

COMMENTS RECEIVED AFTER NOTIFICATION OF
BASIC ASSESSMENT PROCESS

LANDOWNERS

Savannah Environmental Public Process

From: Meyer, Anton <Anton.Meyer@debeersgroup.com>
Sent: 18 September 2018 11:22 AM
To: Savannah Environmental Public Process
Subject: RE: Namas & Zonnequa Wind Farms- Notification of Basic Assessment Process

Hi Rozanne

De Beers Namaqualand Mines (DBNM) has no objection to the development.

As you already know, DBNM owns Farm Sandkop 322. Can you please advise what system will be in place to ensure that disturbances caused by the proposed powerline crossing over the farm are properly marked to avoid confusion with existing disturbances caused by diamond mining operations?

Regards,

Anton Meyer
Senior Environmental Officer
De Beers Group of Companies
Namaqualand Mines
BMMR Checkpoint Drive
Private Bag X01
Kleinsee, 8282
Tel: + 027(0) 877-0048
Fax: + 027(0) 11 374-5418
www.debeersgroup.com

From: Savannah Environmental Public Process <publicprocess@savannahsa.com>
Sent: 11 September 2018 08:44 AM
To: Meyer, Anton <Anton.Meyer@debeersgroup.com>
Subject: RE: Namas & Zonnequa Wind Farms- Notification of Basic Assessment Process

Dear Anton,

Thank you.

Kind regards,

Rozanne Els
Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547
[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Meyer, Anton [<mailto:Anton.Meyer@debeersgroup.com>]
Sent: 11 September 2018 7:27 AM
To: Savannah Public Process <publicprocess@savannahsa.com>
Subject: RE: Namas & Zonnequa Wind Farms- Notification of Basic Assessment Process

Hi Rozanne

Thank you for your email.

I will send my comments within the next couple of days.

Regards,

Anton Meyer

Senior Environmental Officer

De Beers Group of Companies

Namaqualand Mines

BMMR Checkpoint Drive

Private Bag X01

Kleinsee, 8282

Tel: + 027(0) 877-0048

Fax:+ 027(0) 11 374-5418

www.debeersgroup.com

From: Savannah Public Process <publicprocess@savannahsa.com>

Sent: 17 August 2018 03:26 PM

Cc: gabriele@savannahsa.com; nicolene@savannahsa.com

Subject: Namas & Zonnequa Wind Farms- Notification of Basic Assessment Process

Dear Stakeholder,

Two 140MW wind farms are proposed to be developed on adjacent sites within the Springbok REDZ, approximately 20km south of the town of Kleinsee in the Northern Cape. The wind farm are known as the Namas wind Farm and the Zonnequa Wind Farm and are within the Nama Khoi Local Municipality and the Namakwa District Municipality. A suitable project site for the development of each of the wind farms has been identified by the project development companies.

Savannah Environmental has been appointed to undertake the Basic Assessment Process for the Namas and Zonnequa Wind Farms.

Please refer to the attached Notification letter and Background Information document for further information regarding the project.

Please do not hesitate to contact us if you have any quires in this regards.

Kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

■

The information contained in this e-mail is confidential and may be subject to legal privilege. If you are not the intended recipient, you must not use, copy, distribute or disclose the e-mail or any part of its contents or take any action in reliance on it. If you have received this e-mail in error, please e-mail the sender by replying to this message. All reasonable precautions have been taken to ensure no viruses are present in this e-mail and the sender cannot accept responsibility for loss or damage arising from the use of this e-mail or attachments.

The information contained in this e-mail is confidential and may be subject to legal privilege. If you are not the intended recipient, you must not use, copy, distribute or disclose the e-mail or any part of its contents or take any action in reliance on it. If you have received this e-mail in error, please e-mail the sender by replying to this message. All reasonable precautions have been taken to ensure no viruses are present in this e-mail and the sender cannot accept responsibility for loss or damage arising from the use of this e-mail or attachments.

INTERESTED AND AFFECTED PARTIES (I&APS)

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
PUBLIC PARTICIPATION PROCESS
NAMAS WIND FARM & ZONNEQUA WIND FARM, NORTHERN CAPE
REGISTRATION & COMMENT FORM**

Return completed reply form to: **Rozanne Els** of **Savannah Environmental**

Fax: **086 684 0547**

Phone: **011 656 3237**

E-mail: **publicprocess@savannahsa.com**

Postal Address: **PO Box 148, Sunninghill, 2157**

Please provide your complete contact details:

Name & Surname:

Organisation & Designation:

Postal Address:

Telephone:

Fax:

JEANENE JESSNITZ	
OPEN AFRICA - PROJECT MANAGER	
P O BOX 3	
KLENZEE 8282	
	Cellphone: 0832642223
	E-mail: jeanene.jessnitz@gmail.com

Would you like to register as an interested and affected party (I&AP)? YES NO

(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

RURAL TOURISM & CONSERVATION DEVELOPMENT IS MY CORE FOCUS. ALSO INVOLVED WITH ENVIRONMENTAL EDUCATION & ENTERPRISE DEVELOPMENT IN RURAL AREAS. MENTORING THE 5 N/CAPE ROUTES - THE NAMAQUA COASTAL ROUTE & RICHTERSVELD

ROUTES IN PARTICULAR APPLY.

Please list your comments regarding the project (add additional pages if necessary):

WOULD LIKE TO BE INVOLVED. NEW DEVELOPMENT IN OUR REGION

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:

Organisation & Designation:

Postal Address:

Telephone:

Fax:

	Cellphone:
	E-mail:

COMMENTS RECEIVED AFTER NOTIFICATION OF
BASIC ASSESSMENT REPORT FOR PUBLIC
REVIEW AND COMMENT

INTERESTED AND AFFECTED PARTIES (I&APS)

Rozanne Els

From: Dominic Bugan <dbugan55@gmail.com>
Sent: 05 December 2018 4:03 PM
To: rozanne@savannahsa.com
Cc: nicolene@savannahsa.com
Subject: Re: release code to access the documents

Received, thank you.

On Wed, 5 Dec 2018 at 15:29, Rozanne Els <rozanne@savannahsa.com> wrote:

Good afternoon Dominic,

Please see the access codes below:

Namas LEk87*56\Kllqqh

Zonnequa 75j744}7Drf6

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Dominic Bugan [mailto:dbugan55@gmail.com]
Sent: 05 December 2018 12:19 PM
To: rozanne@savannahsa.com
Subject: release code to access the documents

Good day

I hereby request a access code to download documents for public view. I attended a Focus Group Meeting regarding the Namas Wind Farm project, and would like to read the Assessments done.

Thank you.

Dominic Bagan

COMMUNITY DEVELOPMENT WORKER

Savannah Environmental Public Process

From: Nicolene Venter <nicolene@savannahsa.com>
Sent: 27 November 2018 7:57 AM
To: nico.marika.smit@gmail.com
Cc: 'Savannah Environmental Public Process'
Subject: Namas & Zonnque: NC Security - Antwoord op navraag

Goeie More Nico,

Met verwysing na jou navraag ontvang op 22 November 2019 (e-pos hieronder) het ons die volgende terugvoer van die Applikant ontvang:

Unfortunately, at this early stage in the process, requirements cannot be stipulated as requested. It is suggested that it would be in your interest to have a favourable BBEEE scoring to improve your company's chances of success. What this needs to be the Applicant cannot advise. The Economic Development components to the project are becoming very competitive, meaning that they expect that Independent Power Producers (IPPs) will be setting high targets in order to maximise their chances of being appointed a Preferred Bidder.

The requirements will come from the appointed contractor, which is still very far off. It is therefore recommended that the company's business is aligned with the context of South Africa and possibly look into other renewable energy projects that are either operating or in construction to find out how the security companies involved are structured. This could be difficult to obtained, as the information might not be readily available.

It is recommended that some investigating be done, but even in doing so, it is not standard for every contract. However, it may give you some direction, but unfortunately there is no guarantee.

Laat ons gerus weet as daar nog enige verdere vra is.

Vriendelike groete

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Nicolene Venter [<mailto:nicolene@savannahsa.com>]
Sent: Thursday, November 22, 2018 1:42 PM
To: nico.marika.smit@gmail.com
Cc: 'Lisa Opperman' <lisa.o@savannahsa.com>; 'Rozanne Els' <rozanne@savannahsa.com>
Subject: RE: Namas & Zonnque Wind plase - NC Security

Middag Nico,

Goed om weer van jou te hoor!

Nico, ons sal jou navraag aan die ontwikkelaar (ons kliënt) deurgee en verneem of hulle al hierdie tipe van inligting beskikbaar het.

Sodra ons van hulle hoor, sal ons jou laat weet.

Groetnis

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

From: Nico Smit [<mailto:nico.marika.smit@gmail.com>]

Sent: 22 November 2018 11:23 AM

To: publicprocess@savannahsa.com

Subject: Namas & Zonnque Wind plase - NC Security

Goeie more Nicolene

Hoop en vertrou dit gaan goed en dat julle sommer vorder.

Wat ek graag sal wil weet, ek is `n Sekuriteits Diensverskaffer plaaslik op Kleinsee. Ek verstaan dat indien jy `n diens moet lewer aan hierdie maatskappye moet jy by sekere entiteite registreer wees en goed soos BBEEE moet 100% wees. Ek is geregistreer by PSIRA soos voorgeskryf deur die wet, maar is daar sekere vereistes wat julle of die maatskappye wat die werk gaan kry voorskryf.

Hierdie registrasies vat mos maar tyd en ek wil net nie met my broek op my skoene gevang word nie.

Groete

Nico Smit

NC Security Services

Sel no. 083 453 2821



Virus-free. www.avast.com



Virus-free. www.avast.com

Savannah Environmental Public Process

From: Natalie Weyers <nats.weyers@gmail.com>
Sent: 22 November 2018 7:34 PM
To: 'Savannah Public Process'
Subject: RE: ZONNEQUA WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

Hi, thanks for reminder.

We enjoyed and appreciated the feedback/info session we had with your team. Our few questions were noted, and therefore I can only say I wish you all the best of luck with this project and sincerely hope all goes as planned. 5 years down the line we hope to see the plan materialize, as mentioned, roads are a worry and medical assistance.....

Thanks again

From: Savannah Public Process [mailto:publicprocess@savannahsa.com]
Sent: 22 November 2018 01:15 PM
To: undisclosed-recipients:
Subject: ZONNEQUA WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

Dear Stakeholder,

With reference to the attached notification letter and emails below, this email serves as a reminder that the comment period ends **Tomorrow, Friday the 23rd November 2018**.

Kindly submit your comments by **Tomorrow, Friday the 23rd November 2018**, by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process <publicprocess@savannahsa.com>
> Date Sent: 16/11/2018 09:42
> To:
> Cc:

> Subject: FW: ZONNEQUA WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

>

Dear Stakeholder,

With reference to the attached notification letter and email below, this email serves as a reminder that the comment period ends on **Friday, 23 November 2018**.

Kindly submit your comments on or before **Friday, 23 November 2018** by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process

> Date Sent: 23/10/2018 09:30

> To:

> Cc:

> Subject: FW: ZONNEQUA WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

>

Dear Stakeholder,

A wind farm is proposed to be developed within the Springbok Renewable Energy Development Zone (REDZ), approximately 20 km south-east of the town of Kleinsee in the Northern Cape. The wind farm is known as the **Zonnequa Wind Farm** and is located within the Nama Khoi Local Municipality and the Namakwa District Municipality.

It is Genesis Zonnequa Wind (Pty) Ltd's, the developer, intention to bid the Zonnequa Wind Farm project under the Department of Energy's (DoE) Renewable Energy Independent Power Producer Procurement (REIPPP) Programme. The power generated from the project will be sold to Eskom and will feed into the national electricity grid. The development of the project will also assist with achieving the electricity generation goals as set out in the Integrated Resources Plan.

This e-mail serves to inform you, as a registered Interested and Affected Party (I&AP), that in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA) and the 2014 Environmental Impact

Assessment (EIA) Regulations, as amended in April 2017, that the Basic Assessment Report (BAR) is available for your review and comment.

The hard copy of the BAR can be viewed at the Kleinsee Library (3rd Avenue, Kleinsee, open on Tuesdays & Thursdays between 11h00 and 17h00) from **Wednesday, 24 October 2018** to **Friday, 23 November 2018**. An electronic copy can be downloaded from our website (<http://www.savannahsa.com/public-documents/energy-generation/zonnequa-wind-farm/>).

Please refer to the attached letter for further details in this regard.

Kind regards,

Nicolene Venter

Public Participation and Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Mobile: +27 83 377 9112 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

▪



Virus-free. www.avast.com

ORGANS OF STATE

Savannah Environmental Public Process

From: Nicolene Venter <nicolene@savannahsa.com>
Sent: 28 November 2018 10:01 AM
To: 'Simphiwe Masilela'
Cc: 'Graham Mondzinger'; 'Francois Coetzee'; 'Savannah Environmental Public Process'
Subject: Namas & Zonnequa: Acknowledgement of comments on BAR (ATNS)

Dear Simphiwe,

As per our previous e-mail, thank you for the comments received from the ATNS.

In response to the ATNS' advise that we contact the Operator / Manager at Kleinsee Airport, we can confirm that a representative XXXXX (Lisa, he attended the Kleinsee Community FGM) attended a Focus Group Meeting held in Kleinsee and therefore been made aware of these two projects.

Response regarding the Hyperion Solar PVs will be submitted in due course.

Kind regards,

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Simphiwe Masilela <SimphiweM@atns.co.za>
Sent: Tuesday, November 27, 2018 3:38 PM
To: Nicolene Venter <nicolene@savannahsa.com>; Rozanne Els <rozanne@savannahsa.com>
Cc: Graham Mondzinger <grahamm@atns.co.za>; Francois Coetzee <FrancoisC@atns.co.za>
Subject: Namas, Zonnequa & Hyperion



Good day Nicolene and Rozanne,

RE: NAMAS AND ZONNEQUA WIND FARM

This area is situated 20km SE of Kleinsee Airport, the proposed falls outside the Annex14 surfaces associated with the mentioned airport and it will not affect the safety of flight.

However, we recommend that they be contacted for comments on the above mentioned.

RE: HYPERION SOLAR PV's

The area in which the solar photovoltaic solar panels is situated is 13km SE of the FAR25: GA-TLHOSE/MAREMANE MILITARY SHOOTING RANGE boundary.

It also falls 5km NW of Sishen Airport, which is within the boundaries of the ICAO Annex 14 surfaces associated with the airport.

We cannot determine whether the proposed will affect the safety of flights, we would have to conduct a formal assessment once the project is ready for construction.

It may include a glint and glare impact assessment to be done as per SACAA requirement (refer to: Obstacle Notice 4/2017 (17/11/2017): Additional Requirements for Solar Project Applications) on the SACAA website.

We request that you please update us should there be any new developments that may affect our interests.

We will duly conduct assessments as required when the project is ready for construction.

Furthermore, we kindly request that all queries or new applications to be forwarded to the Obstacle Evaluators on the following:

obstacleEvaluator@atns.co.za

For note for us to carry out a successful assessment we require the following information:

1. LOCATION (Co-ordinates WGS84 system)
2. SITE/GROUND ELEVATION (AMSL)
3. HEIGHT TO TOP OF PROPOSED DEVELOPMENT (in meters)

Kind Regards,

Simphiwe Masilela

Obstacle Evaluator | COO - Air Traffic Services

ATNS Head Office, Bruma, Johannesburg, South Africa

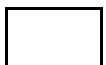
T: +2711 607 1228 • F: 011 607 1466 • C:

E: SimphiweM@atns.co.za • W: www.atns.com



[View Disclaimer](#)

The contents of this email are confidential and intended for the named recipient(s) only. The information may be privileged or otherwise protected from disclosure. The views expressed in this message are those of the sender, unless otherwise stated to be. This email is also subject to copyright. No part hereof may be reproduced, adapted, transmitted, or used in any way without the written consent of ATNS SOC Limited. Please do not hesitate to contact us immediately should you have any doubts regarding the authenticity of an email purportedly sent by the sender.



Virus-free. www.avast.com

Savannah Environmental Public Process

From: Nicolene Venter <nicolene@savannahsa.com>
Sent: 28 November 2018 7:40 AM
To: 'Simphiwe Masilela'
Cc: 'Graham Mondzinger'; 'Francois Coetzee'; 'Savannah Environmental Public Process'; 'Lisa Opperman'; 'Shaun Taylor'
Subject: Namas & Zonnequa Wind Farms and Hyperion Solar PVs 1,2,3&4: Acknowledgement of comments (ATNS)

Dear Simphiwe,

Please receive herewith our acknowledgement of the ATNS' comments on the:

- Basic Assessment Reports for the Namas and Zonnequa Wind Farms; and
- Scoping Reports for the four (4) Hyperion Solar PVs

Responses to the ATNS' comment will be provided in due course and we can confirm that it will be included in both the above-mentioned projects' Comments and Responses Reports that forms part of the Reports as mentioned above.

Kind regards,

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Simphiwe Masilela <SimphiweM@atns.co.za>
Sent: Tuesday, November 27, 2018 3:38 PM
To: Nicolene Venter <nicolene@savannahsa.com>; Rozanne Els <rozanne@savannahsa.com>
Cc: Graham Mondzinger <grahamm@atns.co.za>; Francois Coetzee <FrancoisC@atns.co.za>
Subject: Namas, Zonnequa & Hyperion



Good day Nicolene and Rozanne,

RE: NAMAS AND ZONNEQUA WIND FARM

This area is situated 20km SE of Kleinsee Airport, the proposed falls outside the Annex14 surfaces associated with the mentioned airport and it will not affect the safety of flight.

However, we recommend that they be contacted for comments on the above mentioned.

RE: HYPERION SOLAR PV's

The area in which the solar photovoltaic solar panels is situated is 13km SE of the FAR25: GA-TLHOSE/MAREMANE MILITARY SHOOTING RANGE boundary.

It also falls 5km NW of Sishen Airport, which is within the boundaries of the ICAO Annex 14 surfaces associated with the airport.

We cannot determine whether the proposed will affect the safety of flights, we would have to conduct a formal assessment once the project is ready for construction.

It may include a glint and glare impact assessment to be done as per SACAA requirement (refer to: Obstacle Notice 4/2017 (17/11/2017): Additional Requirements for Solar Project Applications) on the SACAA website.

We request that you please update us should there be any new developments that may affect our interests.

We will duly conduct assessments as required when the project is ready for construction.

Furthermore, we kindly request that all queries or new applications to be forwarded to the Obstacle Evaluators on the following:

obstacleEvaluator@atns.co.za

For note for us to carry out a successful assessment we require the following information:

1. LOCATION (Co-ordinates WGS84 system)
2. SITE/GROUND ELEVATION (AMSL)
3. HEIGHT TO TOP OF PROPOSED DEVELOPMENT (in meters)

Kind Regards,

Simphiwe Masilela

Obstacle Evaluator | COO - Air Traffic Services
ATNS Head Office, Bruma, Johannesburg, South Africa

T: +2711 607 1228 • F: 011 607 1466 • C:
E: SimphiweM@atns.co.za • W: www.atns.com



[View Disclaimer](#)

The contents of this email are confidential and intended for the named recipient(s) only. The information may be privileged or otherwise protected from disclosure. The views expressed in this message are those of the sender, unless otherwise stated to be. This email is also subject to copyright. No part hereof may be reproduced, adapted, transmitted, or used in any way without the written consent of ATNS SOC Limited. Please do not hesitate to contact us immediately should you have any doubts regarding the authenticity of an email purportedly sent by the sender.

Savannah Environmental Public Process

From: Samantha Ralston-Paton <energy@birdlife.org.za>
Sent: 23 November 2018 3:28 PM
To: Savannah Environmental Public Process
Subject: Re: Request fro Comment: Namas & Zonnequa Wind Farms
Attachments: Namas Zonnequq_dBAR_BirdLifecomment .pdf; Untitled attachment 01314.html; BLSA_logo.jpg; Untitled attachment 01317.html; PastedGraphic-2.pdf; Untitled attachment 01320.html; PastedGraphic-1.tiff; Untitled attachment 01323.html; PastedGraphic-2.tiff; Untitled attachment 01326.html

Importance: High

Dear Rozanne

Please see the attached comment,

Kind regards
Sam

Rozanne Els
Savannah Environmental
publicprocess@savannahsa.com

23 November 2018

Dear Ms Els

Draft Basic Assessment Reports for the proposed Namas and Zonnequa Wind Farms in the Northern Cape Province.

Thank for the opportunity to comment on the above report. BirdLife South Africa supports the responsible development of renewable energy infrastructure in South Africa. We largely agree with the findings and recommendations the avifaunal specialist, yet we remain concerned about the potential for cumulative negative impacts on Secretarybird. While no active nests have been identified, indications are that this is a preferred breeding area and it is possible, if not likely, that fresh attempts to breed will be made in the broader area. Should the nest at the proposed Namas facility be re-occupied, wind turbines would virtually surround the nest.

Should the development(s) be approved, we suggest the following:

- Prior to construction, the area should be searched for any signs of active Secretarybird nests.
- Should an active nest be identified, this should be treated as high sensitivity. If it is not possible to avoid constructing turbines within 1.5km of the nest, turbines within this buffer should be curtailed, or shutdown on demand during the breeding and fledgling period (this could be refined based on data collected indicating how the birds use the area).
- Should Secretarybirds be confirmed present in the area, a research project should be initiated (funded by the applicant) to study the birds, including how they respond to turbines (before and after construction) and how they respond to the removal of the nest. This information should be used to refine the mitigation strategy.
- In order to compensate for potential negative impacts, we strongly urge the applicant to work with the landowner(s) to reduce other threats to Secretarybird in the surrounding landscape. For example, fences should be removed or repaired, and their visibility should be increased – see attached pamphlet.

Lastly, we note that the EMP states that selective feathering or stopping turbines should be considered if unsustainable numbers of raptors are killed. We suggest that this should not be limited to raptors, but all birds. We also request that decisions regarding thresholds and options for operational phase mitigation be taken in consultation with relevant species experts, BirdLife South Africa and the Department of Environmental Affairs.

Thank you for taking the time to consider our input.



Giving Conservation Wings

BirdLife South Africa is a partner of BirdLife International, a global partnership of nature conservation organisations.
Member of IUCN (International Union for Conservation of Nature).

Reg No: 001 – 298 NPO
PBO Exemption No: 930004518

Yours sincerely

A handwritten signature in black ink, appearing to read "Samantha Ralston-Paton".

Samantha Ralston-Paton
Birds and Renewable Energy Project Manager

Isdell House, 17 Hume Road
Dunkeld West, Gauteng 2196
Private Bag X16, Pinetown
2123, South Africa
Tel: +27 (0)11 789 1122
Fax: +27 (0)11 789 5188
Email: info@birdlife.org.za
www.birdlife.org.za



Partnership for
nature and people



Honorary Patrons: Mrs Gaynor Rupert, Dr Precious Moloi-Motsepe, Mr Mark Shuttleworth



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environment House · 473 Steve Biko Road, Arcadia, · PRETORIA

DEA Reference: 14/12/16/3/3/1/1971

Enquiries: Mr Herman Alberts

Telephone: (012) 399 9371 **E-mail:** HAlberts@environment.gov.za

Ms Karen Jodas
Savannah Environmental (Pty) Ltd
PO Box 148
SUNNINGHILL
2157

Telephone Number: (011) 656 3237
E-Mail Address: karen@savannahsa.com

PER E-MAIL / MAIL

Dear Ms Jodas

COMMENTS ON THE DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED 140MW NAMAS WIND FARM WITHIN THE NAMA KHOI LOCAL MUNICIPALITY IN THE NORTHERN CAPE PROVINCE

The application for Environmental Authorisation (EA) and draft Basic Assessment Report (BAR) dated October 2018 and received by the Department on 24 October 2018, refer.

This letter serves to inform you that the following information must be included to the final BAR:

(a) Listed Activities

- (i) Please ensure that all relevant listed activities are applied for, are specific and that it can be linked to the development activity or infrastructure as described in the project description.
- (ii) If the activities applied for in the application form differ from those mentioned in the final BAR, an amended application form must be submitted. Please note that the Department's application form template has been amended and can be downloaded from the following link <https://www.environment.gov.za/documents/forms>.

(b) Process

- (i) The final BAR to be submitted to this Department must comply with all the requirements in terms of the scope of assessment and content of BARs in accordance with Appendix 1 and Regulation 19(1) of the EIA Regulations, 2014 as amended.
- (ii) In accordance with Appendix 1 (3) (1) (a) of the EIA Regulations, 2014 as amended, the following details must be submitted:
 - *the EAP who prepared the report; and*
 - *the expertise of the EAP to carry out EIA procedures.*

(c) Public participation

- (i) Please ensure that comments from all relevant stakeholders are submitted to the Department with the final BAR. This includes but is not limited to the Northern Cape Department of Environment and Nature Conservation, the Department of Agriculture, Forestry and Fisheries (DAFF), the provincial Department of Agriculture, the South African Civil Aviation Authority (SACAA), the Department of Transport, the Local Municipality, the District Municipality, the Department of Water and Sanitation (DWS), the South African National Roads Agency Limited (SANRAL), the South African Heritage Resources Agency (SAHRA), the Endangered Wildlife Trust (EWT), BirdLife SA, the Department of Mineral Resources, the Department of Rural Development and Land Reform, the Square Kilometre Array (SKA) and the Department of Environmental Affairs: Directorate Biodiversity and Conservation.
- (ii) Please ensure that all issues raised and comments received during the circulation of the draft BAR from registered I&APs and organs of state which have jurisdiction in respect of the proposed activity are adequately addressed in the final BAR. Proof of correspondence with the various stakeholders must be included in the final BAR. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments.
- (iii) A Comments and Response trail report (C&R) must be submitted with the final BAR. The C&R report must incorporate all comments for this development. The C&R report must be a separate document from the main report and the format must be in the table format as indicated in Annexure 1 of this comments letter. Please refrain from summarising comments made by I&APs. All comments from I&APs must be copied verbatim and responded to clearly. Please note that a response such as "noted" is not regarded as an adequate response to I&AP's comments.
- (iv) The Public Participation Process must be conducted in terms of Regulation 39, 40, 41, 42, 43 & 44 of the EIA Regulations 2014 as amended.
- (v) The final BAR must also indicate that this draft BAR has been subjected to a public participation process.
- (vi) The final BAR must indicate clearly the name of the newspaper that the advertisement for the draft BAR has been advertised.

(d) Alternatives

- (i) Please provide a full description of any identified alternatives for the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives will have on the environment and on the community that may be affected by the activity as per Appendix 1 (2) (e) and 3 (1) (h) (i) of GN R.982 of 2014 as amended. Further, you are required to indicate which alternative is preferred and provide detailed motivation on why it is preferred.
- (ii) Alternatively, you should submit written proof of an investigation and motivation if no reasonable or feasible alternatives exist in terms of Appendix 1 of the EIA Regulations, 2014 as amended.

(e) Layout & Sensitivity Maps

- (i) The final BAR must provide the four corner coordinate points for the proposed development site (note that if the site has numerous bend points, at each bend point coordinates must be provided) as well as the start, middle and end point of all linear activities.
- (ii) All preferred turbine positions must be clearly numbered. The turbine position numbers must be consistently used in all maps to be included in the final BAR.
- (iii) The final BAR must provide the technical details of the proposed facility in a table format as well as their description and/or dimensions. A sample for the minimum information required is listed under point 2 of the EIA information required for wind energy facilities below.
- (iv) A copy of the final layout map must be submitted with the final BAR. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:

- The envisioned area for the wind energy facility; i.e. placing of wind turbines and all associated infrastructure should be mapped at an appropriate scale.
 - All supporting onsite infrastructure such as laydown area, guard house, control room, and buildings, including accommodation etc.
 - All necessary details regarding all possible locations and sizes of the proposed satellite substation, the main substation and internal powerlines;
 - All existing infrastructure on the site, especially internal roads infrastructure;
 - The location of sensitive environmental features on site e.g. CBAs, heritage sites, wetlands, drainage lines etc. that will be affected by the facility and its associated infrastructure;
 - Buffer areas; and
 - All “no-go” areas.
- (v) The final BAR must include an environmental sensitivity map indicating environmental sensitive areas and features identified during the assessment process.
- (vi) The final BAR must include a map combining the final layout map superimposed (overlain) on the environmental sensitivity map.
- (vii) A shapefile of the preferred development layout/footprint must be submitted to this Department. The shapefile must be created using the Hartebeesthoek 94 Datum and the data should be in Decimal Degree Format using the WGS 84 Spheroid. The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, .xml (Metadata file). If specific symbology was assigned to the file, then the .avl and/or the .lyr file must also be included. Data must be mapped at a scale of 1:10 000 (please specify if an alternative scale was used). The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title. The shape file must be submitted to:

Postal Address:

Department of Environmental Affairs
Private Bag X447
Pretoria
0001

Physical address:

Department of Environmental Affairs
Environment House
473 Steve Biko,
Arcadia,
Pretoria

For Attention: Muhammad Essop
Integrated Environmental Authorisations
Strategic Infrastructure Developments
Telephone Number: (012) 399 9406
Email Address: MEssop@environment.gov.za

(f) Specialist assessments

- (i) The EAP must ensure that the terms of reference (TOR) for all the identified specialist studies must include the following:
- A detailed description of the study’s methodology; indication of the locations and descriptions of the development footprint, and all other associated infrastructures that they have assessed and are recommending for authorisations.
 - Provide a detailed description of all limitations to the studies. All specialist studies must be conducted in the right season and providing that as a limitation will not be allowed.

- Please note that the Department considers a 'no-go' area, as an area where no development of any infrastructure is allowed; therefore, no development of associated infrastructure including access roads is allowed in the 'no-go' areas.
 - Should the specialist definition of 'no-go' area differ from the Departments definition; this must be clearly indicated. The specialist must also indicate the 'no-go' area's buffer if applicable.
 - All specialist studies must be final, and provide detailed/practical mitigation measures and recommendations, and must not recommend further studies to be completed post EA.
 - Should specialists recommend specific mitigation measures for identified turbine positions, these must be clearly indicated.
 - Clearly defined cumulative impacts and where possible the size of the identified impact must be quantified and indicated, i.e. hectares of cumulatively transformed land.
 - A detailed process flow to indicate how the specialist's recommendations, mitigation measures and conclusions from the various similar developments in the area were taken into consideration in the assessment of cumulative impacts and when the conclusion and mitigation measures were drafted for this project.
 - Identified cumulative impacts associated with the proposed development must be rated with the significance rating methodology used in the process.
 - The significance rating must also inform the need and desirability of the proposed development.
 - A cumulative impact environmental statement on whether the proposed development must proceed.
- (ii) Should the appointed specialists specify contradicting recommendations, the EAP must clearly indicate the most reasonable recommendation and substantiate this with defensible reasons; and where necessary, include further expertise advice.
- (iii) The avifauna and bat specialist studies must be conducted according to the latest BirdLife South Africa/Endangered Wildlife Trust: Best practice guidelines for avian monitoring and impact mitigation at proposed wind energy development sites in Southern Africa and the latest South African Bat Assessment Advisory Panel's (SABAAP) guidelines.

(g) The Environmental Management Programme (EMPr) to be submitted as part of the BAR must include the following:

- (i) All recommendations and mitigation measures recorded in the BAR and the specialist studies conducted.
- (ii) The final site layout map.
- (iii) Measures as dictated by the final site layout map and micro-siting.
- (iv) An environmental sensitivity map indicating environmental sensitive areas and features identified during the basic assessment process.
- (v) A map combining the final layout map superimposed (overlain) on the environmental sensitivity map.
- (vi) An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.
- (vii) A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site and be implemented prior to commencement of the construction phase.
- (viii) An avifauna monitoring and management plan to be implemented during the construction and operation of the facility. This plan must be drafted by a suitably qualified avifauna specialist.
- (ix) A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- (x) An open space management plan to be implemented during the construction and operation of the facility.

- (xi) A traffic management plan for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimize impacts on local commuters e.g. limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
- (xii) A transportation plan for the transport of components, main assembly cranes and other large pieces of equipment.
- (xiii) A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
- (xiv) A fire management plan to be implemented during the construction and operation of the facility.
- (xv) An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.
- (xvi) An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.
- (xvii) Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.

The EAP must provide detailed motivation if any of the above requirements is not required by the proposed development and not included in the EMPr.

The Environmental Management Programme (EMPr) must comply with all the requirements in terms of the content of EMPrs in accordance with Appendix 4 of the EIA Regulations, 2014 as amended.

General

The EAP is requested to contact the Department to make the necessary arrangements to conduct a site inspection prior to the submission of the final BAR.

Please also ensure that the final BAR includes the period for which the Environmental Authorisation is required and the date on which the activity will be concluded as per Appendix 1 (3)(1)(q) of the NEMA EIA Regulations, 2014, as amended.

You are further reminded to comply with Regulation 19(1)(a) of the NEMA EIA Regulations, 2014, as amended, which states that:

*“Where basic assessment must be applied to an application, the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority -
 (a) a basic assessment report, inclusive of specialist reports, an EMPr, and where applicable a closure plan, which have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority.”*

Should there be significant changes or new information that has been added to the BAR or EMPr which changes or information was not contained in the reports or plans consulted on during the initial public participation process, you are therefore required to comply with Regulation 19(b) of the NEMA EIA Regulations, 2014, as amended, which states:

“the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority – (b) a notification in writing that the basic assessment report, inclusive of specialist reports an EMPr, and where applicable, a closure plan, will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the basic assessment report or EMPr or, where applicable, a closure plan, which changes or information was not contained in the reports or plans consulted on during the initial public participation process contemplated in subregulation (1)(a) and that the revised reports or, EMPr or, where applicable, a closure plan will be subjected to another public participation process of at least 30 days”.

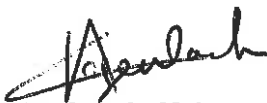
Should you fail to meet any of the timeframes stipulated in Regulation 19 of the NEMA EIA Regulations, 2014, as amended, your application will lapse.

Furthermore, it must be reiterated that, should an application for Environmental Authorisation be subject to the provisions of Chapter II, Section 38 of the National Heritage Resources Act, Act 25 of 1999, then this Department will not be able to make nor issue a decision in terms of your application for Environmental Authorisation pending a letter from the pertinent heritage authority categorically stating that the application fulfils the requirements of the relevant heritage resources authority as described in Chapter II, Section 38(8) of the National Heritage Resources Act, Act 25 of 1999. Comments from SAHRA and/or the provincial department of heritage must be provided in the BAR.

You are requested to submit two (2) electronic copies (1 CD and 1 USB) and two (2) hard copies of the BAR to the Department as per Regulation 19(1) of the EIA Regulations, 2014 (as amended). You are also reminded of Section 24F of the National Environmental Management Act, Act No 107 of 1998, as amended, which stipulates that no activity may commence prior to an Environmental Authorisation being granted by the Department.

You are hereby reminded of Section 24F of the National Environmental Management Act, Act No. 107 of 1998, as amended, that no activity may commence prior to an Environmental Authorisation being granted by the Department.

Yours faithfully



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Signed by: Mr Coenrad Agenbach

Designation: Deputy Director: Strategic Infrastructure Developments

Date: 23/11/2018

CC:	Mr Davin Chown	Genesis Namas Wind (Pty) Ltd	E-mail: davin@genesis-eco.com
	Mr Brian Fischer	NC DENC	E-mail: BFisher@ncpg.gov.za
	Ms Samantha Titus	Nama Khoi Local Municipality	E-mail: municipal.manager@namakhoi.gov.za

EIA INFORMATION REQUIRED FOR WIND ENERGY FACILITIES

1. General site information

The following general site information is required:

- Descriptions of all affected farm portions
- 21 digit Surveyor General codes of all affected farm portions
- Copies of deeds of all affected farm portions
- Photos of areas that give a visual perspective of all parts of the site
- Photographs from sensitive visual receptors (tourism routes, tourism facilities, etc.)
- Facility design specifications including:
 - Type of technology
 - Structure height
 - Surface area to be covered (including associated infrastructure such as roads)
 - Structure orientation
 - Laydown area dimensions (construction period and thereafter)
 - Generation capacity
- Generation capacity of the facility as a whole at delivery points

This information must be indicated on the first page of the EIAr. It is also advised that it be double checked as there are too many mistakes in the applications that have been received that take too much time from authorities to correct.

2. Sample of technical details for the proposed facility:

Component	Description/ Dimensions
Location of the site	
Facility area	
SG Codes	
Site access	
Export capacity	
Proposed technology	
Hub height from ground level	
Rotor diameter	
Area occupied by substations	
Area occupied by both permanent and construction laydown areas	
Area occupied by buildings	
Width and length of internal roads	
Proximity to grid connection	
Type and height of fencing	

3. Site maps and GIS information

Site maps and GIS information should include at least the following:

- All maps/information layers must also be provided in ESRI Shapefile format
- All affected farm portions must be indicated
- The exact site of the application must be indicated (the areas that will be occupied by the application)

- A status quo map/layer must be provided that includes the following:
 - Current use of land on the site including:
 - Buildings and other structures
 - Agricultural fields
 - Grazing areas
 - Natural vegetation areas (natural veld not cultivated for the preceding 10 years) with an indication of the vegetation quality as well as fine scale mapping in respect of Critical Biodiversity Areas and Ecological Support Areas
 - Critically endangered and endangered vegetation areas that occur on the site
 - Bare areas which may be susceptible to soil erosion
 - Cultural historical sites and elements
 - Rivers, streams and water courses
 - Ridgelines and 20m continuous contours with height references in the GIS database
 - Fountains, boreholes, dams (in-stream as well as off-stream) and reservoirs
 - High potential agricultural areas as defined by the Department of Agriculture, Forestry and Fisheries
 - Buffer zones (also where it is dictated by elements outside the site):
 - 500m from any irrigated agricultural land
 - 1km from residential areas
 - Indicate isolated residential, tourism facilities on or within 1km of the site
- A slope analysis map/layer that include the following slope ranges:
 - Less than 8% slope (preferred areas for WIND TURBINE and infrastructure)
 - between 8% and 12% slope (potentially sensitive to WIND TURBINE and infrastructure)
 - between 12% and 14% slope (highly sensitive to WIND TURBINE and infrastructure)
 - steeper than 18% slope (unsuitable for WIND TURBINE and infrastructure)
- A site development proposal map(s)/layer(s) that indicate:
 - Foundation footprint
 - Permanent laydown area footprint
 - Construction period laydown footprint
 - Internal roads indicating width (construction period width and operation period width) and with numbered sections between the other site elements which they serve (to make commenting on sections possible)
 - River, stream and water crossing of roads and cables indicating the type of bridging structures that will be used
 - Substation(s) and/or transformer(s) sites including their entire footprint.
 - Cable routes and trench dimensions (where they are not along internal roads)
 - Connection routes to the distribution/transmission network (the connection must form part of the EIA even if the construction and maintenance thereof will be done by another entity such as ESKOM)
 - Cut and fill areas at WIND TURBINE sites along roads and at substation/transformer sites indicating the expected volume of each cut and fill
 - Borrow pits
 - Spoil heaps (temporary for topsoil and subsoil and permanently for excess material)
 - Buildings including accommodation

With the above information authorities will be able to assess the strategic and site impacts of the application.

4. Regional map and GIS information

The regional map and GIS information should include at least the following:

- All maps/information layers must also be provided in ESRI Shapefile format
- The map/layer must cover an area of 20km around the site
- Indicate the following:
 - roads including their types (tarred or gravel) and category (national, provincial, local or private)
 - Railway lines and stations
 - Industrial areas
 - Harbours and airports
 - Electricity transmission and distribution lines and substations
 - Pipelines
 - Waters sources to be utilised during the construction and operational phases
 - A visibility assessment of the areas from where the facility will be visible
 - Critical Biodiversity Areas and Ecological Support Areas
 - Critically Endangered and Endangered vegetation areas
 - Agricultural fields
 - Irrigated areas
 - An indication of new road or changes and upgrades that must be done to existing roads in order to get equipment onto the site including cut and fill areas and crossings of rivers and streams

5. Important stakeholders

Amongst other important stakeholders, comments from the National Department of Agriculture, Forestry and Fisheries must be obtained and submitted to the Department. Any application, documentation, notification etc. should be forwarded to the following officials:

Ms Mashudu Marubini
Delegate of the Minister (Act 70 of 1970)
E-mail: MashuduMa@daff.gov.za
Tel 012- 319 7619

Ms Thoko Buthelezi
AgriLand Liaison office
E-mail: ThokoB@daff.gov.za
Tel 012- 319 7634

All hardcopy applications / documentation should be forwarded to the following address:

Physical address:

Delpen Building
Cnr Annie Botha and Union Street
Office 270
Attention: Delegate of the Minister Act 70 of 1970

Postal Address:

Department of Agriculture, Forestry and Fisheries
Private Bag X120
Pretoria
0001
Attention: Delegate of the Minister Act 70 of 1970

In addition, comments must be requested from Eskom regarding grid connectivity and capacity. Request for comment must be submitted to:

Mr John Geeringh
Eskom Transmission
Megawatt Park D1Y38
PO Box 1091
JOHANNESBURG
2000

Tel: 011 516 7233
Fax: 086 661 4064
John.geeringh@eskom.co.za

B. AGRICULTURE STUDY REQUIREMENTS

- Detailed soil assessment of the site in question, incorporating a radius of 50 m surrounding the site, on a scale of 1:10 000 or finer. The soil assessment should include the following:
 - Identification of the soil forms present on site
 - The size of the area where a particular soil form is found
 - GPS readings of soil survey points
 - The depth of the soil at each survey point
 - Soil colour
 - Limiting factors
 - Clay content
 - Slope of the site
 - A detailed map indicating the locality of the soil forms within the specified area,
 - Size of the site
- Exact locality of the site
- Current activities on the site, developments, buildings
- Surrounding developments / land uses and activities in a radius of 500 m of the site
- Access routes and the condition thereof
- Current status of the land (including erosion, vegetation and a degradation assessment)
- Possible land use options for the site
- Water availability, source and quality (if available)
- Detailed descriptions of why agriculture should or should not be the land use of choice
- Impact of the change of land use on the surrounding area
- A shape file containing the soil forms and relevant attribute data as depicted on the map.

C. ASTRONOMY GEOGRAPHIC ADVANTAGE ACT, 2007 (ACT NO. 21 OF 2007)

The purpose of the Act is to preserve the geographic advantage areas that attract investment in astronomy. The entire Northern Cape Province excluding the Sol Plaatje Municipality had been declared an astronomy advantage area. The Northern Cape optical and radio telescope sites were declared core astronomy advantage areas. The Act allowed for the declaration of the Southern Africa Large Telescope (SALT), MeerKAT and Square Kilometre Array (SKA) as astronomy and related scientific endeavours that had to be protected.

You must indicate the applicability of the Astronomy Geographic Advantage Act, Act No. 21 of 2007 on the application in the BAR/EIR. You must obtain comments from the Southern African Large Telescope (SALT) if the proposed development is situated within a declared astronomy advantage area.

Annexure 1

Format for Comments and Response Trail Report:

Date of comment, format of comment name of organisation/I&AP	Comment	Response from EAP/Applicant/Specialist
27/01/2016 Email Department of Environmental Affairs: Strategic Infrastructure Development (John Soap)	Please record C&R trail report in this format Please update the contact details of the provincial environmental authority	EAP: (Noted)The C&R trail report has been updated into the desired format, see Appendix K EAP: Details of provincial authority have been updated, see page 16 of the Application form

Nicolene Venter

From: Nicolene Venter <nicolene@savannahsa.com>
Sent: Wednesday, November 21, 2018 11:12 AM
To: 'Deidre Koopman'
Cc: 'Cynthia Nkoane'
Subject: RE: Namas & Zonnequa: Property information

Dear Deidre,

Thank you for the confirmation below.

Kind regards,

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Deidre Koopman <Deidre.Koopman@drdlr.gov.za>
Sent: Wednesday, November 21, 2018 11:10 AM
To: Nicolene Venter <nicolene@savannahsa.com>
Cc: Cynthia Nkoane <Cynthia.Nkoane@drdlr.gov.za>
Subject: RE: Namas & Zonnequa: Property information

Dear Nicolene

Kindly note that the DRDLR has no relation in terms of the properties listed on the spreadsheet, as it is privately owned.

Regards
Deidré

From: Nicolene Venter [mailto:nicolene@savannahsa.com]
Sent: Tuesday, November 20, 2018 4:15 PM
To: Deidre Koopman
Subject: Namas & Zonnequa: Property information

Dear Deidre,

Attached please find the spreadsheet with the property information for both the Namas & Zonnequa Wind Energy Projects as requested.

Please do not hesitate to contact us should you require any additional information.

Kind regards,



Virus-free. www.avast.com



t: +27 (0)11 656 3237
f: +27 (0) 86 684 0547

Nicolene Venter
Public Participation and Social
Consultant

e: nicolene@savannahsa.com
c: +27 (0) 83 377 9112

SAWEA Award for Leading Environmental Consultant on Wind Projects in 2013 & 2015

Savannah Environmental Public Process

From: Kate MacEwan <kate@iws-sa.co.za>
Sent: 23 November 2018 10:25 AM
To: Savannah Public Process
Subject: Re: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

Dear Rozanne

My main comment for the Namas Basic Assessment is as follows:

Why is the following mitigation recommendation by the specialist not specified under mitigation measures, but has instead been put as project implications? It should be a specific and detailed mitigation measure (not vague as currently written) in order for the impact rating to be reduced:

It is recommended that Level 3 mitigation be applied to all turbines on site from the start of operation, from sunset until sunrise every night for the months of March, April, May, August and September. This implies 90-degree feathering below the manufacturer's cut in speed to minimise free-wheeling, which does not result in high production loss but can lessen the likelihood of bat impacts significantly. If this mitigation is not technically feasible based on the model of turbine to be used, the bat specialist conducting the operational bat mortality study must recommend a technically feasible alternative. The specialist conducting the operational bat mortality monitoring may also, after the first year of operational monitoring, recommend Level 3, or other required mitigations, to be applied to selected turbines only, based on the bat mortality results. This is an adaptive management approach and the effectiveness of the adaptive management will have to be determined during the second year of the operational monitoring study.

Kind regards

Kate MacEwan
Chairperson
South African Bat Assessment Association (SABAA)
Mobile: +27 (0) 79 175 1758
Email: kate@iws-sa.co.za
Web: www.sabaa.org.za



From: Savannah Public Process <publicprocess@savannahsa.com>
Reply-To: Savannah Public Process <publicprocess@savannahsa.com>
Date: Friday, 23 November 2018 at 07:23
To: <undisclosed-recipients:;>
Subject: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

Dear Stakeholder,

With reference to the attached notification letter and emails below, this email serves as a reminder that the comment period ends **Today, Friday the 23rd of November 2018**.

Kindly submit your comments **Today, Friday the 23rd of November 2018**, by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process <publicprocess@savannahsa.com>
> Date Sent: 22/11/2018 13:12
> To:
> Cc:
> Subject: FW: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT
>

Dear Stakeholder,

With reference to the attached notification letter and emails below, this email serves as a reminder that the comment period ends **Tomorrow, Friday the 23rd November 2018**.

Kindly submit your comments by **Tomorrow, Friday the 23rd November 2018**, by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process
> Date Sent: 16/11/2018 09:44
> To:
> Cc:
> Subject: FW: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT
>

Dear Stakeholder,

With reference to the attached notification letter and email below, this email serves as a reminder that the comment period ends on **Friday, 23 November 2018**.

Kindly submit your comments on or before **Friday, 23 November 2018** by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process
> Date Sent: 23/10/2018 09:18
> To:
> Cc:
> Subject: FW: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT
>

Dear Stakeholder,

A wind farm is proposed to be developed within the Springbok Renewable Energy Development Zone (REDZ), approximately 20 km south-east of the town of Kleinsee in the Northern Cape. The wind farm is known as the **Namas Wind Farm** and is located within the Nama Khoi Local Municipality and the Namakwa District Municipality.

It is Genesis Namas Wind (Pty) Ltd's, the developer, intention to bid the Namas Wind Farm project under the Department of Energy's (DoE) Renewable Energy Independent Power Producer Procurement

(REIPPP) Programme. The power generated from the project will be sold to Eskom and will feed into the national electricity grid. The development of the project will also assist with achieving the electricity generation goals as set out in the Integrated Resources Plan.

This e-mail serves to inform you, as a registered Interested and Affected Party (I&AP), that in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA) and the 2014 Environmental Impact Assessment (EIA) Regulations, as amended in April 2017, that the Basic Assessment Report (BAR) is available for your review and comment.

The hard copy of the BAR can be viewed at the Kleinsee Library (3rd Avenue, Kleinsee, open on Tuesdays & Thursdays between 11h00 and 17h00) from **Wednesday, 24 October 2018** to **Friday, 23 November 2018**. An electronic copy can be downloaded from our website (<http://www.savannahsa.com/public-documents/energy-generation/namas-wind-farm/>).

Please refer to the attached letter for further details in this regard.

Kind regards,

Nicolene Venter

Public Participation and Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Mobile: +27 83 377 9112 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

▪



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 13064

Date: Thursday November 15, 2018
Page No: 1

Final Comment

In terms of Section 38(4), 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Genesis Namas Wind (Pty) Ltd

c/o Unit B10, Century Plaza, Heron Crescent, Century City, Cape Town

The development of a wind farm with a contracted capacity of up to 140MW which will include up to 43 wind turbines and associated infrastructure including a substation, a power line to connect at Gromis Substation, access roads and laydown areas.

Savannah Environmental has been contracted by Genesis Namas Wind Farm (Pty) Ltd to conduct an Environmental Authorisation (EA) Application process for the proposed Namas Wind Energy Facility (WEF) near Kleinsee, Northern Cape Province. A draft Basic Assessment Report (BAR) has been completed in terms of the National Environmental Management Act, 1998 (NEMA) and the 2017 NEMA Environmental Impact Assessment (EIA) Regulations. The proposed development will include the construction of up to 43 wind turbines, concrete turbine foundations and turbine hardstands, temporary laydown areas, cabling between the turbine to be laid underground where practical, on-site substation, access roads, temporary concrete batching plant, operations and maintenance buildings.

ASHA Consulting (Pty) Ltd had been appointed to provide heritage input into the EA Application process as per section 38(3) and 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA).

Orton, J. 2018. Heritage Impact Assessment: Proposed Namas Wind Farm near Kleinsee, Namakwaland Magisterial District, Northern Cape.

Over 50 heritage sites were identified within the proposed development area. These include ephemeral scatters and deflation hollows containing marine shell fragments, Stone Age lithics, ceramics, ostrich eggshell fragments, hammerstone fragment, quartzite anvil, and glass fragments. Of the identified heritage resources, a total of 29 sites were rated as sites of low-medium significance that require mitigation, one of medium significance and one of medium-high significance.

Recommendations provided in the report include the following:

- An archaeologist should be appointed to conduct a final pre-construction survey of the approved layout



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 13064

Date: Thursday November 15, 2018

Page No: 2

- at least 6 months prior to the commencement of construction;
- A chance finds procedure must be implemented for the rescuing of any fossils discovered during construction;
 - All work is to be carried out within the authorised construction footprint. Any new area that may need to be disturbed must be surveyed for archaeological sites prior to disturbance;
 - Where possible, built elements should be painted in a colour to match the surrounding landscape;
 - Any disturbed areas not required during operation must be rehabilitated after construction; and
 - If any archaeological material or human burials are uncovered during the course of the development, then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

Pether, J. 2018. Palaeontological Impact Assessment (Desktop Study): Proposed Genesis Namas and Zonnequa Wind Farms, Namakwa District Municipality, Northern Cape.

The proposed development area is underlain by the unfossiliferous Springbok Formation, Olifantsrivier and Graauw Duinen Formations, Dorbank Formations, Swartlintjies Formation, Koekenaap Formation, and the Hardevlei Formation. Sparse fossil bones have been recorded from the Dorbank Formation and in the overlying coversands and dunes, and late Quaternary faunal assemblages have been recorded in the Swartlintjies Formation such as frogs, ostrich, zebra, steenbok, giraffe, and small rodents. The Dorbank Formation will be impacted by the development.

Recommendations provided in the report include the following:

- Monitoring of all construction phase excavations by project staff and Environmental Control Officer (ECO);
- Inspection, sampling and recording of selected exposures in the event of fossil finds;
- Fossil finds and the compiled contextual report deposited in a curatorial scientific institution;
- Inform staff of the need to watch for potential fossil occurrence and the Fossil Finds Procedures to be followed in the event of fossil occurrences;
- Liaise with palaeontologist on the nature of potential finds and appropriate actions;
- Obtain a permit from SAHRA for the fossil finds collection should resources be discovered.

Final Comment

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 13064

Date: Thursday November 15, 2018
Page No: 3

The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has no objection to the development and supports the recommendations of the specialists. The recommendations of the specialists and the following conditions apply to the development and must be included in the Final BAR and EMPr:

- The walk-down of the final approved layout must be conducted by a qualified archaeologist and the walk-down report must be submitted to SAHRA prior to the construction phase. No construction may commence without comments from SAHRA in this regard;
- Should any of the identified heritage sites rated as low-medium, medium and medium-high be impacted by the proposed development, a permit in terms of section 35 of the NHRA and Chapter II and IV of the NHRA Regulations must be applied for prior to the construction phase;
- The Final BAR and EMPr must be submitted to SAHRA for record purposes;
- If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately. A professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA;
- Should the project be granted Environmental Authorisation, SAHRA must be notified and all relevant documents submitted to the case file.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

Natasha Higgitt
Heritage Officer

Our Ref:



an agency of the
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za
South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 13064

Date: Thursday November 15, 2018
Page No: 4

South African Heritage Resources Agency

Phillip Hine
Acting Manager: Archaeology, Palaeontology and Meteorites Unit
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/513722>
(DEA, Ref:)

Terms & Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.

Ms. Nicolene Venter

Public Participant and Social Consultation

Savannah Environmental (Pty) Ltd

email:publicprocess@savannahsa.com

Date: 27 November 2018

Dear Ms. Venter

RE: BASIC ASSESSMENT REPORT FOR THE PROPOSED NAMAS WIND FARM

This letter is in response to your notice of availability of basic assessment report for review and comment with regard to the impact of the proposed wind energy farm on the Square Kilometre Array radio telescope.

The South African Radio Astronomy Observatory has conducted a high level risk assessment on the potential impact of the Namas Wind Farm on the SKA and based on the distance from the location of the proposed wind farm to the nearest SKA radio telescope facility, we do not anticipate any negative impact on the SKA and have no objection to the project at this current stage.

SARAO would like to be kept informed of the progress with this project and reserves the right to further risk assessments at a later stage.

Regards,


Mr Busang Sethole
Spectrum & Telecommunication Analyst
South African Radio Astronomy Observatory (SARAO)
Tel: 011 442 2434
Email: bsethole@ska.ac.za

www.ska.ac.za

The South African Radio Astronomy Observatory (SARAO) is a National Facility managed by the National Research Foundation and incorporates all national radio astronomy telescopes and programmes. SARAO is responsible for implementing the Square kilometre Array (SKA) in South Africa.

Savannah Environmental Public Process

From: Nicolene Venter <nicolene@savannahsa.com>
Sent: 27 November 2018 2:24 PM
To: 'Busang Sethole'
Cc: 'Adrian Tiplady'; 'Musa Baloye'; lisa.o@savannahsa.com; 'Savannah Environmental Public Process'
Subject: RE: Namas Wind Farm: Comments Enquiry

Dear BR,

Thank you – much appreciated.

Kind regards

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Busang Sethole <bsethole@ska.ac.za>
Sent: Tuesday, November 27, 2018 9:38 AM
To: nicolene@savannahsa.com
Cc: Adrian Tiplady <atiplady@ska.ac.za>; Musa Baloye <mbaloye@ska.ac.za>; lisa.o@savannahsa.com; rozanne@savannahsa.com
Subject: Re: Namas Wind Farm: Comments Enquiry

Hi Nicole

Please find the attached comments for Namas.

BR,

Busang Sethole

Analyst: Spectrum and Telecoms
South African Radio Astronomy Observatory
www.ska.ac.za
17 Baker Street, Rosebank, South Africa
Phone: +27 11 268 3449

On Mon, Nov 26, 2018 at 4:35 PM Nicolene Venter <nicolene@savannahsa.com> wrote:

Dear Busang,

I would just like to confirm whether we will be receiving comments on the Basic Assessment Report for the Namas Wind Farm from SARAO.

We received SARAO's comments on the Zonnequa Wind Farm.

Kind regards,

Nicolene Venter

Public Participation & Social Consultant | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Busang Sethole <bsethole@ska.ac.za>

Sent: Monday, November 26, 2018 8:55 AM

To: publicprocess@savannahsa.com

Cc: Adrian Tiplady <atiplady@ska.ac.za>; nicolene@savannahsa.com; Musa Baloye <mbaloye@ska.ac.za>

Subject: Re: Request fro Comment: Namas & Zonnequa Wind Farms

Good Day

Kindly find the signed response from SARAO on the basic assessment report.

BR,

Busang Sethole

Analyst: Spectrum and Telecoms

South African Radio Astronomy Observatory

www.ska.ac.za

17 Baker Street, Rosebank, South Africa

Phone: +27 11 442 3449

On Mon, Nov 26, 2018 at 8:44 AM Savannah Environmental Public Process <publicprocess@savannahsa.com> wrote:

Dear Adrian,

Thank you. We will await the formal submission.

Kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

[SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015](#)

From: Adrian Tiplady [mailto:atiplady@ska.ac.za]

Sent: 26 November 2018 8:26 AM

To: Savannah Environmental Public Process <publicprocess@savannahsa.com>

Cc: Busang Sethole <bsethole@ska.ac.za>

Subject: Re: Request fro Comment: Namas & Zonnequa Wind Farms

Hi Rozanne,

Apologies for the delay - the facility will not pose any detrimental impact on the SKA. My colleague Busang, cc'd on this email, will send you a formal submission confirming this.

Regards,

Adrian

On 23/11/2018 12:32 PM, Savannah Environmental Public Process wrote:

Dear Adrian,

This email serves as a reminder that the comment period for the above mentioned project ends **Today the 23rd of November 2018.**

Kindly indicate if you will be submitting comments ?

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd

Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

From: Savannah Environmental Public Process [<mailto:publicprocess@savannahsa.com>]

Sent: 20 November 2018 10:32 AM

To: 'atiplady@ska.ac.za' <atiplady@ska.ac.za>

Subject: Request fro Comment: Namas & Zonnequa Wind Farms

Importance: High

Dear Adrian,

With reference to the attached notification letters in regards to the Namas and Zonnequa Wind Farms, we noted that we have not yet received written comment on the Basic Assessment Report for public review from SKA.

This e-mail serves as a reminder that the comment period for the above mentioned project ends on **Friday, 23 November 2018.**

It would be appreciated if you can submit written comment before or on **Friday, 23 November 2018** by close of business.

Should you not have any comments, please inform us accordingly.

Kind regards,

--

Dr. Adrian Tiplady
SKA South Africa
Johannesburg
+27 11 442 2434
+27 72 372 0134
www.ska.ac.za



Virus-free. www.avast.com

Savannah Environmental Public Process

From: Lizell Stroh <StrohL@caa.co.za>
Sent: 27 November 2018 3:51 PM
To: Savannah Public Process
Subject: RE: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT
Attachments: Information template Windfarms Development around Aerodromes.docx

From: Savannah Public Process [mailto:publicprocess@savannahsa.com]
Sent: 22 November 2018 01:12 PM
Subject: REMINDER: NAMAS WIND FARM: NOTIFICATION OF AVAILABILITY OF BASIC ASSESSMENT REPORT FOR REVIEW AND COMMENT

Dear Stakeholder,

With reference to the attached notification letter and emails below, this email serves as a reminder that the comment period ends **Tomorrow, Friday the 23rd November 2018**.

Kindly submit your comments by **Tomorrow, Friday the 23rd November 2018**, by close of business.

Thank you and kind regards,

Rozanne Els

Public Participation Co-ordinator | Savannah Environmental (Pty) Ltd
Tel: +27 (0)11 656 3237 | Fax: +27 (0)86 684 0547

SAWEA Award for Leading Environmental Consultant for Wind Projects in 2013 & 2015

> From: Savannah Public Process <publicprocess@savannahsa.com>
> Date Sent: 16/11/2018 09:44
> To:
> Cc:



Information Document

Wind Farms and Obstacle Assessments

1. Introduction

- 1.1 The effective use of an aerodrome may be considerably affected by natural features and by manmade constructions both inside and outside the boundaries of the aerodrome.
- 1.2 This may result in restrictions to the optimal use of the aerodrome
- 1.3 It is therefore necessary to consider the local airspace as an integral part of the aerodrome environment
- 1.4 The control of obstacles, and here I include the prevention or removal of obstacles, is clearly related to the safe and efficient use of the aerodrome.
- 1.5 What is an Obstacle?

International Civil Aviation Organization (ICAO) Annex 14 definition:-

All fixed or mobile objects or parts thereof, whether temporary or permanent, that:

- a) are located on an area intended for the surface movement of aircraft; or
- b) Extend above a defined surface intended to protect aircraft in flight; or
- c) Stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

1.6 It is a legal requirement to obtain prior approval for an obstacle in terms of the Aviation Act with parts 139.01.30, the dominant regulation. The standards for Markings of obstacles can be found in the technical standards to this regulation and is essentially that of annex 14 and some differences in character exist to accommodate local practices and conditions.

1.6 Part 171 and its associated CATS-ESO technical standards are also applicable in as far the protection of Communication; Navigation and Surveillance systems are concerned.

1.7 Part 91.01.10 also has reference.

Note:- The above reference refers to the regulations the new Civil Aviation Act (Act 13 of 2009) as promulgated

2. Discussion

2.1 The significance of any proposed or existing obstacle on or in the vicinity of an aerodrome is assessed by two separate sets of criteria defining airspace.

2.2 The first and the one that will be concentrated on, is the obstacle limitation surfaces as defined in Annex 14 chapter 4, the second being the PANS-OPS surfaces defined in Doc8168 Vol II (Construction of Visual and Instrument Flight Procedures)

2.3 Annex 14 define surfaces such as the strip width of the runway, approach and departure surfaces, transition surfaces, the inner horizontal, the conical and the outer horizontal surfaces. The dimensions of these surfaces vary with runway classification and the dimensions of the runway. Runway classification ranges from code 1 to code 4 and a numerical sub classification (A to G) and the runways could be non instrument, instrument non-precision and precision.

2.4 Obstacle assessments inside the boundaries of the aerodrome are not discussed in this document due to the amount of variables and complexity thereof.

Obstacle assessments outside the aerodrome would look at obstacles differently depending on utilization of the aerodrome and considers runways to be used for both departure and approach purposes:-

a) Small aerodromes utilized by small slow flying aircraft and featuring short runways would be evaluated against the criteria for code 2 instrument non precision approach surfaces with a slope of 3.3 % and a diversion of 15%. The inner horizontal would be regarded as a simple horizontal disk and diameter of 3500m above the published reference point of the aerodrome.

b) Large aerodromes utilized by large(r) and fast aircraft and featuring longer runways are evaluated against the criteria applicable for precision approaches with an ideal slope of 1.6% but to a slope of not exceeding 2% as may be dictated by existing structures or terrain. The inner horizontal now becomes a composite shape with circular arcs centered on the runway thresholds, and 45m above the runway threshold, and joined tangentially by straight lines. The same principle would apply to aerodromes featuring multiple runways. In practice this means that an obstacle is evaluated against the threshold elevation of the closest threshold.

This two tier approach to obstacle assessment is aimed at offering aerodromes more protection to facilitate future expansion

2.5 In some cases obstacles in the vicinity of aerodromes are subject to more stringent requirements dictated by possible interference to Radar and/or ILS systems as is the case at ORTIA where Radar absorbing cladding may be required on structures exceeding 1730m AMSL – a figure 6m below the inner horizontal surface.

2.6 All obstacles exceeding 45m AGL are marked by default in South Africa in terms of and to the standards of Part 139 while, structures exceeding 30mAGL and also 150m above aerodrome elevation is regarded as significant within 15 Km from the aerodrome and is also marked. The latter which relates to Doc 9137 Vol 6 is however adapted and applies to any structure exceeding 150m above the mean ground level.

2.7 Wind turbine generators or collectively called Wind farms, are obstacles with unique properties as not only are they of variable geometry; they also have the ability to interfere on avionic systems.

a) Most notable interference is false targets produced on **PRIMARY RADAR** when in **line of sight** but could also interfere when in close proximity of secondary radar. It is generally accepted that it would not interfere on **SECONDARY RADAR** beyond 15 Km in distance.

b) Wind turbines also cause disturbance in the air that shows up on meteorological radar systems as storm cells. This disturbance also holds a potential danger to small aircraft if allowed in close proximity of small aerodromes or areas of recreational flying.

2.8 By Part 139, no wind farm **SHOULD** be built within 35 km from an aerodrome. This 35 km is not a forbidden zone but rather a caution zone where extended investigation will be done if required and will involve all role players. This 35 km zone is based on the Annex 10 protection criteria for ILS plus a buffer zone.

a) If an investigation indicates a possibility of interference, mitigation measures will be investigated and may involve repositioning or relocation of turbines. Options such as fill in radar may be considered if required or an application may be rejected outright if an acceptable level of mitigation cannot be reached.

b) Wind farms are subjected to unique marking methods differentiating it from any other obstacle. Any telecommunications structure or other structure within a wind farm will be regarded as part of the wind farm and will be marked accordingly.

c) Night markings of wind farms consist of dual flashing red lights of 2000 candela intensity. Not all turbines are marked but rather aimed at defining the outline of a wind farm and the most significant points. The flashing lights are synchronized.

2.9 It should be noted that the Northern Cape Province has proven to be a popular location for wind farms. While this location may have limited impact on aviation, the high intensity night markings of wind farms may bring it in conflict with the AGA Act, which saw the light as an effort to protect the Northern Cape for purposes of astronomy. This may lead to a re-consideration of marking methods.

3. Conclusion

3.1 While South Africa has got legislation in place to protect aviation from obstacles, including wind farms in Part 139.01.30 and also protection of Communication, Navigation and Surveillance systems including aeronautical meteorological systems in Part 171, this is a slow and cost intensive process.