



**Name:** Morné de Jager  
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**Date:** 6 May 2019  
**Ref:** Hartebeesthoek West/2

Arcus  
Office 220  
Cube Workspace  
Cape Town

**Attention: Ms Aneesah Alwie**

Dear Madam

**SPECIALIST STUDY: NOISE IMPACT ASSESSMENT: SPLIT OF THE PHEZUKOMOYA WIND ENERGY FACILITY AND CHANGE OF WIND TURBINE SPECIFICATIONS – PART II AMENDMENT**

The above-mentioned issue as well as report AC-PWEF/ENIA/201709-Rev 0 is of relevance.

I, Morné de Jager, conducted an Environmental Noise Impact Assessment (ENIA) during the end of 2017 for the proposed Phezukomoya Wind Energy Facility (WEF).

With the input data as used, the above-mentioned assessment indicated that the proposed wind farm would have a noise impact of:

- **medium significance** on two potential noise-sensitive developments (NSDs) in the area during the construction phase, mainly due to the construction of access roads as well as construction traffic.
- **low significance** on all the potential noise-sensitive developments (NSDs) in the area during the operational phase, using the Acciona AW125/3000 wind turbine for all operational wind speeds (generating 108.4 dBA).

The Phezukomoya WEF is authorised for a maximum capacity of 275 MW, with a total of up to 55 turbines with an individual rating of between 3 and 5 MW, with a rotor diameter of 150 m, hub height of 150 m and a blade length of 75 m.

The developer of the Phezukomoya WEF has since split the WEF into two smaller wind farms, namely the Phezukomoya Split 1 and Hartebeesthoek West wind farms (see **Figure 1**). This letter specifically addresses the Hartebeesthoek West Wind Farm as well as the proposed changes in the wind turbine details, including:

- A hub height of 137m with a rotor diameter of 175m;
- Increasing the turbine output to 6.2 MW per turbine.

The change, however, does not move any wind turbines closer than 1,000 m to any identified NSDs and will reduce the number of wind turbines. Considering the proposed changes to the layout, wind turbine specifications and the turbine output, it is my opinion that the change will not increase or change the significance of the noise impact.

A full noise impact assessment with new modelling will not be required, and the recommendations as contained in the previous document will still be valid. This recommendation is based on the outcome of the report, which indicated that the extent of the potential impact is limited to 1,000m from the closest wind turbines (Section 9.3.1, pg. 108). The impacts, the significance, findings and the recommendations of the noise report (report AC-PWEF/ENIA/201709-Rev 0) will remain the same, and it will not be required to do any additional or other acoustic studies for the proposed changes.

Should you require any further details, or have any additional questions, please do not hesitate to call me on the above numbers.

Yours Faithfully,



Morné de Jager  
Enviro-Acoustic Research cc

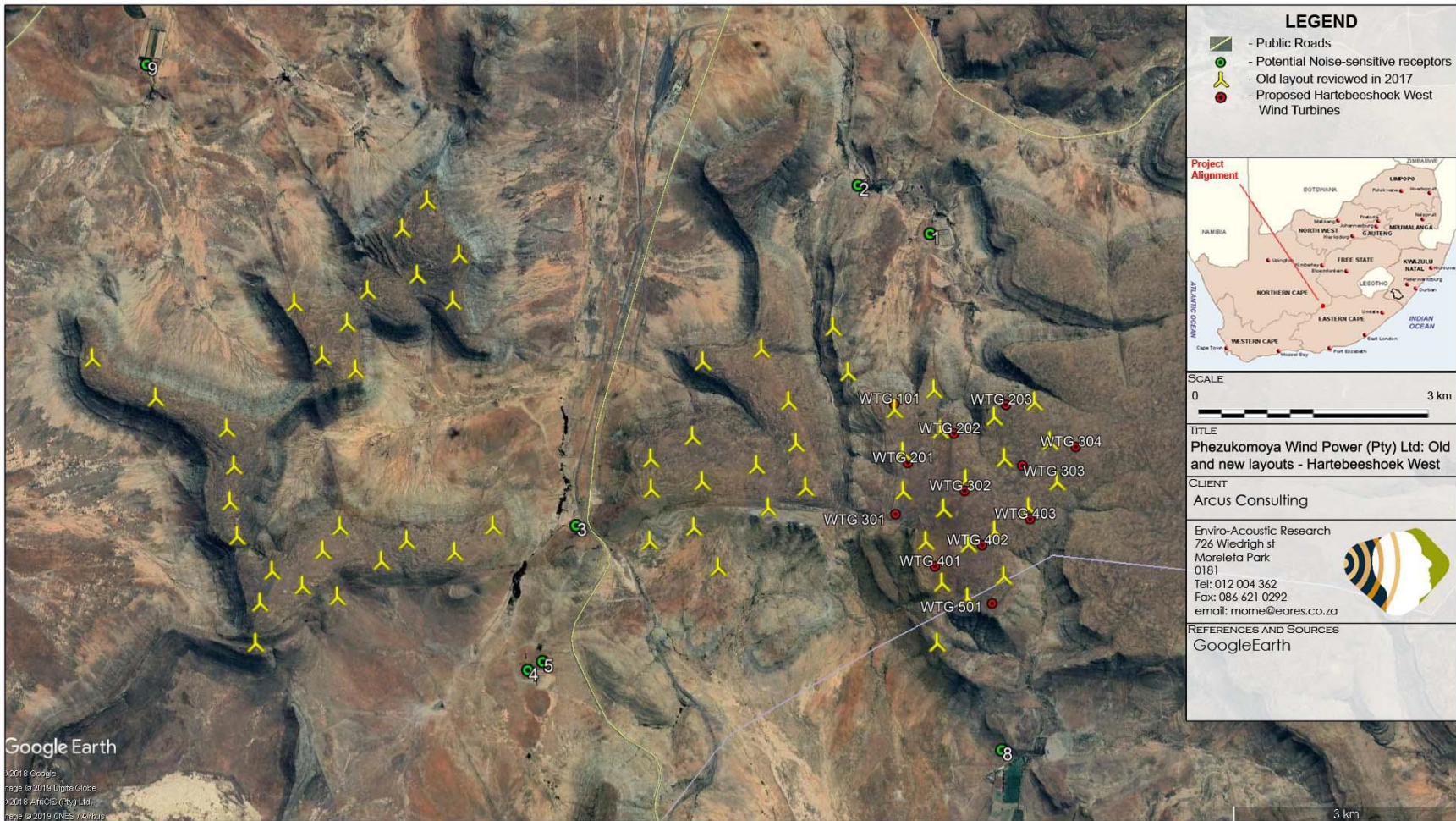


Figure 1: New locations of wind turbines compared with old layout.



**Name** : Mr Morné de Jager  
**Profession** : Acoustician / Noise Specialist  
**Date of Birth** : 1971/12/21  
**Parent Firm** : Enviro Acoustic Research cc  
**Position in Firm** : Noise Specialist  
**Years with firm** : 5 years  
**Nationality** : South African  
**BI & Male/Female Status** : White Male  
**Professional Qualification** : B. Ing (Chemical) University of Pretoria 1998  
  
**Professional Membership** : International Associate: American Society of Acoustics

LANGUAGE	SPEAK	READ	WRITE
English	Y	Y	Y
Afrikaans	Y	Y	Y

**Countries of Work Experience** : South Africa, Lesotho, Namibia, Ghana, Zambia, Mozambique  
**Proposed Position on Team** : Noise Specialist

## SUMMARY

Morné has been in private consulting for the last 20 years, managing various projects for the mining and industrial sector, private developers, business, other environmental consulting firms as well as the Department of Water Affairs. During that period he has been involved in various projects, either as specialist, consultant, trainer or project manager. During that period he gradually moved towards environmental acoustics, focusing on this field exclusively since 2007. He focused on Environmental Noise Measurement, Prediction and Control. He has been doing work in this field for the past 11 years and was involved with more than 300 noise studies in the last few years for a plethora of different projects, including studies for numerous existing and proposed mines, power stations, wind farms, road and transportation networks, residential development and pipeline development amongst others.

## RELEVANT EXPERIENCE

### Wind Energy Facilities

*Full Environmental Noise Impact Assessments for - Bannf (Vidigenix), iNca Gouda (Aurecon SA), Isivunguvungu (Aurecon), De Aar (Aurecon), Kokerboom 1 (Aurecon), Kokerboom 2 (Aurecon), Kokerboom 3 (Aurecon), Kangnas (Aurecon), Plateau East and West (Aurecon), Wolf (Aurecon), Outeniqwa (Aurecon), Umsinde Emoyeni (ARCUS), Komsberg (ARCUS), Karee (ARCUS), Kolkies (ARCUS), San Kraal (ARCUS), Phezukomoya (ARCUS), Canyon Springs (Canyon Springs), Perdekraal (ERM), Scarlet Ibis (CESNET), Albany (CESNET), Sutherland (CSIR), Kap Vley (CSIR), Kuruman (CSIR), Rietrug (CSIR), Sutherland 2 (CSIR), Perdekraal (ERM), Teekloof (Mainstream), Eskom Aberdene (SE), Dorper (SE), Spreeukloof (SE), Loperberg (SE), Penhoek Pass (SE), Amakhala Emoyeni (SE), Zen (Savannah Environmental – SE), Goereesoe (SE), Springfontein (SE), Garob (SE), Project Blue (SE), ESKOM Kleinsee (SE), Namas (SE), Zonnequa (SE), Walker Bay (SE), Oyster Bay (SE), Hidden Valley (SE), Deep River (SE), Tsitsikamma (SE), AB (SE), West Coast One (SE), Hopefield II (SE), Namakwa Sands (SE), VentuSA Gouda (SE), Dorper (SE), Klipheuwel (SE), INCA Swellendam (SE), Cookhouse (SE), Iziduli (SE), Msenge (SE), Cookhouse II (SE), Rhebokfontein (SE), Suurplaat (SE), Karoo Renewables (SE), Koningaas (SE), Spitskop (SE), Castle (SE), Khai Ma (SE), Poortjies (SE), Korana (SE), IE Moorreesburg (SE), Gunstfontein (SE), Boulders (SE), Vredenburg (Terramanzi), Loeriesfontein (SiVEST), Rhenosterberg (SiVEST), Noupoot (SiVEST), Prieska (SiVEST), Dwarsrug (SiVEST), Graskoppies (SiVEST), Philco (SiVEST), Hartebeest Leegte (SiVEST), Ithemba (SiVEST), !Xha Boom (SiVEST), Spitskop West (Terramanzi), Haga Haga (Terramanzi), Vredenburg (Terramanzi), Msenge Emoyeni (Windlab)*

### Mining and Industry

*Full Environmental Noise Impact Assessments for – Delft Sand (AGES), BECSA – Middelburg (Golder Associates), Kromkrans Colliery (Geovicon Environmental), SASOL Borrow Pits Project (JMA)*

	<p><i>Consulting), Lesego Platinum (AGES), Tweefontein Colliery (Cleanstream Environmental), Evraz Vametco Mine and Plant (JMA), Goedehoop Colliery (Geovicon), Hacra Project (Prescali Environmental), Der Brochen Platinum Project (J9 Environment), Brandbach Sand (AGES), Verkeerdepán Extension (CleanStream Environmental), Dwaalboom Limestone (AGES), Jagdlust Chrome (MENCO), WPB Coal (MENCO), Landau Expansion (CleanStream Environmental), Otjikoto Gold (AurexGold), Klipfontein Colliery (MENCO), Imbabala Coal (MENCO), ATCOM East Expansion (Jones and Wagner), IPP Waterberg Power Station (SE), Kangra Coal (ERM), Schoongesicht (CleanStream Environmental), EastPlats (CleanStream Environmental), Chapudi Coal (Jacana Environmental), Generaal Coal (JE), Mopane Coal (JE), Glencore Boshhoek Chrome (JMA), Langpan Chrome (PE), Vlakpoort Chrome (PE), Sekoko Coal (SE), Frankford Power (REMIG), Strahrae Coal (Ferret Mining), Transalloys Power Station (Savannah), Pan Palladium Smelter, Iron and PGM Complex (Prescali Environmental), Fumani Gold (AGES), Leiden Coal (EIMS), Colenso Coal and Power Station (SiVEST/EcoPartners), Klippootjie Coal (Gudani), Rietspruit Crushers (MENCO), Assen Iron (Tshikovha), Transalloys (SE), ESKOM Ankerlig (SE), Nooitgedacht Titano Project (EcoPartners), Algoa Oil Well (EIMS), Spitskop Chrome (EMAssistance), Vlakfontein South (Gudani), Leandra Coal (Jacana), Grazvalley and Zoetveld (Prescali), Tjate Chrome (Prescali), Langpan Chromite (Prescali), Vereeniging Recycling (Pro Roof), Meyerton Recycling (Pro Roof), Hammanskraal Billeting Plant 1 and 2 (Unica), Development of Altona Furnace, Limpopo Province (Prescali Environmental), Haakdoorndrift Opencast at Amandelbult Platinum (Aurecon), Landau Dragline relocation (Aurecon), Stuart Coal Opencast (CleanStream Environmental), Tetra4 Gas Field Development (EIMS), Kao Diamonds – Tipping Village Relocation (EIMS), Kao Diamonds – West Valley Tailings Deposit (EIMS), Upington Special Economic Zone (EOH), Arcellor Mittal CCGT Project near Saldanha (ERM), Malawi Sugar Mill Project (ERM), Proposed Mooifontein Colliery (Geovicon Environmental), Goedehoop North Residue Deposit Expansion (Geovicon Environmental), Mutsho 600MW Coal-Fired Power Plant (Jacana Environmental), Tshivhaso Coal-Fired Power Plant (Savannah Environmental), Doornhoek Fluorspar Project (Exigo)</i></p>
<b>Road and Railway</b>	<p><i>K220 Road Extension (UrbanSmart), Boskop Road (MTO), Sekoko Mining (AGES), Davel-Swaziland-Richards Bay Rail Link (Aurecon), Moloto Transport Corridor Status Quo Report and Pre-Feasibility (SiVEST), Postmasburg Housing Development (SE), Tshwane Rapid Transport Project, Phase 1 and 2 (NRM Consulting/City of Tshwane), Transnet Apies-river Bridge Upgrade (Transnet), Gautrain Due-diligence (SiVest), N2 Piet Retief (SANRAL), Atterbury Extension, CoT (Bokomoso Environmental), Riverfarm Development (Terramanzi)</i></p>
<b>Airport</b>	<p><i>Oudtshoorn Noise Monitoring (AGES), Sandton Heliport (Alpine Aviation), Tete Airport Scoping (Aurecon)</i></p>
<b>Noise monitoring and Audit Reports</b>	<p><i>SASOL Exploration (Lefatshe), Charlie Rig, Twisdraai Colliery (Lefatshe), Peerboom Colliery (EcoPartners), Thabametsi (Digby Wells), Doxa Deo (Doxa Deo), Harties Dredging (Rand Water), Xstrata Coal – Witbank Regional (Xstrata), Sephaku Delmas (AGES), Amakhala Emoyeni WEF (Windlab Developments), Oyster Bay WEF (Renewable Energy Systems), Tsitsikamma WEF Ambient Sound Level study (Cennergi and SE), Hopefield WEF (Umoya), Wesley WEF (Innowind), Ncora WEF (Innowind), Boschmanspoort (Jones and Wagner), Nqamakwe WEF (Innowind), Hopefield WEF Noise Analysis (Umoya), Dassiesfontein WEF Noise Analysis (BioTherm), Transnet Noise Analysis (Aurecon), Jeffries Bay Wind Farm (Globeleq), Sephaku Aganang (Exigo), Sephaku Delmas (Exigo), Beira Audit (BP/GPT), Nacala Audit (BP/GPT), NATREF (Nemai), Rappa Resources (Rayten), Measurement Report for Sephaku Delmas (Ages), Measurement Report for Sephaku Aganang (Ages), Development noise measurement protocol for Mamba Cement (Exigo), Measurement Report for Mamba Cement (Exigo), Measurement Report for Nokeng Fluorspar (Exigo), Tsitsikamma Community Wind Farm Pre-operation sound measurements (Cennergi), Waainek WEF Operational Noise Measurements (Innowind), Sedibeng Brewery Noise Measurements (MENCO), Tsitsikamma Community Wind Farm Operational noise measurements (Cennergi), Noupoot Wind Farm Operational noise measurements (Mainstream),</i></p>
<b>Small Noise Impact</b>	<p><i>TCTA AMD Project Baseline (AECOM), NATREF (Nemai Consulting), Christian Life Church (UrbanSmart), Kosmosdale (UrbanSmart), Louwlandia K220 (UrbanSmart), Richards Bay Port</i></p>

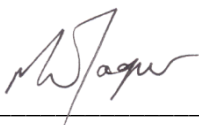
<b>Assessments</b>	<p><i>Expansion (AECOM), Babalegi Steel Recycling (AGES), Safika Slag Milling Plant (AGES), Arcelor Mittal WEF (Aurecon), RVM Hydroplant (Aurecon), Grootvlei PS Oil Storage (SiVEST), Rhenosterberg WEF, (SiVEST), Concerto Estate (BPTrust), Ekuseni Youth Centre (MENCO), Kranskop Industrial Park (Cape South Developments), Pretoria Central Mosque (Noman Shaikh), Soshanguve Development (Maluleke Investments), Seshego-D Waste Disposal (Enviroxcellence), Zambesi Safari Equipment (Owner), Noise Annoyance Assessment due to the Operation of the Gautrain (Thornhill and Lakeside Residential Estate), Upington Solar (SE), Ilangaletu Solar (SE), Pofadder Solar (SE), Flagging Trees WEF (SE), Uyekraal WEF (SE), Ruuki Power Station (SE), Richards Bay Port Expansion 2 (AECOM), Babalegi Steel Recycling (AGES), Safika Ladium (AGES), Safika Cement Isando (AGES), RareCo (SE), Struisbaai WEF (SE), Perdekraal WEF (ERM), Kotula Tsatsi Energy (SE), Olievenhoutbosch Township (Nali), , HDMS Project (AECOM), Quarry extensions near Ermelo (Rietspruit Crushers), Proposed uMzimkhulu Landfill in KZN (nZingwe Consultancy), Linksfield Residential Development (Bokomoso Environmental), Rooihuiskraal Ext. Residential Development, CoT (Plandev Town Planners), Floating Power Plant and LNG Import Facility, Richards Bay (ERM), Floating Power Plant project, Saldanha (ERM), Vopak Growth 4 project (ERM), Elandspoor Ext 3 Residential Development (Gibb Engineering)</i></p>
<b>Project reviews and amendment reports</b>	<p><i>Loperberg (Savannah), Dorper (Savannah), Penhoek Pass (Savannah), Oyster Bay (RES), Tsitsikamma Community Wind Farm Noise Simulation project (Cennergj), Amakhala Emoyeni (Windlab), Spreeukloof (Savannah), Spinning Head (SE), Kangra Coal (ERM), West Coast One (Moyeng Energy), Rheboksfontein (Moyeng Energy), De Aar WEF (Holland), Quarterly Measurement Reports – Dangote Delmas (Exigo), Quarterly Measurement Reports – Dangote Lichtenburg (Exigo), Quarterly Measurement Reports – Mamba Cement (Exigo), Quarterly Measurement Reports – Dangote Delmas (Exigo) Quarterly Measurement Reports – Nokeng Fluorspar (Exigo), Proton Energy Limited Nigeria (ERM), Hartebeest WEF Update (Moorreesburg) (Savannah Environmental), Modderfontein WEF Opinion (Terramanzi), IPD Vredenburg WEF (IPD Power Vredenburg), etc.</i></p>

## SUMMARY OF OTHER EXPERIENCE

2013 to Date    Enviro Acoustic Research cc  
 2000 to 2013    M2 Environmental Connections  
 1998 to 2000    Department of Water and Sanitation, Assistant Director

## DECLARATION

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature, I am available and willing to serve in the position indicated by me in the Proposal Ref: MDTE/2019/09.



Signature of Staff Member

24 January 2019

Date



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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

	(For official use only)
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

**Proposed Hartbeeshoek West Wind Energy Facility near Noupoort**

#### 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>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
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

##### Postal address:

Department of Environmental Affairs  
Attention: Chief Director: Integrated Environmental Authorisations  
Private Bag X447  
Pretoria  
0001

##### Physical address:

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](mailto:EIAAdmin@environment.gov.za)



**1. SPECIALIST INFORMATION**

Specialist Company Name:	Enviro-Acoustic Research cc			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition	100%
Specialist name:	Morné de Jager			
Specialist Qualifications:	B. Ing (Chem)			
Professional affiliation/registration:	SAAI, ASA			
Physical address:	726 Wiedrigh Street, Moreleta Park, 0181			
Postal address:	PO Box 2047, Garsfontein East			
Postal code:	0060	Cell:	082 565 4059	
Telephone:	012 004 0362	Fax:	086 621 0292	
E-mail:	morne@menco.co.za			

**2. DECLARATION BY THE SPECIALIST**

I, Morné de Jager, 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

**Enviro-Acoustic Research CC**

Name of Company:

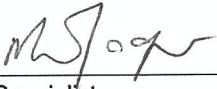
**2019 / 09 / 03**

Date



**3. UNDERTAKING UNDER OATH/ AFFIRMATION**

I, Morné de Jager, 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

**Enviro-Acoustic Research CC**

\_\_\_\_\_  
Name of Company

**2019 / 09 / 03**

\_\_\_\_\_  
Date



\_\_\_\_\_  
Signature of the Commissioner of Oaths

**03/09/2019**

\_\_\_\_\_  
Date

Commissioner of Oaths/Kommissaris van Ede  
**MJ MILLARD**  
Ex Officio  
Professional Accountant (SA)  
Professionele Rekenmeester (SA)  
Lid No: 8916  
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0040