DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

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File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Environmental Impact Assessment (EIA) for the proposed development of the Klipkraal Wind Energy Facility (WEF) 3, BESS and associated infrastructure near Fraserburg in the Northern Cape Province

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
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4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

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Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

Specialist Company Name:	SAFETECH			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	Non-Compliant	Percentage Procurement recognition	0
Specialist name:	Dr Brett Williams			
Specialist Qualifications:	PHD			
Professional affiliation/registration:	Registered Occupational Hygienist			
Physical address:	64 Worraker Street, Newton Park, Gqeberha			
Postal address:	PO BOX 27607, Greenacres			
Postal code:	6057	Cell:	082 550 2137	
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E-mail:	Brett.williams@safetech.co.za			

2. DECLARATION BY THE SPECIALIST

I, Brett Williams, declare that –

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- all the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Signature of the Specialist

Safetech

Name of Company:

28/07/2022

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Brett Williams, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

Safetech

Name of Company

28/07/2022

Date

Signature of the Commissioner of Oaths

19/08/2022

Date

CINDY KILLIAN
COMMISSIONER OF OATHS
PRACTISING ATTORNEY
70 WORRAKER STREET, NEWTON PARK
PORT ELIZABETH, 6045

ENVIRONMENT
HEALTH
SAFETY

SITE SENSITIVITY VERIFICATION REPORT

FOR THE KLIPKRAAL WIND ENERGY FACILITY 3
NEAR FRASERBURG, NORTHERN CAPE.

Date of Site Visit:	18/09/2021 – 24/09/2021
Specialist Name:	Dr Brett Williams
Professional Registration Number:	SAIOH 0221
Specialist Affiliation / Company:	Safetech
Specialist Topic:	Noise Impact Assessment
Document Version:	Version 2
Proposed WEF Project Name:	Klipkraal Wind Energy Facility 3

28th July 2022

HW592A1000508

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VAT No. 4180135461
Directors: B Williams, C Williams

Approved Inspection Authority (OH0049-CI-09)

1. Introduction

Klipkraal Wind Facility 3 (Pty) Ltd proposes to develop the Klipkraal Wind Energy Facility 3 and Grid Connection located to the south of Fraserburg in the Northern Cape. The Wind Energy Facility (WEF) will be one of five, separate wind developments proposed by the developer. This report will only address the Klipkraal WEF 3. Safetech has been appointed to conduct the noise impact assessment.

The first stage in the assessment is to conduct a site sensitivity report as per the requirements of the Environmental Assessment Protocols of the NEMA EIA Regulations (2014, as amended), and the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Noise Impacts (GG 43110 / GNR 320, 20 March 2020).

The grid connection will not require a full noise impact assessment. The noise from the construction of the grid connection will be addressed in the final EIA report.

The potential noise impacts from the construction and operation of the proposed development of the Klipkraal Wind Energy Facilities and Grid Connection will including the following:

- Construction equipment and vehicle noise
- Mechanical and aerodynamic noise from the operation of the various wind turbine components.

The impacts of mechanical and aerodynamic noise are described in detail below.

2. Description of Noise Impacts

The sources of sounds emitted from operating wind turbines can be divided into two categories, firstly mechanical sounds, from the interaction of turbine components, and secondly aerodynamic sounds, produced by the flow of air over the blades and past the tower.

Mechanical Sounds
Mechanical sounds originate from the relative motion of mechanical components and the dynamic response among them. Sources of such sounds include:

- Gearboxes
- Main electrical generator
- Yaw Drives
- Cooling Fans and
- Auxiliary Equipment (e.g. hydraulic pumps).

Since the emitted sound is associated with the rotation of mechanical and electrical equipment, it tends to be tonal (of a common frequency), although it may also have a broadband component. For example, pure tones can be emitted at the rotational frequencies of shafts and generators, and the meshing frequencies of the gears.

In addition, the hub, rotor, and tower may act as loudspeakers, transmitting the mechanical sound and radiating it. The transmission path of the sound can be air-borne or structure-borne. Air-borne means that the sound is directly propagated from the component surface or interior into the air. Structure-borne sound is transmitted along other structural components before it is radiated into the air.

Figure 1 below shows the type of transmission path, and the sound power levels for the individual components for a wind turbine.

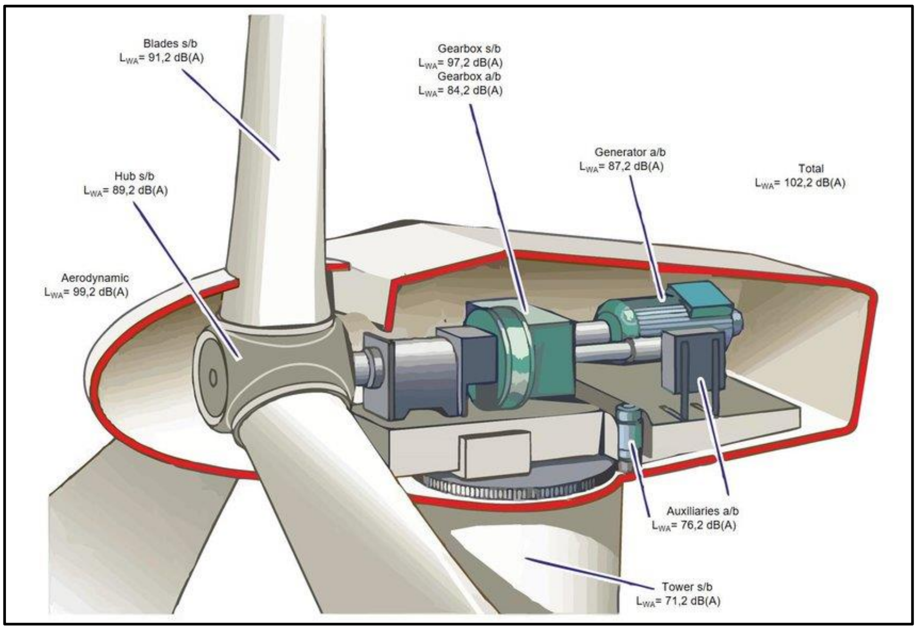


Figure 1: Typical Sound Power Levels of a Turbine (Moraleda 2019).

Aerodynamic Sound

Aerodynamic broadband sound is typically the largest component of wind turbine acoustic emissions. It originates from the flow of air around the blades, especially the downward moving blade. A large number of complex flow phenomena occur, each of which might generate some sound (see Figure 2). Aerodynamic sound generally increases with rotor speed. The various aerodynamic sound generation mechanisms that must be considered are divided into three groups:

- Low Frequency Sound: Sound in the low frequency part of the sound spectrum is generated when the rotating blade encounters localized flow deficiencies due to the flow around a tower, wind speed changes, or wakes shed from other blades.
- Inflow Turbulence Sound: Depends on the amount of atmospheric turbulence. The atmospheric turbulence results in local force or local pressure fluctuations around the blade.
- Airfoil Noise: This group includes the sound generated by the air flow right along the surface of the airfoil. This type of sound is typically of a broadband nature, but tonal components may occur due to blunt trailing edges, or flow over slits and holes.

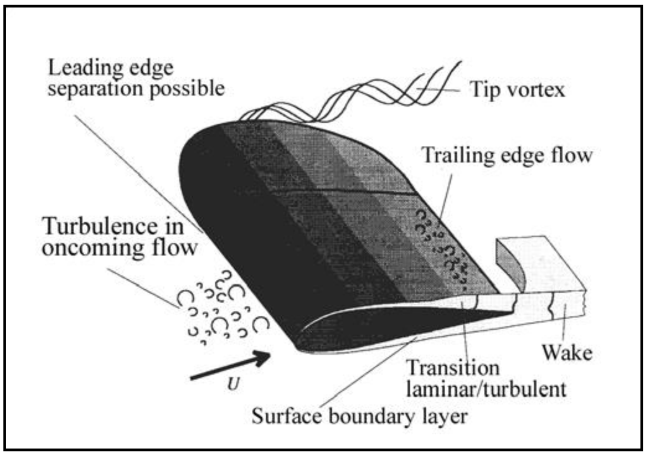


Figure 2: Sources of Aerodynamic Noise (Wagner 1996).

Modern airfoil design takes all the above factors into account and is generally much quieter that the first generation of bade designs.

Residual Sound & Wind Speed

The ability to hear a wind turbine depends on the residual sound level[1]. When the background sounds and wind turbine sounds are of the same magnitude, the wind turbine sound may get lost in the background noise. Both the wind turbine sound power level and the residual sound pressure level will be functions of wind speed. Thus, whether the sound emitted from a wind turbine exceeds the residual sound level will depend on how each of these varies with wind speed.

The most likely sources of wind-generated sounds are interactions between wind and vegetation. Several factors affect the sound generated by wind flowing over vegetation. For example, the total magnitude of wind-generated sound depends more on the size of the windward surface of the vegetation than the foliage density or volume.

The sound level and frequency content of wind generated sound also depends on the type of vegetation. For example, sounds from deciduous trees tend to be slightly lower and more broadband than that from conifers, which generate more sounds at specific frequencies. The equivalent A-weighted broadband sound pressure generated by wind in foliage has been shown to be approximately proportional to the base 10 logarithm of wind speed.

Sound emitted from large modern wind turbines during constant speed operation tend to increase more slowly with increasing wind speed, than wind generated sound. As a result, wind turbine noise is more commonly a concern at lower wind speeds, and it is often difficult to measure sound from modern wind turbines above wind speeds of 8 m/s because the background wind-generated sound sometimes masks the wind turbine sound above 8 m/s.

It should be remembered that average sound level measurements might not indicate when a sound is detectable by a listener. Just as a dog's barking can be heard through other sounds, sounds with particular frequencies or an identifiable pattern may be heard through background sounds that is otherwise loud enough to mask those sounds. Sound emissions from wind turbines will also vary as the turbulence in the wind through the rotor changes. Turbulence in ground level winds will also affect a listener's ability to hear other sounds. Because fluctuations in ground level wind speeds will not exactly correlate with those at the hub height of the turbine, a listener might find moments when the wind turbine could be heard over the residual sound.

[1] In laymans terms this is the "ambient sound or background noise" although this is defined diffenrently in environmental noise legislation.

Low Frequency Noise and Infrasound

Infrasound was a significant characteristic of some wind turbine models that has been attributed to early designs in which turbine blades were downwind of the main tower. The effect was generated as the blades cut through the turbulence generated around the downwind side of the tower. Modern designs generally have the blades upwind of the tower. Wind conditions around the blades and improved blade design minimize the generation of the effect.

As depicted in Figure 3 below, low frequency pressure vibrations are typically categorized as low frequency sound when they can be heard near the bottom of human perception (10-200 Hz), and infrasound when they are below the common limit of human perception. Sound below 20 Hz is generally considered to be infrasound, even though there may be some human perception in that range. Because the ranges of low frequency sound and infrasound overlap it is important to understand how the terms are applied in a given context.

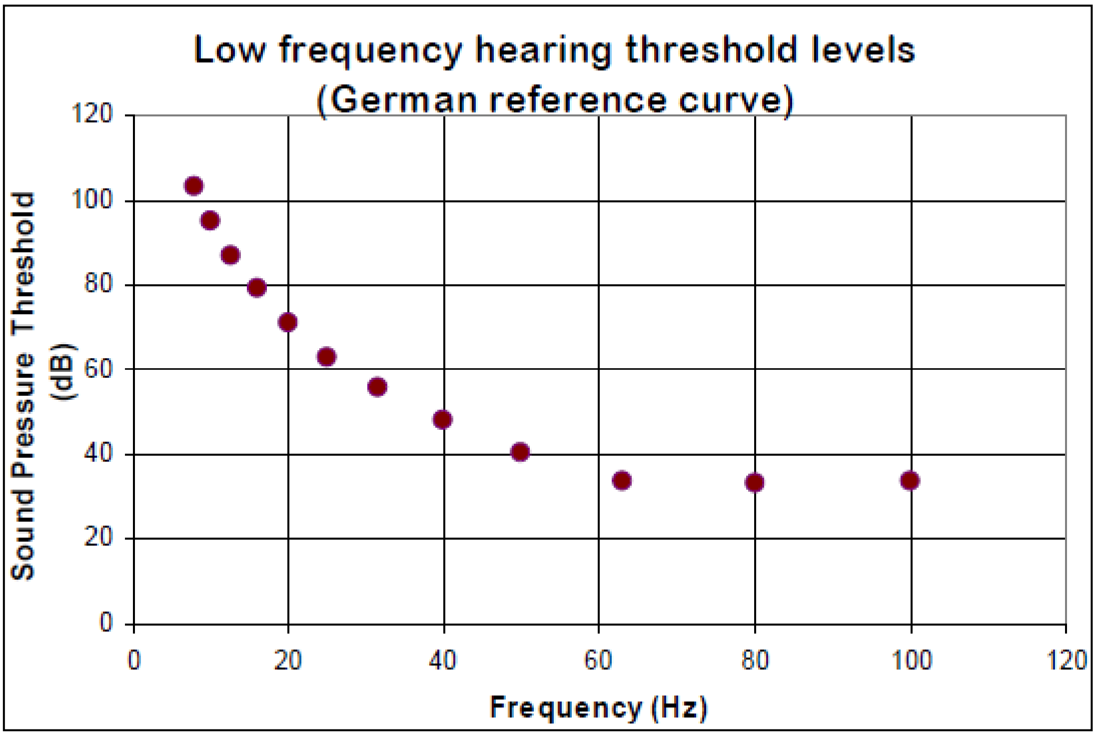


Figure 3: Low Frequency Hearing Threshold Levels

Infrasound is always present in the environment and stems from many sources including residual air turbulence from wind, ventilation units, waves on the seashore, distant explosions, traffic, aircraft, and other machinery. Infrasound propagates farther (i.e., with lower levels of dissipation) than higher frequencies. To place infrasound in perspective, when a child is swinging high on a swing, the pressure changes on their ears, from top to bottom of the swing, is nearly 120 dB(A) at a frequency of around 1 Hz.

Some characteristics of the human perception of infrasound and low frequency sound are:

- Low frequency sound and infrasound (2-100 Hz) are perceived as a mixture of auditory and tactile sensations
- Lower frequencies must be of a higher magnitude (dB) to be perceived, e.g., the threshold of hearing at 10 Hz is around 100 dB (see Figure 3 above)

- Tonality cannot be perceived below around 18 Hz and
- Infrasound may not appear to be coming from a specific location, because of its long wavelengths.

The primary human response to perceived infrasound is annoyance, with resulting secondary effects. Annoyance levels typically depend on other characteristics of the infrasound, including intensity, variations with time, such as impulses, loudest sound, periodicity, etc. Infrasound has three annoyance mechanisms:

- A feeling of static pressure
- Periodic masking effects in medium and higher frequencies; and
- Rattling of doors, windows, etc. from strong low frequency components.

Human effects vary by the intensity of the perceived infrasound, which can be grouped into these approximate ranges:

- 90 dB and below: No evidence of adverse effects'
- 115 dB: Fatigue, apathy, abdominal symptoms, hypertension in some humans
- 120 dB: Approximate threshold of pain at 10 Hz and
- 120 – 130 dB and above: Exposure for 24 hours causes physiological damage.

The typical range of sound power level for wind turbine generators is in the range of 100 to 105 dB(A) – a much lower sound power level (10 dB or more) than the majority of construction machinery such as bulldozers. For infrasound to be audible even to a person with the most sensitive hearing at a distance of 300 m would require a sound power level of at least 140 dB at 10 Hz and even higher emission levels than this at lower frequencies and at greater distances. There is no information available to indicate that wind turbine generators emit infrasound anywhere near this intensity.

3. Possible Mitigation Measures of Potential Noise Impacts

To mitigate the potential noise impacts of the proposed development, the following measures will be considered if needed:

- Construction Phase:
  - Conduct Noise Sensitivity Training for all construction staff where construction takes place close to sensitive receptors.
  - No construction should occur during night-time hours (22:00-06:00).
  - If possible, piling activities should occur during the hottest part of the day to take advantage of the unstable atmospheric conditions.
  - Residual Noise Monitoring should be conducted during the construction phase at sensitive NSAs.
- Operational Phase:
  - Wind Turbine Generators (WTGs) should not be placed within 500m of any occupied Noise Sensitive Area (NSA).
  - If the night-time noise rating limit for rural areas (35dB(A)) is exceeded, the WTGs could be operated in a lower power mode at certain wind speeds or be relocated further away from an NSA.

The potential noise mitigation measures will be determined during the final modelling and noise impact assessment phase.

4. Description of the Affected Environment

Figure 4 below shows the regional context, including the four other wind energy developments bordering the proposed development. A total of 23 Noise Sensitive Areas (NSAs) were identified. The site verification process determined that most NSAs are not permanently occupied. Furthermore, some NSAs are kraals for livestock and abandoned buildings.

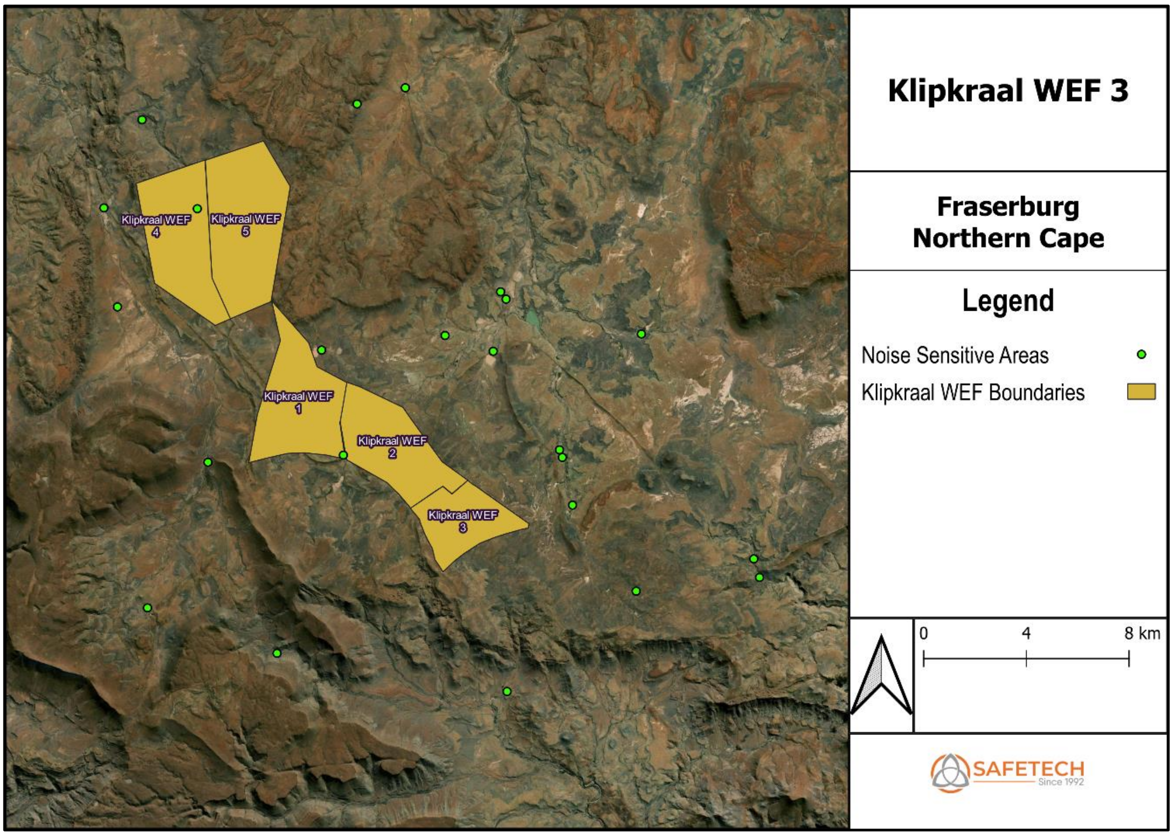


Figure 4: Klipkraal Regional Context

The noise emissions could have an impact on the residents at the NSA's. Figure 5 below shows the NSA's that are most likely to be impacted by Klipkraal WEF 3, due to their distance to the closest turbine. These distances are shown in Annexure B.

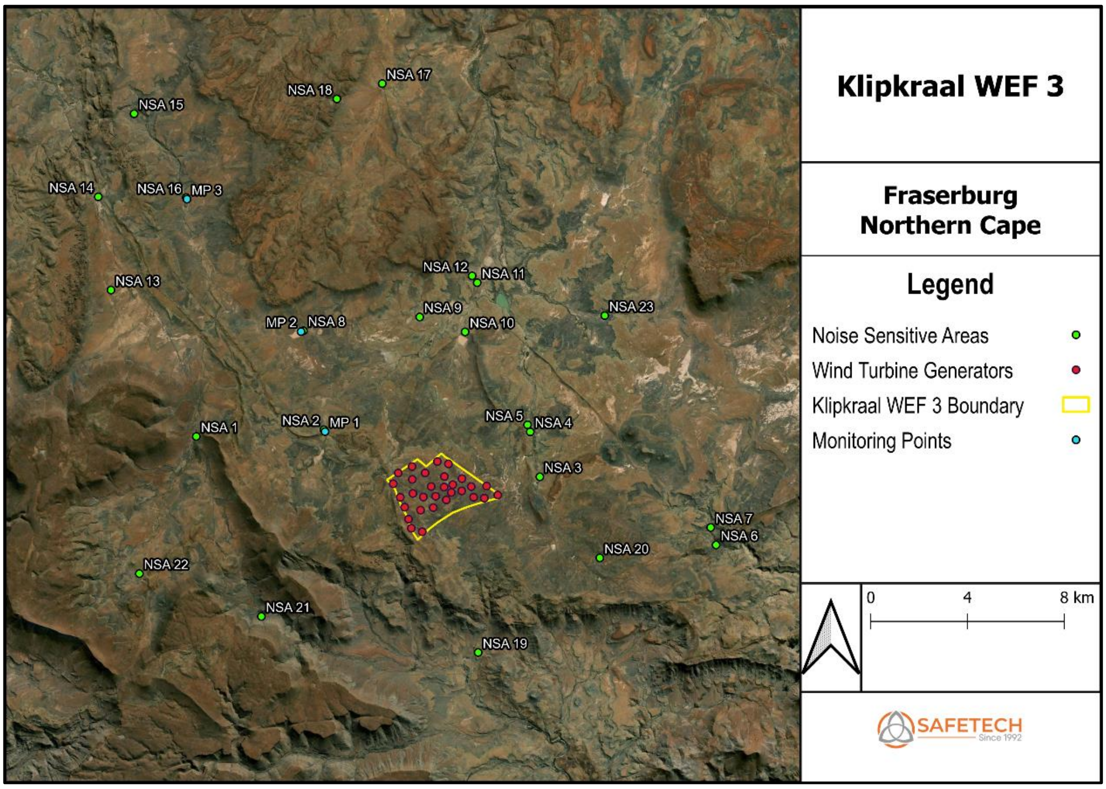


Figure 5: Klipkraal WEF 3 Local Context

Three noise measurements were conducted. The locations of the monitoring points (MP) are shown in Figure 5.

5. Field Study

The field study validated the classification of the study area as a rural district. Table 1 below shows the SANS 10103:2008 guidelines for day and night noise limits. National and provincial standards classify noise levels exceeding 7dB(A) above the ambient noise levels as a disturbing noise.

Table 1: Noise limits for rural districts

Type of District	Equivalent Continuous Rating Level, $L_{Req.T}$ for Noise					
	Outdoors (dB(A))			Indoors, with open windows (dB(A))		
	Day-night	Daytime	Night-time	Day-night	Daytime	Night-time
Rural Districts	45	45	35	35	35	25

The field study was conducted from the 18th of September 2021 to the 24th of September 2021 in accordance with SANS 10103:2008. The guidelines to determine the ambient noise levels of the area are described in the methodology below:

> *A long-term measurement was taken by placing a noise meter on a tripod and ensuring that it was placed at least 1.2 m from floor level and 3.5 m from any large flat reflecting surface. The 36-hour measurement time encompassed one "day" period (06:00-22:00) and two "night" periods (22:00-06:00). The noise meter was calibrated before and after the survey. At no time was the difference more than one decibel (dB) (Note: If the difference between measurements at the same point under the same conditions is more than 1 dB, then this is an indication that the noise meter is not properly calibrated). The weighting used was on the A scale and the meter was placed on "fast", which is the preferred*

method as per SANS 10103:2008, the measurement and rating of environmental noise. The meter was fitted with a windscreen, which is supplied by the manufacturer. The windscreen is designed to reduce wind noise around the microphone and not bias the measurements.

The results of the baseline residual noise monitoring for the three monitoring points are illustrated in Figures 6 to 11 below. The noise profiles during the time of the monitoring were typical of the rural landscape. Noise sources included birds chirping, occasional cars passing by wind and rustling of leaves from surrounding vegetation.

The details of the equipment used are as follows, the calibration certificates can be found in Annexure A:

- **Rion NL-62 and UC-59L Integrating Sound Level Meter with built-in ⅓-Octave Filter and ½" Microphone with NC-74 Sound Calibrator**: Type 1, Rion NL-62, NH-26, UC-59L Integrating Sound Level Meter with built-in ⅓-Octave Filter and ½" Microphone. Serial no.: 00420125; 01697; 00840. Calibrated by: M and N Acoustic Services cc on 06-20 July 2021 (calibration due July 2022 as per SANS 10083:2013). Certificate number: 2021-AS-0751. Calibration certificate attached in Annexure. Total uncertainty of measurements: Integrating Sound Level Meter: Refer to calibration certificate. ½" Microphone: ± 0.3 dB. Built-in ⅓-Octave Filter: ± 0.3 dB.

- **Rion NC-74, NC-74-002 Sound Calibrator:** Serial no.: 34425540. Calibrated by: M and N Acoustic Services cc on 07 July 2021 (calibration due July 2022). Certificate number: 2019-AS-0749. Calibration certificate attached in Annexure. Total uncertainty of measurements: Sound Calibrator: ± 0.19 dB

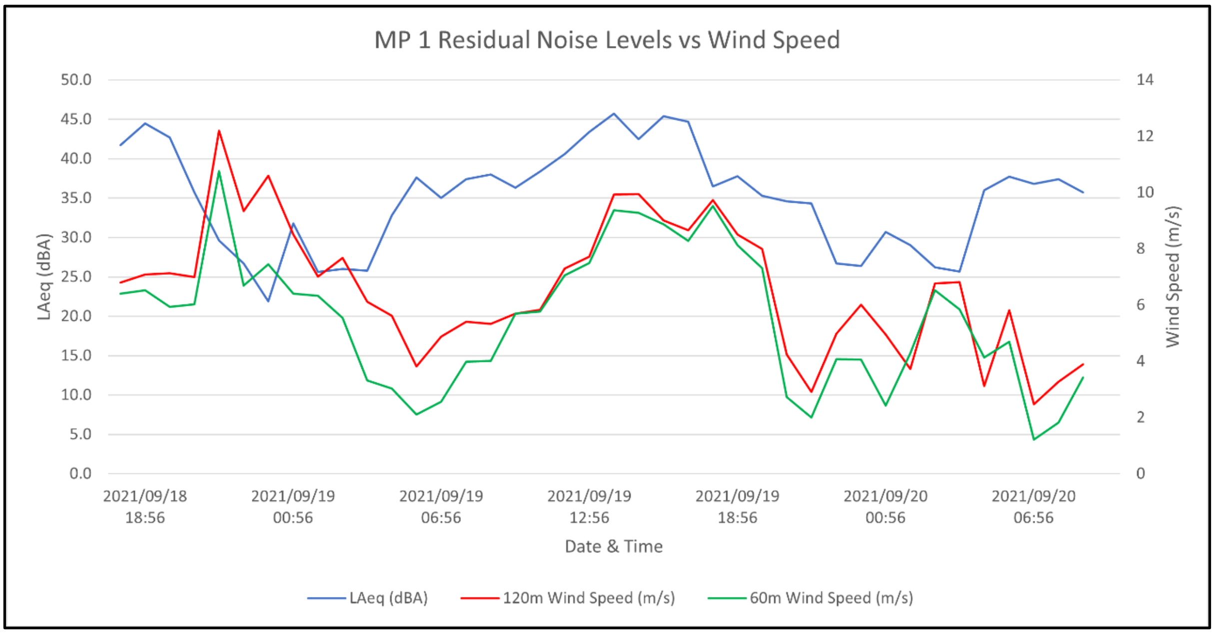


Figure 6: Monitoring Point 1 Residual Noise Levels vs Weather Conditions

Figure 7 below shows the frequency distribution of sound for MP 1 during the same time period.

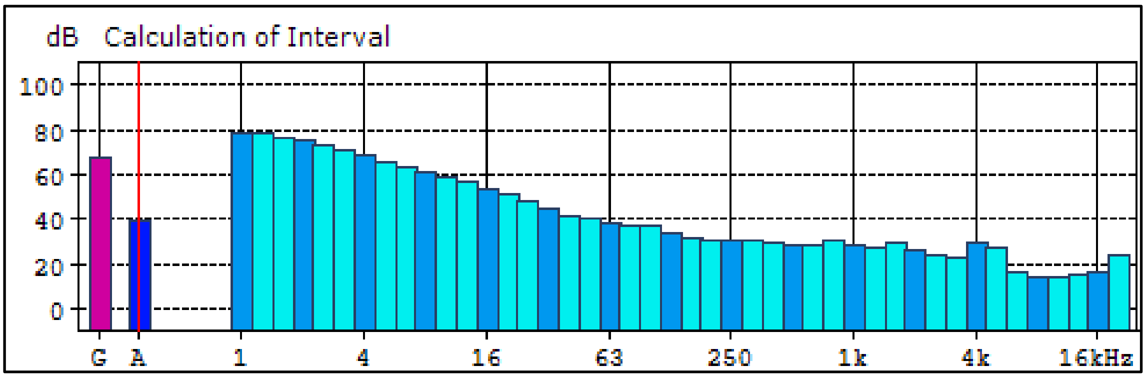


Figure 7: MP 1 Frequency Distribution

For MP 1 above, the L_{Aeq} value for the daytime period was 40.8 dB(A). The L_{Aeq} value for the night-time period was 30.3 dB(A).

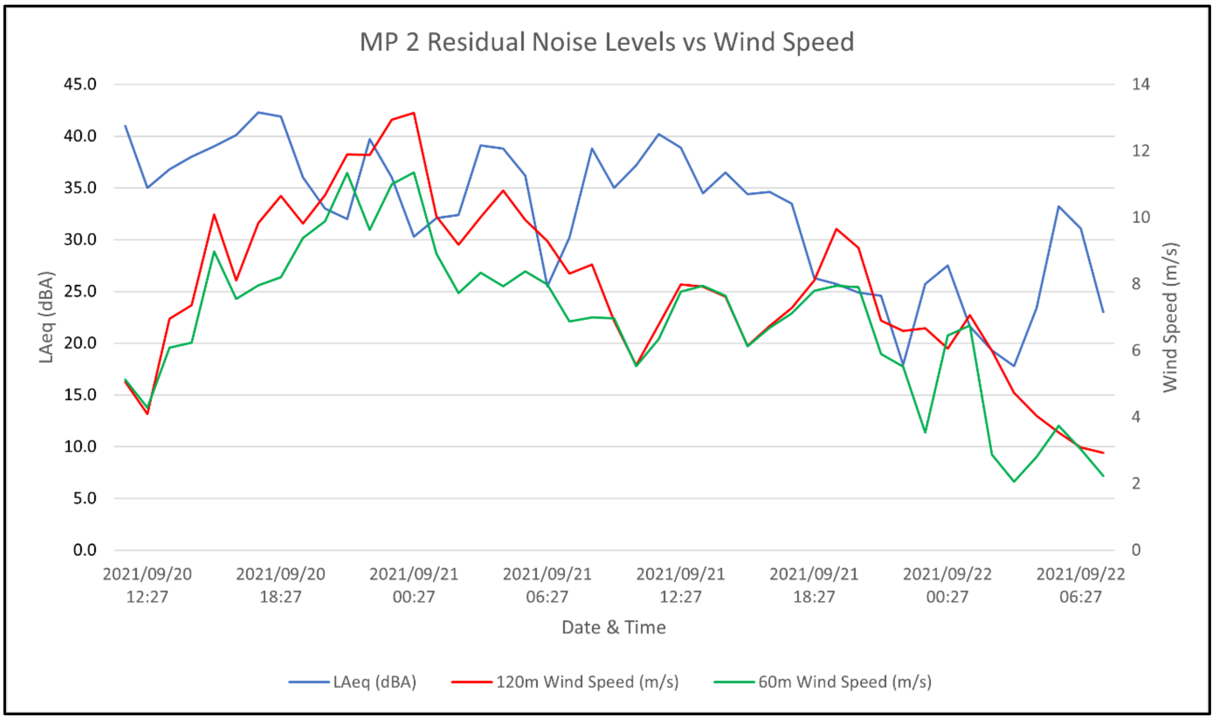


Figure 8: Monitoring Point 2 Residual Noise Levels vs Weather Conditions

Figure 9 below shows the frequency distribution of sound for MP 2 during the same time period.

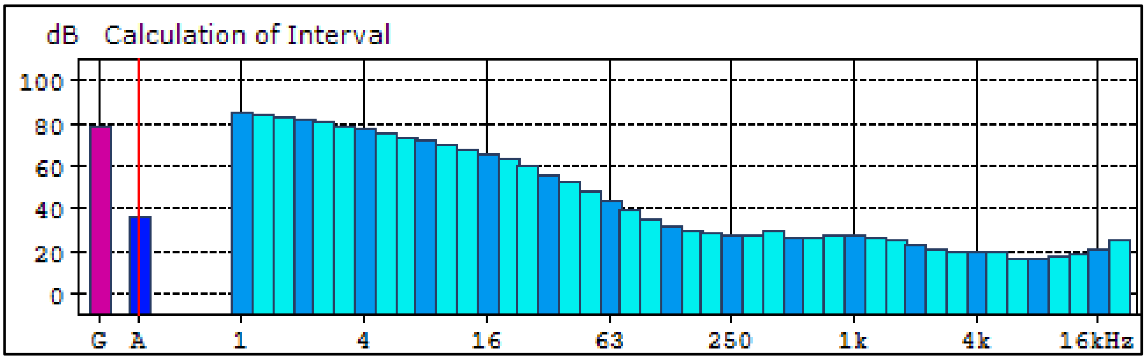


Figure 9: MP 2 Frequency Distribution

For MP 2 above, the L_{Aeq} value for the daytime period was 37.0 dB(A). The L_{Aeq} value for the night-time period was 34.0 dB(A).

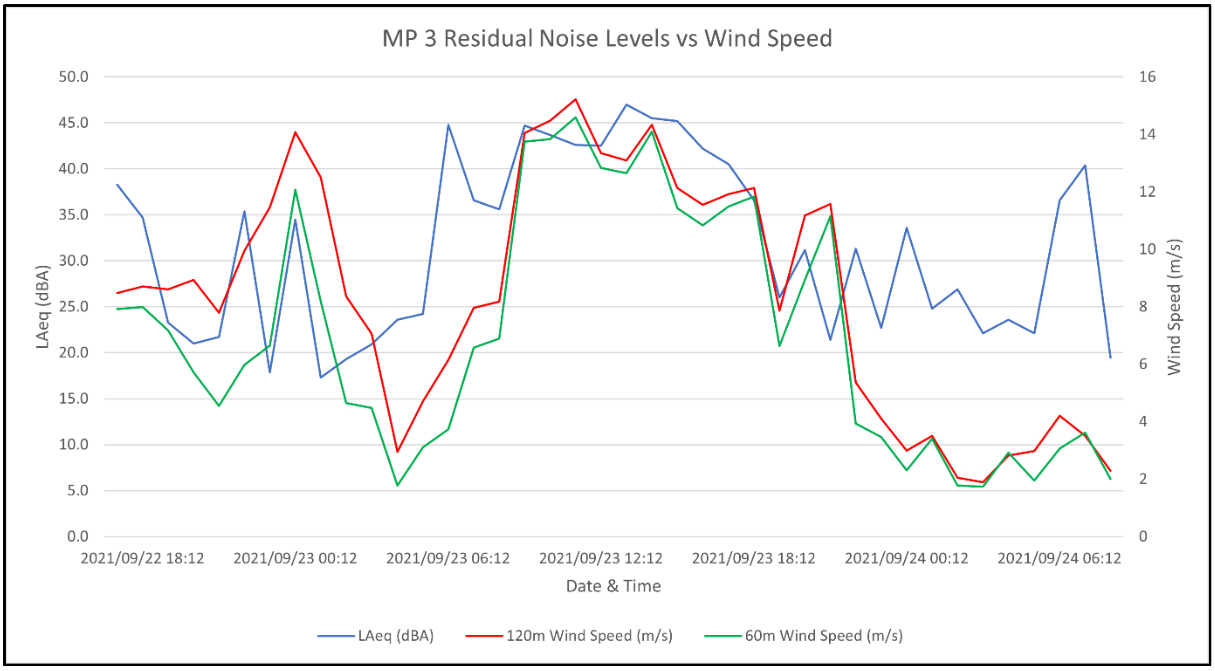


Figure 10: Monitoring Point 3 Ambient Noise Levels vs Weather Conditions

Figure 11 below shows the frequency distribution of sound for MP 3 during the same time period.

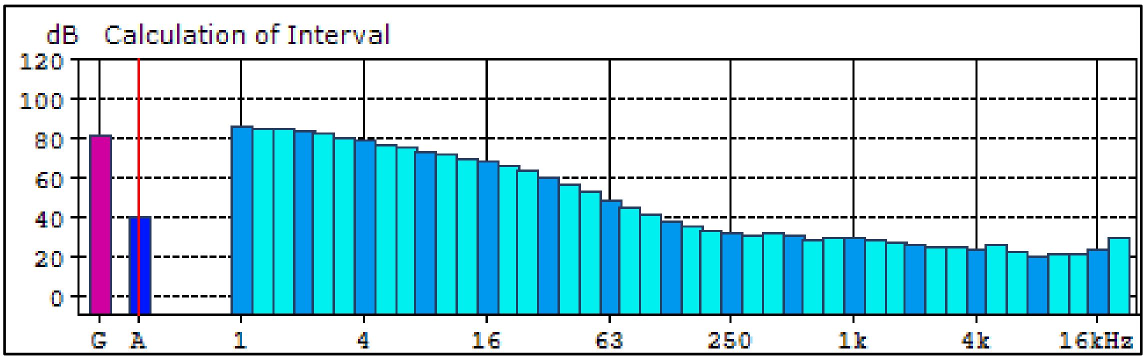


Figure 11: MP 3 Frequency Distribution

For MP 3 above, the L_{Aeq} value for the daytime period was 41.2 dB(A). The L_{Aeq} value for the night-time period was 28.8 dB(A).

The weather data for the monitoring period was supplied by the client. Two weather stations are located within the study area. Weather Station 2 wind speeds, recorded at 60m and 120m above ground level, were used as this station was closer to the monitoring points. The Coordinates of Weather Station 2 are: 32° 5' 29.40" S; 21° 47' 49.70" E.

6. Cumulative Study

As per the Screening Report, no other Wind Energy Facilities or Solar Farms are located within 30km of the proposed development. The cumulative impacts will not need to be assessed.

The cumulative impacts study will therefore only consider the other four Klipkraal Wind Energy Facilities, as shown in Figure 4.

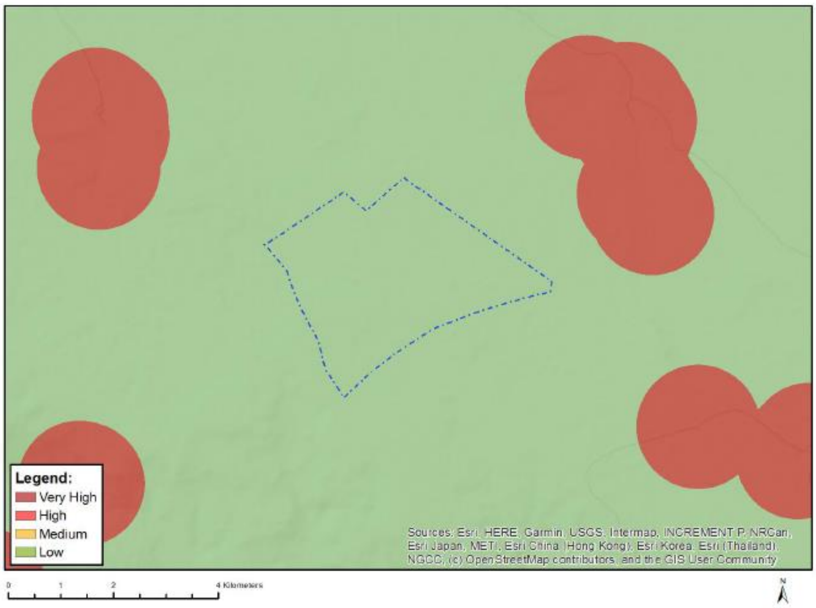
7. Grid Connection

From a noise perspective, no impacts are anticipated from the operation of the grid connection infrastructure. Therefore, a separate noise impact assessment will not be required. The noise impacts arising from the construction of the grid connection will be assessed as part of the construction of the Wind Energy Facilities (internal roads and turbines).

8. Screening Tool

Figure 12 below shows the noise themed sensitivities shown in the screening tool.

MAP OF RELATIVE NOISE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Area of low sensitivity

Figure 12: Noise Themed Sensitivities

The site visit confirmed the location of the Noise Sensitive Areas in Figure 12. Additional NSA's were also identified.

9. Legal Requirements

As part of the noise impact assessment, relevant noise related legislation and standards will be identified. Where applicable the following standards will also be consulted:

- South Africa - GNR.154 of January 1992: Noise control regulations in terms of section 25 of the Environment Conservation Act (ECA), 1989 (Act No. 73 of 1989).
- South Africa - GNR.155 of 10 January 1992: Application of noise control regulations made under section 25 of the Environment Conservation Act, 1989 (Act No. 73 of 1989).
- South Africa – GNR. 320 of 20 March 2020: Procedures for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes under Sections 24(5)(a) and (h) of the National Environmental Management Act, 1998 (Act no. 107 of 1998).
- SANS 10103:2008 Version 6 - The measurement and rating of environmental noise with respect to annoyance and to speech communication.
- SANS 10357:2004 Version 2.1 - The calculation of sound propagation by the Concawe method.
- International Finance Corporation – 2007 General EHS Guidelines: Environmental Noise.

10. Conclusion

The following is concluded and verified:

- The project site is situated in a rural district.
- The project could impact on several noise sensitive areas.
- It is recommended that a 500m buffer be placed around all noise sensitive receptors for planning purposes. The WTG layout for Klipkraal WEF 3 should adhere to this recommendation.

The proposed mitigations measures of the potential noise impacts have been described in Section 3.

It is recommended that a full noise impact assessment, that includes emission modelling be conducted. A comprehensive report will be provided that will include noise mitigation measures to be included in the environmental management plan as well as predicted noise levels during the construction and operation phase.

Dr Brett Williams

ANNEXURE A – Calibration Certificates

sanas
Calibration Laboratory
148
1302

M AND N ACOUSTIC SERVICES (Pty) Ltd
Co. Reg. No. 2012/[illegible]/07 VAT NO 4300255876 BEE Status: Level 4
P.O. Box 61713, Pierre van Ryneveld, 0045
No. 15, Mustang Avenue
Pierre van Ryneveld, 0045
Tel: 012 689-2007 (076 990 3070) • Fax: 086 211 4690
E-mail: admin@mnacoustics.co.za
Website: www.mnacoustics.co.za

CERTIFICATE OF CALIBRATION

CERTIFICATE NUMBER	2021-AS-0751
ORGANISATION	RUBICEPT (PTY) LTD
ORGANISATION ADRESS	14 ROSE STREET, GQEBERHA
CALIBRATION OF	INTEGRATING SOUND LEVEL METER complete with built-in ⅓- OCTAVE/OCTAVE FILTER, ½" PRE-AMPLIFIER and ½" MICROPHONE
MANUFACTURERS	RION
MODEL NUMBERS	NL-62, NH-26 and UC-59L
SERIAL NUMBERS	00420125, 01697 and 00840
DATE OF CALIBRATION	06-20 JULY 2021
RECOMMENDED DUE DATE	JULY 2022
PAGE NUMBER	PAGE 1 OF 6

This certificate is issued in accordance with the conditions of approval granted by the South African National Accreditation System (SANAS). This Certificate may not be reproduced without the written approval of SANAS and M and N Acoustic Services.

The measurement results recorded in this certificate were correct at the time of calibration. The subsequent accuracy will depend on factors such as care, handling, frequency of use and the number of different users. It is recommended that re-calibration should be performed at an interval, which will ensure that the instrument remains within the desired limits and/or manufacturer's specifications.

The South African National Accreditation System (SANAS) is member of the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). This arrangement allows for mutual recognition of technical test and calibration data by member accreditation bodies worldwide. For more information on the arrangement please consult www.ilac.org

Authorized/Calibrated by:	Checked by:	Date of Issue:
M. NAUDE (SANAS TECHNICAL SIGNATORY)	N.J. BLIGNAUT (CALIBRATION TECHNICIAN)	20 JULY 2021

Director: Marianka Naudé

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Calibration Laboratory
148
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M AND N ACOUSTIC SERVICES (Pty) Ltd
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E-mail: admin@mnacoustics.co.za
Website: www.mnacoustics.co.za

CERTIFICATE OF CONFORMANCE

CERTIFICATE NUMBER	2021-AS-0749
ORGANISATION	RUBICEPT (PTY) LTD
ORGANISATION ADDRESS	14 ROSE STREET, GQEBERHA
CALIBRATION OF	SOUND LEVEL CALIBRATOR (complete with ½" Adapter)
MANUFACTURER	RION
MODEL NUMBER	NC-74 and NC-74-002
SERIAL NUMBER	34425540
DATE OF CALIBRATION	07 JULY 2021
RECOMMENDED DUE DATE	JULY 2022
PAGE NUMBER	PAGE 1 OF 3

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Calibrations performed by this laboratory are in terms of standards, the accuracies of which are traceable to national measuring standards as maintained by NMISA.

The measurement results recorded in this certificate were correct at the time of calibration. The subsequent accuracy will depend on factors such as care, handling, frequency of use and the amount of different users. It is recommended that re-calibration should be performed at an interval, which will ensure that the instrument remains within the desired limits and/or manufacturer's specifications.

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Director: Marianka Naudé

ANNEXURE B – Closest Distance from Proposed WTGs to Noise Sensitive Areas

Name	Closest WTG Distance (m)
NSA 3	1 896
NSA 4	2 878
NSA 5	3 048
NSA 2	3 559
NSA 20	4 957
NSA 10	5 477
NSA 19	5 492
NSA 9	6 016
NSA 8	7 067
NSA 21	7 195
NSA 11	7 569
NSA 12	7 806
NSA 1	8 385
NSA 23	8 576
NSA 7	8 914
NSA 6	9 266
NSA 22	11 143
NSA 13	14 093
NSA 16	14 373
NSA 18	15 506
NSA 17	15 785
NSA 14	16 870
NSA 15	18 442