	welding shop	Area	6.8
4	1	lorry idling outside workshop	lorry park	Point	7.9
16	1	Welding Shop-East Access Door	welding shop	Area	8.5
11	1	car doors	Museum Car Park	Area	11.2
14	1	Welding Shop-Facade 02	welding shop	Area	12.2
20	1	Workshop-Facade 01	Workshop	Area	14.1
13	1	Welding Shop-Facade 01	welding shop	Area	14.3
22	1	Workshop-East Access	Workshop	Area	15.7
23	1	Workshop-East Access	Workshop	Area	15.8
21	1	Workshop-Facade 02	Workshop	Area	15.9
18	1	Welding Shop-Facade 04	welding shop	Area	16.2
7	1	lorry idling west parking	lorry park	Point	16.6
1	1	lorry at fuel station	fuel station	Point	18.6
12	1	Welding Shop-Roof 01	welding shop	Area	18.8
19	1	Workshop-Roof 01	Workshop	Area	19.0

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
3	1	pressure washer	wash station	Point	20.7
5	1	lorry idling south parking	lorry park	Point	21.4
8	1	Lorry Park West	lorry park	Line	22.1
6	1	lorry idling east parking	lorry park	Point	22.2
9	1	Lorry Park East	lorry park	Line	27.7
10	1	Lorry park South	lorry park	Line	29.6

Receiver House at Barrhead Leather F I F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 3					
13	14	Welding Shop-Facade 01	welding shop	Area	1.2
18	14	Welding Shop-Facade 04	welding shop	Area	3.1
20	14	Workshop-Facade 01	Workshop	Area	4.2
23	14	Workshop-East Access	Workshop	Area	5.0
2	14	fuel station pump	fuel station	Point	5.6
22	14	Workshop-East Access	Workshop	Area	6.7
21	14	Workshop-Facade 02	Workshop	Area	7.0
3	14	pressure washer	wash station	Point	7.9
4	14	lorry idling outside workshop	lorry park	Point	8.5
17	14	Welding Shop-Facade 03	welding shop	Area	8.5
25	14	Workshop-Facade 04	Workshop	Area	8.6
15	14	Welding Shop-East Access Door	welding shop	Area	10.1
16	14	Welding Shop-East Access Door	welding shop	Area	10.2
7	14	lorry idling west parking	lorry park	Point	11.7
12	14	Welding Shop-Roof 01	welding shop	Area	11.7
24	14	Workshop-Facade 03	Workshop	Area	12.7
5	14	lorry idling south parking	lorry park	Point	14.4
1	14	lorry at fuel station	fuel station	Point	15.5
19	14	Workshop-Roof 01	Workshop	Area	15.7
14	14	Welding Shop-Facade 02	welding shop	Area	16.0
11	14	car doors	Museum Car Park	Area	17.0
8	14	Lorry Park West	lorry park	Line	22.4
6	14	lorry idling east parking	lorry park	Point	23.9
9	14	Lorry Park East	lorry park	Line	29.5
10	14	Lorry park South	lorry park	Line	29.7

Receiver Viewfield F I F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 34.0 dB(A) Sigma					
13	22	Welding Shop-Facade 01	welding shop	Area	0.0
23	22	Workshop-East Access	Workshop	Area	2.1
2	22	fuel station pump	fuel station	Point	2.6
18	22	Welding Shop-Facade 04	welding shop	Area	3.0
20	22	Workshop-Facade 01	Workshop	Area	4.2
21	22	Workshop-Facade 02	Workshop	Area	8.5
17	22	Welding Shop-Facade 03	welding shop	Area	11.2
7	22	lorry idling west parking	lorry park	Point	12.2

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
22	22	Workshop-East Access	Workshop	Area	12.8
5	22	lorry idling south parking	lorry park	Point	15.1
4	22	lorry idling outside workshop	lorry park	Point	15.1
25	22	Workshop-Facade 04	Workshop	Area	15.1
12	22	Welding Shop-Roof 01	welding shop	Area	16.0
1	22	lorry at fuel station	fuel station	Point	16.2
24	22	Workshop-Facade 03	Workshop	Area	17.0
15	22	Welding Shop-East Access Door	welding shop	Area	18.0
14	22	Welding Shop-Facade 02	welding shop	Area	18.2
16	22	Welding Shop-East Access Door	welding shop	Area	18.2
3	22	pressure washer	wash station	Point	18.6
6	22	lorry idling east parking	lorry park	Point	20.1
19	22	Workshop-Roof 01	Workshop	Area	20.4
8	22	Lorry Park West	lorry park	Line	21.0
9	22	Lorry Park East	lorry park	Line	26.3
11	22	car doors	Museum Car Park	Area	27.4
10	22	Lorry park South	lorry park	Line	28.0

Receiver Cowdenmill Cottages west						FI	GF	LrD,lim	dB(A)	LrN,lim	dB(A)	LrD 34	dB(A)	Sigma(LrD)	0 dB(A)	LrN 3:
17	5	Welding Shop-Facade 03	welding shop	Area	5.2											
25	5	Workshop-Facade 04	Workshop	Area	6.3											
2	5	fuel station pump	fuel station	Point	6.6											
15	5	Welding Shop-East Access Door	welding shop	Area	6.8											
24	5	Workshop-Facade 03	Workshop	Area	6.8											
16	5	Welding Shop-East Access Door	welding shop	Area	9.0											
20	5	Workshop-Facade 01	Workshop	Area	13.0											
14	5	Welding Shop-Facade 02	welding shop	Area	13.6											
13	5	Welding Shop-Facade 01	welding shop	Area	14.0											
7	5	lorry idling west parking	lorry park	Point	14.8											
21	5	Workshop-Facade 02	Workshop	Area	15.5											
18	5	Welding Shop-Facade 04	welding shop	Area	15.6											
11	5	car doors	Museum Car Park	Area	16.4											
12	5	Welding Shop-Roof 01	welding shop	Area	16.6											
6	5	lorry idling east parking	lorry park	Point	17.0											
19	5	Workshop-Roof 01	Workshop	Area	17.1											
5	5	lorry idling south parking	lorry park	Point	17.4											
1	5	lorry at fuel station	fuel station	Point	18.0											
4	5	lorry idling outside workshop	lorry park	Point	19.6											
23	5	Workshop-East Access	Workshop	Area	20.5											
22	5	Workshop-East Access	Workshop	Area	20.8											

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
8	5	Lorry Park West	lorry park	Line	21.3
9	5	Lorry Park East	lorry park	Line	23.8
3	5	pressure washer	wash station	Point	23.9
10	5	Lorry park South	lorry park	Line	29.7

Receiver Viewfield FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 34 dB(A) Sigma(LrD) 0 dB(A) LrN 33.6 dB(A) Sigma						
13	22	Welding Shop-Facade 01	welding shop	Area	-0.8	
23	22	Workshop-East Access	Workshop	Area	2.1	
18	22	Welding Shop-Facade 04	welding shop	Area	2.4	
2	22	fuel station pump	fuel station	Point	3.1	
20	22	Workshop-Facade 01	Workshop	Area	3.7	
21	22	Workshop-Facade 02	Workshop	Area	7.1	
17	22	Welding Shop-Facade 03	welding shop	Area	9.9	
7	22	lorry idling west parking	lorry park	Point	12.0	
22	22	Workshop-East Access	Workshop	Area	12.0	
25	22	Workshop-Facade 04	Workshop	Area	13.4	
4	22	lorry idling outside workshop	lorry park	Point	14.0	
12	22	Welding Shop-Roof 01	welding shop	Area	14.9	
24	22	Workshop-Facade 03	Workshop	Area	15.5	
5	22	lorry idling south parking	lorry park	Point	16.8	
14	22	Welding Shop-Facade 02	welding shop	Area	16.9	
15	22	Welding Shop-East Access Door	welding shop	Area	17.0	
3	22	pressure washer	wash station	Point	17.1	
16	22	Welding Shop-East Access Door	welding shop	Area	17.3	
1	22	lorry at fuel station	fuel station	Point	17.7	
19	22	Workshop-Roof 01	Workshop	Area	19.1	
6	22	lorry idling east parking	lorry park	Point	19.1	
8	22	Lorry Park West	lorry park	Line	21.9	
11	22	car doors	Museum Car Park	Area	25.3	
9	22	Lorry Park East	lorry park	Line	26.6	
10	22	Lorry park South	lorry park	Line	28.5	

Receiver Woodend Cottage FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.4 dB(A)						
23	25	Workshop-East Access	Workshop	Area	-1.4	
13	25	Welding Shop-Facade 01	welding shop	Area	-0.9	
3	25	pressure washer	wash station	Point	2.0	
2	25	fuel station pump	fuel station	Point	2.4	
18	25	Welding Shop-Facade 04	welding shop	Area	3.1	
20	25	Workshop-Facade 01	Workshop	Area	5.2	
21	25	Workshop-Facade 02	Workshop	Area	7.8	
17	25	Welding Shop-Facade 03	welding shop	Area	10.0	
4	25	lorry idling outside workshop	lorry park	Point	10.6	
7	25	lorry idling west parking	lorry park	Point	11.5	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
22	25	Workshop-East Access	Workshop	Area	13.0
5	25	lorry idling south parking	lorry park	Point	13.4
25	25	Workshop-Facade 04	Workshop	Area	14.9
1	25	lorry at fuel station	fuel station	Point	15.1
12	25	Welding Shop-Roof 01	welding shop	Area	15.2
24	25	Workshop-Facade 03	Workshop	Area	16.2
14	25	Welding Shop-Facade 02	welding shop	Area	17.2
15	25	Welding Shop-East Access Door	welding shop	Area	17.3
16	25	Welding Shop-East Access Door	welding shop	Area	17.5
8	25	Lorry Park West	lorry park	Line	17.6
6	25	lorry idling east parking	lorry park	Point	19.3
19	25	Workshop-Roof 01	Workshop	Area	19.4
9	25	Lorry Park East	lorry park	Line	24.7
10	25	Lorry park South	lorry park	Line	27.1
11	25	car doors	Museum Car Park	Area	28.7

Receiver Woodend Cottage FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.3 dB(A)

23	24	Workshop-East Access	Workshop	Area	-1.5
13	24	Welding Shop-Facade 01	welding shop	Area	-1.2
3	24	pressure washer	wash station	Point	1.8
2	24	fuel station pump	fuel station	Point	2.3
18	24	Welding Shop-Facade 04	welding shop	Area	3.3
20	24	Workshop-Facade 01	Workshop	Area	5.5
21	24	Workshop-Facade 02	Workshop	Area	7.4
17	24	Welding Shop-Facade 03	welding shop	Area	9.6
4	24	lorry idling outside workshop	lorry park	Point	10.4
7	24	lorry idling west parking	lorry park	Point	12.2
22	24	Workshop-East Access	Workshop	Area	12.8
5	24	lorry idling south parking	lorry park	Point	13.5
1	24	lorry at fuel station	fuel station	Point	14.6
25	24	Workshop-Facade 04	Workshop	Area	14.9
12	24	Welding Shop-Roof 01	welding shop	Area	14.9
24	24	Workshop-Facade 03	Workshop	Area	16.0
14	24	Welding Shop-Facade 02	welding shop	Area	16.9
15	24	Welding Shop-East Access Door	welding shop	Area	17.2
16	24	Welding Shop-East Access Door	welding shop	Area	17.4
8	24	Lorry Park West	lorry park	Line	17.4
19	24	Workshop-Roof 01	Workshop	Area	19.2
6	24	lorry idling east parking	lorry park	Point	19.4
9	24	Lorry Park East	lorry park	Line	24.6
10	24	Lorry park South	lorry park	Line	27.0

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
11	24	car doors	Museum Car Park	Area	28.7	
Receiver House at Barrhead Leather FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 3						
13	14	Welding Shop-Facade 01	welding shop	Area	-1.9	
18	14	Welding Shop-Facade 04	welding shop	Area	1.0	
20	14	Workshop-Facade 01	Workshop	Area	2.4	
17	14	Welding Shop-Facade 03	welding shop	Area	3.0	
23	14	Workshop-East Access	Workshop	Area	3.7	
21	14	Workshop-Facade 02	Workshop	Area	4.3	
22	14	Workshop-East Access	Workshop	Area	5.0	
2	14	fuel station pump	fuel station	Point	5.8	
25	14	Workshop-Facade 04	Workshop	Area	6.0	
4	14	lorry idling outside workshop	lorry park	Point	6.4	
12	14	Welding Shop-Roof 01	welding shop	Area	7.8	
24	14	Workshop-Facade 03	Workshop	Area	8.3	
7	14	lorry idling west parking	lorry park	Point	8.4	
1	14	lorry at fuel station	fuel station	Point	9.2	
5	14	lorry idling south parking	lorry park	Point	9.5	
14	14	Welding Shop-Facade 02	welding shop	Area	9.9	
15	14	Welding Shop-East Access Door	welding shop	Area	11.7	
3	14	pressure washer	wash station	Point	11.7	
16	14	Welding Shop-East Access Door	welding shop	Area	12.1	
19	14	Workshop-Roof 01	Workshop	Area	12.1	
11	14	car doors	Museum Car Park	Area	15.7	
8	14	Lorry Park West	lorry park	Line	20.4	
6	14	lorry idling east parking	lorry park	Point	22.9	
9	14	Lorry Park East	lorry park	Line	28.1	
10	14	Lorry park South	lorry park	Line	29.8	
Receiver Cowdenmoor Farm FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 33.2 dB(A)						
2	6	fuel station pump	fuel station	Point	2.0	
4	6	lorry idling outside workshop	lorry park	Point	2.1	
15	6	Welding Shop-East Access Door	welding shop	Area	3.2	
16	6	Welding Shop-East Access Door	welding shop	Area	3.4	
23	6	Workshop-East Access	Workshop	Area	3.9	
22	6	Workshop-East Access	Workshop	Area	4.0	
13	6	Welding Shop-Facade 01	welding shop	Area	4.4	
24	6	Workshop-Facade 03	Workshop	Area	7.8	
21	6	Workshop-Facade 02	Workshop	Area	9.0	
14	6	Welding Shop-Facade 02	welding shop	Area	9.6	
1	6	lorry at fuel station	fuel station	Point	10.9	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
17	6	Welding Shop-Facade 03	welding shop	Area	12.4	
5	6	lorry idling south parking	lorry park	Point	15.0	
18	6	Welding Shop-Facade 04	welding shop	Area	15.2	
12	6	Welding Shop-Roof 01	welding shop	Area	16.4	
20	6	Workshop-Facade 01	Workshop	Area	16.6	
3	6	pressure washer	wash station	Point	17.4	
25	6	Workshop-Facade 04	Workshop	Area	17.4	
7	6	lorry idling west parking	lorry park	Point	17.5	
6	6	lorry idling east parking	lorry park	Point	18.8	
19	6	Workshop-Roof 01	Workshop	Area	20.9	
8	6	Lorry Park West	lorry park	Line	21.8	
9	6	Lorry Park East	lorry park	Line	22.8	
10	6	Lorry park South	lorry park	Line	27.0	
11	6	car doors	Museum Car Park	Area	28.0	
Receiver House at Barrhead Leather FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 33 dB(A) Sigma(LrD) 0 dB(A) LrN 3						
13	15	Welding Shop-Facade 01	welding shop	Area	1.7	
23	15	Workshop-East Access	Workshop	Area	4.5	
2	15	fuel station pump	fuel station	Point	5.2	
18	15	Welding Shop-Facade 04	welding shop	Area	5.2	
20	15	Workshop-Facade 01	Workshop	Area	6.5	
21	15	Workshop-Facade 02	Workshop	Area	8.9	
6	15	lorry idling east parking	lorry park	Point	11.1	
17	15	Welding Shop-Facade 03	welding shop	Area	11.2	
4	15	lorry idling outside workshop	lorry park	Point	12.1	
22	15	Workshop-East Access	Workshop	Area	13.1	
5	15	lorry idling south parking	lorry park	Point	13.4	
25	15	Workshop-Facade 04	Workshop	Area	13.4	
1	15	lorry at fuel station	fuel station	Point	16.0	
12	15	Welding Shop-Roof 01	welding shop	Area	17.0	
7	15	lorry idling west parking	lorry park	Point	17.2	
24	15	Workshop-Facade 03	Workshop	Area	17.2	
3	15	pressure washer	wash station	Point	17.8	
15	15	Welding Shop-East Access Door	welding shop	Area	18.0	
16	15	Welding Shop-East Access Door	welding shop	Area	18.3	
14	15	Welding Shop-Facade 02	welding shop	Area	18.5	
9	15	Lorry Park East	lorry park	Line	19.7	
8	15	Lorry Park West	lorry park	Line	19.7	
19	15	Workshop-Roof 01	Workshop	Area	20.3	
11	15	car doors	Museum Car Park	Area	21.3	
10	15	Lorry park South	lorry park	Line	29.8	
Receiver Cowdenmoor Farm FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.4 dB(A)						

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
2	8	fuel station pump	fuel station	Point	2.7
4	8	lorry idling outside workshop	lorry park	Point	3.9
23	8	Workshop-East Access	Workshop	Area	5.3
22	8	Workshop-East Access	Workshop	Area	5.5
13	8	Welding Shop-Facade 01	welding shop	Area	6.0
15	8	Welding Shop-East Access Door	welding shop	Area	6.1
16	8	Welding Shop-East Access Door	welding shop	Area	6.3
24	8	Workshop-Facade 03	Workshop	Area	8.5
21	8	Workshop-Facade 02	Workshop	Area	9.6
14	8	Welding Shop-Facade 02	welding shop	Area	11.3
1	8	lorry at fuel station	fuel station	Point	12.4
17	8	Welding Shop-Facade 03	welding shop	Area	13.1
7	8	lorry idling west parking	lorry park	Point	15.7
18	8	Welding Shop-Facade 04	welding shop	Area	16.2
20	8	Workshop-Facade 01	Workshop	Area	16.3
5	8	lorry idling south parking	lorry park	Point	16.4
6	8	lorry idling east parking	lorry park	Point	16.8
12	8	Welding Shop-Roof 01	welding shop	Area	17.9
25	8	Workshop-Facade 04	Workshop	Area	17.9
3	8	pressure washer	wash station	Point	20.3
8	8	Lorry Park West	lorry park	Line	20.9
19	8	Workshop-Roof 01	Workshop	Area	21.9
11	8	car doors	Museum Car Park	Area	23.0
9	8	Lorry Park East	lorry park	Line	23.5
10	8	Lorry park South	lorry park	Line	27.1

Receiver	CF	GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A)	Sigma(LrD) 0 dB(A)	LrN 32.4 dB(A)
2	7		fuel station pump	fuel station	Point	2.7	
13	7		Welding Shop-Facade 01	welding shop	Area	5.0	
4	7		lorry idling outside workshop	lorry park	Point	5.1	
23	7		Workshop-East Access	Workshop	Area	5.2	
15	7		Welding Shop-East Access Door	welding shop	Area	5.8	
16	7		Welding Shop-East Access Door	welding shop	Area	6.0	
22	7		Workshop-East Access	Workshop	Area	6.6	
24	7		Workshop-Facade 03	Workshop	Area	8.0	
14	7		Welding Shop-Facade 02	welding shop	Area	10.2	
21	7		Workshop-Facade 02	Workshop	Area	10.3	
17	7		Welding Shop-Facade 03	welding shop	Area	11.8	
1	7		lorry at fuel station	fuel station	Point	12.2	
18	7		Welding Shop-Facade 04	welding shop	Area	15.1	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
7	7	lorry idling west parking	lorry park	Point	16.0
20	7	Workshop-Facade 01	Workshop	Area	16.1
12	7	Welding Shop-Roof 01	welding shop	Area	16.5
5	7	lorry idling south parking	lorry park	Point	16.6
6	7	lorry idling east parking	lorry park	Point	16.6
25	7	Workshop-Facade 04	Workshop	Area	17.2
3	7	pressure washer	wash station	Point	19.8
8	7	Lorry Park West	lorry park	Line	21.0
19	7	Workshop-Roof 01	Workshop	Area	21.7
9	7	Lorry Park East	lorry park	Line	23.6
11	7	car doors	Museum Car Park	Area	24.4
10	7	Lorry park South	lorry park	Line	26.8

Receiver Woodend Cottage FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32.3 dB(A)						
23	24	Workshop-East Access	Workshop	Area	-2.1	
13	24	Welding Shop-Facade 01	welding shop	Area	-1.5	
3	24	pressure washer	wash station	Point	0.5	
2	24	fuel station pump	fuel station	Point	2.6	
18	24	Welding Shop-Facade 04	welding shop	Area	2.9	
20	24	Workshop-Facade 01	Workshop	Area	3.9	
21	24	Workshop-Facade 02	Workshop	Area	6.4	
4	24	lorry idling outside workshop	lorry park	Point	8.3	
17	24	Welding Shop-Facade 03	welding shop	Area	8.7	
7	24	lorry idling west parking	lorry park	Point	9.8	
5	24	lorry idling south parking	lorry park	Point	10.9	
22	24	Workshop-East Access	Workshop	Area	11.2	
1	24	lorry at fuel station	fuel station	Point	12.0	
25	24	Workshop-Facade 04	Workshop	Area	13.5	
12	24	Welding Shop-Roof 01	welding shop	Area	13.8	
24	24	Workshop-Facade 03	Workshop	Area	14.5	
8	24	Lorry Park West	lorry park	Line	15.5	
14	24	Welding Shop-Facade 02	welding shop	Area	15.9	
15	24	Welding Shop-East Access Door	welding shop	Area	16.0	
16	24	Welding Shop-East Access Door	welding shop	Area	16.3	
19	24	Workshop-Roof 01	Workshop	Area	17.8	
6	24	lorry idling east parking	lorry park	Point	18.3	
9	24	Lorry Park East	lorry park	Line	23.2	
11	24	car doors	Museum Car Park	Area	26.8	
10	24	Lorry park South	lorry park	Line	27.4	

Receiver Cowdenmill Cottages east FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 32						
17	1	Welding Shop-Facade 03	welding shop	Area	-1.4	
25	1	Workshop-Facade 04	Workshop	Area	-0.4	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
24	1	Workshop-Facade 03	Workshop	Area	1.6
15	1	Welding Shop-East Access Door	welding shop	Area	2.5
16	1	Welding Shop-East Access Door	welding shop	Area	2.6
4	1	lorry idling outside workshop	lorry park	Point	2.9
2	1	fuel station pump	fuel station	Point	6.0
11	1	car doors	Museum Car Park	Area	6.2
14	1	Welding Shop-Facade 02	welding shop	Area	8.2
23	1	Workshop-East Access	Workshop	Area	8.4
22	1	Workshop-East Access	Workshop	Area	8.8
13	1	Welding Shop-Facade 01	welding shop	Area	9.8
20	1	Workshop-Facade 01	Workshop	Area	10.7
21	1	Workshop-Facade 02	Workshop	Area	11.5
3	1	pressure washer	wash station	Point	11.9
18	1	Welding Shop-Facade 04	welding shop	Area	12.2
7	1	lorry idling west parking	lorry park	Point	12.4
12	1	Welding Shop-Roof 01	welding shop	Area	15.8
19	1	Workshop-Roof 01	Workshop	Area	16.0
5	1	lorry idling south parking	lorry park	Point	17.5
8	1	Lorry Park West	lorry park	Line	17.5
1	1	lorry at fuel station	fuel station	Point	18.1
6	1	lorry idling east parking	lorry park	Point	21.8
9	1	Lorry Park East	lorry park	Line	26.5
10	1	Lorry park South	lorry park	Line	28.3

Receiver	Viewfield	FI	F	1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A)	Sigma(LrD) 0 dB(A)	LrN 32.1 dB(A)	Sigma
13	21	Welding Shop-Facade 01	welding shop	Area	-2.1					
18	21	Welding Shop-Facade 04	welding shop	Area	-0.1					
20	21	Workshop-Facade 01	Workshop	Area	0.5					
2	21	fuel station pump	fuel station	Point	2.5					
23	21	Workshop-East Access	Workshop	Area	3.1					
25	21	Workshop-Facade 04	Workshop	Area	4.1					
21	21	Workshop-Facade 02	Workshop	Area	4.6					
17	21	Welding Shop-Facade 03	welding shop	Area	6.3					
22	21	Workshop-East Access	Workshop	Area	6.7					
24	21	Workshop-Facade 03	Workshop	Area	8.8					
4	21	lorry idling outside workshop	lorry park	Point	9.2					
3	21	pressure washer	wash station	Point	10.6					
12	21	Welding Shop-Roof 01	welding shop	Area	11.0					
15	21	Welding Shop-East Access Door	welding shop	Area	11.7					
16	21	Welding Shop-East Access Door	welding shop	Area	12.2					

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
19	21	Workshop-Roof 01	Workshop	Area	13.0
11	21	car doors	Museum Car Park	Area	14.1
14	21	Welding Shop-Facade 02	welding shop	Area	15.3
5	21	lorry idling south parking	lorry park	Point	15.5
1	21	lorry at fuel station	fuel station	Point	16.8
7	21	lorry idling west parking	lorry park	Point	19.0
6	21	lorry idling east parking	lorry park	Point	20.0
8	21	Lorry Park West	lorry park	Line	21.9
9	21	Lorry Park East	lorry park	Line	26.5
10	21	Lorry park South	lorry park	Line	27.8

Receiver Woodend Cottage FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.9 dB(A)

23	25	Workshop-East Access	Workshop	Area	-1.8
13	25	Welding Shop-Facade 01	welding shop	Area	-1.4
3	25	pressure washer	wash station	Point	0.8
2	25	fuel station pump	fuel station	Point	2.8
18	25	Welding Shop-Facade 04	welding shop	Area	2.8
20	25	Workshop-Facade 01	Workshop	Area	3.8
21	25	Workshop-Facade 02	Workshop	Area	6.7
4	25	lorry idling outside workshop	lorry park	Point	8.8
17	25	Welding Shop-Facade 03	welding shop	Area	9.2
7	25	lorry idling west parking	lorry park	Point	9.4
5	25	lorry idling south parking	lorry park	Point	11.0
22	25	Workshop-East Access	Workshop	Area	11.6
1	25	lorry at fuel station	fuel station	Point	13.1
25	25	Workshop-Facade 04	Workshop	Area	13.7
12	25	Welding Shop-Roof 01	welding shop	Area	14.4
24	25	Workshop-Facade 03	Workshop	Area	15.0
15	25	Welding Shop-East Access Door	welding shop	Area	16.0
8	25	Lorry Park West	lorry park	Line	16.1
16	25	Welding Shop-East Access Door	welding shop	Area	16.3
14	25	Welding Shop-Facade 02	welding shop	Area	16.4
19	25	Workshop-Roof 01	Workshop	Area	18.5
6	25	lorry idling east parking	lorry park	Point	18.6
9	25	Lorry Park East	lorry park	Line	23.8
11	25	car doors	Museum Car Park	Area	24.5
10	25	Lorry park South	lorry park	Line	27.5

Receiver Cowdenmill Cottages east FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31

17	2	Welding Shop-Facade 03	welding shop	Area	0.9
15	2	Welding Shop-East Access Door	welding shop	Area	2.3
16	2	Welding Shop-East Access Door	welding shop	Area	2.7

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
24	2	Workshop-Facade 03	Workshop	Area	3.0
25	2	Workshop-Facade 04	Workshop	Area	4.7
2	2	fuel station pump	fuel station	Point	4.7
4	2	lorry idling outside workshop	lorry park	Point	7.5
14	2	Welding Shop-Facade 02	welding shop	Area	8.5
11	2	car doors	Museum Car Park	Area	10.4
1	2	lorry at fuel station	fuel station	Point	12.5
7	2	lorry idling west parking	lorry park	Point	13.1
5	2	lorry idling south parking	lorry park	Point	13.3
20	2	Workshop-Facade 01	Workshop	Area	13.8
13	2	Welding Shop-Facade 01	welding shop	Area	13.9
23	2	Workshop-East Access	Workshop	Area	14.3
22	2	Workshop-East Access	Workshop	Area	14.5
6	2	lorry idling east parking	lorry park	Point	14.6
21	2	Workshop-Facade 02	Workshop	Area	15.2
18	2	Welding Shop-Facade 04	welding shop	Area	15.6
8	2	Lorry Park West	lorry park	Line	17.3
12	2	Welding Shop-Roof 01	welding shop	Area	17.5
19	2	Workshop-Roof 01	Workshop	Area	18.3
3	2	pressure washer	wash station	Point	19.2
9	2	Lorry Park East	lorry park	Line	22.3
10	2	Lorry park South	lorry park	Line	29.0

Receiver	Lagavulin	FI	GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A)	Sigma(LrD) 0 dB(A)	LrN 31.8 dB(A)	Sigma
15	18	Welding Shop-East Access Door		welding shop		Area	-2.7		
16	18	Welding Shop-East Access Door		welding shop		Area	-2.5		
23	18	Workshop-East Access		Workshop		Area	-2.1		
13	18	Welding Shop-Facade 01		welding shop		Area	-1.5		
3	18	pressure washer		wash station		Point	0.4		
2	18	fuel station pump		fuel station		Point	2.7		
14	18	Welding Shop-Facade 02		welding shop		Area	5.2		
21	18	Workshop-Facade 02		Workshop		Area	6.3		
20	18	Workshop-Facade 01		Workshop		Area	6.4		
22	18	Workshop-East Access		Workshop		Area	7.9		
17	18	Welding Shop-Facade 03		welding shop		Area	8.4		
4	18	lorry idling outside workshop		lorry park		Point	8.9		
7	18	lorry idling west parking		lorry park		Point	9.4		
18	18	Welding Shop-Facade 04		welding shop		Area	12.0		
5	18	lorry idling south parking		lorry park		Point	12.7		
1	18	lorry at fuel station		fuel station		Point	12.9		
6	18	lorry idling east parking		lorry park		Point	12.9		
12	18	Welding Shop-Roof 01		welding shop		Area	13.8		

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
8	18	Lorry Park West	lorry park	Line	14.3
24	18	Workshop-Facade 03	Workshop	Area	14.6
25	18	Workshop-Facade 04	Workshop	Area	14.7
19	18	Workshop-Roof 01	Workshop	Area	17.9
9	18	Lorry Park East	lorry park	Line	19.2
10	18	Lorry park South	lorry park	Line	27.0
11	18	car doors	Museum Car Park	Area	28.1

Receiver Lagavulin							FI	GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A)	Sigma(LrD) 0 dB(A)	LrN 31.8 dB(A)	Sigma
15	17	Welding Shop-East Access Door	welding shop	Area	-2.4									
16	17	Welding Shop-East Access Door	welding shop	Area	-2.2									
23	17	Workshop-East Access	Workshop	Area	-2.0									
13	17	Welding Shop-Facade 01	welding shop	Area	-1.6									
3	17	pressure washer	wash station	Point	0.6									
2	17	fuel station pump	fuel station	Point	2.6									
14	17	Welding Shop-Facade 02	welding shop	Area	5.6									
21	17	Workshop-Facade 02	Workshop	Area	6.4									
20	17	Workshop-Facade 01	Workshop	Area	6.5									
18	17	Welding Shop-Facade 04	welding shop	Area	7.0									
17	17	Welding Shop-Facade 03	welding shop	Area	8.5									
4	17	lorry idling outside workshop	lorry park	Point	8.8									
7	17	lorry idling west parking	lorry park	Point	8.9									
22	17	Workshop-East Access	Workshop	Area	9.6									
5	17	lorry idling south parking	lorry park	Point	12.3									
1	17	lorry at fuel station	fuel station	Point	13.3									
12	17	Welding Shop-Roof 01	welding shop	Area	14.0									
6	17	lorry idling east parking	lorry park	Point	14.4									
25	17	Workshop-Facade 04	Workshop	Area	14.4									
24	17	Workshop-Facade 03	Workshop	Area	14.7									
8	17	Lorry Park West	lorry park	Line	15.1									
19	17	Workshop-Roof 01	Workshop	Area	18.1									
9	17	Lorry Park East	lorry park	Line	20.1									
10	17	Lorry park South	lorry park	Line	26.7									
11	17	car doors	Museum Car Park	Area	28.0									

Receiver Cowdenmoor Farm							FI	GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 32 dB(A)	Sigma(LrD) 0 dB(A)	LrN 31.7 dB(A)	Sigma
2	9	fuel station pump	fuel station	Point	2.7									
4	9	lorry idling outside workshop	lorry park	Point	3.9									
15	9	Welding Shop-East Access Door	welding shop	Area	4.9									
16	9	Welding Shop-East Access Door	welding shop	Area	5.1									
23	9	Workshop-East Access	Workshop	Area	5.3									

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
13	9	Welding Shop-Facade 01	welding shop	Area	5.3
22	9	Workshop-East Access	Workshop	Area	5.3
24	9	Workshop-Facade 03	Workshop	Area	8.4
21	9	Workshop-Facade 02	Workshop	Area	9.1
14	9	Welding Shop-Facade 02	welding shop	Area	10.2
1	9	lorry at fuel station	fuel station	Point	10.3
17	9	Welding Shop-Facade 03	welding shop	Area	12.1
5	9	lorry idling south parking	lorry park	Point	12.9
18	9	Welding Shop-Facade 04	welding shop	Area	15.0
6	9	lorry idling east parking	lorry park	Point	15.2
20	9	Workshop-Facade 01	Workshop	Area	15.3
12	9	Welding Shop-Roof 01	welding shop	Area	16.6
7	9	lorry idling west parking	lorry park	Point	16.9
25	9	Workshop-Facade 04	Workshop	Area	17.1
3	9	pressure washer	wash station	Point	18.2
19	9	Workshop-Roof 01	Workshop	Area	20.7
8	9	Lorry Park West	lorry park	Line	21.2
9	9	Lorry Park East	lorry park	Line	21.7
11	9	car doors	Museum Car Park	Area	22.9
10	9	Lorry park South	lorry park	Line	26.9

Receiver Cowdenmoor Farm FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 32 dB(A) Sigma(LrD) 0 dB(A) LrN 31.6 dB(A)

4	6	lorry idling outside workshop	lorry park	Point	1.2
2	6	fuel station pump	fuel station	Point	2.4
15	6	Welding Shop-East Access Door	welding shop	Area	2.9
16	6	Welding Shop-East Access Door	welding shop	Area	3.2
23	6	Workshop-East Access	Workshop	Area	3.5
22	6	Workshop-East Access	Workshop	Area	3.5
13	6	Welding Shop-Facade 01	welding shop	Area	4.0
24	6	Workshop-Facade 03	Workshop	Area	7.5
21	6	Workshop-Facade 02	Workshop	Area	8.6
1	6	lorry at fuel station	fuel station	Point	9.1
14	6	Welding Shop-Facade 02	welding shop	Area	9.2
17	6	Welding Shop-Facade 03	welding shop	Area	9.6
18	6	Welding Shop-Facade 04	welding shop	Area	12.7
5	6	lorry idling south parking	lorry park	Point	13.6
20	6	Workshop-Facade 01	Workshop	Area	13.7
12	6	Welding Shop-Roof 01	welding shop	Area	14.2
25	6	Workshop-Facade 04	Workshop	Area	14.9
3	6	pressure washer	wash station	Point	16.4
7	6	lorry idling west parking	lorry park	Point	16.5
6	6	lorry idling east parking	lorry park	Point	17.0
19	6	Workshop-Roof 01	Workshop	Area	18.3

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
8	6	Lorry Park West	lorry park	Line	20.4
9	6	Lorry Park East	lorry park	Line	21.1
11	6	car doors	Museum Car Park	Area	25.5
10	6	Lorry park South	lorry park	Line	26.6

Receiver	Viewfield	FI GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 31 dB(A)	Sigma(LrD) 0 dB(A)	LrN 31.3 dB(A)	Sigma
13	21	Welding Shop-Facade 01	welding shop	Area	-4.5			
18	21	Welding Shop-Facade 04	welding shop	Area	-2.3			
20	21	Workshop-Facade 01	Workshop	Area	-1.2			
17	21	Welding Shop-Facade 03	welding shop	Area	1.0			
21	21	Workshop-Facade 02	Workshop	Area	1.3			
23	21	Workshop-East Access	Workshop	Area	1.6			
25	21	Workshop-Facade 04	Workshop	Area	1.9			
22	21	Workshop-East Access	Workshop	Area	3.8			
2	21	fuel station pump	fuel station	Point	4.3			
4	21	lorry idling outside workshop	lorry park	Point	4.7			
24	21	Workshop-Facade 03	Workshop	Area	4.9			
3	21	pressure washer	wash station	Point	5.0			
12	21	Welding Shop-Roof 01	welding shop	Area	6.6			
16	21	Welding Shop-East Access Door	welding shop	Area	7.1			
15	21	Welding Shop-East Access Door	welding shop	Area	8.4			
19	21	Workshop-Roof 01	Workshop	Area	9.2			
14	21	Welding Shop-Facade 02	welding shop	Area	9.2			
11	21	car doors	Museum Car Park	Area	12.3			
5	21	lorry idling south parking	lorry park	Point	14.7			
1	21	lorry at fuel station	fuel station	Point	15.9			
7	21	lorry idling west parking	lorry park	Point	17.7			
6	21	lorry idling east parking	lorry park	Point	19.6			
8	21	Lorry Park West	lorry park	Line	20.9			
9	21	Lorry Park East	lorry park	Line	25.1			
10	21	Lorry park South	lorry park	Line	27.8			

Receiver	Woodend Cottage	FI F 1	LrD,lim dB(A)	LrN,lim dB(A)	LrD 30 dB(A)	Sigma(LrD) 0 dB(A)	LrN 30.0 dB(A)
13	23	Welding Shop-Facade 01	welding shop	Area	-4.2		
23	23	Workshop-East Access	Workshop	Area	-2.3		
18	23	Welding Shop-Facade 04	welding shop	Area	-1.2		
3	23	pressure washer	wash station	Point	-0.4		
20	23	Workshop-Facade 01	Workshop	Area	-0.3		
22	23	Workshop-East Access	Workshop	Area	0.9		
17	23	Welding Shop-Facade 03	welding shop	Area	1.1		
4	23	lorry idling outside workshop	lorry park	Point	1.2		
21	23	Workshop-Facade 02	Workshop	Area	1.4		
2	23	fuel station pump	fuel station	Point	2.3		

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
15	23	Welding Shop-East Access Door	welding shop	Area	3.3	
16	23	Welding Shop-East Access Door	welding shop	Area	3.5	
25	23	Workshop-Facade 04	Workshop	Area	3.8	
24	23	Workshop-Facade 03	Workshop	Area	7.5	
14	23	Welding Shop-Facade 02	welding shop	Area	8.7	
12	23	Welding Shop-Roof 01	welding shop	Area	9.5	
7	23	lorry idling west parking	lorry park	Point	10.5	
19	23	Workshop-Roof 01	Workshop	Area	12.4	
5	23	lorry idling south parking	lorry park	Point	13.1	
1	23	lorry at fuel station	fuel station	Point	14.6	
11	23	car doors	Museum Car Park	Area	15.5	
8	23	Lorry Park West	lorry park	Line	17.5	
6	23	lorry idling east parking	lorry park	Point	18.9	
9	23	Lorry Park East	lorry park	Line	24.6	
10	23	Lorry park South	lorry park	Line	26.2	
Receiver Woodend Cottage FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 29 dB(A) Sigma(LrD) 0 dB(A) LrN 29.1 dB(A)						
13	23	Welding Shop-Facade 01	welding shop	Area	-5.7	
18	23	Welding Shop-Facade 04	welding shop	Area	-3.0	
23	23	Workshop-East Access	Workshop	Area	-2.8	
20	23	Workshop-Facade 01	Workshop	Area	-2.3	
17	23	Welding Shop-Facade 03	welding shop	Area	-2.2	
3	23	pressure washer	wash station	Point	-2.1	
4	23	lorry idling outside workshop	lorry park	Point	-1.2	
21	23	Workshop-Facade 02	Workshop	Area	-0.7	
22	23	Workshop-East Access	Workshop	Area	-0.7	
15	23	Welding Shop-East Access Door	welding shop	Area	-0.3	
25	23	Workshop-Facade 04	Workshop	Area	-0.2	
16	23	Welding Shop-East Access Door	welding shop	Area	0.0	
2	23	fuel station pump	fuel station	Point	2.6	
24	23	Workshop-Facade 03	Workshop	Area	4.0	
14	23	Welding Shop-Facade 02	welding shop	Area	4.4	
12	23	Welding Shop-Roof 01	welding shop	Area	5.6	
11	23	car doors	Museum Car Park	Area	8.0	
19	23	Workshop-Roof 01	Workshop	Area	8.4	
7	23	lorry idling west parking	lorry park	Point	8.5	
5	23	lorry idling south parking	lorry park	Point	10.8	
1	23	lorry at fuel station	fuel station	Point	12.6	
8	23	Lorry Park West	lorry park	Line	16.0	
6	23	lorry idling east parking	lorry park	Point	18.1	
9	23	Lorry Park East	lorry park	Line	23.7	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
10	23	Lorry park South	lorry park	Line	26.1	
Receiver Cowdenmoor Farm FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 29 dB(A) Sigma(LrD) 0 dB(A) LrN 28.6 dB(A)						
4	11	lorry idling outside workshop	lorry park	Point	-3.3	
15	11	Welding Shop-East Access Door	welding shop	Area	-2.1	
23	11	Workshop-East Access	Workshop	Area	-1.5	
22	11	Workshop-East Access	Workshop	Area	-1.0	
24	11	Workshop-Facade 03	Workshop	Area	1.7	
5	11	lorry idling south parking	lorry park	Point	1.8	
2	11	fuel station pump	fuel station	Point	1.8	
7	11	lorry idling west parking	lorry park	Point	1.9	
16	11	Welding Shop-East Access Door	welding shop	Area	2.0	
21	11	Workshop-Facade 02	Workshop	Area	3.0	
13	11	Welding Shop-Facade 01	welding shop	Area	4.6	
6	11	lorry idling east parking	lorry park	Point	6.4	
17	11	Welding Shop-Facade 03	welding shop	Area	7.1	
14	11	Welding Shop-Facade 02	welding shop	Area	7.8	
8	11	Lorry Park West	lorry park	Line	8.2	
1	11	lorry at fuel station	fuel station	Point	10.6	
20	11	Workshop-Facade 01	Workshop	Area	12.4	
25	11	Workshop-Facade 04	Workshop	Area	13.1	
18	11	Welding Shop-Facade 04	welding shop	Area	15.4	
12	11	Welding Shop-Roof 01	welding shop	Area	15.9	
9	11	Lorry Park East	lorry park	Line	16.6	
19	11	Workshop-Roof 01	Workshop	Area	17.3	
3	11	pressure washer	wash station	Point	17.4	
11	11	car doors	Museum Car Park	Area	21.2	
10	11	Lorry park South	lorry park	Line	24.5	

Receiver Cowdenmoor Farm FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 27 dB(A) Sigma(LrD) 0 dB(A) LrN 27.4 dB(A)

4	11	lorry idling outside workshop	lorry park	Point	-2.0	
7	11	lorry idling west parking	lorry park	Point	-1.0	
15	11	Welding Shop-East Access Door	welding shop	Area	-0.9	
23	11	Workshop-East Access	Workshop	Area	-0.1	
24	11	Workshop-Facade 03	Workshop	Area	0.0	
22	11	Workshop-East Access	Workshop	Area	0.1	
21	11	Workshop-Facade 02	Workshop	Area	1.0	
2	11	fuel station pump	fuel station	Point	2.3	
16	11	Welding Shop-East Access Door	welding shop	Area	2.6	
17	11	Welding Shop-Facade 03	welding shop	Area	3.6	
13	11	Welding Shop-Facade 01	welding shop	Area	4.2	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
5	11	lorry idling south parking	lorry park	Point	5.4	
6	11	lorry idling east parking	lorry park	Point	6.3	
20	11	Workshop-Facade 01	Workshop	Area	7.0	
25	11	Workshop-Facade 04	Workshop	Area	7.0	
14	11	Welding Shop-Facade 02	welding shop	Area	7.5	
1	11	lorry at fuel station	fuel station	Point	9.9	
18	11	Welding Shop-Facade 04	welding shop	Area	13.0	
8	11	Lorry Park West	lorry park	Line	14.3	
12	11	Welding Shop-Roof 01	welding shop	Area	14.4	
19	11	Workshop-Roof 01	Workshop	Area	14.6	
9	11	Lorry Park East	lorry park	Line	16.8	
3	11	pressure washer	wash station	Point	17.4	
11	11	car doors	Museum Car Park	Area	17.7	
10	11	Lorry park South	lorry park	Line	23.7	
Receiver Cowdenmill Cottages east FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 27 dB(A) Sigma(LrD) 0 dB(A) LrN 27						
17	2	Welding Shop-Facade 03	welding shop	Area	-2.5	
25	2	Workshop-Facade 04	Workshop	Area	-1.8	
15	2	Welding Shop-East Access Door	welding shop	Area	-0.3	
4	2	lorry idling outside workshop	lorry park	Point	-0.1	
24	2	Workshop-Facade 03	Workshop	Area	-0.1	
16	2	Welding Shop-East Access Door	welding shop	Area	0.2	
1	2	lorry at fuel station	fuel station	Point	0.6	
5	2	lorry idling south parking	lorry park	Point	0.7	
2	2	fuel station pump	fuel station	Point	1.5	
7	2	lorry idling west parking	lorry park	Point	1.6	
23	2	Workshop-East Access	Workshop	Area	3.8	
22	2	Workshop-East Access	Workshop	Area	3.8	
11	2	car doors	Museum Car Park	Area	4.2	
14	2	Welding Shop-Facade 02	welding shop	Area	4.4	
13	2	Welding Shop-Facade 01	welding shop	Area	5.5	
8	2	Lorry Park West	lorry park	Line	6.1	
3	2	pressure washer	wash station	Point	6.9	
21	2	Workshop-Facade 02	Workshop	Area	8.0	
20	2	Workshop-Facade 01	Workshop	Area	8.3	
18	2	Welding Shop-Facade 04	welding shop	Area	8.7	
6	2	lorry idling east parking	lorry park	Point	10.9	
12	2	Welding Shop-Roof 01	welding shop	Area	11.1	
19	2	Workshop-Roof 01	Workshop	Area	11.8	
9	2	Lorry Park East	lorry park	Line	17.4	
10	2	Lorry park South	lorry park	Line	25.5	
Receiver Cowdenmoor Farm west FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 26 dB(A) Sigma(LrD) 0 dB(A) LrN 26.:						

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
2	13	fuel station pump	fuel station	Point	-5.6	
13	13	Welding Shop-Facade 01	welding shop	Area	-0.9	
1	13	lorry at fuel station	fuel station	Point	-0.5	
15	13	Welding Shop-East Access Door	welding shop	Area	0.1	
7	13	lorry idling west parking	lorry park	Point	0.3	
16	13	Welding Shop-East Access Door	welding shop	Area	0.3	
5	13	lorry idling south parking	lorry park	Point	0.5	
6	13	lorry idling east parking	lorry park	Point	1.4	
4	13	lorry idling outside workshop	lorry park	Point	1.8	
24	13	Workshop-Facade 03	Workshop	Area	2.4	
23	13	Workshop-East Access	Workshop	Area	3.3	
22	13	Workshop-East Access	Workshop	Area	3.6	
21	13	Workshop-Facade 02	Workshop	Area	3.7	
14	13	Welding Shop-Facade 02	welding shop	Area	4.0	
17	13	Welding Shop-Facade 03	welding shop	Area	5.4	
3	13	pressure washer	wash station	Point	6.8	
8	13	Lorry Park West	lorry park	Line	9.1	
18	13	Welding Shop-Facade 04	welding shop	Area	9.3	
20	13	Workshop-Facade 01	Workshop	Area	10.3	
25	13	Workshop-Facade 04	Workshop	Area	11.1	
12	13	Welding Shop-Roof 01	welding shop	Area	11.4	
9	13	Lorry Park East	lorry park	Line	14.8	
19	13	Workshop-Roof 01	Workshop	Area	15.3	
10	13	Lorry park South	lorry park	Line	20.2	
11	13	car doors	Museum Car Park	Area	22.4	
Receiver Cowdenmoor Farm FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 26 dB(A) Sigma(LrD) 0 dB(A) LrN 26.2 dB(A)						
13	12	Welding Shop-Facade 01	welding shop	Area	-2.5	
1	12	lorry at fuel station	fuel station	Point	-2.2	
2	12	fuel station pump	fuel station	Point	-2.0	
4	12	lorry idling outside workshop	lorry park	Point	-0.6	
15	12	Welding Shop-East Access Door	welding shop	Area	0.7	
16	12	Welding Shop-East Access Door	welding shop	Area	1.0	
5	12	lorry idling south parking	lorry park	Point	1.1	
23	12	Workshop-East Access	Workshop	Area	1.4	
22	12	Workshop-East Access	Workshop	Area	1.5	
6	12	lorry idling east parking	lorry park	Point	1.8	
24	12	Workshop-Facade 03	Workshop	Area	2.3	
21	12	Workshop-Facade 02	Workshop	Area	3.3	
14	12	Welding Shop-Facade 02	welding shop	Area	3.5	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)	
17	12	Welding Shop-Facade 03	welding shop	Area	4.8	
20	12	Workshop-Facade 01	Workshop	Area	8.4	
18	12	Welding Shop-Facade 04	welding shop	Area	9.0	
9	12	Lorry Park East	lorry park	Line	9.4	
25	12	Workshop-Facade 04	Workshop	Area	10.9	
12	12	Welding Shop-Roof 01	welding shop	Area	11.3	
3	12	pressure washer	wash station	Point	11.6	
7	12	lorry idling west parking	lorry park	Point	12.6	
8	12	Lorry Park West	lorry park	Line	15.4	
19	12	Workshop-Roof 01	Workshop	Area	15.6	
11	12	car doors	Museum Car Park	Area	19.2	
10	12	Lorry park South	lorry park	Line	22.1	
Receiver Cowdenmoor Farm FI F 1 LrD,lim dB(A) LrN,lim dB(A) LrD 25 dB(A) Sigma(LrD) 0 dB(A) LrN 24.5 dB(A)						
2	10	fuel station pump	fuel station	Point	-3.5	
4	10	lorry idling outside workshop	lorry park	Point	-3.3	
1	10	lorry at fuel station	fuel station	Point	-3.1	
13	10	Welding Shop-Facade 01	welding shop	Area	-2.5	
22	10	Workshop-East Access	Workshop	Area	-1.6	
23	10	Workshop-East Access	Workshop	Area	-0.8	
15	10	Welding Shop-East Access Door	welding shop	Area	-0.6	
16	10	Welding Shop-East Access Door	welding shop	Area	-0.3	
24	10	Workshop-Facade 03	Workshop	Area	0.9	
21	10	Workshop-Facade 02	Workshop	Area	1.7	
14	10	Welding Shop-Facade 02	welding shop	Area	2.5	
7	10	lorry idling west parking	lorry park	Point	2.8	
3	10	pressure washer	wash station	Point	3.3	
17	10	Welding Shop-Facade 03	welding shop	Area	3.5	
5	10	lorry idling south parking	lorry park	Point	5.7	
6	10	lorry idling east parking	lorry park	Point	7.4	
18	10	Welding Shop-Facade 04	welding shop	Area	8.0	
20	10	Workshop-Facade 01	Workshop	Area	8.2	
25	10	Workshop-Facade 04	Workshop	Area	9.1	
12	10	Welding Shop-Roof 01	welding shop	Area	9.4	
8	10	Lorry Park West	lorry park	Line	11.3	
11	10	car doors	Museum Car Park	Area	12.7	
9	10	Lorry Park East	lorry park	Line	12.7	
19	10	Workshop-Roof 01	Workshop	Area	13.1	
10	10	Lorry park South	lorry park	Line	22.0	
Receiver Cowdenmoor Farm west FI GF LrD,lim dB(A) LrN,lim dB(A) LrD 24 dB(A) Sigma(LrD) 0 dB(A) LrN 24.5 dB(A)						
2	13	fuel station pump	fuel station	Point	-7.8	
6	13	lorry idling east parking	lorry park	Point	-3.0	

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
1	13	lorry at fuel station	fuel station	Point	-2.7
13	13	Welding Shop-Facade 01	welding shop	Area	-2.4
7	13	lorry idling west parking	lorry park	Point	-1.1
15	13	Welding Shop-East Access Door	welding shop	Area	-0.4
16	13	Welding Shop-East Access Door	welding shop	Area	-0.1
24	13	Workshop-Facade 03	Workshop	Area	1.0
4	13	lorry idling outside workshop	lorry park	Point	1.5
17	13	Welding Shop-Facade 03	welding shop	Area	1.8
21	13	Workshop-Facade 02	Workshop	Area	1.9
14	13	Welding Shop-Facade 02	welding shop	Area	2.2
3	13	pressure washer	wash station	Point	2.4
23	13	Workshop-East Access	Workshop	Area	3.2
22	13	Workshop-East Access	Workshop	Area	3.3
18	13	Welding Shop-Facade 04	welding shop	Area	5.7
5	13	lorry idling south parking	lorry park	Point	5.9
20	13	Workshop-Facade 01	Workshop	Area	7.4
25	13	Workshop-Facade 04	Workshop	Area	7.5
12	13	Welding Shop-Roof 01	welding shop	Area	8.0
19	13	Workshop-Roof 01	Workshop	Area	12.8
8	13	Lorry Park West	lorry park	Line	13.5
9	13	Lorry Park East	lorry park	Line	16.3
10	13	Lorry park South	lorry park	Line	17.1
11	13	car doors	Museum Car Park	Area	18.9

Receiver Cowdenmoor Farm						FI	GF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 23 dB(A)	Sigma(LrD) 0 dB(A)	LrN 22.6 dB(A)
2	10	fuel station pump	fuel station	Point	-6.0							
1	10	lorry at fuel station	fuel station	Point	-4.9							
13	10	Welding Shop-Facade 01	welding shop	Area	-4.4							
4	10	lorry idling outside workshop	lorry park	Point	-4.0							
15	10	Welding Shop-East Access Door	welding shop	Area	-2.2							
16	10	Welding Shop-East Access Door	welding shop	Area	-1.9							
22	10	Workshop-East Access	Workshop	Area	-1.7							
24	10	Workshop-Facade 03	Workshop	Area	-1.2							
17	10	Welding Shop-Facade 03	welding shop	Area	-0.7							
23	10	Workshop-East Access	Workshop	Area	-0.5							
21	10	Workshop-Facade 02	Workshop	Area	-0.4							
3	10	pressure washer	wash station	Point	-0.4							
14	10	Welding Shop-Facade 02	welding shop	Area	0.3							
18	10	Welding Shop-Facade 04	welding shop	Area	2.9							
6	10	lorry idling east parking	lorry park	Point	3.7							

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SNo	RNo	Source	Source group	Source ty	LrD dB(A)
20	10	Workshop-Facade 01	Workshop	Area	3.7
25	10	Workshop-Facade 04	Workshop	Area	4.5
5	10	lorry idling south parking	lorry park	Point	5.7
12	10	Welding Shop-Roof 01	welding shop	Area	5.8
9	10	Lorry Park East	lorry park	Line	8.9
19	10	Workshop-Roof 01	Workshop	Area	9.8
7	10	lorry idling west parking	lorry park	Point	9.9
8	10	Lorry Park West	lorry park	Line	12.4
11	10	car doors	Museum Car Park	Area	15.8
10	10	Lorry park South	lorry park	Line	18.8

Receiver	Lagavulin	FIGF	LrD,lim dB(A)	LrN,lim dB(A)	LrD 22 dB(A)	Sigma(LrD) 0 dB(A)	LrN 21.7 dB(A)	Sigma
13	16		Welding Shop-Facade 01	welding shop	Area	-5.7		
5	16		lorry idling south parking	lorry park	Point	-4.0		
1	16		lorry at fuel station	fuel station	Point	-4.0		
15	16		Welding Shop-East Access Door	welding shop	Area	-3.4		
16	16		Welding Shop-East Access Door	welding shop	Area	-3.2		
2	16		fuel station pump	fuel station	Point	-3.2		
23	16		Workshop-East Access	Workshop	Area	-3.0		
3	16		pressure washer	wash station	Point	-2.3		
17	16		Welding Shop-Facade 03	welding shop	Area	-2.1		
22	16		Workshop-East Access	Workshop	Area	-1.5		
4	16		lorry idling outside workshop	lorry park	Point	-1.3		
7	16		lorry idling west parking	lorry park	Point	-1.2		
20	16		Workshop-Facade 01	Workshop	Area	-1.2		
21	16		Workshop-Facade 02	Workshop	Area	-0.4		
6	16		lorry idling east parking	lorry park	Point	-0.1		
14	16		Welding Shop-Facade 02	welding shop	Area	0.1		
18	16		Welding Shop-Facade 04	welding shop	Area	1.4		
12	16		Welding Shop-Roof 01	welding shop	Area	2.0		
25	16		Workshop-Facade 04	Workshop	Area	2.6		
8	16		Lorry Park West	lorry park	Line	3.2		
24	16		Workshop-Facade 03	Workshop	Area	3.2		
9	16		Lorry Park East	lorry park	Line	6.7		
19	16		Workshop-Roof 01	Workshop	Area	7.8		
11	16		car doors	Museum Car Park	Area	10.9		
10	16		Lorry park South	lorry park	Line	20.3		

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