



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: 14/12/16/3/3/1/1970

Enquiries: Mr Herman Alberts

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

Mr Davin Chown
Genesis Zonnequa Wind (Pty) Ltd
39 De Villiers Road
Kommetjie
CAPE TOWN
7975

Telephone Number: (083) 460 3898
E-Mail Address: davin@genesis-eco.com

PER E-MAIL / MAIL

Dear Mr Chown

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998), AS AMENDED (NEMA); GOVERNMENT NOTICES. R982, R983 AND R984, AS AMENDED FOR THE PROPOSED 140MW ZONNEQUA WIND ENERGY FACILITY WITHIN THE NAMA KHOI LOCAL MUNICIPALITY IN THE NORTHERN CAPE PROVINCE

With reference to the above application, please be advised that the Department has decided to grant an environmental authorisation to you. The environmental authorisation (EA) and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the National Environmental Management Act: the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing within 14 (fourteen) days of the date of this EA, of the Department's decision as well as the provisions regarding the submission of appeals that are contained in the Regulations.

In terms of the Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000), you are entitled to the right to fair, lawful and reasonable administrative action; and to written reasons for administrative action that affects you negatively. Further your attention is drawn to the provisions of the Protection of Personal Information Act, 2013 (Act No. 4 of 2013) which stipulates that the Department should conduct itself in a responsible manner when collecting, processing, storing and sharing an individual or another entity's personal information by holding the Department accountable should the Department abuse or compromise your personal information in any way.

Your attention is drawn to Chapter 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) National Appeal Regulations published under Government Notice R993 in Government Gazette No. 38303 dated 08 December 2014 (National Appeal Regulations, 2014), which prescribe the appeal procedure

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to be followed. Kindly include a copy of this document (National Appeal Regulations, 2014) with the letter of notification to interested and affected parties in this matter.

Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

Appeals must be submitted in writing in the prescribed form to:

The Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appealsdirector@environment.gov.za;

By hand: Environment House
473 Steve Biko Street
Arcadia
Pretoria
0083; or

By post: Private Bag X447
Pretoria
0001

Please note that in terms of Section 43(7) of the NEMA, the lodging of an appeal will suspend the EA or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with any activity authorised in the EA until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at <https://www.environment.gov.za/documents/forms#legal> authorisations or request a copy of the documents at appealsdirector@environment.gov.za.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Date: 18/02/2019

| | | | |
|-----|-------------------|----------------------------------|--|
| CC: | Ms Karen Jodas | Savannah Environmental (Pty) Ltd | E-mail: karen@savannahsa.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 |





environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 25 of the Environmental Impact Assessment Regulations, 2014

The 140MW Zonnequa Wind Energy Facility (WEF) within the Nama Khoi Local Municipality in the Northern Cape Province

Namakwa District Municipality

| | |
|---------------------------------------|---|
| Authorisation register number: | <i>14/12/16/3/3/1/1970</i> |
| Last amended: | <i>First issue</i> |
| Holder of authorisation: | <i>Genesis Zonnequa Wind (Pty) Ltd</i> |
| Location of activity: | <i>Portion 1 of Farm Zonnekwa 328; Remaining Extent of Farm Zonnekwa 326 Nama Khoi Local Municipality in the Northern Cape Province</i> |

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

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Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this environmental authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 the Department hereby authorises –

GENESIS ZONNEQUA WIND (PTY) LTD

with the following contact details –

Mr Davin Chown
39 De Villiers Road
Kommetjie
CAPE TOWN
7975

Cell phone Number: (083) 460 3898
Fax Number: (086) 689 0583
E-mail Address: davin@genesis-eco.com

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1 and Listing Notice 2 as amended (GN R. 983 and 984 as amended):

| Activity number | Activity description |
|--|---|
| <p><u>GN R. 983 Item 11:</u></p> <p><i>"The development of facilities or infrastructure for the transmission and distribution of electricity –</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kV."</i></p> | <p>The WEF will require the construction and operation of an on-site facility substation with a capacity of 33kV/132kV to facilitate the connection of the wind farm to the national grid.</p> |
| <p><u>GN R. 983 Item 14:</u></p> <p><i>"The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic meter or more but not exceeding 500 cubic meter.</i></p> | <p>The WEF will require the storage and handling of dangerous goods for the construction activities of the facility, as well as during the operation and maintenance of the facility. Approximately 80m³ will be required.</p> |
| <p><u>GN R. 983 Item 24:</u></p> <p><i>"The development of a road—</i></p> <p><i>(ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres."</i></p> | <p>The WEF will require the construction of internal access roads between the project components which will be approximately 8 metres in width.</p> |
| <p><u>GN R. 983 Item 28:</u></p> <p><i>"Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</i></p> <p><i>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare."</i></p> | <p>The total area of land to be developed is larger than 1 hectare and is currently used for agricultural purposes. The total extent of the development footprint is expected to be 39.57ha.</p> |

| | |
|--|---|
| <p><u>GN R. 983 Item 56:</u> <i>"The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre- (ii) where no reserve exists, where the existing road is wider than 8 metres."</i></p> | <p>The WEF will require the widening of existing roads by more than 6m for the construction of the wind farm.</p> |
| <p><u>GN R. 984 Item 1:</u> <i>"The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more."</i></p> | <p>The total electricity output for the WEF will be more than 20MW, with a maximum contracted capacity of up to 140MW.</p> |
| <p><u>GN R. 984 Item 15:</u> <i>"The clearance of an area of 20 hectares or more of indigenous vegetation."</i></p> | <p>The clearance of more than 20 hectares of indigenous vegetation will be required during construction of the facility. The total extent of the development footprint is expected to be 39.57ha.</p> |

as described in the Basic Assessment Report (BAR) dated December 2018 at:

21 SG Code:

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 8 | 0 | 0 | 0 | 0 | 1 |
| C | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 6 | 0 | 0 | 0 | 0 | 0 |

Coordinates:

| (WEF preferred site) | Latitude (s) | Longitude (e) |
|----------------------|-----------------|-----------------|
| 1 | 29° 45' 20.023" | 17° 14' 22.691" |
| 2 | 29° 45' 43.955" | 17° 17' 25.502" |
| 3 | 29° 48' 23.438" | 17° 17' 59.643" |
| 4 | 29° 48' 19.493" | 17° 16' 20.281" |
| 5 | 29° 48' 53.566" | 17° 14' 50.604" |
| 6 | 29° 49' 37.294" | 17° 14' 50.728" |
| 7 | 29° 50' 0.765" | 17° 12' 54.287" |
| 8 | 29° 48' 46.927" | 17° 12' 43.368" |

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- for the proposed 140MW Zonnequa Wind Energy Facility within the Nama-Khoi Local Municipality, Northern Cape Province, hereafter referred to as "the property".

The facility will comprise the following:

- Up to 56 wind turbines with a maximum hub height of up to 130m;
- The tip height of the turbines will be up to 205m;
- Concrete turbine foundations and turbine hardstands;
- Temporary laydown areas which will accommodate the storage and assembly area;
- Cabling between the turbines, to be laid underground where practical;
- An on-site substation of 150m x 150m to facilitate the connection between the wind farm and electricity grid;
- Access roads to the site (with a width of up to 10m) and between project components (with a width of up to 8m);
- A temporary concrete batching plant; and
- Operation and maintenance buildings including a gatehouse, security building, control centre, offices, warehouses, a workshop and visitors centre.

Technical details of the WEF:

| Component | Description/ Dimensions |
|------------------------------------|--|
| Location of the site | 19km south-east of Kleinsee in the Northern Cape Province |
| Farm and SG Codes | C05300000000032800001 C05300000000032600000 |
| Site access | Access to the site is currently possible via existing farm access from the public roads |
| Export capacity | 140MW |
| Proposed technology | Wind turbines |
| Number of Turbines | Up to 56 |
| Hub height from ground level | Up to 130m |
| Rotor diameter | Up to 205m |
| Width and length of internal roads | Access roads to the site (with a width of up to 10m) and between project components (with a width of up to 8m) |

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Conditions of this Environmental Authorisation

Scope of authorisation

1. The construction of the Zonnequa Wind Energy Facility and its associated infrastructure with a maximum output capacity of 140MW as described above is hereby approved.
2. Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
4. The activities authorised may only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further environmental authorisation in terms of the regulations.
6. The holder of an environmental authorisation must apply for an amendment of the environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. This activity must commence within a period of five (05) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
8. Construction must be completed within 5 years of the commencement of the activity on site.
9. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

Notification of authorisation and right to appeal

10. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this Environmental Authorisation, of the decision to authorise the activity.
11. The notification referred to must –
 - 11.1. specify the date on which the authorisation was issued;
 - 11.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 11.4. give the reasons of the Competent Authority for the decision.

Commencement of the activity

12. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014, and no appeal has been lodged against the decision. In terms of Section 43(7), an appeal under Section 43 of the National Environmental Management Act, Act No. 107 of 1998, as amended will suspend the Environmental Authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

Management of the activity

13. A copy of the final site layout map must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval prior to commencement of the activity. 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:
 - 13.1. Cable routes (where they are not along internal roads);
 - 13.2. Position of wind turbines and associated infrastructure;
 - 13.3. Internal roads indicating width;

- 13.4. Wetlands, drainage lines, rivers, stream and water crossing of roads and cables;
 - 13.5. All sensitive features e.g. Critical Biodiversity Areas, Ecological Support Areas, heritage sites, wetlands, pans and drainage channels that will be affected by the facility and associated infrastructure;
 - 13.6. Substation(s) inverters and/or transformer(s) sites including their entire footprint;
 - 13.7. Connection routes (including pylon positions) to the distribution/transmission network;
 - 13.8. All existing infrastructure on the site, such as roads;
 - 13.9. Soil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - 13.10. Buildings, including accommodation; and,
 - 13.11. All "no-go" and buffer areas.
14. Furthermore, a shapefile of the approved development layout/footprint must be submitted to this Department within two months from the date of this decision. 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: Mr Muhammad Essop

Integrated Environmental Authorisations

Strategic Infrastructure Developments

Telephone Number: (012) 399 9406

Email Address: MEssop@environment.gov.za

15. The Environmental Management Programme (EMPr) submitted as part of the BAR is not approved and must be amended to include measures as dictated by the final site lay-out map and micro-siting, and the provisions of this environmental authorisation. The EMPr must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.
16. The EMPr amendment must include the following:
 - 16.1. The requirements and conditions of this authorisation.
 - 16.2. All recommendations and mitigation measures recorded in the BAR.
 - 16.3. All mitigation measures as listed in the specialist reports must be included in the EMPr and implemented.
 - 16.4. The final site layout map.
 - 16.5. 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.
 - 16.6. 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 in consultation with the ECO and be implemented prior to commencement of the construction phase.
 - 16.7. 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.
 - 16.8. A traffic management plan for the site access roads to ensure that no hazards would results 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.
- 16.9. A construction and operational avifauna and bat monitoring plan.
 - 16.10. 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.
 - 16.11. 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.
 - 16.12. 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.
 - 16.13. A fire management plan to be implemented during the construction and operational phases.
 - 16.14. 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.
 - 16.15. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
 - 16.16. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map. This map must reflect the proposed location of the turbine as stated in the BAR and this authorisation.
 17. The final amended EMPr (once approved) must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
 18. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
 19. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the BAR be discovered.

Frequency and process of updating the EMPr

20. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 27 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
21. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
22. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
23. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R.982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.
24. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The amendment process is prescribed in Regulation 37 of GN R.982. The holder of the authorisation must request comments on the proposed amendments to the impact management outcomes of the EMPr or amendments to the closure objectives of the closure plan from potentially interested and affected parties, including the competent authority, by using any of the methods provided for in the Act for a period of at least 30 days.

Monitoring

25. The holder of the authorisation must appoint an experienced Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
 - 25.1. The ECO must be appointed before commencement of any authorised activities.
 - 25.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.

- 25.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
- 25.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

26. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department.
27. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department.
28. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982.
29. The holder of the authorisation must, in addition, submit environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.
30. The environmental audit reports must be compiled in accordance with Appendix 7 of the EIA Regulations, 2014 and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
31. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Notification to authorities

32. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number.

Operation of the activity

33. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.

Site closure and decommissioning

34. Should the activity ever cease or become redundant, the holder of the authorisation must undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

Turbines position

35. Up to 56 wind turbines are approved.
36. All wind turbines must avoid all areas designated as “no-go” areas as well as their buffers.
37. The final placement of turbines must follow a micro siting procedure involving a walk-through and identification of any sensitive areas by ecological, avifaunal, bat, surface water and heritage specialists.
38. Exclusion of sensitive ecological, avifaunal, bat, surface water and heritage areas from construction activities must inform micro siting of all development activities.
39. Should any occupied farm buildings be affected by shadow flicker, the holder of this Environmental Authorisation must provide mitigation measures to reduce the impact to an acceptable level as advised by a suitably qualified specialist.

Avifauna and bats

40. No turbines must be constructed in no-go areas, while associated infrastructure (roads, powerlines and substations) must be avoided where possible in these areas.
41. Prior to construction, an avifaunal specialist must conduct a site walkthrough, covering the final road and powerline routes as well as the final turbine positions, to identify any nests/breeding/roosting activity of priority species, as well as any additional sensitive habitats. The results thereto must inform the final construction schedule in close proximity to that specific area, including reducing construction time, scheduling activities around avian breeding and/or movement schedules, and lowering levels of associated noise.

42. If any priority species are confirmed to be breeding (e.g. if a nest site is found), construction activities within 500m of the breeding site must cease, and the avifaunal specialist must be contacted immediately for further assessment of the situation and instruction on how to proceed.
43. A construction and operational avifauna and bat monitoring plan must be developed and implemented 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.
44. As an absolute minimum, avifauna and bat monitoring, to survey impacts resulting from the infrastructure on the bird and bat communities with focus on assessing the displacement and disturbance effects of the development on the bird and bat communities, as well as bird and bat collisions and continue to gather information on the bird and bat communities present in the area and monitor the effectiveness of the mitigation measures, must occur during the construction period and continue for at least three years during the operation of the facility.
45. The results of this monitoring must be made available to the Department of Environmental Affairs (DEA), Birdlife South Africa (BLSA) and the South African Bat Assessment Advisory Panel (SABAAP) and must further advise the EMPr where necessary.
46. The results of the pre-construction avian monitoring assessments including all recommendations proposed, must inform the final layout and the construction schedule of the facility.
47. The facility must be designed in a manner that prevents infrastructure components from being used as perching or roosting substrates by birds and bats, as such is prohibited.
48. The holder of this environmental authorisation must restrict the construction activities to the footprint area. No access to the remainder of the property is allowed.
49. Anti-collision devices such as bird flappers must be installed where powerlines cross avifaunal corridors (e.g. grasslands, rivers, wetlands, and dams). The input of an avifaunal specialist must be obtained for the fitting of the anti-collision devices onto specific sections of the line once the exact positions of the towers have been surveyed and pegged. Additional areas of high sensitivity along the preferred alignment must also be identified by the avifaunal specialist for the fitment of anti-collision devices. These devices must be according to Eskom's Transmission and EWT's Guidelines.

Vegetation, wetlands and water resources

50. No development/infrastructure are allowed within the No-Go areas.
51. No turbines must be placed within the high sensitivity areas.
52. All internal powerline/cables must follow internal access roads.

53. The 'no-go' areas of the development property must be clearly demarcated and must be excluded from the final layout plan.
54. Relevant permits must be obtained from relevant authorities for any removal or destruction of Threatened or Protected Species (TOPs).
55. Before the clearing of the site, the appropriate permits must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) for the removal of plants listed in the National Forest Act and from the relevant provincial departments for the destruction of species protected in terms of the specific provincial legislation. Copies of the permits must be kept by the ECO.
56. Construction activities must be restricted to demarcated areas to restrict the impact on sensitive environmental features.
57. All areas of disturbed soil must be reclaimed using only indigenous grass and shrubs. Reclamation activities shall be undertaken according to the rehabilitation plan to be included in the final EMPr.
58. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
59. No exotic plants must be used for rehabilitation purposes; only indigenous plants of the area must be utilised.
60. No activities will be allowed to encroach into a water resource without a Water Use License being in place from the Department of Water and Sanitation.
61. Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing but must be temporarily stored in a demarcated area.
62. Removal of alien invasive species or other vegetation and follow-up procedures must be in accordance with the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).
63. Contractors and construction workers must be clearly informed of the no-go areas.
64. Where roads pass right next to major water bodies, provisions must be made for fauna such as toads to pass under the roads by using culverts or similar structures.
65. Bridge design must be such that it minimises impact to riparian areas with minimal alterations to water flow and must allow the movement of fauna and flora.
66. The final development area should be surveyed for species suitable for search and rescue, which should be trans-located prior to the commencement of construction.
67. Electric fencing should not have any strands within 30cm of the ground, which should be sufficient to allow smaller mammals, reptiles and tortoises to pass through, but still remain effective as a security barrier.
68. Disturbed areas must be rehabilitated as soon as possible after construction with locally indigenous plants to enhance the conservation of existing natural vegetation on site.

69. Wetlands, rivers and river riparian areas must be treated as "no-go" areas and demarcated as such. No vehicles, machinery, personnel, construction material, fuel, oil, bitumen or waste must be allowed into these areas without the express permission of and supervision of the ECO, except for rehabilitation work in these areas.
70. Workers must be made aware of the importance of not destroying or damaging the vegetation along rivers and wetland areas and this awareness must be promoted throughout the construction phase.
71. Freshwater ecosystems located in close proximity to the construction areas must be inspected on a regular basis (but especially after rainfall) by the ECO for signs of disturbance, sedimentation and pollution from construction activities. If signs of disturbance, sedimentation or pollution are noted, immediate action must be taken to remedy the situation and, if necessary, a freshwater ecologist must be consulted for advice on the most suitable remediation measures.
72. No discharge of effluents or polluted water must be allowed into any rivers or wetland areas.
73. If construction areas are to be pumped of water (e.g. after rains), this water must be pumped into an appropriate settlement area, and not allowed to flow into any rivers or wetland areas.
74. Workers must be made aware of the importance of not polluting rivers or wetlands and of not undertaking activities that could result in such pollution, and this awareness must be promoted throughout the construction phase.

Roads and transportation

75. Existing road infrastructure must be used as far as possible for providing access to the proposed turbine positions. Where no road infrastructure exists, new roads must be placed within existing disturbed areas or environmental conditions must be taken into account to ensure that minimum amount of damage is caused to natural habitats.
76. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuters, consideration must be given to limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time.
77. Internal access roads must be located to minimize stream crossings. All structures crossing streams must be located and constructed such that they do not decrease channel stability or increase water velocity.
78. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
79. Signage must be erected at appropriate points warning of turning traffic and the construction site.
80. Necessary permits must be obtained for the oversized construction vehicles to transport turbine components.

81. Construction vehicles carrying materials to the site must avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
82. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information to minimize impacts on possible faunal species.
83. Road borders must be regularly maintained to ensure that vegetation remains short and that they therefore serve as an effective firebreak.
84. Roads must be designed such that changes to surface water runoff are avoided and erosion is not initiated.
85. All construction vehicles must adhere to a low speed limit to avoid collisions with susceptible species such as snakes and tortoises.

Noise

86. Routine noise measurements must be conducted during the operation of the facility and a complaints register must be opened and made available to affected parties and to the Department on request.
87. The holder of this authorisation must ensure that the construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA wear ear protection equipment.
88. The holder of this authorisation must ensure that all equipment and machinery are well maintained and equipped with silencers.
89. The holder of this authorisation must provide a prior warning to the community when a noisy activity e.g. blasting is to take place.
90. Construction staff must be trained in actions to minimise noise impacts.
91. The holder of this authorisation must ensure that the National Noise Control Regulations and SANS10103:2008 are adhered to and measures to limit noise from the work site are implemented.

Visual resources

92. The holder of this authorisation must reduce visual impacts during construction by minimising areas of surface disturbance, controlling erosion, using dust suppression techniques and restoring exposed soil as closely as possible to their original contour and vegetation.
93. A lighting engineer must be consulted to assist in the planning and placement of light fixtures in order to reduce visual impacts associated with glare and light trespass.
94. Lighting of main structures (turbines) and ancillary buildings must be designed to minimise light pollution without compromising safety, and turbines must be lit according to Civil Aviation Regulations.
95. Signage on or near wind turbines must be avoided unless they serve to inform the public about wind turbines and their function.

96. Commercial messages and graffiti on turbines are prohibited.

Human health and safety

97. A health and safety programme must be developed to protect both workers and the general public during construction, operation and decommissioning of the energy facility. The programme must establish a safety zone for wind turbines from residences and occupied buildings, roads, right-of-ways and other public access areas that is sufficient to prevent accidents resulting from the operation of the wind turbines.
98. Potential interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.
99. The holder of this authorisation must obtain approval from the South Africa Civil Aviation Authority that the wind facility will not interfere with the performance of aerodrome radio Communication, Navigation and Surveillance (CNS) equipment, especially the radar, prior to commencement of the activity. A copy of the approval must be kept on site by the ECO.
100. The holder of this authorisation must ensure that the operation of the wind facility complies with the relevant communication regulations or guidelines relating to electromagnetic interference, e.g. microwave, radio and television transmissions.
101. The holder of this authorisation must obtain approval from the South Africa Weather Services (WeatherSA) that the energy facility will not interfere with the performance of their equipment, especially radar, prior to commencement of the activity. A copy of the approval must be kept on site by the ECO.
102. The holder of this authorisation must train safety representatives, managers and workers in workplace safety. The construction process must be compliant with all safety and health measures as prescribed by the relevant act.
103. Liaison with land owners/farm managers must be done prior to construction in order to provide sufficient time for them to plan agricultural activities.
104. No unsupervised open fires for cooking or heating must be allowed on site.

Hazardous materials and waste management

105. Areas around fuel tanks must be bunded or contained in an appropriate manner as per the requirements of SABS 089:1999 Part 1.
106. Leakage of fuel must be avoided at all times and if spillage occurs, it must be remedied immediately.
107. Hazardous waste such as bitumen, oils, oily rags, paint tins etc. must be disposed of at an approved waste landfill site licensed to accept such waste.
108. No dumping or temporary storage of any materials may take place outside designated and demarcated laydown areas, and these must all be located within areas of low environmental sensitivity.
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109. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
110. Hazardous and flammable substances must be stored and used in compliance to the applicable regulations and safety instructions. Furthermore, no chemicals must be stored nor may any vehicle maintenance occur within 350m of the temporal zone of wetlands, a drainage line with or without an extensive floodplain or hillside wetlands.
111. Temporary bunds must be constructed around chemical storage to contain possible spills.
112. Spill kits must be made available on-site for the clean-up of spills.
113. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling and re-use options where appropriate. Where solid waste is disposed of, such disposal shall only occur at a landfill licensed in terms of section 20(b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).
114. The holder of this authorisation must provide sanitation facilities within the construction camps and along the road so that workers do not pollute the surrounding environment. These facilities must be removed from the site when the construction phase is completed as well as associated waste to be disposed of at a registered waste disposal site.
115. The holder of this authorisation must take note that no temporary site camps will be allowed outside the footprint of the development area as the establishment of such structures might trigger a listed activity as defined in the Environmental Impact Assessment Regulations, 2014 as amended.

Excavation and blasting activities

116. Underground cables and internal access roads must be aligned as much as possible along existing infrastructure to limit damage to vegetation and watercourses.
117. Foundations and trenches must be backfilled with originally excavated materials as much as possible. Excess excavation materials must be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
118. Borrow materials must be obtained only from authorised and permitted sites. Permits must be kept on site by the ECO.
119. Anti-erosion measures such as silt fences must be installed in disturbed areas.

Air emissions

120. Dust abatement techniques must be used before and during surface clearing, excavation, or blasting activities.
121. Appropriate dust suppression techniques must be implemented on all exposed surfaces during periods of high wind. Such measures may include wet suppression, chemical stabilisation, the use of a wind fence, covering surfaces with straw chippings and re-vegetation of open areas.

Historical / cultural / paleontological resources

122. If concentrations of archaeological heritage material, fossils and human remains are uncovered during construction, all work must cease immediately and be reported to the South African Heritage Resources Agency (SAHRA) so that a systematic and professional investigation / excavation can be undertaken.
123. Construction managers/foremen must be informed before construction starts of the possible types of heritage sites and cultural material that may be encountered and the procedures to follow when they find sites.
124. All buffers and no-go areas stipulated in the BAR must be adhered to for the facility, all roads and powerlines.
125. All construction and maintenance crew and vehicles (except small vehicles which may use existing farm tracks) must be kept out of the buffer zones.
126. The final layout must be shown to the appointed archaeologist before implementation to confirm that all significant heritage resources have been adequately protected.

General

127. The recommendations of the EAP in the BAR dated December 2018 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this Environmental Authorisation will take preference.
128. A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
 - 128.1. at the site of the authorised activity;
 - 128.2. to anyone on request; and
 - 128.3. where the holder of the environmental authorisation has a website, on such publicly accessible website.

129. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 18/02/2019



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The listed activities as applied for in the application form received in October 2018.
- b) The information contained in the BAR dated December 2018.
- c) The comments received from SAHRA, Eskom, the Department of Rural development and Land reform, the Department of Water and Sanitation, Birdlife SA, the Northern Cape Department of Environment and Nature Conservation, and interested and affected parties as included in the BAR dated December 2018.
- d) Mitigation measures as proposed in the BAR and the EMPr.
- e) The information contained in the specialist studies contained within the appendices of the BAR dated December 2018.

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the provision of electricity to the national grid.
- c) The BAR dated December 2018 identified all legislation and guidelines that have been considered in the preparation of the BAR.
- d) The location of the proposed wind energy facility in a REDZ.
- e) The methodology used in assessing the potential impacts identified in the BAR dated December 2018 and the specialist studies have been adequately indicated.
- f) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014, as amended for public involvement.

3. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the BAR dated December 2018 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The information contained in the BAR dated December 2018 is deemed to be accurate and credible.
- d) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the BAR and will be implemented to manage the identified environmental impacts during the construction phase.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the authorised activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the authorised activities can be mitigated to acceptable levels. The environmental authorisation is accordingly granted.