



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environment House · 473 Steve Biko, Arcadia · PRETORIA
Tel (+ 27 12) 399 9372

DEA Reference: 12/12/20/1782/2

Enquiries: Mr Muhammad Essop

Telephone: (012) 399 9406 **E-mail:** MEssop@environment.gov.za

Mr Michael Mangnall
South Africa Mainstream Renewable Power Developments (Pty) Ltd
PO Box 45063
CLAREMONT
7735

Telephone Number: (021) 657 4045
Email Address: Mike.Mangnall@mainstreamrp.com

PER EMAIL / MAIL

Dear Mr Mangnall

AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION ISSUED ON 22 FEBRUARY 2012 FOR THE 140 MEGAWATTS (MW) SUTHERLAND WIND ENERGY FACILITY NEAR SUTHERLAND, NORTHERN AND WESTERN CAPE PROVINCES

The Environmental Authorisation (EA) issued for the above mentioned application by this Department on 22 February 2012, your application for an amendment of the EA received on 20 April 2016, the acknowledgement letter dated 25 April 2016, the draft additional information received for comment on 01 June 2016 and the additional information received on 26 July 2016 and 25 August 2016, refer.

Based on a review of the reason for requesting an amendment to the above EA, this Department, in terms of Chapter 5, Regulation 27(2)(a) of the Environmental Impact Assessment Regulations, 2014, has decided to amend the EA dated 22 February 2012 by issuing a new EA.

The attached EA will replace the EA as well as the subsequent amendments. All further amendments must be lodged on the attached EA.

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

Your attention is drawn to Chapter 2 of Government Notice No. R.993, which prescribes the appeal procedure to be followed. Kindly include a copy of this document with the letter of notification to interested and affected parties.

An appellant must submit an 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 applicant by the competent authority.

MS

By post: Private Bag X447,
Pretoria, 0001; or

By hand: Environment House
473 Steve Biko,
Arcadia, Pretoria,

Appeals must be submitted in writing to:

Mr Z Hassam, Director: Appeals and Legal Review, of this Department at the above mentioned addresses. Mr Hassam can also be contacted at:

Tel: (012) 399 9356
Email: Appealsdirector@environment.gov.za

Please note that in terms of section 43(7) of the National Environmental Management Act, 1998, an appeal under section 43 of that Act 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 is finalised.

For guidance on appeals submitted to the Minister in terms of NEMA and the SEMAs, please find a copy of the guideline on the administration of appeals on the Department's website:
(https://www.environment.gov.za/documents/forms#legal_authorisations).

Yours faithfully



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

Date: 10/11/2016

cc	Ms Surina Laurie	CSIR	E-mail: SLaurie@csir.co.za
----	------------------	------	----------------------------



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 27(2)(a) of the Environmental Impact Assessment Regulations, 2014

The 140 Megawatts (MW) Sutherland Wind Energy Facility near Sutherland, Northern and Western
Cape Provinces

Karoo Hoogland and Laingsburg Local Municipalities

Authorisation register number:	<i>12/12/20/1782/2</i>
Last amended:	<i>Second Issue</i>
Holder of authorisation:	<i>South Africa Mainstream Renewable Power Developments (Pty) Ltd</i>
Location of activity:	<i>Portion 1 of Beeren Valley Farm 150 Remaining Extent of Beeren Valley Farm 150 Portion 1 of Boschmanskloof Farm 9 Portion 1 of Botmanshoek Farm 10 Portion 1 of Schietfontein Farm 179 Remaining Extent of Nooitgedacht Farm 148 Karoo Hoogland Local Municipality Namakwa District Municipality Central Karoo District Municipality Laingsburg Local Municipality Northern Cape Province Western 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.

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 –

SOUTH AFRICA MAINSTREAM RENEWABLE POWER DEVELOPMENTS (PTY) LTD

(hereafter referred to as the **holder of the authorisation**)

with the following contact details –

Mr Michael Mangnall

PO Box 45063

CLAREMONT

7735

Telephone Number: (021) 657 4045

Cellphone Number: (083) 785 1492

Fax Number: (021) 671 5665

E-mail Address: Mike.Mangnall@mainstreamrp.com

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1 & Listing Notice 2 (GN R. 386 & 387):

Listed activities
<p><u>GN R. 386 Item 1:</u></p> <p><i>"The construction of facilities or infrastructure, including associated structures or infrastructure, for –</i></p> <p><i>(a) the generation of electricity where-</i></p> <p><i>(i) the electricity output is 20 megawatts or more; or</i></p> <p><i>(ii) the elements of the facility cover a combined area in excess of 1 hectare"</i></p>
<p><u>GN R. 386 Item 1(f):</u></p> <p><i>"The construction of facilities or infrastructure including associated structures or infrastructure, for the generation of electricity where the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more".</i></p>
<p><u>GN R386 Item 14:</u></p> <p><i>"The construction of mast of any material or type and of any height, including those used for telecommunication broadcasting and radio transmission, but excluding (a) mast of metres and lower exclusively used (i) by radio amateurs; or (ii) for lighting purposes (b) flag poles and lightning conductor poles."</i></p>
<p><u>GN R386 Item 15:</u></p> <p><i>"The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long".</i></p>
<p><u>GN R387 Item 1(l):</u></p> <p><i>"The construction of facilities or infrastructure, including associated structures or infrastructure, for the transmission and distribution of above ground electricity with capacity of 120 kV more".</i></p>
<p><u>GN R387 Item 2:</u></p> <p><i>"Any development, activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be 20 hectares or more".</i></p>
<p><u>GN R386 Item 14:</u></p> <p><i>"The construction of masts of any material of type and of any height, including those used for telecommunications broadcasting and radio transmission, but excluding</i></p> <p><i>(a) masts of 15m and lower exclusively used (i) by radio amateurs; or (ii) for lighting purposes</i></p> <p><i>(b) flagpoles; and</i></p>

(c) lightning conductor poles.”

GN R386 Item 15:

“The construction of a road that is wider than 4 metres or that has a road reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long.”

as described in the amended Environmental Impact Assessment Report (EIAR) dated August 2016 at:

21 SG Codes:

C	0	7	2	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	1
C	0	7	2	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0
C	0	4	3	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	1
C	0	4	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
C	0	7	2	0	0	0	0	0	0	0	0	1	7	9	0	0	0	0	0	1
C	0	7	2	0	0	0	0	0	0	0	0	1	4	8	0	0	0	0	0	0

Preferred site

	Latitude	Longitude
A	-32.646157°	20.796781°
B	-32.662799°	20.844044°
C	-32.578964°	20.875831°
D	-32.599922°	20.942203°
E	-32.603969°	21.014796°
F	-32.623689°	21.042648°
G	-32.649592°	21.037906°
H	-32.639166°	20.963243°
I	-32.643543°	20.945442°
J	-32.667401°	20.953127°
K	-32.677505°	20.869450°
L	-32.681040°	20.845352°

M	-32.711203°	20.790094°
---	-------------	------------

- for the Sutherland Wind Energy Facility (up to 140 MW maximum capacity) and its associated infrastructure near Sutherland within the Karoo Hoogland and Laingsburg Local Municipalities, which falls under the jurisdiction of the Namakwa District Municipality in the Northern Cape and the Central Karoo District Municipality in the Western Cape Province, hereafter referred to as “the property”.

The 140 MW Sutherland West Wind Energy Facility will comprise the following:

- Up to 56 wind turbines with a height of up to 120 m and rotor diameter of up to 120 m;
- The wind turbines will be connected to another by means of medium voltage cables. The cables will be buried approximately 1m below ground level;
- An internal gravel road network will be constructed to facilitate movement between turbines on site. These roads will be 15 m wide and 6 km in length and will include drainage and cabling;
- Some existing public roads may need to be upgraded to facilitate the turbine transport;
- A hard standing laydown area of a maximum of 10,000m² will be constructed; and
- A site compound will be constructed for all contractors, this would be approximately 5,000m² in size.

Technical details of the proposed facility:

Component	Description / Dimensions
Location of the site	Sutherland, Karoo Hoogland Local Municipality and Namakwa District Municipality, Northern Cape and Central Karoo District Municipality and Laingsburg Local Municipality, Western Cape
Farm names	Portion 1 of Beeren Valley Farm 150 Remaining Extent of Beeren Valley Farm 150 Portion 1 of Boschmanskloof Farm 9 Portion 1 of Botmanshoek Farm 10 Portion 1 of Schietfontein Farm 179 Remaining Extent of Nootgedacht Farm 148
Site access	Secondary road off the R 354
Export capacity	140
Proposed technology	Wind turbines
Number of turbines	56

Hub height from ground level	120 m
Rotor diameter	120 m
Width and length of internal roads	15 m wide and 6 km

Conditions of this Environmental Authorisation

Scope of authorisation

1. The 140MW Sutherland Wind Energy Facility and its associated infrastructure near Sutherland within the Karoo Hoogland and Laingsburg Local Municipalities in the Namakwa District Municipality in the Northern Cape and the Central Karoo District Municipality in the Western Cape 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 five (05) 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.
12. The holder of the authorisation must publish a notice –
 - 12.1. informing interested and affected parties of the decision;
 - 12.2. informing interested and affected parties where the decision can be accessed; and
 - 12.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in terms of the National Appeal Regulations, 2014.

Commencement of the activity

13. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014. In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 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.
14. The applicant must compile a socio-economic report with the specific programmes and project for the entire life of the proposed development that will benefit the community.
15. The applicant must submit the socio-economic report with the specific programmes and projects and the final layout of the entire wind energy facility to the registered I&APs and immediate communities in the vicinity of the site before they are submitted to the DEA for approval.

Management of the activity

16. A copy of the final development 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:
 - 16.1. Cable routes (where they are not along internal roads);
 - 16.2. Position of wind turbines and associated infrastructure;
 - 16.3. Internal roads indicating width;
 - 16.4. Wetlands, drainage lines, rivers, stream and water crossing of roads and cables;
 - 16.5. All sensitive features e.g. Critical Biodiversity Areas, National Protected Area Expansion Strategy areas, Ecological Support Areas, heritage sites, wetlands, pans and drainage lines that will be affected by the facility and associated infrastructure;
 - 16.6. Substation(s) inverters and/or transformer(s) sites including their entire footprint;
 - 16.7. Connection routes (including pylon positions) to the distribution/transmission network;
 - 16.8. All existing infrastructure on the site, especially roads;
 - 16.9. Soil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - 16.10. Buildings, including accommodation; and,
 - 16.11. All "no-go" and buffer areas.
17. 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 Road
Pretoria
0083

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

18. The Environmental Management Programme (EMPr) submitted as part of the EIAR 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.
19. The EMPr amendment must include the following:
 - 19.1. The requirements and conditions of this authorisation.
 - 19.2. All recommendations and mitigation measures recorded in the EIAR.
 - 19.3. All mitigation measures as listed in the specialist reports must be included in the EMPr and implemented.
 - 19.4. The final site layout map.

- 19.5. 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.
- 19.6. 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.
- 19.7. 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.
- 19.8. 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.
- 19.9. 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.
- 19.10. 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.
- 19.11. 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.
- 19.12. A fire management plan to be implemented during the construction and operational phases.
- 19.13. 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.

- 19.14. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- 19.15. 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 EIA and this authorisation.
20. 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.
21. Changes to the EMPr must be submitted to this Department for approval before such changes could be effected.
22. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIA be discovered.

Frequency and process of updating the EMPr

23. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 30 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.
24. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
25. 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.
26. 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.
27. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The holder must notify the Department of its intention to amend the EMPr at least 60 days prior to submitting such amendments to the EMPr to the Department for approval. In

assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R. 982.

Monitoring

28. The holder of the authorisation must appoint an experienced independent 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.
 - 28.1. The ECO must be appointed before commencement of any authorised activities.
 - 28.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
 - 28.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 28.4. 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

29. 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.
30. 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.
31. 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.
32. 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.
33. 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.

34. 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

35. 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

36. 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

37. 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

Avifauna and bats

38. A bird and bat monitoring programme must be implemented to document the effect of the operation of the energy facility on avifauna and bats. This should commence prior to construction, and continue during operation of the energy facility.
39. The results of the pre-construction bird monitoring programme must inform the final layout and the construction schedule of the energy facility.
40. Reports regarding bird monitoring must be submitted to the relevant provincial environmental department, Birdlife South Africa, the Endangered Wildlife Trust (EWT), CapeNature and this

Department on a quarterly basis. The report will assist all stakeholders in identifying potential and additional mitigation measures and to establish protocols for a bird monitoring programme for wind energy development in the country.

41. The baseline data collected and documented during the survey must be shared with the EWT, CapeNature and Birdlife South Africa for a better understanding of the distribution or breeding behaviour of any of the priority species.
42. Habitat destruction must be kept to an absolute minimum by keeping the lay-down areas as small as possible, reducing the number and size/length of roads and reducing the final extent of the developed area.
43. The applicant must ensure that lighting on the turbines is kept to a minimum and is coloured (red or green) and intermittent, rather than permanent and white, to reduce confusion effects for nocturnal migrants.
44. The facility must be designed to discourage the use of infrastructure components as perching or roosting substrates by birds and bats.

Vegetation, wetlands and water resources

45. All species of special concern (SSC) must be identified and every effort must be made to rescue them.
 46. Vegetation clearing must be limited to the required footprint. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.
 47. Critical available biodiversity information must be consulted for the final placement of turbine infrastructure.
 48. The applicant must ensure that the continuous monitoring and removal of alien plant species is undertaken. An alien removal program must be developed and implemented.
 49. A "Plant Rescue and Protection" plan which allows for the maximum transplant of conservation important species from areas to be transformed must be compiled by a vegetation specialist familiar with the site in consultation with the ECO. This plan must be implemented prior to commencement of the construction phase.
 50. 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 department for the destruction of species protected in terms of the specific provincial legislation. Copies of the permits must be submitted to the Department for record keeping.
 51. Construction activities must be restricted to demarcated areas to restrict impact on vegetation, birds and animals.
-

52. A comprehensive habitat rehabilitation plan must be developed for the site. 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.
53. All areas of disturbed soil must be reclaimed using only indigenous grass and shrubs. Reclamation activities should be undertaken as early as possible on disturbed areas.
54. All electrical collector lines must be buried in a manner that minimizes additional surface disturbance.
55. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
56. The applicant is required to inform the relevant provincial department and/or this Department should the removal of protected species, medicinal plants and "data deficient" plant species be required.
57. All hard infrastructures should be located within existing areas of low sensitivity, as far as possible.
58. All turbines must be located at least 100m from the edge of any highly sensitive areas.
59. No exotic plants may be used for rehabilitation purposes; only indigenous plants of the area may 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 Affairs.
61. Appropriate erosion mitigation must be implemented to prevent any potential erosion.
62. Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing but should be temporarily stored in a demarcated area.
63. 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).
64. The applicant must ensure that all the "No-go" areas are clearly demarcated (using fencing and appropriate signage) before construction commences.
65. Contractors and construction workers must be clearly informed of the no-go areas.
66. Siting of turbines should adhere to >500m setbacks from large water bodies, riparian vegetation and rocky crevices, if and where high bat occurrence is found after monitoring.
67. Where roads pass right next to major water bodies provision should be made for fauna such as toads to pass under the roads by using culverts or similar.
68. Bridge design must be such that it minimise impact to the riparian areas with minimal alterations to water flow and must be permeable to movement of fauna and flora.

Roads and transportation

69. 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 should be placed within existing disturbed areas or environmental conditions must be taken into account to ensure the minimum amount of damage is caused to natural habitats.
70. A transportation plan must be developed, particularly for the transport of turbines, main assembly cranes and other large pieces of equipment. A permit must be obtained from the relevant transport department for the transportation of all components (abnormal loads) to the sites.
71. A traffic management plan must be prepared 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.
72. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuter, consideration should be given to limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time.
73. Roads must be designed so that changes to surface water runoff are avoided and erosion is not initiated.
74. Internal access roads must be located away from drainage bottoms and avoid wetlands, if feasible.
75. Internal access roads must be located to minimize stream crossings. All structures crossing streams must be located and constructed so that they do not decrease channel stability or increase water velocity.
76. Existing drainage must not be altered, especially in sensitive areas.
77. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
78. Signage must be erected at appropriate points warning of turning traffic and the construction site.
79. Construction vehicles carrying materials to the site should avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
80. Road borders should be regularly maintained to ensure that vegetation remains short and that they therefore serve as an effective firebreak.

Noise

81. Construction staff to be given training in actions to minimise noise impacts.

82. Noise from the turbines at the identified noise sensitive areas must be less than the 45dB(A) limit for rural areas presented in SANS10103.
83. The applicant must ensure that the National Noise Control Regulations and SANS10103:2008 are adhered to and reasonable measures to limit noise from the work site are implemented.
84. The applicant must ensure that the construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA must wear ear protection equipment.
85. The applicant must ensure that all equipment and machinery are well maintained and equipped with silencers.
86. The applicant must provide a prior warning to the community when a noisy activity e.g. blasting is to take place.
87. All noisy construction operations should only occur during daylight hours if possible.
88. All wind turbines should be located at a setback distance of 500m from any homestead and a day/night noise criteria level at the nearest residents of 45dB(A) should be used to locate the turbines. The 500m setback distance can be relaxed if local factors; such as high ground between the noise source and the receiver, indicates that a noise disturbance will not occur.
89. Positions of turbines jeopardizing compliance with accepted noise levels should be revised during the micro-siting of the units in question and predicted noise levels re-modelled by the noise specialist, in order to ensure that the predicted noise levels are less than 45dB(A).

Visual resources

90. The applicant 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.
91. 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.
92. Signage on or near wind turbines should be avoided unless they serve to inform the public about wind turbines and their function.
93. Commercial messages and graffiti on turbines must be avoided.
94. Laydown areas and stockyards should be located in low visibility areas (e.g. valleys between ridges) and existing vegetation should be used to screen them from view where possible.
95. Night lighting of the construction sites should be minimised within the requirements of safety and efficiency.

Human health and safety

96. 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.
97. Potentials interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.
98. The applicant must ensure that the operation of the wind facility has minimal electromagnetic interference (EMI) (i.e. impacts to microwave, radio and television transmissions) and should comply with the relevant communication regulations.
99. The applicant must obtain a written permit or 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. The approval/permit must be submitted to the Director: Environmental Impact Evaluation.
100. The applicant 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. The approval must be submitted to the Director: Environmental Impact Evaluation.
101. The applicant 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.
102. Liaison with land owners/farm managers is to be done prior to construction in order to provide sufficient time for them to plan agricultural activities. If possible, construction should be scheduled to take place within the post-harvest and pre-planting season, when fields are lying fallow.
103. No open fires for cooking or heating must be allowed on site.

Hazardous materials and waste management

104. Areas around fuel tanks must be bunded or contained in an appropriate manner as per the requirements of SABS 089:1999 Part 1.
 105. Leakage of fuel must be avoided at all times and if spillage occurs, it must be remedied immediately.
-

106. Hazardous waste such as bitumen, oils, oily rags, paint tins etc. must be disposed of at an approved hazardous waste landfill site.
107. An effective monitoring system must be put in place during the construction phase of the development to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. The applicant must ensure that precautionary measures are in place to limit the possibility of oil and other toxic liquids from entering the soil or storm water system.
108. Streams, river, pans, wetlands, dams and their catchments and other environmental sensitive areas must be protected from the direct or indirect spillage of pollutants.
109. 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.
110. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
111. 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.
112. Temporary bunds must be constructed around chemical storage to contain possible spills.
113. Spill kits must be made available on-site for the clean-up of spills.
114. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20(b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).
115. Temporary ablution facilities must be provided for staff at all times during the construction phase. The ablutions must be cleaned regularly with associated waste being disposed of at a registered/permited waste site and must be removed from the site when the construction phase is completed.

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 authorized and permitted sites.
-

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 there are any changes to the layout of the turbines, then additional survey work will be required in order to ensure that no sites are directly impacted and/or to identify the need for an excavation permit.
123. Should any graves be found, all construction activities must be suspended and an archaeologist be contacted immediately. The discovered graves must be cordoned off.

Storm water management

124. A comprehensive storm water management plan must be developed for the site to ensure compliance with applicable regulations and to prevent off-site migration of contaminated storm water or increased soil erosion. The comprehensive storm water management plan should form part of the EMP.
125. Construction must include 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.

Turbines position

126. Turbines must be positioned in such a way that shadow flicker does not affect any farm buildings.

General

127. The recommendations of the EAP in the EIAR dated August 2016 submitted as part of the application for amendment 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: 10/11/2016



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 information contained in the EIR dated September 2011.
- b) The comments received from Cape Nature and interested and affected parties as included in the EIR dated September 2011.
- c) Mitigation measures as proposed in the EIR dated September 2011 and the EMPr.
- d) The information contained in the specialist studies contained in the EIR dated September 2011.
- e) The motivation provided in the application form received on 20 April 2016, the acknowledgement letter dated 25 April 2016, the draft additional information received for comment on 01 June 2016 and the additional information received on 26 July 2016 and 25 August 2016.
- f) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

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 need for clean and renewable energy sources to reduce the country's energy supply problems.
- c) The EIR dated September 2011 identified all legislation and guidelines that have been considered in the preparation of the EIR dated September 2011.
- d) The methodology used in assessing the potential impacts identified in the EIR dated September 2011 and the specialist studies have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2006 for public involvement.

- f) The motivation provided in the application form received on 20 April 2016, the acknowledgement letter dated 25 April 2016, the draft additional information received for comment on 01 June 2016 and the additional information received on 26 July 2016 and 25 August 2016.

3. Conclusions

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

- a) The identification and assessment of impacts are detailed in the EIR dated September 2011 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 proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) All relevant environmental legal and procedural requirements have been met.
- e) The information contained in the EIR dated September 2011 is accurate and credible.
- f) EMP measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIR and will be implemented to manage the identified environmental impacts during the construction process.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity 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 proposed activity can be mitigated to acceptable levels. The application is accordingly granted.