Soundscape Consulting (Pty) Ltd
Neighbourhood Workspace
58 Main Street, Newlands, Cape Town, 7700
nicolette@soundscapeconsult.com

21 January 2026
Ref. SSC1256
Prepared by: K Garder and N von Reiche

Johmandie Pienaar
Environmental Assessment Practitioner
Enviro-EAP
+27 72 240 3092
johmandie@enviro-eap.co.za

Environmental noise impact report for Knorvarkie Campsite located on the R234 Hopefield Road, Velddrif

Dear Johmandie,

Thank you for this opportunity to assist you with the noise impact report for the Knorvarkie campsite located on the R234 Hopefield Road, Velddrif.

The **purpose** of this report is to **assess existing noise conditions at Knorvarkie** (River Shack restaurant, campsite and guest accommodation) and to **evaluate the potential for noise impacts** at neighbouring receptors in response to received complaints. The assessment provides a clear record of measured levels, operational influences, and the extent to which Knorvarkie's activities may contribute to noise disturbance off-site.

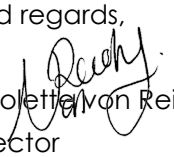
The investigation was undertaken **in accordance with the intent of the Western Cape Noise Control Regulations** (WCNCR) and relevant **South African standards**, including SANS 10103 (environmental noise measurement and rating level assessment) and SANS 10328 (methods and procedures for environmental noise impact assessment). **Short-term measurements** were conducted at representative on-site and off-site locations during both busy and quiet operating conditions, during daytime and night-time, and were supported by field observations to identify dominant sources and intermittent events.

Measured results were used to **determine rating levels** for **comparison with guideline criteria** and to assess overall compliance at nearby receptors. In addition, **busy-versus-quiet comparisons** were used to estimate **Knorvarkie's operational contribution**, and the **likelihood of "disturbing noise"** as contemplated in the WCNCR, particularly in relation to music and guest activity during busy periods.

While **overall levels were generally consistent with applicable guideline values on an average basis**, the findings indicate a **distinct potential for disturbing noise at the nearest neighbouring residence** under certain busy operating conditions. Accordingly, and to support ongoing compliance and good neighbour relations, a **Noise Management Plan has been prepared** and is included in Annex B of this report, setting out practical operational controls, communication procedures, complaint response measures, and monitoring requirements.

I trust this meets with your requirements. If you have any questions or comments, please do not hesitate to contact me.

Kind regards,



Nicolette von Reiche
Director

Table of Contents

1 Introduction 4
2 Noise control regulations and guidelines 4
2.1 Western Cape Noise Control Regulations of 2013 5
2.1.1 Regulation 2 prohibition of disturbing noise 5
2.1.2 Regulation 4, land use (subregulation 1, 3, and 4) 5
2.2 SANS 10103: 2008 6
2.3 IFC environmental noise level guidelines 7
3 Noise survey 7
3.1 Survey methodology 7
3.2 Noise survey results 12
4 Rating levels as per SANS 10103 17
5 Knorvarkie Campsites' noise impact: Busy vs quiet conditions 19
5.1 Purpose and interpretation approach 19
5.2 Busy–quiet differences and estimated operational increment 19
5.3 Interpretation by receptor 20
5.3.1 Site B (nearest residence – primary receptor) 20
5.3.2 Site C (neighbouring guest accommodation – secondary receptor 21
5.3.3 Overall conclusion against the 7 dBA criterion for disturbing noise 21
6 Conclusions 21
7 References 22
8 Annexure A: Logger results, logger 3rd octave, and logger statistics 23
9 Annex B: Noise management plan 36

List of Tables

Table 1: Typical rating levels for outdoor noise (SSA, 2008) 6
Table 2: Categories of community or group responses (SSA, 2008) 7
Table 3: IFC noise level guidelines 7
Table 4: SANS 10103 outdoor noise measurement methodology checklist 8
Table 5: Equipment details 9
Table 6: Main noise survey results 13
Table 7: Estimated daytime rating levels based on measurements 18
Table 8: Estimated night-time rating levels based on measurements 19
Table 9: Busy–quiet differences and notes on audibility 20

List of Figures

Figure 1: Photographs of SLM in situ at Site A, Knorvarkie Guest Accommodation 10
Figure 2: Photographs of SLM in situ at Site B, closest neighbouring residential dwelling 10
Figure 3: Photographs of SLM in situ at Site C, neighbouring residential dwellings/guest accommodation 10
Figure 4: Noise survey locations 11
Figure 5: Site A, Daytime, Busy period detailed results 24
Figure 6: Site A, Daytime, Quiet period detailed results 25
Figure 7: Site A, Nighttime, Busy period detailed results 26
Figure 8: Site A, Nighttime, Quiet period detailed results 27
Figure 9: Site B, Daytime, Busy period detailed results 28
Figure 10: Site B, Daytime, Quiet period detailed results 29
Figure 11: Site B, Nighttime, Busy period detailed results 30
Figure 12: Site B, Nighttime, Quiet period detailed results 31
Figure 13: Site C, Daytime, Busy period detailed results 32
Figure 14: Site C, Daytime, Quiet period detailed results 33
Figure 15: Site C, Nighttime, Busy period detailed results 34
Figure 16: Site C, Nighttime, Quiet period detailed results 35

1 Introduction

Soundscape Consulting (Pty) Ltd (Soundscape) was appointed by Enviro-EAP to conduct an environmental noise survey and impact assessment at the Knorvarkie campsite located on the R234 Hopefield Road, Velddrif. The survey and impact assessment were conducted in accordance methodologies outlined in South African National Standard (SANS) 10103: 2008 '*The measurement and rating of environmental noise with respect to annoyance and to speech communication*', and SANS 10328: 2008 '*Methods for environmental noise impact assessments*.

Knorvarkie is a small campsite situated on the banks of the Berg River, where day visitors and overnight campers make use of the riverfront setting for fishing, boating, and general outdoor recreation. The site consists of designated camping stands, a shared ablution block, a free-standing rental accommodation unit, and the *River Shack*, an onsite restaurant and bar. The River Shack and the free-standing rental unit have been identified as their main sources of noise.

Noise-sensitive receptors within a 2-kilometre radius include residential and agricultural operations, and various forms of rental accommodation.

This noise impact report provides context for the assessment with reference to applicable environmental noise regulations and guidelines. It outlines the methodology used during the site survey and presents a detailed account of the noise measurement results. The findings aim to support compliance evaluation.

2 Noise control regulations and guidelines

Environmental noise guidelines and/or standards are important tools for impact management since it forms the link between the source of noise and the receiver.

National Noise Control Regulations (1992) were published under the Environment Conservation Act no. 73 of 1989 (ECA) (DEA, 1989)[1]. Key to National Noise Control Regulations (1992) are definitions for road, aircraft, and industry noise control zones. It defines and prohibits noise nuisance and provides broad guidance on noise measurement.

National Noise Control Regulations (1992) have been repealed in the Eastern Cape, Gauteng, the Free State, and the Western Cape where Provincial Noise Control Regulations have been published. Provincial Noise Control Regulations for these provinces refer extensively to the SANS 10103 procedures for the measurement and rating of environmental noise.

Provision is also made for the control of environmental noise under the National Environmental Management: Air Quality Act no. 39 of 2004, as amended (NEM: AQA) (DEA, 2004). The Minister may prescribe essential national noise standards under section 34 of NEM: AQA but these have yet to be specified. It is expected that such standards will also refer to SANS 10103.

[1] Department of Environmental Affairs (DEA)

2.1 Western Cape Noise Control Regulations of 2013

Only those clauses of the Western Cape Noise Control Regulations of 2013 (WCNCR) key to this survey and assessment are presented here.

2.1.1 Regulation 2 prohibition of disturbing noise

A person may not-

a) cause a disturbing noise; or
b) allow a disturbing noise to be caused by any person, animal, machine, device, apparatus, vehicle, vessel or model aircraft, or any combination thereof.

A "disturbing noise" means a noise, excluding the unamplified human voice, which-

a) exceeds the rating (desired) level by 7 dBA[2]
b) exceeds the residual (existing) noise level where the residual noise level is higher than the rating level (see paragraph 2.2 for definition of rating levels)
c) exceeds the residual noise level by 3 dBA where the residual noise level is lower than the rating level or
d) in the case of a low-frequency noise, exceeds the level specified in Annex B of SANS 10103.

2.1.2 Regulation 4, land use (subregulation 1, 3, and 4)

1) The local authority, or any other authority responsible for considering an application for a building plan approval, business licence approval, planning approval, or environmental authorisation, may instruct the applicant to conduct and submit, as part of the application-
   a) a noise impact assessment in accordance with SANS 10328 to establish whether the noise impact rating of the proposed land use or activity exceeds the appropriate rating level for a particular district as indicated in SANS 10103; or
   b) where the noise level measurements cannot be determined, an assessment, to the satisfaction of the local authority, of the noise level of the proposed land use or activity.

3) Where the results of an assessment undertaken in terms of subregulation (1) indicate that the applicable noise rating levels referred to in that subregulation will likely be exceeded, or will not be exceeded but will likely exceed the existing residual noise levels by 5 dBAA or more-
   a) the applicant must provide a **noise management plan**, clearly specifying appropriate mitigation measures to the satisfaction of the local authority, before the application is decided; and
   b) implementation of those mitigation measures may be imposed as a condition of approval of the application.

4) Where an applicant has not implemented the noise management plan as contemplated in subregulation (3), the local authority may instruct the applicant in writing to-
   a) cease any activity that does not comply with that plan; or

[2] dBA (A-Weighted Decibels) is a unit of sound level measurement that represents the relative loudness of sounds as perceived by the human ear. The "A-weighting" filter is applied to account for the varying sensitivity of human hearing to different frequencies, emphasising mid-range frequencies (where the ear is most sensitive) while reducing the influence of very low and very high frequencies.

b) reduce the noise levels to an acceptable level to the satisfaction of the local authority.

2.2 SANS 10103: 2008

The values given in Table 1 are typical rating levels that should not be exceeded **outdoors** in the different districts listed. Outdoor ambient noise exceeding these levels may be annoying to the community. Refer to Table 2 for the SANS 10103 methodology of assessing annoyance. In the absence of human activity, the acoustic environment would likely be rural in character. However, the presence of the restaurant, guest accommodation and campsite, together with the nearby railway line, alters this setting and will elevate the prevailing ambient noise climate, particularly during peak (in-season) periods.

Table 1: Typical rating levels for outdoor noise (SSA, 2008)

	Equivalent continuous rating level ($L_{Req,T}$)[3] for outdoor noise, dBA		
Type of district	**Day/night rating level, $L_{R,dn}$[4]**	**Daytime rating level, $L_{Req,d}$[5]**	**Night-time rating level, $L_{Req,n}$[6]**
Rural districts	45	45	35
Suburban districts with little road traffic	50	50	40
Urban districts	55	55	45
Urban districts with workshops; business premises; and/or main roads	60	60	50
Central business districts	65	65	55
Industrial districts	70	70	60

Complaints would normally justify investigation only when the rating level of the ambient noise exceeds the rating level of the residual noise at the same location during the relevant period.
It is probable that the noise is annoying or otherwise intrusive to the community or to a group of persons if the rating level of the ambient noise under investigation exceeds the following:

a) the rating level of the residual noise (determined in the absence of the specific noise under investigation), or
b) the typical rating level for the ambient noise for the applicable environment given in Table 2.

The probable community or group response to excess noise is given in Table 2. Note, the overlapping ranges for the excess values are given because a spread in the community reaction might be anticipated.

[3] $L_{Req,T}$ – Equivalent continuous A-weighted sound pressure level ($L_{Aeq,T}$) during a specified time interval, plus specified adjustments for tonal character.
[4] $L_{R,dn}$ – Equivalent continuous A-weighted sound pressure level ($L_{Aeq,T}$) during a reference time interval of 24 hours, plus specified adjustments for tonal character, impulsiveness of the sound and the time of day.
[5] $L_{Req,d}$ – The rating level for daytime.
[6] $L_{Req,n}$ – The rating level for night-time.

Table 2: Categories of community or group responses (SSA, 2008)

	Estimated community or group response	
Excess rating level ($\Delta L_{Req,T}$) in dBA	**Category**	**Description**
0 to 10	Little	Sporadic complaints
5 to 15	Medium	Widespread complaints
15 to 20	Strong	Threats of community or group action
More than 20	Very strong	Vigorous community or group action

2.3 IFC environmental noise level guidelines

For additional context, the International Finance Corporation (IFC) Environmental, Health and Safety (EHS) Guidelines for Environmental Noise (IFC, 2007) are also referenced and summarised in Table 3. These guidelines indicate that noise impacts at the nearest off-site receptor should not exceed the applicable guideline values or should not result in an increase of more than 3 dBAabove the prevailing background level.

The IFC criteria present acceptable outdoor noise levels for residential receptors irrespective of local zoning. Notably, these guideline values are broadly consistent with the ambient sound levels that SANS 10103 associates with typical urban residential environments.

Table 3: IFC noise level guidelines

	A-weighted equivalent sound pressure levels (dBA)	
Receptor	**Daytime**	**Night-time**
Residential, institutional, educational	55	45
Industrial, commercial	70	70

3 Noise survey

3.1 Survey methodology

The SANS 10103 methodology for the measurement of outdoor noise was adopted. See Table 4 for the methodology and requirements checklist. To assist and inform data processing and reporting the methodology was expanded to include the measurement of selected weather parameters, field record keeping, and photographic records.

Table 4: SANS 10103 outdoor noise measurement methodology checklist

Measurement procedure	Requirement	Condition met	Details
Measuring equipment	Integrating sound level meter (SLM) configuration, which complies at least with the accuracy requirements specified for a class 1 instrument in SANS 656, SANS 658, and SANS 61672-1. A windscreen of a type specified by the manufacturer as being suitable for the microphone, and that does not detectably influence the accuracy of the meter under the ambient conditions of the test, shall be used.	Yes	Refer to Table 4
Calibration	All items of the sound measuring equipment used should be calibrated against the requirements of SANS 656, SANS 658, SANS 60942, and SANS 61672-1 (by an accredited laboratory), at intervals not exceeding one year for the sound calibrator, and two years for the rest of the equipment, that they comply with the requirements for accuracy for Type 1 instruments.	Yes	Refer to Table 4
Acoustic sensitivity	Using the sound calibrator, the acoustic sensitivity of the meter should be checked immediately before and after each series of sound level measurements and the results should be discarded if the two checks do not coincide to within 1.0 dB.	Yes	Acoustic sensitivity within 1.0 dBA
Microphone positions for outdoor noise	Measuring points that are representative of the noise climate should be selected. At each measuring point, the microphone should be placed at a height of between 1.2 m and 1.5 m for general investigations, and, if practicable, at least 3.5 m away from walls, buildings, and other large flat vertical surfaces.	Yes	See Figure 4 for a map showing survey locations. Photographs of the SLM *in situ* are included in Figure 1 to Figure 3.
Interference	Ensure (as far as possible) that the measurements are not affected by the residual noise and extraneous influences, e.g. wind, electrical interference, and any other non-acoustic interference, and that the instrument is operated under the conditions specified by the manufacturer.	Yes	
Measurement time intervals	The measurement time intervals should be so chosen that the results are representative of the reference time interval, and that variations in the rating level owing to the variation of the emission at the source, and owing to weather influence on sound propagation, are adequately covered.	Yes	

Table 5: Equipment details

Equipment	Model	Serial number	Calibration
Hand-held analyser with built in 3rd octave filter, pre-amplifier, and ½"microphone	B&K 2250	3004727,20260, 2888663	July 2025
Portable calibrator	B&K 4230	1511916	July 2025

Noise indices included in the survey:

- **$L_{AFeq,T}$ (Fast, A-weighted equivalent continuous sound level)**: The A-frequency-weighted, "Fast" time-weighted equivalent continuous sound pressure level, averaged over a period T. It is the single steady level that contains the same total sound energy as the time-varying A-weighted sound level measured using Fast (F) time weighting during the period. *(e.g., LAFeq,30min)*
- **$L_{AIeq,T}$ (Impulse, A-weighted equivalent continuous sound level):** The A-frequency-weighted, "Impulse" time-weighted equivalent continuous sound pressure level, averaged over a period T. It is the single steady level that contains the same total sound energy as the time-varying A-weighted sound level measured using Impulse (I) time weighting, which responds more strongly to short-duration impulsive events than Fast. This is the k**ey index required by SANS 10103 for environmental noise measurements**.
- **Statistical noise levels (L_{AF10}, L_{AF50}, L_{AF90}, etc.)**: These are percentile levels measured with Fast time weighting and A-weighting. L_{AF90} is the level exceeded 90% of the time, often used as a proxy for residual or background noise and useful for assessing steady-state sources or quiet periods between events.
- **L_{Zeq} 1/3 octave band spectra (Linear-weighted equivalent continuous sound level):** These measurements provide the frequency composition of the sound field in third-octave bands, using Z-weighting (i.e. no frequency weighting) and are included for information only. This information is helpful for identifying tonal or low frequency components, supporting source identification, informing potential mitigation strategies based on dominant frequency bands.

Figure 1: Photographs of SLM in situ at Site A, Knorvarkie Guest Accommodation

Figure 2: Photographs of SLM in situ at Site B, closest neighbouring residential dwelling

Figure 3: Photographs of SLM in situ at Site C, neighbouring residential dwellings/guest accommodation

Figure 4: Noise survey locations

3.2 Noise survey results

The survey was conducted on 13, 14 and 15 December 2025 at the locations indicated in Figure 4. Measurement periods were selected to coincide with Knorvarkie's peak seasonal activity and included a busy day, a busy night, a quiet day, and a quiet night.

Site A is located on dry grass alongside a gravel road, adjacent to Knorvarkie's nearest residential receptor; a rental unit/guest accommodation situated **on their own property**. A cluster of trees stands on the opposite side of the road. The site is approximately 105 metres from the River Shack.

Site B is positioned on the corner of Knorvarkie's neighbouring property. It lies along a gravel road, with a line of bushes on one side and the river situated approximately 38 metres beyond them. **A residential dwelling is located at this point**. The site is approximately 290 meters from the River Shack.

Site C is located near the cluster of accommodation at the **far end of the neighbouring property.** It sits alongside a gravel road, with cottages approximately 40 metres away. On the opposite side of the road, long grass and reeds extend toward the river beyond. The site is approximately 700 meters from the River Shack on a direct line.

Main results required for the calculation of rating levels in accordance with the procedure set out in SANS 10103 and for determining Knorvarkie's impact at neighbouring properties are presented in Table 5. Supplementary results i.e. time history sound pressure levels, 3rd octave frequency spectra, and statistical noise levels, are included in Annex A.

Weather conditions during the monitoring period were stable, with clear skies and no cloud cover recorded throughout. Daytime temperatures ranged from 20 degrees Celsius (°C) to 28 °C, accompanied by moderate winds of 4 to 8 metres per second (m/s) and relatively low humidity levels (33–43%). Night-time conditions were cooler, with temperatures between 15 °C and 17 °C, wind speeds of 6 to 8 m/s, and higher humidity (56 to 70%). The absence of precipitation or significant atmospheric disturbances ensured consistent measurement conditions across all monitoring sessions.

Music from The River Shack and Knorvarkie's rental accommodation ranged from soft background music to intense bass during busy periods, clearly audible at Site A and intermittently at Site B. Cargo train pass-bys occurred while measuring at Sites A, B, and C. This significantly elevated L_{Aleq} and L_{AFeq} values during both day and night measurements and represents the most dominant intermittent noise source across the monitoring period. At Site B, some music from Knorvarkie was audible during the busy daytime period, while the overall acoustic environment was also influenced by irrigation systems, barking dogs, and lawnmower activity.

Table 6: Main noise survey results

Location	Record ID	Coordinates	Start date and time	Daytime / Nighttime	Restaurant operation (busy/quiet)	Duration, T (mm:ss)	$L_{Aleq,T}$ (dBA)	$L_{AFeq,T}$ (dBA)	L_{AF90} (dBA)	Acoustic observations
Site A (Knorvarkie Guest Accommodation)	060102 004	-32.814513° 18.193500°	Saturday 2025/12/13 16:06	Daytime	Busy	32:19	54.9	51.5	45.3	❖ Audible from The River Shack o Intense bass from the music o Music & people ❖ Audible from Knorvarkie's rental accommodation o Noisy people entering the accommodation. ❖ Other o Birds o Wind blowing through the trees o Insects o Wind feels peaceful with stronger gusts every now and then ❖ No vehicular movement
Site A (Knorvarkie Guest Accommodation)	060103 005	-32.814513° 18.193500°	Monday 2025/12/15 09:49	Daytime	Quiet	31:28	57.4	56.5	35.1	❖ Audible from The River Shack o Soft music o People talking o Tractor moving around in the car park ❖ Audible from Knorvarkie's rental accommodation o No audible sound ❖ Other o Motorboat on the river o Wind blowing through the trees o Cargo train passed for approximately 5 minutes ❖ Onsite traffic: 1 Light, 0 Heavy
Site A (Knorvarkie Guest Accommodation)	060102 008	-32.814513° 18.193500°	Saturday 2025/12/13 22:04	Nighttime	Busy	32:27	45.6	41.5	34.1	❖ Audible from The River Shack o No audible sound ❖ Audible from Knorvarkie's rental accommodation o Loud music & rowdy behaviour ❖ Other o Insects

Location	Record ID	Coordinates	Start date and time	Daytime / Nighttime	Restaurant operation (busy/quiet)	Duration, T (mm:ss)	$L_{Aleq,T}$ (dBA)	$L_{AFeq,T}$ (dBA)	L_{AF90} (dBA)	Acoustic observations
										○ Some wind blowing through trees ❖ Onsite traffic: 1 Light, 0 Heavy
Site A (Knorvarkie Guest Accommodation)	060103 002	-32.814513° 18.193500°	Sunday 2025/12/14 21:54	Nighttime	Quiet	16:14	40.5	37.4	32.2	❖ Audible from The River Shack ○ No audible sound ❖ Audible from Knorvarkie's rental accommodation ○ No audible sound ❖ Other ○ Wind blowing through the trees ❖ No vehicular movement
Site B (Neighbouring residence)	060102 006	-32.813209° 18.194618°	Saturday 2025/12/13 16:53	Daytime	Busy	12:14	50.8	48.1	43.8	❖ Audible from The River Shack ○ Music, some moments louder than others ❖ Audible from Knorvarkie's rental accommodation ○ No audible sound ❖ Other ○ Birds ○ Wind blowing through reeds next to the river ○ Boat passed by slowly
Site B (Neighbouring residence)	060103 006	-32.813209° 18.194618°	Monday 2025/12/15 10:28	Daytime	Quiet	30:23	49	43.1	33.8	❖ Audible from The River Shack ○ No audible sound ○ Tractor in the distance ❖ Audible from Knorvarkie's rental accommodation ○ No audible sound ❖ Other ○ Irrigation system ○ Birds ○ Barking dogs ○ Lawnmower ○ Motorboats on the river
Site B (Neighbouring residence)	060102 009	-32.813209° 18.194618°	Saturday 2025/12/13 22:46	Nighttime	Busy	31:37	40.1	31.9	25.8	❖ Audible from The River Shack ○ No audible sound

Location	Record ID	Coordinates	Start date and time	Daytime / Nighttime	Restaurant operation (busy/quiet)	Duration, T (mm:ss)	$L_{Aleq,T}$ (dBA)	$L_{AFeq,T}$ (dBA)	L_{AF90} (dBA)	Acoustic observations
										❖ Audible from Knorvarkie's rental accommodation o Car ❖ Other o Insects
Site B (Neighbouring residence)	060103 003	-32.813209° 18.194618°	Sunday 2025/12/14 22:32	Nighttime	Quiet	31.28	58.3	51.4	26.6	❖ Audible from The River Shack o No audible sound ❖ Audible from Knorvarkie's rental accommodation o No audible sound ❖ Other o Insects o Birds o Cargo train passed for approximately 5 minutes
Site C (Neighbouring guest accommodation)	060102 007	-32.809059° 18.194560°	Saturday 2025/12/13 17:35	Daytime	Busy	31:13	52.3	50.4	40.7	❖ Audible from The River Shack o No audible sound ❖ Audible from Knorvarkie's rental accommodation o Music in the distance, not from the nearby cottages ❖ Other o Birds o Insects o Wind blowing through the grass o Intermittent talking from the cottages o Cargo train passed for approximately 5 minutes ❖ Onsite traffic: 4 Light, 0 Heavy
Site C (Neighbouring guest accommodation)	060104 001	-32.809059° 18.194560°	Monday 2025/12/15 11:04	Daytime	Quiet	31:58	44.2	32.7	23.1	❖ Audible from The River Shack o No audible sound ❖ Audible from Knorvarkie's rental accommodation o No audible sound ❖ Other o Birds

Location	Record ID	Coordinates	Start date and time	Daytime / Nighttime	Restaurant operation (busy/quiet)	Duration, T (mm:ss)	$L_{Aleq,T}$ (dBA)	$L_{AFeq,T}$ (dBA)	L_{AF90} (dBA)	Acoustic observations
										○ Insects ○ Dogs barking in the distance ○ Wind blowing through the trees ❖ No vehicular movement
Site C (Neighbouring guest accommodation)	060102 010	-32.809059° 18.194560°	Saturday 2025/12/13 23:26	Nighttime	Busy	33:02	39.2	32.1	24.1	❖ Audible from The River Shack ○ No audible sound ❖ Audible from Knorvarkie's rental accommodation ○ No audible sound ❖ Other ○ Birds ○ Some wind
Site C (Neighbouring guest accommodation)	060103 004	-32.809059° 18.194560°	Sunday 2025/12/14 23:09	Nighttime	Quiet	31.44	40.2	32	28.2	❖ Audible from The River Shack ○ No audible sound ❖ Audible from Knorvarkie's rental accommodation ○ No audible sound ❖ Other ○ Birds ○ Insects ○ Wind blowing through the grass

4 Rating levels as per SANS 10103

The rating levels needed for comparison with SANS 10103, were calculated from measurement results and applying correction factors (where required) for impulsive and tonal sound.

Impulsive sound is characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the residual noise or more generally speaking, noise which manifests itself as a succession of distinct pulses or transients. Two alternative procedures for considering impulsiveness in noise are described in SANS 10103.

The first, as is the case here, involves instrumentation that can integrate while using the impulse weighting (I-time weighting), to directly measure $L_{AIeq,T}$ (see Table 6). When the instrument cannot apply the I-time weighting, the following procedure is recommended. The $L_{Aeq,T}$ is measured directly and based on observations and professional judgements, it must be decided whether the sound measured was impulsive in nature.

For highly impulsive sound or regular impulsive sound, a correction factor (C_i) of 12 dBA and 5 dBA respectively, should be added to obtain the rating level using Equation 1. If the sound is not impulsive, Ci is zero. Note that the impulse and tone corrections are only added, individually or separately, for the measurement time intervals during which they were present in the noise emission.

Equation 1 $$L_{Req,T} = L_{AFeq,T} + C_i + C_t$$

- $L_{Aeq,T}$ is the equivalent continuous A-weighted sound pressure levels in decibels
- C_i is the correction factor for impulsive sound
- C_t is the correction for tonal sound

If audible tones, such as whines, whistles, hums (noise with discernible pitch) are present, a correction factor of 5 is added to determine the rating level (Equation 1). C_t is zero if no audible tones are present.

In a composite sound field generated by more than one sound source or source type the tonal correction (where applicable) should only be applied to that component contributed by the source or source type that generates the tonal noise if this source can be determined. Otherwise, 5 dBA shall be directly added to the total composite sound pressure level as generated by a combination of non-tonal and tonal noise sources. The tone correction should in this case only be added for the specific measurement time interval during which the tone was present.

If the observer adjudicates a tone as being clearly present, and it can be clearly identified, objective judgement may be exercised, and the appropriate correction may be added. If the judgement is unclear the analysis included in SANS 10103 can give guidance on the determination of the presence of a tonal component. It requires the use of a one-third octave band filter during measurements to determine the time average sound pressure level in the

band that contains the tonal frequency being considered and the time average sound pressure levels in the two adjacent bands. The presence of a tone is indicated should the level difference be more than 15 dBAfor frequencies 25 Hz to 125 Hz, more than 8 dBAfor frequencies 60 Hz to 400 Hz, or more than 5 dBAfor frequencies 500 Hz to 10 kHz.

Analyses of 3rd octave frequency spectra confirmed the specialists observations that corrections for tonal noise are not required (Refer to Annexure A, Figure 5 to Figure 16 for 3rd octave frequency spectra). Table 7 and Table 8 presents derived rating levels derived from measurements.

For compliance purposes, the survey results were compared with the SANS 10103 district rating level framework and the IFC noise guideline levels for residential receptors, with separate daytime (06:00–22:00) and night-time (22:00–06:00) rating levels derived from the measured data.

As expected for a rural area with localised human activity, the measured daytime and night-time levels were generally higher than the "typical rural" indicative levels (45 dBA daytime and 35 dBA night-time) and were more consistent with the absolute levels typically associated with suburban/urban environments (50 to 55 dBA daytime and 40 to 45 dBA at night).

Notwithstanding the higher absolute levels, the acoustic character remains distinctly rural, with the sound climate influenced by intermittent sources such as occasional vehicle activity, birds and insects, wind through vegetation, farming activity, tractors, and periodic cargo-train pass-bys, rather than the continuous road traffic and commercial activity that typically dominate urban soundscapes.

Against the IFC guideline levels for residential receptors, the results at the nearest off-site receptors were generally compliant on an average basis, with occasional short-duration departures associated primarily with cargo-train pass-bys rather than Knorvarkie's routine operations.

Table 7: Estimated daytime rating levels based on measurements

Location	Descriptions	Daytime rating level (dBA), based on measurements during 'busy period'	Daytime rating level (dBA) based on measurements during 'quiet period'	Typical rating level for rural areas (dBA)	IFC noise level guideline for residential receptors/ typical rating level for urban areas (dBA)
Site A	Knorvarkie guest accommodation	54.9	57.4	45	55
Site B	Closest neighbouring residence	50.8	49		
Site C	Neighbouring guest accommodation	52.3	44.2		

Table 8: Estimated night-time rating levels based on measurements

Location	Descriptions	Daytime rating level (dBA), based on measurements during 'busy period'	Daytime rating level (dBA) based on measurements during 'quiet period'	Typical rating level for rural areas (dBA)	IFC noise level guideline for residential receptors/ typical rating level for urban areas (dBA)
Site A	Knorvarkie guest accommodation	45.6	40.5	35	45
Site B	Closest neighbouring residence	40.1	58.3 (affected by train)		
Site C	Neighbouring guest accommodation	39.2	40.2		

5 Knorvarkie Campsites' noise impact: Busy vs quiet conditions

5.1 Purpose and interpretation approach

To estimate the contribution of Knorvarkie's operations to off-site noise levels, measurements were undertaken under two operational reference conditions, "busy" (restaurant active) and "quiet" (restaurant quiet/closed), at three locations, of which Site B (nearest residence) is the primary receptor of concern and Site C (neighbouring guest accommodation) is a secondary receptor. Results are reported using $L_{Aleq,T}$, together with $L_{AFeq,T}$ and L_{AF90}.

Interpretation of short-duration samples can be complicated by intermittent intrusive events that are not attributable to Knorvarkie (most notably the ~5-minute cargo train pass-bys recorded during parts of the survey, and occasional increases wind). These intrusions can disproportionately elevate $L_{Aleq,T}$ (and sometimes $L_{AFeq,T}$) within a 30-minute sample and can lead to counter-intuitive outcomes (e.g., "quiet" periods appearing louder than "busy" periods). For this reason, and because the dataset cannot at this stage be edited to remove train events, the busy–quiet operational increment is interpreted using (i) the acoustic observations (to confirm whether Knorvarkie-related sources were audible) and (ii) supporting descriptors, particularly L_{AF90} (representative of the residual sound climate and relatively robust to brief intrusions), with $L_{AFeq,T}$ used as a complementary indicator of the overall equivalent sound environment.

A reminder that for the purposes of interpreting impacts in accordance with SANS 10103 and the WCNCR, daytime is defined as 06:00 to 22:00 and night-time as 22:00 to 06:00.

5.2 Busy–quiet differences and estimated operational increment

Table 9 summarises the measured differences between busy and quiet conditions (Busy – Quiet) for Sites B and C. These differences are used to estimate the likely increase attributable

to Knorvarkie operations and to compare this increase to the 7 dBA criterion referenced in the Western Cape Noise Control Regulations as a threshold for "disturbing noise".

Table 9: Busy–quiet differences and notes on audibility

Receptor	Period	$\Delta L_{Aleq,T}$ (dB)	$\Delta L_{AFeq,T}$ (dB)	ΔL_{AF90} (dB)	Knorvarkie audibility and key notes	Data usability for increment
Site B (nearest neighbouring residence)	Day	+1.8	+5.0	+10.0	Busy: River Shack music audible (variable loudness). Quiet: no River Shack sound; dominated by irrigation, dogs, lawnmower, boats.	Usable (audibility confirms source change)
	Night	−18.2	−19.5	−0.8	Busy: no River Shack sound; insects + car. Quiet: train (~5 min) dominates L_{Aleq}/L_{AFeq}.	Not usable for L_{Aleq}/L_{AFeq} (train). L_{AF90} only (limited)
Site C (neighbouring guest accommodation)	Day	+8.1	+17.7	+17.6	Busy: distant music noted; intermittent talking; onsite light vehicles; train (~5 min). Quiet: no Knorvarkie sound; no vehicles.	Usable with caution (train and other local activity present)
	Night	−1.0	+0.1	−4.1	No Knorvarkie sound audible in either sample; birds/insects/wind variability.	Usable (shows no operational effect)

5.3 Interpretation by receptor

5.3.1 Site B (nearest residence – primary receptor)

Daytime: The busy daytime sample at Site B records higher levels than the quiet daytime sample across all descriptors. Acoustic notes confirm that River Shack music was audible during the busy period but not audible during the quiet period, supporting attribution of the measured increase to Knorvarkie operations. The busy–quiet increase is modest in $L_{Aleq,T}$ (+1.8 dB), but more pronounced in $LA_{Feq,T}$ (+5.0 dB) and substantial in L_{AF90} (+10.0 dB). Given the sensitivity of $L_{Aleq,T}$ to intermittent events and the short duration of the busy sample, the most defensible estimate of the daytime operational increment at Site B is approximately 5 dB, with a plausible upper range up to ~10 dBAwhere music intermittently elevated the residual sound climate.

Night-time: Night-time busy–quiet comparisons at Site B are not suitable for deriving an operational increment using $L_{Aleq,T}$ or $L_{AFeq,T}$ because the quiet sample includes a ~5-minute train pass-by that dominates these metrics. However, L_{AF90} differs by less than 1 dBAbetween the two-night samples and no Knorvarkie music was audible in either period, suggesting no clear sustained night-time elevation attributable to Knorvarkie during the sampled periods. On the available evidence, the sustained night-time operational increment at Site B is estimated to be ~0 to 3 dBA(noting that this does not rule out intermittent audibility or tonal/bass character during other times).

5.3.2 Site C (neighbouring guest accommodation – secondary receptor

Daytime: Site C shows a marked busy–quiet contrast. The $L_{Aleq,T}$ difference is +8.1 dB, and both $L_{AFeq,T}$ and L_{AF90} increase by ~18 dB. Acoustic notes indicate that the busy period included distant music from Knorvarkie and increased local activity (intermittent talking and light vehicles), and also included a ~5-minute train pass-by, which will inflate $L_{Aleq,T}$ and $L_{AFeq,T}$. For this reason, the full magnitude of the increase cannot be attributed solely to Knorvarkie. Nevertheless, even a conservative interpretation indicates that busy daytime conditions produced a substantial increase in the sound environment relative to the quiet reference. Accordingly, the likely daytime operational increment at Site C is taken as approximately 7 to 8 dB.

Night-time: There is no indication of an operational effect at night at Site C. Knorvarkie sound was not audible in either night sample or the measured differences are small ($L_{Aleq,T}$ −1.0 dB; $L_{AFeq,T}$ +0.1 dB). The likely sustained night-time increment is therefore ~0 to 2 dB.

5.3.3 Overall conclusion against the 7 dBA criterion for disturbing noise

Based on the busy-versus-quiet comparisons, supported by the acoustic observations and accounting for intermittent train intrusions, the results indicate that the greatest risk of a disturbing-noise increment occurs during daytime busy operations. At Site B, the daytime operational increment is most plausibly of the order of ~5 dBAbut could approach or exceed 7 dBAunder certain busy conditions where music intermittently elevates the residual sound climate. At Site C, the daytime increment is conservatively estimated at ~7 to 8 dBA

Night-time results at Sites B and C indicate no sustained operational increment approaching 7 dBAduring the sampled periods; however, interpretation of Site B night-time $L_{Aleq,T}/L_{AFeq,T}$ is constrained by a train event during the quiet sample.

6 Conclusions

The survey indicates that the **overall daytime and night-time noise environment** at and around Knorvarkie is influenced by a **mix of rural and human activity sources**. On an average basis, the measured levels at the nearest off-site receptors were **generally within the IFC guideline levels for residential receptors**, with **occasional short-lived exceedances** largely linked to **cargo-train pass-bys** rather than Knorvarkie's routine operations.

Despite this general compliance against the IFC guideline levels, the **absolute ambient sound climate** in the area is **higher than would typically be expected in a quiet rural setting**. This is because the local acoustic environment is shaped by multiple contributors, including **natural sounds** (wind in vegetation, insects, birds), **farming and gardening activities** (tractors, irrigation pumps, lawnmowers), **intermittent transport-related noise** (farm equipment and occasional vehicles), and **periodic cargo trains**. Knorvarkie also contributes to the sound climate through

the **River Shack restaurant** (particularly **music**, at times with noticeable bass), and through activity associated with **guest accommodation** (raised voices and music), with some noise also originating from neighbouring properties.

In terms of **Knorvarkie-specific impact**, the busy-versus-quiet comparisons indicate that Knorvarkie's operations can produce a **measurable increase in noise levels at neighbouring receptors during busy daytime conditions**, and that there is a **distinct possibility of "disturbing noise"** at the nearest neighbouring residence, i.e., an increase of a magnitude that may meet or exceed the **WCNCR disturbance threshold** under certain operating conditions (particularly where music and patron activity elevate the residual sound environment). No campsite activity was observed during the survey; however, it is recognised that **campsite use** would represent an additional potential source of noise (voices, music and vehicle movements), particularly during evenings and weekends.

Given the presence of noise complaints, the audibility of music at off-site receptors during busy conditions, and the potential for disturbing noise as defined by the WCNCR, it is concluded that a **Noise Management Plan is required**. The following section therefore sets out practical management measures aimed at reducing off-site audibility (especially music and guest-related noise), managing operating practices during sensitive periods, and providing a clear framework for responding to and resolving future noise complaints.

7 References

DEA. (1989). *Environment Conservation Act (Act no. 73 of 1989), GG no. 11927, GN no. 1188.* Department of Environmental Affairs, South Africa.

DEA. (1992). *Noise control regulations in terms of Section 25 of the Environment Conservation Act (Act no. 73 of 1989), GN no. R154, GG no. 13717, 1992.* Department of Environmental Affairs, South Africa.

DEA. (2004). *National Environmental Management: Air Quality Act (Act no. 39 of 2004).* Department of Environmental Affairs, South Africa.

IFC. (2007). *General environmental, health, and safety guidelines.* International Finance Corporation. Retrieved from IFC web site: www.ifc.org/ehsguidelines

PGWC. (2013). *Western Cape Noise Control Regulations. Provincial Gazette Extraordinary 7141. 20 June 2013.* Cape Town: Provincial Government of the Western Cape.

SSA. (2008). *SANS 10103:2008. Edition 6. The measurement and rating of environmental noise with respect to annoyance and to speech communication.* Pretoria: Standards South Africa.

8 Annexure A: Logger results, logger 3rd octave, and logger statistics

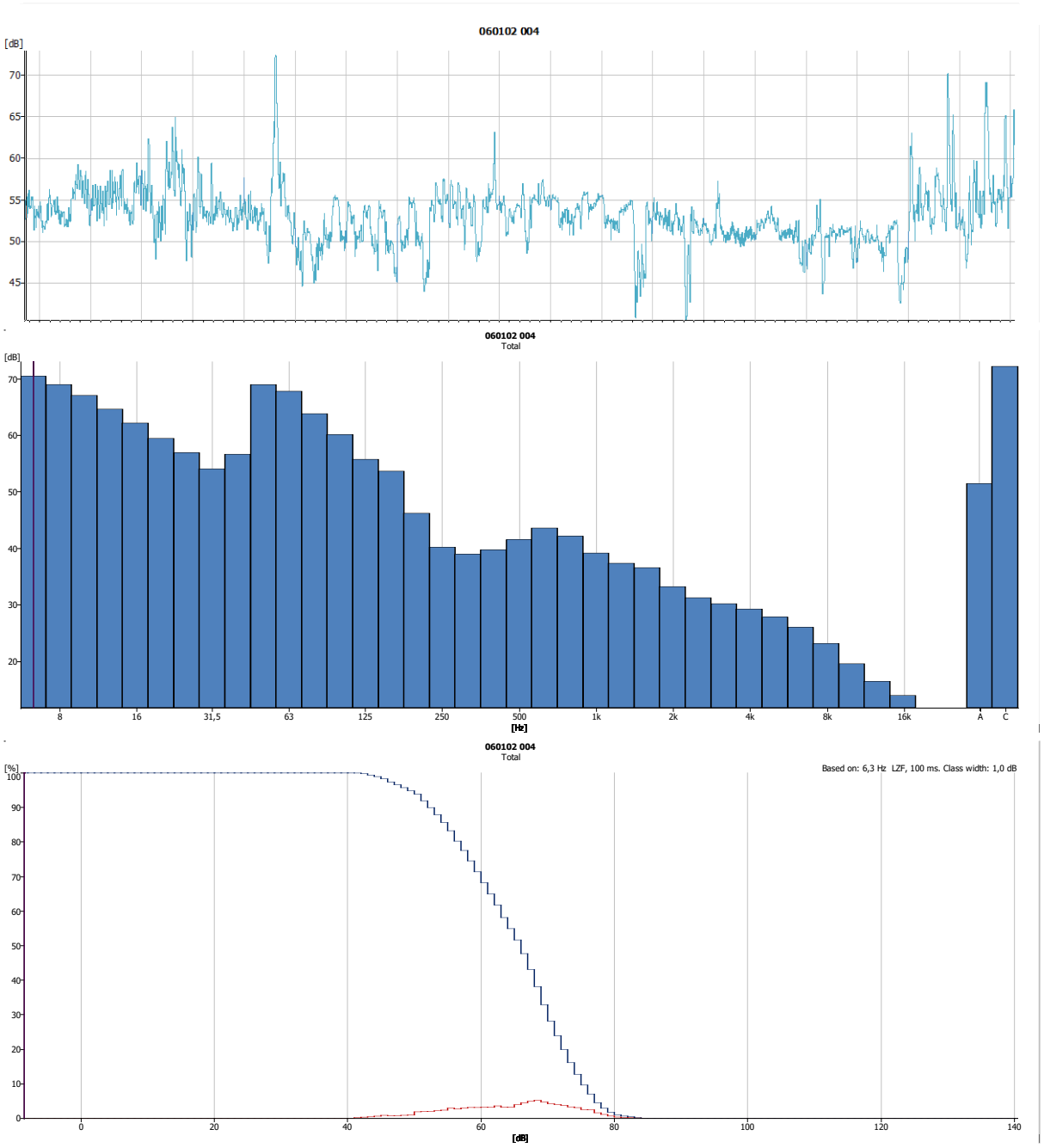


Figure 5: Site A, Daytime, Busy period detailed results

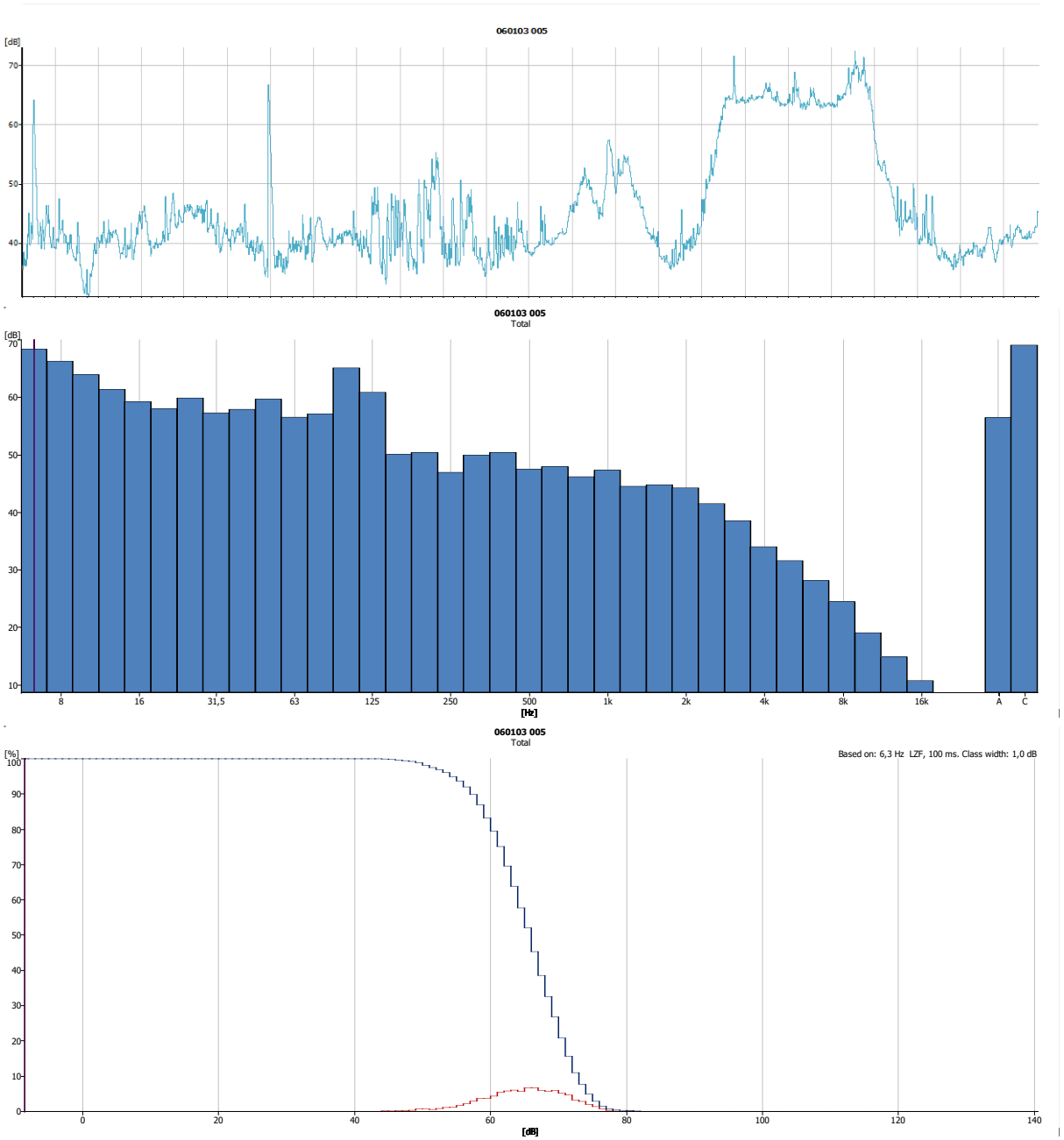


Figure 6: Site A, Daytime, Quiet period detailed results

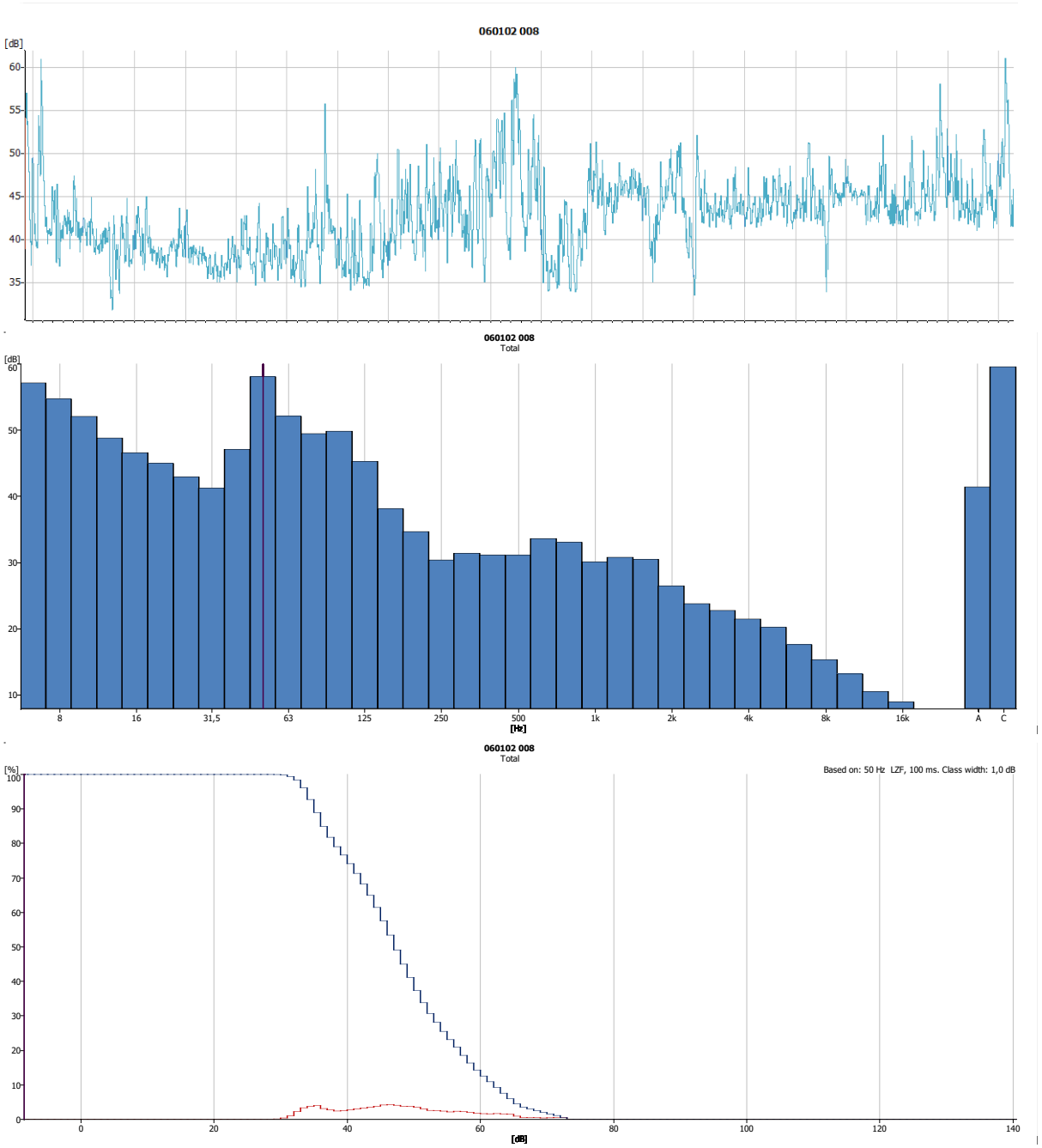


Figure 7: Site A, Nighttime, Busy period detailed results

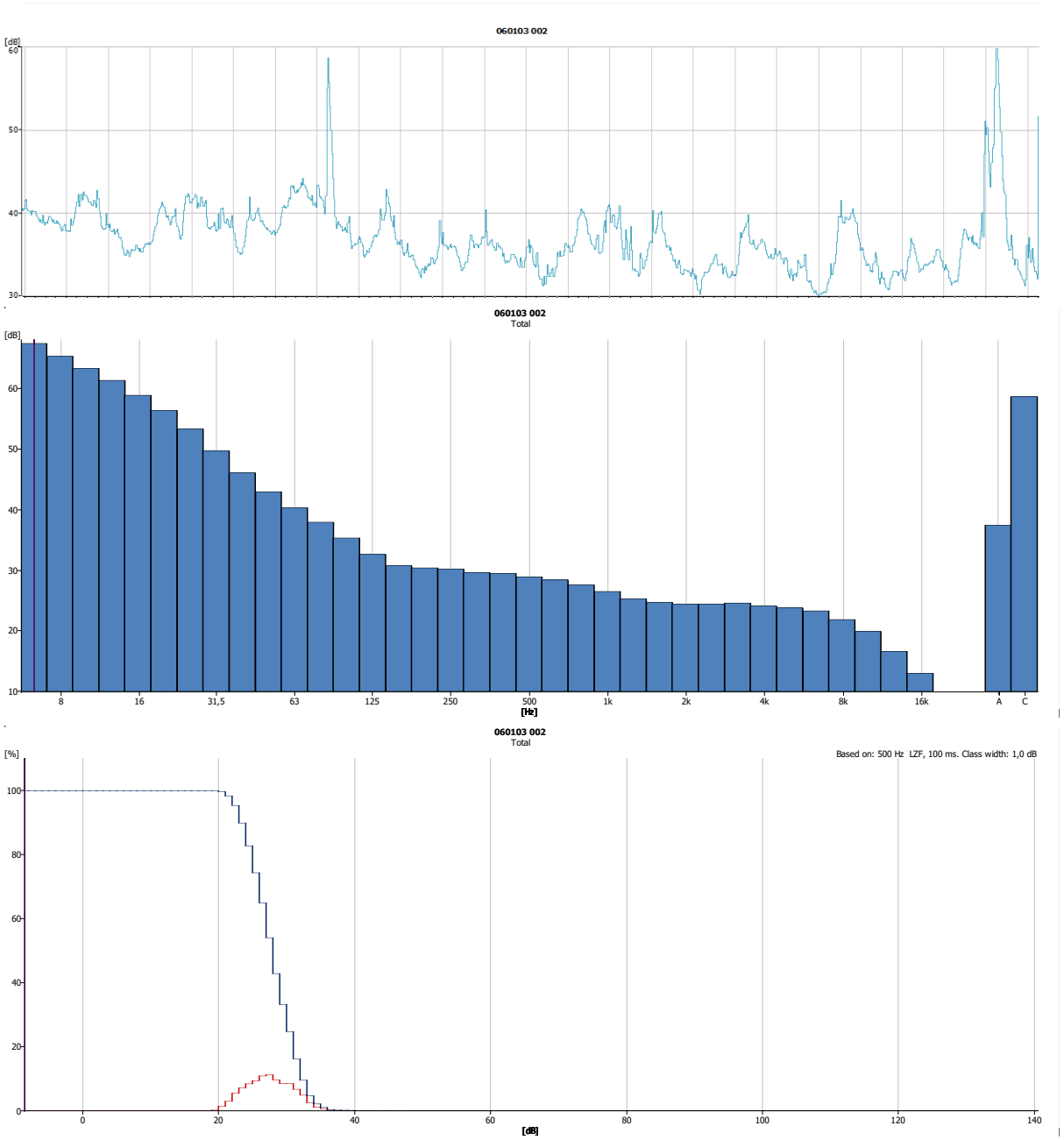


Figure 8: Site A, Nighttime, Quiet period detailed results

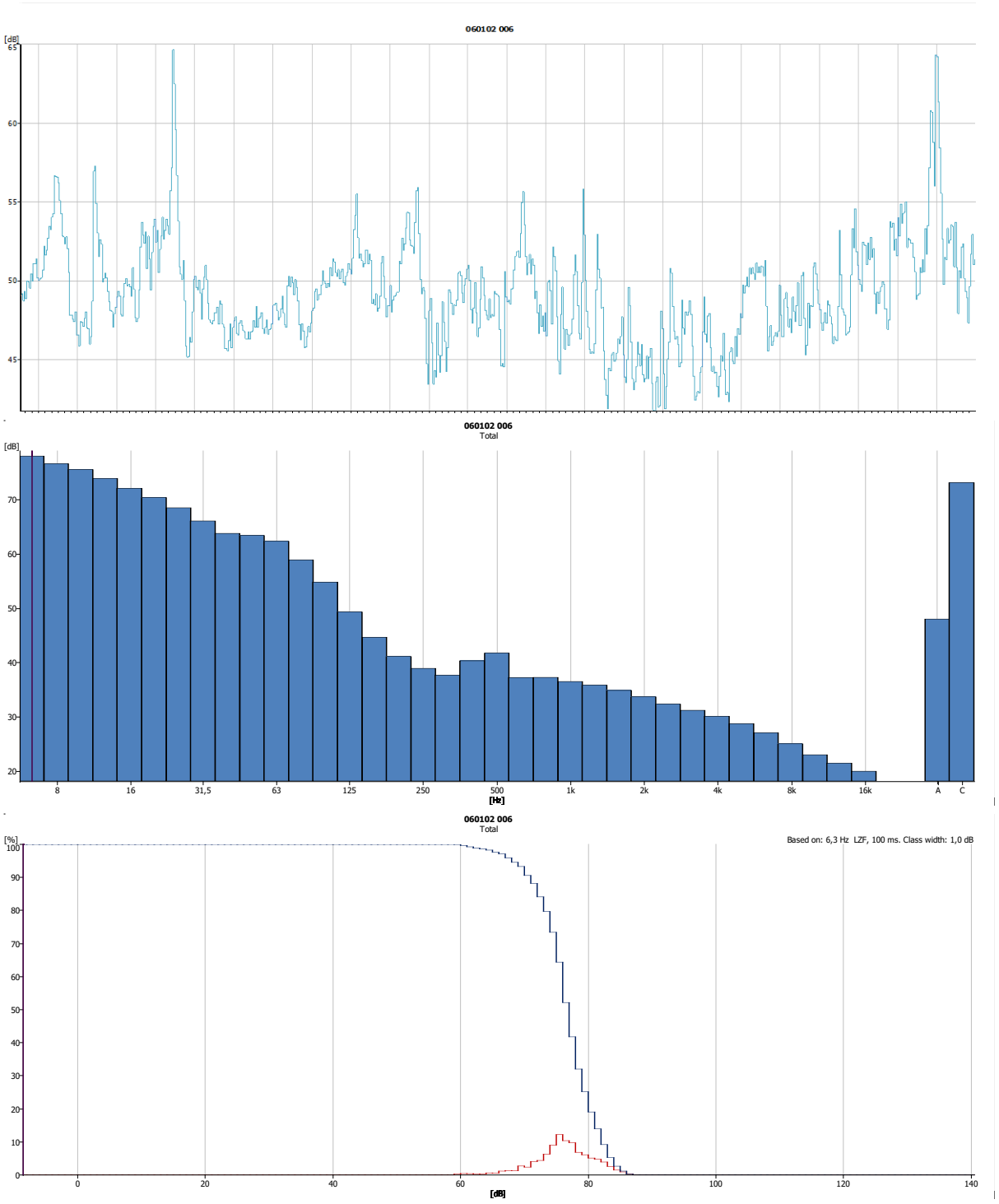


Figure 9: Site B, Daytime, Busy period detailed results

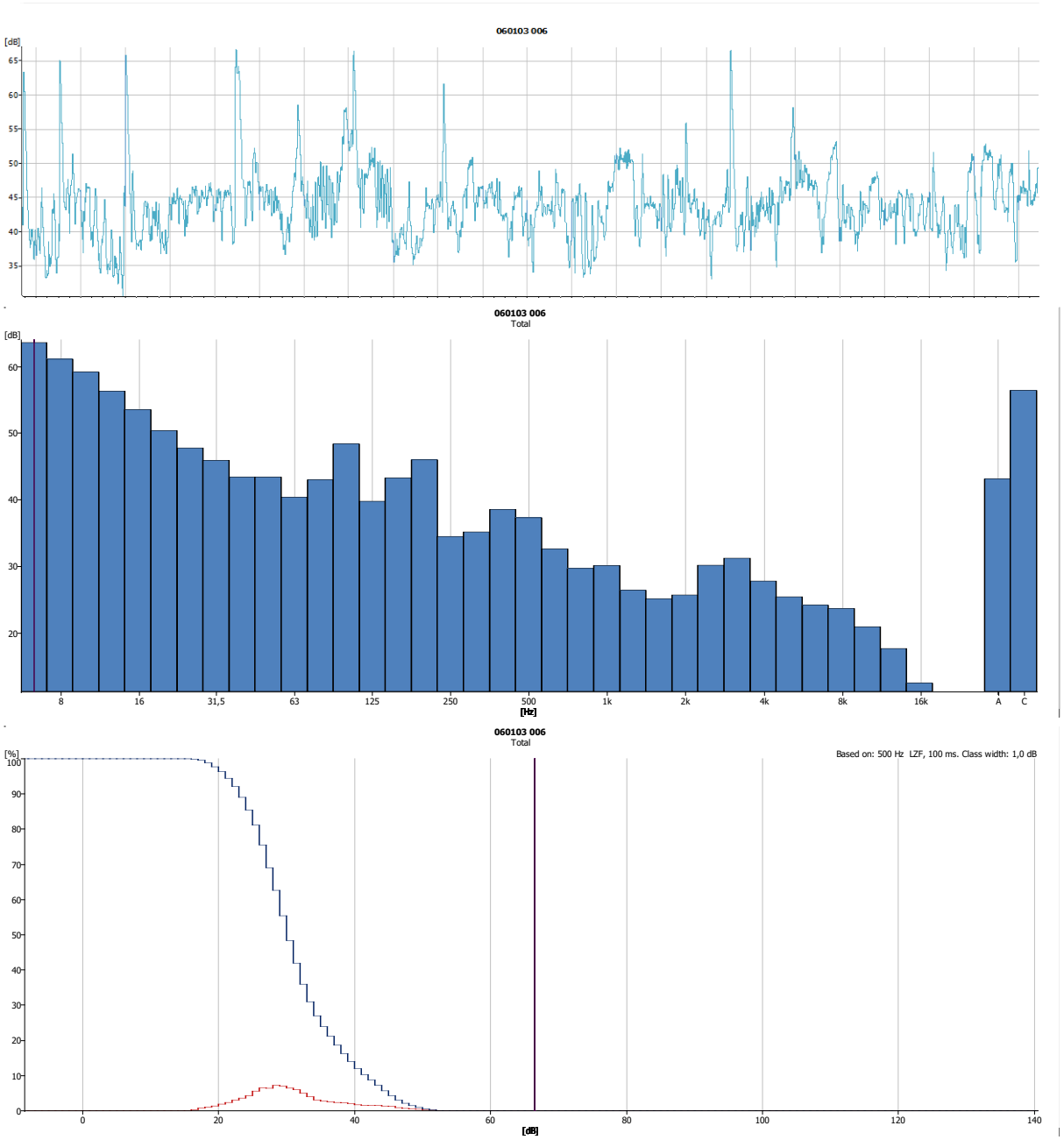


Figure 10: Site B, Daytime, Quiet period detailed results

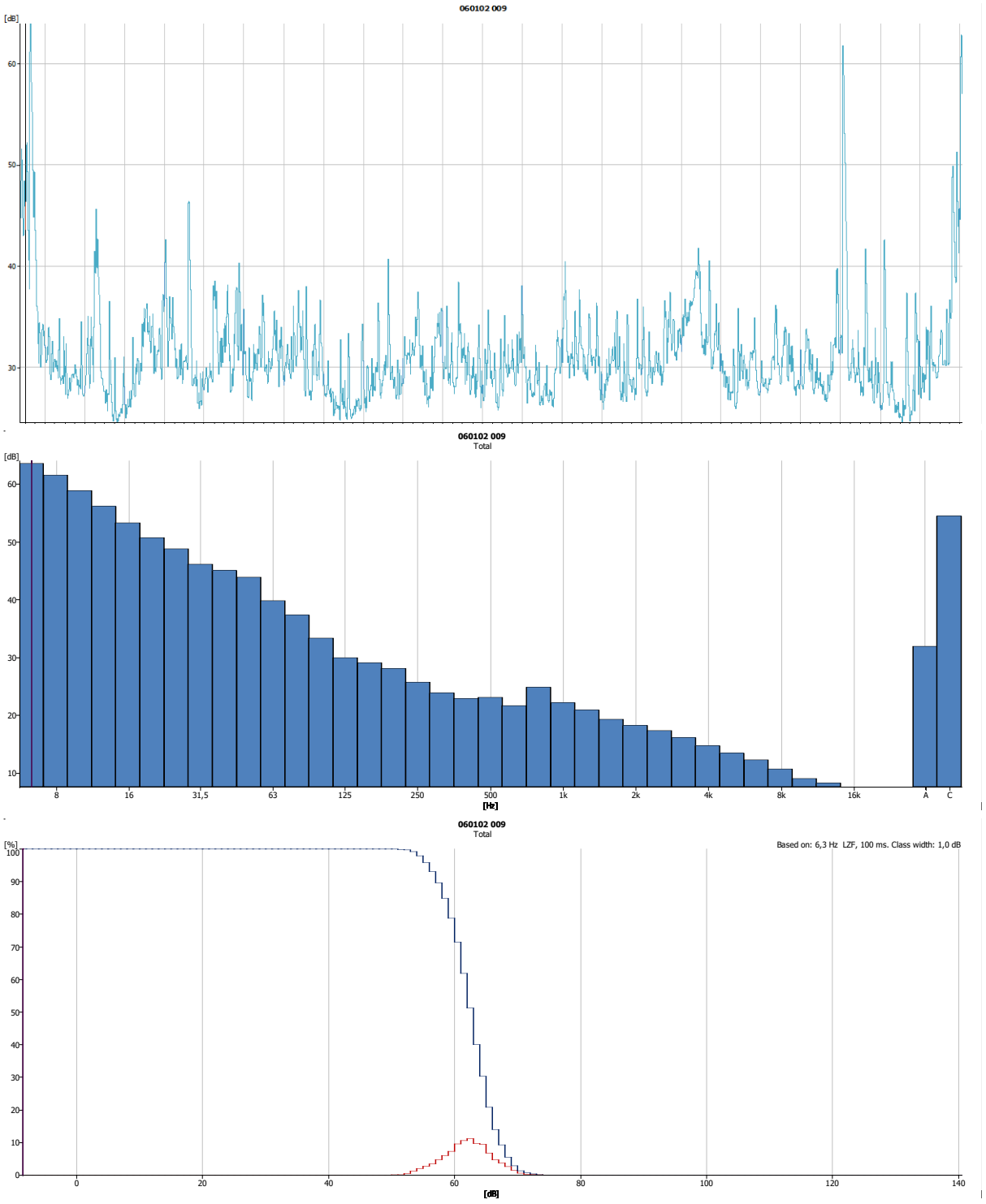


Figure 11: Site B, Nighttime, Busy period detailed results

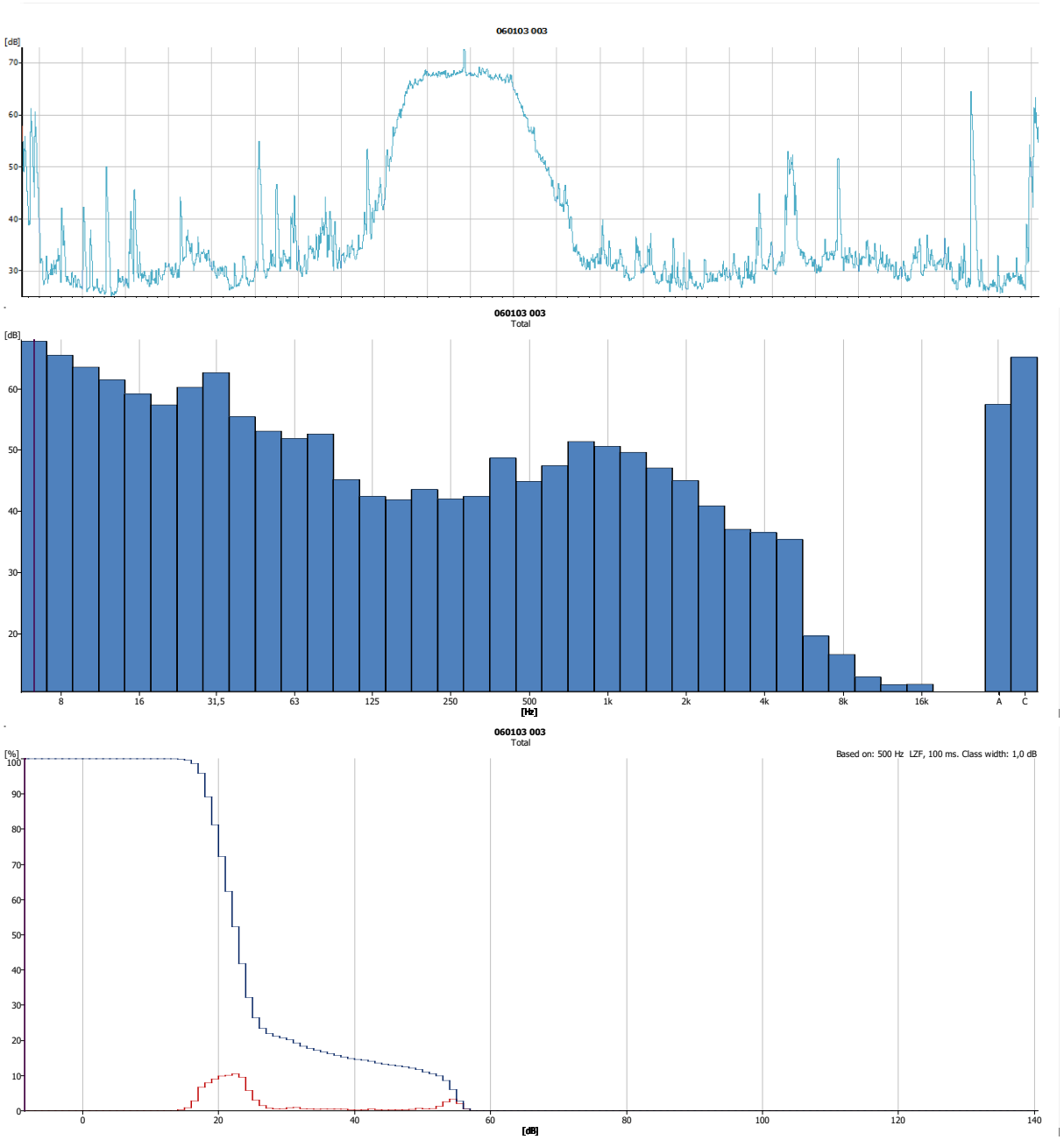


Figure 12: Site B, Nighttime, Quiet period detailed results

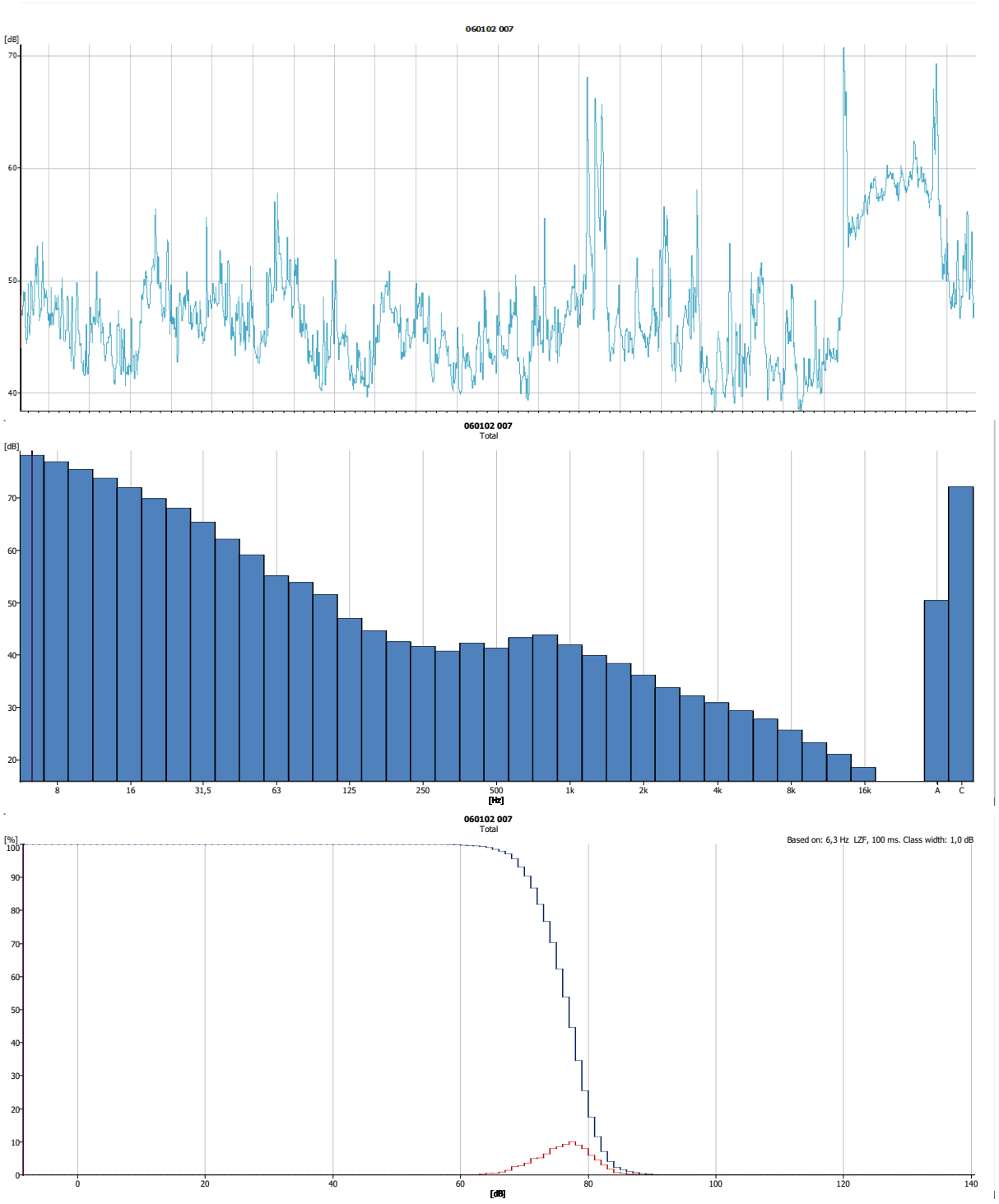
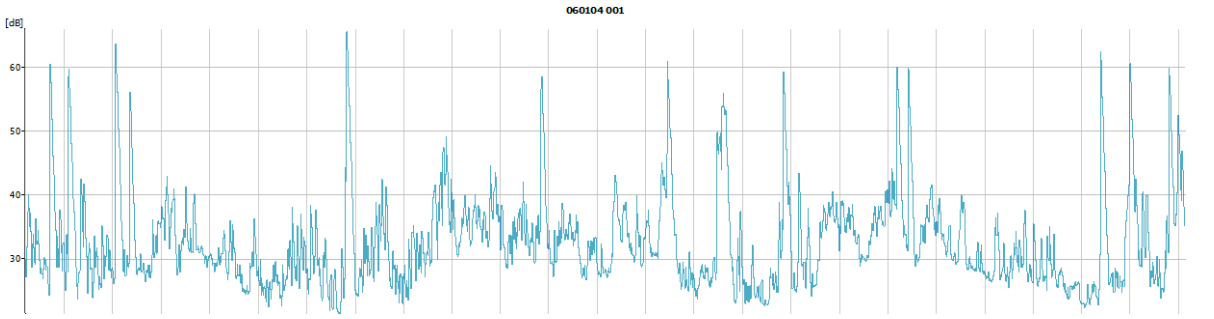


Figure 13: Site C, Daytime, Busy period detailed results



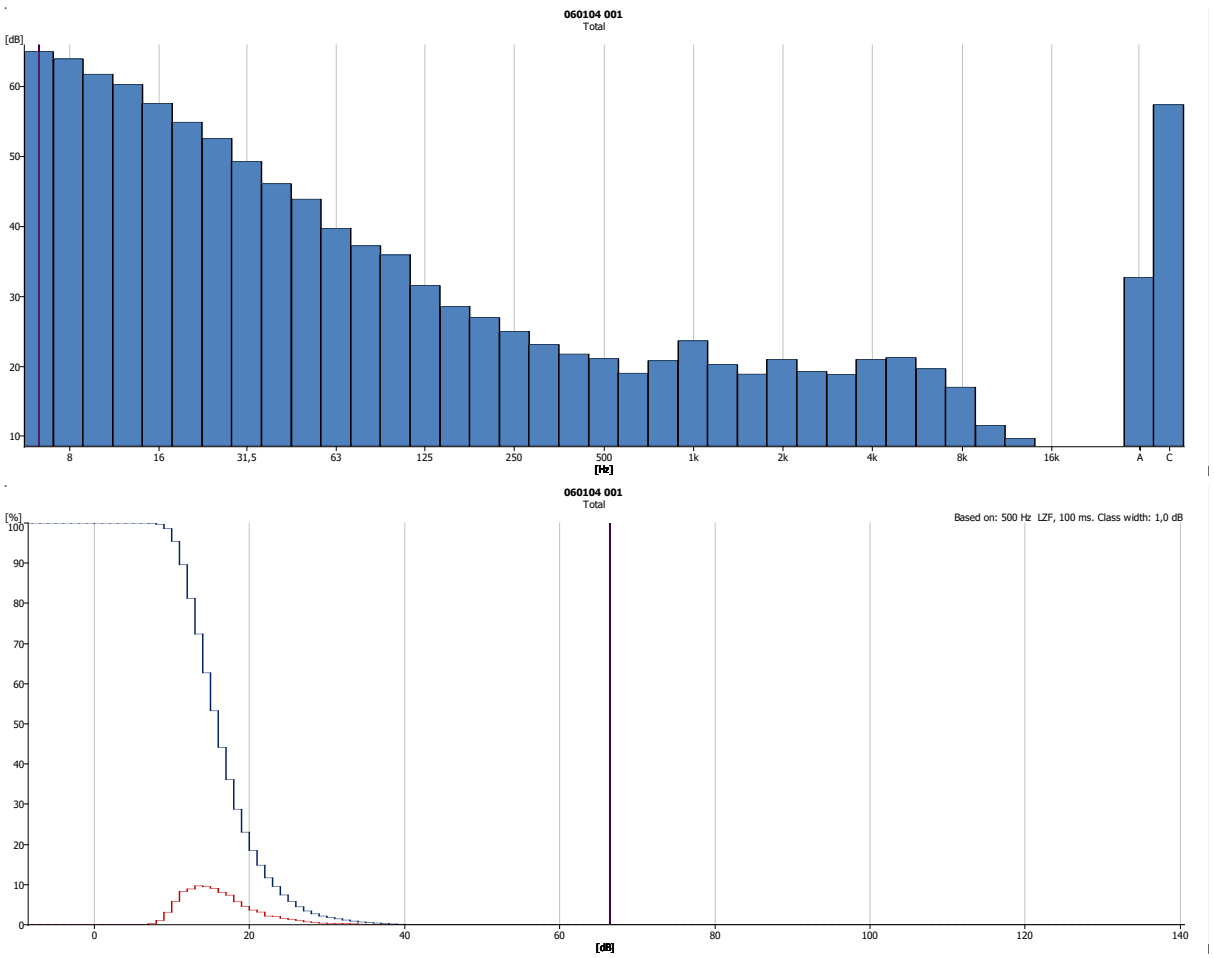


Figure 14: Site C, Daytime, Quiet period detailed results

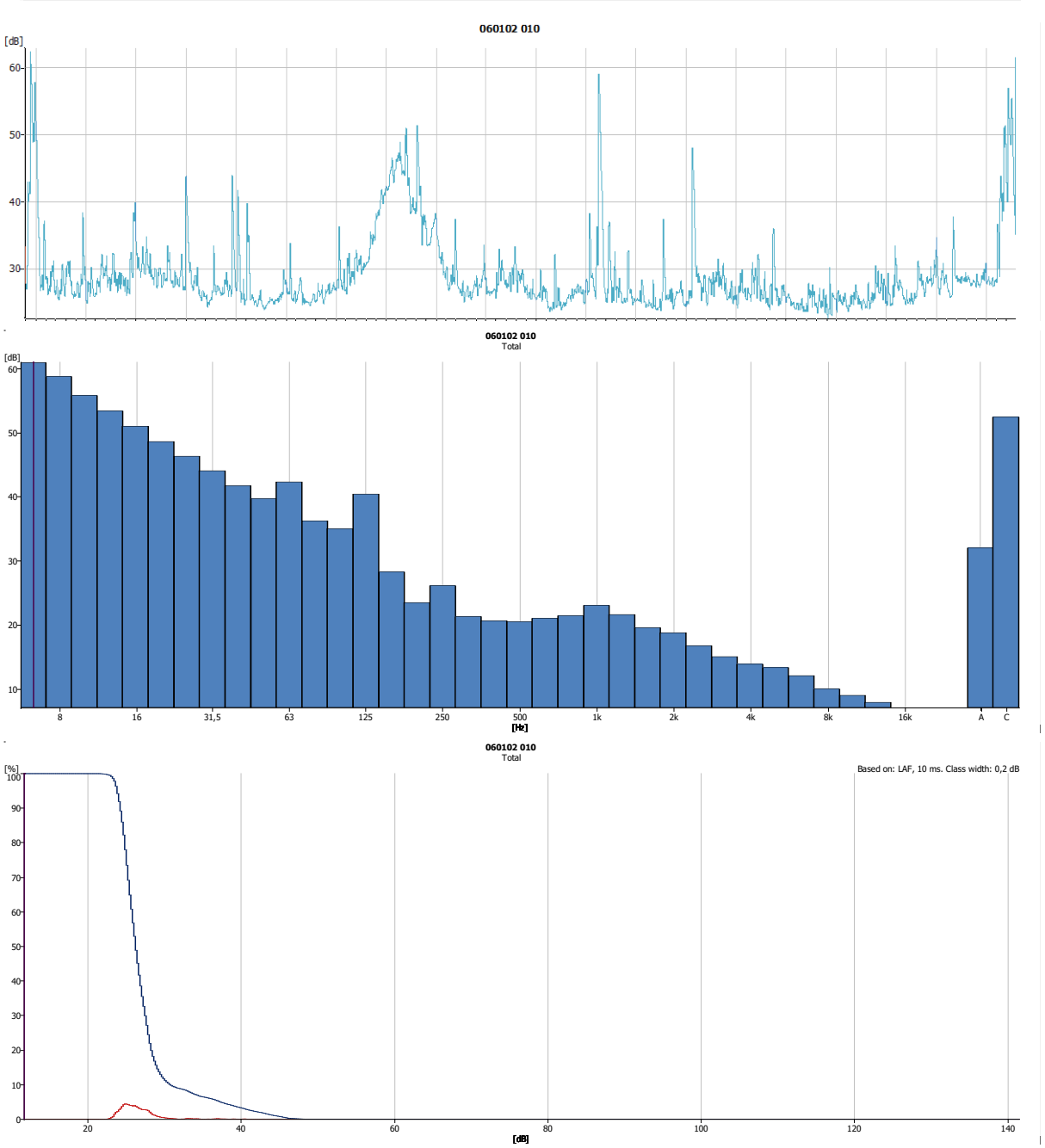


Figure 15: Site C, Nighttime, Busy period detailed results

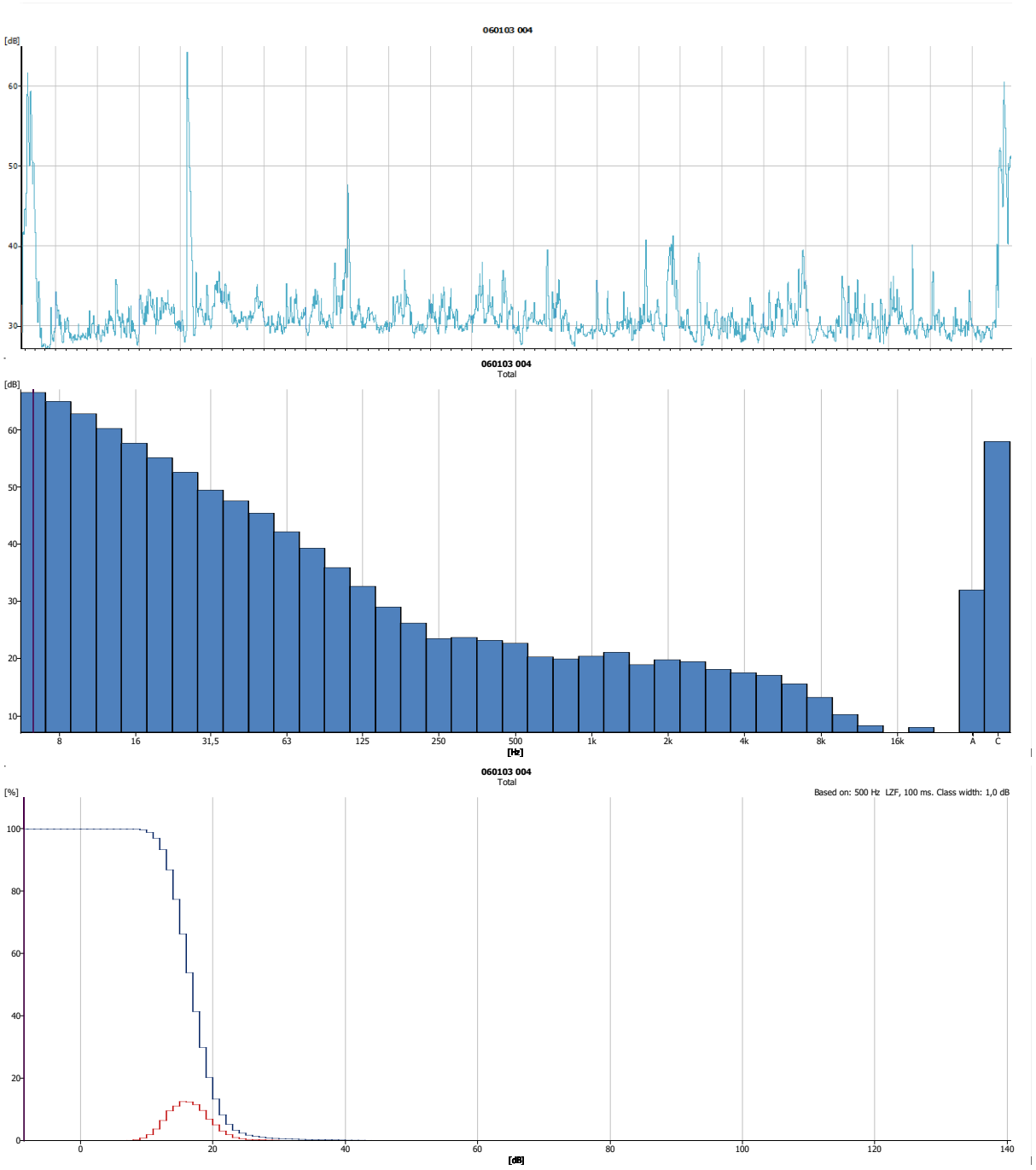


Figure 16: Site C, Nighttime, Quiet period detailed results

9 Annex B: Noise management plan

Noise management plan

Knorvarkie River Shack Restaurant, Campsite and Guest Cottages

1) Purpose

This Noise Management Plan (NMP) sets out practical measures to prevent and manage noise impacts from Knorvarkie's operations (River Shack restaurant, campsite, and guest cottages) on neighbouring properties, and to protect patrons from excessive noise exposure. The plan is intended to support compliance with applicable requirements, including the Western Cape Noise Control Regulations (WCNCR), and to reduce the likelihood of disturbing noise, particularly during evenings and busy periods.

2) Key noise risk sources at Knorvarkie

The dominant noise risks associated with the facility are:

- **Amplified music** (restaurant, private functions, guest cottages, and campsite use), especially **low frequency/bass**.
- **Raised voices and crowd noise** (patrons arriving/leaving, social gatherings, outdoor seating).
- **Occasional live events** (band/DJ/PA systems).
- **Service activities and equipment** (backup generator, pumps, refrigeration plant, maintenance tools, waste handling, delivery vehicles).
- **Vehicle movements** (guest arrivals/departures, parking area activity).

While the wider environment includes intermittent trains and rural ambient sounds (wind/insects/birds), this NMP focuses on **sources Knorvarkie can control**.

3) Noise control measures

Noise control is achieved by implementing measures that minimise noise at source and effectively manage its spread from the source to neighbouring receptors. Measures below include **standard operating procedures** to be applied at all times, plus **event-specific controls** triggered when higher-risk activities are planned.

a) Music and amplified sound control (restaurant, campsite, cottages)

- General principles:
  - No music should be audible beyond the property boundary in a manner that could reasonably be considered disturbing, particularly at night.
  - Low-frequency ("bass") management is prioritised, as bass travels further and is more likely to cause complaints.
- Operational controls

- Volume limits: Set and enforce a maximum amplifier output / mixer gain setting (a "hard limit") for normal trading. Management retains control of the system.
- Bass control:
  - Use high-pass filters/EQ settings to reduce low-frequency energy (typical problem range).
  - Avoid "bass boost" settings.
  - Do not allow portable subwoofers unless specifically managed and approved.
- Speaker placement and orientation:
  - Place speakers indoors wherever feasible.
  - Do not orient speakers toward neighbouring receptors or toward open doors/windows.
  - Elevate and angle speakers toward the audience, not outward.
- Doors/windows: During any amplified music, keep doors/windows on the receptor-facing side closed as far as practicable.
- Outdoor music: Outdoor amplified music should be restricted and subject to specific controls (see live events section).
- Campsite and cottages:
  - Prohibit amplified music (speakers) in campsites after a specified quiet time.
  - Limit cottage outdoor music and require windows/doors closed when music is played at night.
- Hours / quiet times (recommended minimum controls):
  - Establish clear "quiet hours" for the property (covering restaurant outdoor areas, campsite, and cottages). A workable starting point is:
    - Daytime: 06:00 to 22:00
    - Night-time / Quiet hours: 22:00 to 06:00
  - During night-time / quiet hours:
    - No outdoor amplified music.
    - Indoor music to remain at background level (no bass emphasis).
    - Guests requested to keep voices low and avoid outdoor gatherings near boundaries.

b) Live music, DJs and events (higher-risk activities)

Live events and functions are predictable triggers for complaints and must be managed as such.

❖ **Event approval and planning**
- All live/DJ events require **pre-approval by management**, with an event plan covering:
  - event times,
  - sound system details,
  - location (indoor/outdoor),
  - responsible person on duty,
  - neighbour notification requirements.

❖ **Event-specific controls**
- Prefer indoor-only live music.

- If outdoor events are permitted:
  - Limit to defined hours (e.g., end amplified music well before night-time, unless specifically approved).
  - **No subwoofers** outdoors unless a specialist has confirmed acceptable performance.
  - Assign a designated **"sound marshal"** (manager) with authority to reduce volume immediately.
  - Set a **maximum sound level target** at the restaurant boundary closest to neighbours and check periodically during the event.
- Define a **monthly limit** on live events (or a limit by season), to be agreed with neighbours as part of liaison.

c) Guest behaviour management (restaurant, campsite, cottages)

Noise impacts are often driven by people rather than equipment. Controls must be clear, communicated, and enforced.

- House rules and guest commitment
  - Provide a short, clear "Respect the Neighbours" policy:
    - quiet hours,
    - no loud music outdoors,
    - keep voices low after hours,
    - no shouting, hooting, or revving vehicles,
    - designated smoking/standing areas away from receptor-facing boundaries.
  - Include the policy in:
    - booking confirmations,
    - signage at reception/restaurant,
    - campsite check-in,
    - cottage information packs.
- Enforcement protocol
  - Step 1: polite request to comply (staff member / duty manager).
  - Step 2: formal warning by duty manager; reduce music volume if applicable; relocate the group indoors/away from boundary.
  - Step 3: if non-compliance continues: stop the source (switch off music / close outdoor area) and apply house consequences (e.g., removal from outdoor areas, cancellation/refund policy conditions, or eviction for severe breaches).

d) Equipment, vehicles and servicing noise (generator, plant, maintenance)

- Backup generator
  - Locate and operate the generator as far as practicable from sensitive boundaries.
  - Ensure it is fitted with effective silencers and maintained.
  - If complaints persist, consider acoustic enclosure or screening and/or relocating the unit.

- Other stationary equipment
    - Refrigeration plant, pumps, compressors and similar:
        - maintain regularly,
        - replace faulty bearings/fans,
        - isolate vibration,
        - avoid tonal "whines" by servicing promptly.
- Maintenance work
    - Restrict noisy maintenance (e.g., grinding, hammering, power tools) to daytime hours.
    - Avoid early morning or late evening maintenance near receptors.
- Deliveries and waste handling
    - Schedule deliveries and waste collection for daytime hours where feasible.
    - Avoid bottle/glass handling at night.
    - Use quiet handling practices (no dropping bins, soft-close where possible).

e) Control the spread of noise (layout and simple engineering controls)

Where source control is not sufficient, apply measures to reduce propagation:

- Use distance and screening: locate outdoor social areas, smoking areas, and any music zones away from receptor-facing boundaries.
- Consider local screening (fences, walls, solid screens) around outdoor seating or equipment yards, ensuring no gaps where practical.
- Use soft landscaping (dense planting) as a supplementary measure (note: landscaping helps perception but is not a primary acoustic barrier).
- Manage outdoor area layouts so that people naturally gather away from the receptor direction, especially at night.

f) Neighbour liaison and communication

Maintaining an agreed framework with neighbours reduces conflict and supports proactive management.

- **Designated liaison**
    - Appoint a responsible person (owner/manager) as the Neighbour Liaison Officer.
- **Agreed operating principles**
    - Establish a written understanding with neighbours covering:
        - a maximum number of live music events per month (or season),
        - typical event start/finish times,
        - special occasions (e.g., holidays) and how they will be handled,
        - the preferred channel for notifications and complaints.
- **Advance notice**
    - Provide advance notice of planned higher-risk events (live music/private functions), including date, hours, and a contact number for the duty manager.

g) Patron safety and acceptable sound exposure (restaurant context)

Knorvarkie should also protect patrons and staff from unnecessarily high sound levels, as excessive restaurant music can affect comfort, communication, and hearing health.

- Practical targets
  - Maintain music at a level that allows normal conversation at the table without shouting.
  - If live music is hosted, ensure staff can implement immediate reductions if levels become uncomfortable.
- Staff exposure
  - Rotate staff positions if any area becomes consistently loud.
  - Provide hearing protection for staff when live music is hosted or when sound levels are unusually high.

h) Complaints register and response procedure

- **Complaints register**
  - Maintain a complaints register (digital and hard copy) including:
    - date/time received,
    - complainant details (if provided),
    - description of issue (what, where, when, duration),
    - operating status at the time (busy/quiet; event type),
    - immediate actions taken,
    - follow-up actions and outcome,
    - closure date and sign-off.
- **Response procedure**
  - Acknowledge complaints promptly (same day where feasible).
  - Investigate immediately where possible (duty manager listens at boundary / checks sound source).
  - Implement immediate controls (reduce volume, adjust bass/EQ, move speakers, close outdoor area, stop music if necessary).
  - Document actions taken and report back to the complainant with a concise summary.
  - Escalate recurring complaints to a management review and trigger targeted monitoring.

i) Noise monitoring and compliance

A structured monitoring programme helps verify performance and supports complaint resolution.

- **Monitoring types**
  - Routine monitoring: periodic checks during representative busy periods (and occasional quiet reference checks).
  - Event monitoring: for live events / high-risk functions.
  - Complaint-driven monitoring: targeted measurements at the complainant location and/or boundary during the time of concern.

- **Parameters and records**
  - Measure and record appropriate environmental noise descriptors (including the SA impulse-weighted metric used for assessment), supported by statistical levels and frequency information where needed.
  - Record field notes: weather, audibility of music, notable incidents (trains), and operating conditions.
- **Frequency (practical starting point)**
  - Routine: quarterly (or seasonally, if operations are seasonal).
  - Complaints: as required.
  - Independent review: every few years or after significant operational change.

j) Training and awareness

All staff involved in operations must understand the NMP and their role in preventing disturbance.

- Training should cover:
  - house rules and how to enforce them respectfully,
  - music system controls (volume/bass limits; speaker positioning),
  - event procedures and "sound marshal" responsibilities,
  - complaint response and documentation,
  - patron and staff comfort/safety considerations.

k) Review and updating of the NMP

- This NMP must be treated as a living document and reviewed:
  - after any verified complaint trend,
  - after major operational changes (new equipment, new event formats, increased campsite use),
  - after periodic independent reviews.

Updates must be recorded, communicated to staff, and applied consistently.

l) Commitment

Knorvarkie must commit to implementing this NMP to minimise noise disturbance, to respond promptly to complaints, and to maintain constructive relationships with neighbours. This NMP is provided to support compliance with the WCNCR, and the subsequent section of this report sets out the detailed management measures and responsibilities required to give effect to this commitment.

Example guest notice

Knorvarkie Quiet Hours & Respect for Neighbours

Welcome to Knorvarkie.

We're lucky to be in a peaceful rural setting shared with neighbouring homes and guest farms. Please help us keep it that way by following these simple rules.

Quiet Hours
Night-time/Quiet hours: 22:00–06:00
During quiet hours, please keep noise low and avoid activities that carry over long distances (especially near the river and open areas).

Music (Restaurant, Cottages & Campsite)

- No loud music outdoors at any time.
- After 22:00: no amplified music outdoors (speakers, subwoofers, portable sound systems).
- Keep indoor music at background level (you should be able to chat without raising your voice).
- Please avoid bass-heavy music, bass travels far and is the most common cause of complaints.

Voices and gatherings

- Please keep voices low after 22:00 (no shouting, chanting, or rowdy behaviour).
- If you're socialising, please do so indoors during quiet hours.
- Be considerate when arriving or leaving late at night.

Vehicles and parking

- No hooting, revving, or loud music in the parking area.
- Close doors gently and keep voices down when moving between cars and accommodation.

If you're camping

- Quiet hours apply across the campsite.
- Please pack away speakers and keep conversations low after 22:00.

If a neighbour reports disturbance
We take this seriously. Our duty manager may ask you to reduce noise, move indoors, or switch off music. Repeated non-compliance may result in the activity being stopped or the booking being cancelled (for the comfort of all guests and neighbours).

Thank you for helping us keep Knorvarkie calm, safe, and enjoyable for everyone.
Duty Manager contact (24/7 during occupancy): _____