



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 37 of the Environmental Impact Assessment Regulations, 2006

Proposed development of a renewable energy facility at the Sutherland site

Namakwa District Municipality and Central Karoo District Municipality

Authorisation register number:	12/12/20/1782
NEAS reference number:	DEA/EIA/12247/2011
Last amended:	First issue
Holder of authorisation:	Main Stream Renewable Power Sutherland (Pty) Ltd
Location of activity:	NORTHERN AND WESTERN CAPE PROVINCE: Within the Namakwa and Central Karoo District Municipalities

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 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 107 of 1998) and the Environmental Impact Assessment Regulations, 2006 the Department hereby authorises –

MAIN STREAM RENEWABLE POWER SUTHERLAND (PTY) LTD

with the following contact details –

Mainstream Renewable Power Nooitgedacht (Pty) Ltd

Ms Leila Mohamed-Weideman

PO Box 45063

CLAREMONT

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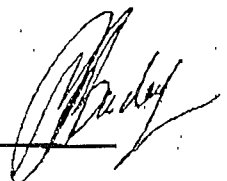
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to undertake the following activities (hereafter referred to as "the activity"):



GN R. 386:

Item 1(l): *The construction of facilities or infrastructure, including associated structures or infrastructure, for the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more.*

Item 14: *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.*

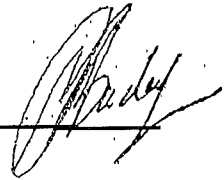
Item 15: *The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long.*

GN R. 387:

Item 1 (l): *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.*

Item 2: *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.*

as described in the Environmental Impact Assessment Report (EIR) dated September 2011 for the proposed construction of the Sutherland Renewable Energy Facility on Portion 0 of farm 30, Klipfontein Extension; Nooitgedagt 148 Portion 1; Tonteldoosfontein 152; Portion 6 (subdivision of Portion 2); Beerenvallei 150, Portion 1 (Scholtzenhof); Schietfontein 179, Portion 1 and Portion 2 (Subdivision of Portion 2); Vanwykskraal 178, Portions 1 and 2; Welgemoed 268; Remainder, Schalkwykskraal 204; Remainder, Drie Roode Heuwels 180; and Remainder, Portions 1 and 2 (subdivisions of Portion 2) Botmashoek 10 located along the Karoo Region and within the jurisdiction of the Namakwa District Municipality and Karoo Hoogland Local Municipality. A small portion of the site falls under the jurisdiction of the Central Karoo District Municipality and the Laingsburg Local Municipality in the Northern and Western Cape Provinces, hereafter referred to as "the property".



The proposed Sutherland Renewable Energy Facility will have a collective generation capacity (wind and solar) of between 747 MW, which translates into a maximum turbine number of 325.

The infrastructure associated with this facility includes:

- Wind turbine generators;
- Photovoltaic (PV) array;
- Internal and external electrical connections;
- Access roads; and
- Additional infrastructure (includes a lay down area, a temporary site compound area for contractors and a borrow pit).

Conditions

Scope of authorisation

1. The preferred Site Layout Alternative 2 is approved.
2. Authorisation of the activity is subject to the conditions contained in this 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 on page 3 of this EA.
5. Any changes to, or deviations from, the project description set out in this 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 authorisation in terms of the regulations.
6. This activity must commence within a period of three (3) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a



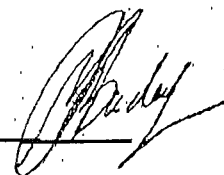
- new application for environmental authorisation must be made in order for the activity to be undertaken.
7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
 8. The holder of an environmental authorisation has the responsibility to notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

Notification of authorisation and right to appeal

9. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment (EIA) Regulations, 2010;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons for the decision.
11. The holder of the authorisation must publish a notice –
 - 11.1. informing interested and affected parties of the decision;
 - 11.2. informing interested and affected parties where the decision can be accessed; and
 - 11.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2)(c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management of the activity

12. A copy of the final site layout plan 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 plan. The site layout plan must indicate the following:
 - 12.1. Turbine positions;



- 12.2. Foundation footprint;
 - 12.3. Permanent laydown area footprint;
 - 12.4. Construction period laydown footprint;
 - 12.5. Internal roads indicating width (construction period width and operation period width) and with numbered sections between the other site elements which they serve (to make commenting on sections possible);
 - 12.6. Wetlands, drainage lines, rivers, stream and water crossing of roads and cables indicating the type of bridging structures that will be used;
 - 12.7. The location of heritage sites;
 - 12.8. Sub-station(s) and/or transformer(s) sites including their entire footprint;
 - 12.9. Cable routes and trench dimensions (where they are not along internal roads);
 - 12.10. Connection routes (including pylon positions) to the distribution/transmission network;
 - 12.11. Cut and fill areas at turbine sites along roads and at sub-station/transformer sites indicating the expected volume of each cut and fill;
 - 12.12. Borrow pits;
 - 12.13. Spoil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - 12.14. All existing infrastructure on the site, especially roads;
 - 12.15. Buildings including accommodation;
 - 12.16. All "no-go" areas.
 - 12.17. A map combining the final layout plan superimposed (overlain) on the environmental sensitivity map. This map must reflect the proposed location of turbines as stated in the EIR dated September 2011 and this authorisation.
13. The Environmental Management Plan (EMP) submitted as part of the application for environmental authorisation must be amended and submitted with the abovementioned layout plan to the Department for written approval prior to commencement of the activity.
14. The EMP amendments must include the following:
- 14.1. All recommendations and mitigation measures recorded in the EIR dated September 2011.
 - 14.2. The requirements and conditions of this authorisation.
 - 14.3. 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.




- 14.4. An open space management plan to be implemented during the construction and operation of the facility.
- 14.5. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility including timeframes for restoration which must indicate rehabilitation within the shortest possible time 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.
- 14.6. 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.
- 14.7. 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.
- 14.8. 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.
- 14.9. 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.
- 14.10. A transportation plan for the transport of turbine components, main assembly cranes and other large pieces of equipment.
- 14.11. 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.



- 14.12. An avifauna and bat monitoring programme to document the effect of the operation of the energy facility on avifauna and bats. This must be compiled by a qualified specialist.
- 14.13. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- 14.14. 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.
15. The approved EMP 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.
16. Changes to the EMP, which are environmentally defensible, shall be submitted to this Department for acceptance before such changes could be effected.
17. The Department reserves the right to request amendments to the EMP should any impacts that were not anticipated or covered in the EIR be discovered.
18. The provisions of the approved EMP including the mitigation measures identified in the EIR and specialist studies shall be an extension of the conditions of this EA and therefore noncompliance with them would constitute noncompliance with the EA.
19. The holder of this authorisation must appoint qualified vegetation, fauna, heritage and avifauna specialists to ground-truth every infrastructure footprint and their recommendation must inform the final layout of the facility and the EMP to be submitted to the department for approval.

Environmental Control Officer (ECO) and duties

20. The holder of this authorisation must appoint an independent Environmental Control Officer (ECO) with experience or expertise in the field for the construction phase of the development. The ECO will have the responsibility to ensure that the conditions referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMP.
 - 20.1. The ECO must be appointed before commencement of any authorised activity.
 - 20.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
 - 20.3. 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.



21. The ECO must:

- 21.1. Keep record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO.
- 21.2. Keep and maintain a detailed incident (including spillage of bitumen, fuels, chemicals, or any other material) and complaint register on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/complaints.
- 21.3. Keep and maintain a daily site diary.
- 21.4. Keep copies of all reports submitted to the Department.
- 21.5. Keep and maintain a schedule of current site activities including the monitoring of such activities.
- 21.6. Obtain and keep record of all documentation, permits, licences and authorisations such as waste disposal certificates, hazardous waste landfill site licences etc. required by this facility.
- 21.7. Compile a monthly monitoring report.

Recording and reporting to the Department

22. The holder of this authorisation must keep all records relating to monitoring and auditing on site and make it available for inspection to any relevant and competent authority in respect of this development.
23. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the *Director: Compliance Monitoring* at the Department.

Environmental audit report

24. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.
25. The environmental audit report must:
 - 25.1. Be compiled by an independent environmental auditor;
 - 25.2. Indicate the date of the audit, the name of the auditor and the outcome of the audit;

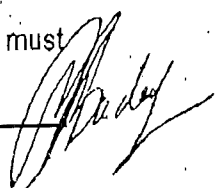
- 25.3. Evaluate compliance with the requirements of the approved EMP and this environmental authorisation;
- 25.4. Include measures to be implemented to attend to any non-compliances or degradation noted;
- 25.5. Include copies of any approvals granted by other authorities relevant to the development for the reporting period;
- 25.6. Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring these issues are appropriately addressed;
- 25.7. Include a copy of this authorisation and the approved EMP;
- 25.8. Include all documentation such as waste disposal certificates, hazardous waste landfill site licences etc. pertaining to this authorisation; and
- 25.9. Include evidence of adherence to the conditions of this authorisation and the EMP where relevant such as training records and attendance records.

Commencement of the activity

26. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
27. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.
28. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.
29. The holder of this authorisation must obtain a Water Use Licence from the Department of Water Affairs (DWA) prior to the commencement of the project should the holder impact on any wetland or water resource. A copy of the license must be submitted to the *Director: Environmental Impact Evaluation* at the Department.

Notification to authorities

30. Fourteen (14) days written notice must be given to the Department that the activity will commence. 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. This notification period may coincide with the notice of intent to appeal period, within which construction may not commence.

Operation of the activity

31. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.
32. The applicant must compile an operational EMP for the operational phase of the activity or alternatively, if the applicant has an existing operational environmental management system, it must be amended to include the operation of the authorised activity.

Site closure and decommissioning

33. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant environmental legal requirements administered by any relevant and competent authority at that time.

Specific conditions

Avifauna and bats

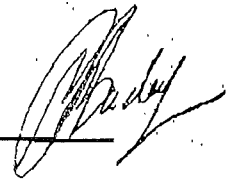
34. A bird and bat monitoring programme must be implemented to document the effect of the operation of the energy facility on avifauna and bats. This should commence prior to construction, and continue during operation of the energy facility.
35. The results of the pre-construction bird monitoring programme must inform the final layout and the construction schedule of the energy facility.
36. 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.
37. 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.

38. 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.
39. Anti-collision devices such as bird flappers must be installed where power lines cross avifaunal corridors. 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. Flappers must be fitted in place so that they do not drift along the line and be readily and cost effectively installed on, or removed from the existing lines.
40. 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.
41. 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

42. All species of special concern (SSC) must be identified and every effort must be made to rescue them.
43. 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.
44. Critical available biodiversity information must be consulted for the final placement of turbines, PV panels and infrastructure.
45. 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.
46. 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.
47. 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.
48. Construction activities must be restricted to demarcated areas to restrict impact on vegetation, birds and animals.

49. 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.
50. 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.
51. All electrical collector lines must be buried in a manner that minimizes additional surface disturbance.
52. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
53. 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.
54. All hard infrastructures should be located within existing areas of low sensitivity, as far as possible.
55. All turbines and PV arrays must be located at least 100m from the edge of any highly sensitive areas.
56. No exotic plants may be used for rehabilitation purposes; only indigenous plants of the area may be utilised.
57. 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.
58. Appropriate erosion mitigation must be implemented to prevent any potential erosion.
59. Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing but should be temporarily stored in a demarcated area.
60. 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).
61. The applicant must ensure that all the "No-go" areas are clearly demarcated (using fencing and appropriate signage) before construction commences.
62. Contractors and construction workers must be clearly informed of the no-go areas.
63. 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.
64. 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.
65. 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.

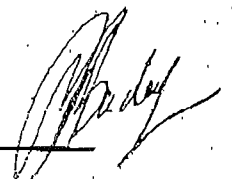


Roads and transportation

66. Existing road infrastructure must be used as far as possible for providing access to the proposed turbine and PV array 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.
67. A transportation plan must be developed, particularly for the transport of turbine and PV components, 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.
68. 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.
69. 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.
70. Roads must be designed so that changes to surface water runoff are avoided and erosion is not initiated.
71. Internal access roads must be located away from drainage bottoms and avoid wetlands, if feasible.
72. 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.
73. Existing drainage must not be altered, especially in sensitive areas.
74. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
75. Signage must be erected at appropriate points warning of turning traffic and the construction site.
76. 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.
77. Road borders should be regularly maintained to ensure that vegetation remains short and that they therefore serve as an effective firebreak.

Noise

78. Construction staff to be given training in actions to minimise noise impacts.
79. Noise from the turbines at the identified noise sensitive areas must be less than the 45dB(A) limit for rural areas presented in SANS10103.



80. 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.
81. 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.
82. The applicant must ensure that all equipment and machinery are well maintained and equipped with silencers.
83. The applicant must provide a prior warning to the community when a noisy activity e.g. blasting is to take place.
84. All noisy construction operations should only occur during daylight hours if possible.
85. 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.
86. 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

87. 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.
88. 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.
89. Signage on or near wind turbines should be avoided unless they serve to inform the public about wind turbines and their function.
90. Commercial messages and graffiti on turbines must be avoided.
91. 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.
92. Night lighting of the construction sites should be minimised within the requirements of safety and efficiency.

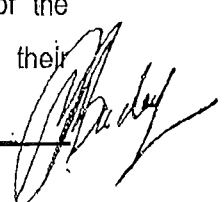
Human health and safety

93. 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.
94. Potentials interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.
 95. 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.
 96. 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*.
 97. 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*.
 98. 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.
 99. 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.
 100. No open fires for cooking or heating must be allowed on site.

Hazardous materials and waste management

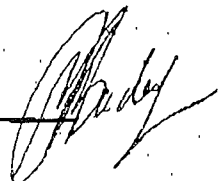
101. Areas around fuel tanks must be bunded or contained in an appropriate manner as per the requirements of SABS 089:1999 Part 1.
102. Leakage of fuel must be avoided at all times and if spillage occurs, it must be remedied immediately.
103. Hazardous waste such as bitumen, oils, oily rags, paint tins etc, must be disposed of at an approved hazardous waste landfill site.
104. 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.
105. Streams, river, pans, wetlands, dams and their catchments and other environmental sensitive areas must be protected from the direct or indirect spillage of pollutants.
106. 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.
107. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
108. 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.
109. Temporary bunds must be constructed around chemical storage to contain possible spills.
110. Spill kits must be made available on-site for the clean-up of spills.
111. 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).
112. 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/permitted waste site and must be removed from the site when the construction phase is completed.

Excavation and blasting activities

113. Underground cables and internal access roads must be aligned as much as possible along existing infrastructure to limit damage to vegetation and watercourses.
114. 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.
115. Borrow materials must be obtained only from authorized and permitted sites.
116. Anti-erosion measures such as silt fences must be installed in disturbed areas.



Air emissions

117. Dust abatement techniques must be used before and during surface clearing, excavation, or blasting activities.
118. 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

119. 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.
120. 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

121. 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.
122. 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

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

Overhead power line

124. A walk-through survey of the final power line corridor must be undertaken by a botanical specialist, an ornithologist and a heritage specialist to identify areas where mitigation may be required.
125. All sections of the proposed power line passing over, or in close proximity of grasslands, rivers, wetlands, and dams must be marked with suitable bird flight diverters in order to deter large birds from colliding with any power line. Additional areas of high sensitivity along the preferred alignment must be identified by an avifaunal specialist for the fitment of anti-collision devices according to Eskom Transmission Guidelines.

General

126. A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
127. The holder of the authorisation must notify both the Director: Environmental Impact Evaluation and the Director: Compliance Monitoring at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
128. 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 applicant or his 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 applicant 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: 22 FEBRUARY 2012



Mr Ishaam Abader

Deputy Director-General: Environmental Quality and Protection

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 EMP;
- d) The information contained in the specialist studies contained in the EIR dated September 2011; and
- e) 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.



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.