



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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

DEA Reference: 14/12/16/3/3/2/1018

Enquiries: Mr Thando Booï

Telephone: (012) 399 9387 **E-mail:** TBooi@environment.gov.za

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

Telephone Number: (021) 657 4045
Cell phone Number: (083) 785 1492
Email Address: mike.mangnall@mainstreamrp.com

PER E-MAIL / MAIL

Dear Mr Mangnall

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 982, 983 AND 984 FOR THE PROPOSED CONSTRUCTION OF THE IXHA BOOM WIND FARM NEAR LOERISFONTEIN, NORTHERN CAPE PROVINCE

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

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 (the Regulations) as amended, 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 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. In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, (the Regulations), as amended you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's decision in respect of your application as well as the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, and the provisions regarding the submission of appeals as contained in the Regulations.

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

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

Mr Z Hassam, Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appealsdirector@environment.gov.za

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

By post: Private Bag X 447,
Pretoria,
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, 1998, the lodging of an appeal 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.

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

Yours faithfully



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

Date: 29/03/2018

cc:	Ms A Gibb	Sivest SA (Pty) Ltd	Tel: (011) 798 0638	Email: andreag@sivest.co.za
	Mr B Fisher	NCDENC	Tel: (053) 807 7300	Email:bfisher@ncpg.gov
	Mr R Van Wyk	Hantam Local Municipality	Tel: (027) 341 8500	Email:socialdev1@hantam.gov.za



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

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

The proposed construction of the !Xha Boom Wind Farm near Loeriesfontein, Hantam Local Municipality in the Northern Cape Province

Namakwa District Municipality

Authorisation register number:	<i>14/12/16/3/3/2/1018</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>South African Mainstream Renewable Power Developments (Pty) Ltd</i>
Location of activity:	<i>Portion 2 of Farm Georg's Vley No 217; Hantam Local Municipality; Namakwa District Municipality; Northern Cape Province.</i>

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

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Decision

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

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

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

Activities authorised

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

SOUTH AFRICAN MAINSTREAM RENEWABLE POWER DEVELOPMENTS (PTY) LTD

with the following contact details –

Mr Michael Mangnall

South African Mainstream Renewable Power Developments (Pty) Ltd

PO Box 45063

CLAREMONT

7735

Telephone Number: (021) 657 045

Cell phone Number: (083) 785 1492

Email Address: mike.mangnall@mainstreamrp.com

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

Activity number	Activity description
<p><u>GN R 983 Activity 11:</u> <i>"The development of facilities or infrastructure for the transmission and distribution of electricity-</i></p> <p><i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts."</i></p> <p><i>excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is —</i></p> <p><i>(a) temporarily required to allow for maintenance of existing infrastructure;</i></p> <p><i>(b) 2 kilometres or shorter in length;</i></p> <p><i>(c) within an existing transmission line servitude; and</i></p> <p><i>(d) will be removed within 18 months of the commencement of development.</i></p>	<p>An on-site Independent Power Producer (IPP) substation will be constructed as part of the proposed wind farm. The proposed on-site IPP substation will be located outside an urban area and will have a capacity of 132kV.</p>
<p><u>GN R. 983 Activity 12:</u> <i>"The development of –</i></p> <p><i>(ii) infrastructure or structures with a physical footprint of 100m² or more;</i></p> <p><i>Where such development occurs –</i></p> <p><i>(a) within a watercourse; or</i></p> <p><i>(c) if no development setback exists, within 32m of a water course, measured from the edge of a watercourse."</i></p> <p><i>excluding—</i></p>	<p>The proposed development will entail the construction of buildings and other infrastructure exceeding 100 square metres in size. Internal access roads will be required which will need to route to the respective wind turbines locations and to the O&M infrastructure. The impact phase surface water assessment identified two (2) Depression Wetlands, three (3) Major Drainage Line (drainage line with a channel width greater than 5m) and two hundred and thirty seven (237) Drainage Lines (drainage line with a channel width less than 5m). As a</p>

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Activity number	Activity description
<p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area; [or]</p> <p>(ee) where such development occurs within existing roads, [or] road reserves or railway line reserves; or</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	<p>result of the proposed internal road network, nineteen (19) road segment will cross surface water resources directly and other infrastructure will also likely fall within 32m of surface water features.</p>
<p><u>GN R. 983 Activity 19:</u></p> <p>"The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from a watercourse, but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; [or]</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>or</p>	<p>The impact phase surface water assessment revealed that there are surface water features located within the development area. This assessment identified two (2) Depression Wetlands, three (03) Major Drainage Line (drainage line with a channel width greater than 5m) and two hundred and thirty seven (237) Drainage Lines (drainage line with a channel width less than 5m). As a result of the proposed internal road network, nineteen (19) road segments will cross surface water resources directly and other infrastructure will also likely fall within 32m of surface water features.</p>

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Activity number	Activity description
<p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	
<p><u>GN R. 983 Activity 24:</u> <i>"The development of-</i></p> <p>(ii) <i>a road with a reserve wider than 13.5 metres, or where no reserve exists where the road is wider than 8 metres."</i></p> <p>but excluding a road—</p> <p>(a) which is identified and included in activity 27 in Listing Notice 2 of 2014;</p> <p>(b) where the entire road falls within an urban area; or</p> <p>c) which is 1 kilometre or shorter.</p>	<p>Internal access roads with a maximum width of 20m are initially being proposed for the construction phase. This is however only temporary as the width of the proposed internal access roads will be reduced to approximately 6m-8m for maintenance purposes during operational phase</p>
<p><u>GN R. 983 Activity 28:</u> <i>"Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 1 April 1998 and where such development:</i></p> <p>(ii) <i>will occur outside an urban area, where the total land to be developed is bigger than 1 ha</i></p> <p><i>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</i></p>	<p>The proposed project site is currently used for agricultural purposes, specifically commercial sheep farming, and the proposed project will result in an area greater than 1 hectare being transformed into an industrial land use.</p>
<p><u>GN R. 983 Activity 56:</u> <i>"The widening of a road by more than 6m, or lengthening of a road by more than 1km-</i></p> <p>(ii) <i>where no reserve exists, where the existing road is wider than 8m.</i></p>	<p>Existing access roads will need to be upgraded in order to access the site. Internal access roads with a maximum width of 20m are initially being proposed for the construction phase. This is however only temporary as the width of proposed internal access roads will be reduced to approximately</p>

Activity number	Activity description
<i>excluding where widening or lengthening occur inside urban areas</i>	~6m to 8m for maintenance purposes during the operational phase of the proposed WEF.
<p><u>GN R. 984 Activity 1:</u> <i>"The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more."</i></p> <p><i>excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs-</i></p> <p><i>(a) within an urban area; or</i> <i>(b) on existing infrastructure</i></p>	It is proposed that a wind farm with a maximum export capacity up to 235MW will be constructed.
<p><u>GN R. 984 Activity 15:</u> <i>"The clearance of an area of 20 hectares or more of indigenous vegetation."</i></p> <p><i>Excluding where such clearance of indigenous vegetation is required for-</i></p> <p><i>(i) the undertaking of a linear activity; or</i> <i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan</i></p>	The proposed wind farm development will transform more than 20 hectares of indigenous vegetation. Clearance will also be required for the proposed on-site substation, O&M building, internal access roads and other associated infrastructure.

as described in the Environmental Impact Assessment Report (EIAR) dated 17 January 2018 at:

21 SG Codes:

C	0	1	5	0	0	0	0	0	0	0	0	0	2	1	7	0	0	0	0	2
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Site (preferred)

Alternative (preferred site)	Latitude	Longitude
XW_01 (NW)	30° 16' 50.056" S	19° 13' 55.084" E
XW_02 (NE)	30° 15' 14.650" S	19° 17' 53.313" E
XW_03 (SE)	30° 21' 22.040" S	19° 16' 8.738" E
XW_04 (SW)	30° 19' 30.216" S	19° 14' 19.283" E

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Centre Point Coordinates		
XW_05	30° 18' 2.587" S	19° 15' 47.612" E
Preferred buildable area	30° 17' 57.432" S	19° 16' 2.031" E
Substation	30° 17' 41.614" S	19° 16' 50.509" E

-for the construction of the !Xha Boom Wind Farm situated near Loeriesfontein, Hantam Local Municipality in the Northern Cape Province, hereafter referred to as "the property".

The !Xha Boom Wind Farm will comprise of the following technical details:

Component	Description/ Dimensions
Farm name and area	Portion 2 of the Farm Georg's Vley No 217 in the Northern Cape.
21 digit SG Codes	C01500000000021700002
Export capacity	Up to 235MW.
Proposed technology	Wind Energy – (Between 4MW – 8MW per turbine).
Number of Turbines	Up to 47.
Hub height from ground level	Up to 160m.
Rotor diameter	Up to 160m.
IPP substation	132kV on-site !Xha Boom IPP Substation. The turbines will be connected via medium voltage cables to the proposed 132kV on-site !Xha Boom IPP Substation.
Width and length of internal roads	Construction – up to approximately 20m (width) Permanent – approximately 6M - 8m.
Fencing	Up to 5m (Fence will either mesh or palisade).
Other Infrastructures	<ul style="list-style-type: none"> • The operations and maintenance buildings, including an on-site spares storage building, a workshop and an operations building. • A temporary construction lay down area. • A hard standing area / platform per turbine.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The proposed construction of the !Xha Boom Wind Farm situated near Loeriesfontein, Hantam Local Municipality in the Northern Cape Province and its associated infrastructure 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. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

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 14 (fourteen) 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 the National Appeal Regulations, 2014;
 - 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 of the competent authority 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 terms of the National Appeal Regulations, 2014.

Commencement of the activity

12. The authorised activity shall not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014. 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.

Management of the activity

13. A final site layout plan submitted as part of the EIAr is not approved. A copy of the final site layout map must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval prior to commencement of the activity with the amended EMPr. All available biodiversity information must be used in the finalisation of the layout

map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:

- 13.1. Internal roads indicating width;
 - 13.2. Substation(s) inverters and/or transformer(s) sites including their entire footprint;
 - 13.3. Connection routes (including pylon positions) to the distribution/transmission network;
 - 13.4. Soil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - 13.5. Buildings, including accommodation; and,
 - 13.6. All "no-go" and buffer areas.
14. Furthermore, a shapefile of the approved development layout/footprint must be submitted to this Department within two months from the date of this decision. The shapefile must be created using the Hartebeesthoek 94 Datum and the data should be in Decimal Degree Format using the WGS 84 Spheroid. The shapefile must include at a minimum the following extensions i.e. .shp; .shx; .dbf; .prj; and, .xml (Metadata file). If specific symbology was assigned to the file, then the .avl and/or the .lyr file must also be included. Data must be mapped at a scale of 1:10 000 (please specify if an alternative scale was used). The metadata must include a description of the base data used for digitizing. The shapefile must be submitted in a zip file using the EIA application reference number as the title. The shape file must be submitted to:

Postal Address:

Department of Environmental Affairs
Private Bag X447
Pretoria
0001

Physical address:

Department of Environmental Affairs
Environment House
473 Steve Biko
Arcadia
Pretoria
For Attention: Mr Muhammad Essop
Integrated Environmental Authorisations
Strategic Infrastructure Developments
Telephone Number: (012) 399 9406
Email Address: MEssop@environment.gov.za

15. The Environmental Management Programme (EMPr) submitted as part of the EIAr is not approved and must be amended to include the provisions of this environmental authorisation. The EMPr must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.
16. The EMPr amendment must also include the following:
 - 16.1. An Electromagnetic Compatibility (EMC) Control Plan, which identifies potential risk, mitigation measures and appropriate test and acceptable procedures during the design and construction of this facility. The EMC Control Plan must be made available by the holder of this environmental authorisation to Square Kilometre Array South Africa (SKA-SA) for approval.
 - 16.2. All recommendations and mitigation measures recorded in the EIAr.
 - 16.3. All mitigation measures as listed in the specialist reports within the EIAr.
 - 16.4. The final site layout map.
 - 16.5. An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.
 - 16.6. A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site in consultation with the ECO and be implemented prior to commencement of the construction phase.
 - 16.7. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
 - 16.8. A traffic management plan for the site access roads to ensure that no hazards would 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.
 - 16.9. A construction and operational avifauna and bat monitoring plan.
 - 16.10. A heritage conservation management plan which must have been submitted to SAHRA for review and comment.

- 16.11. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
- 16.12. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.
- 16.13. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.
- 16.14. A fire management plan to be implemented during the construction and operational phases.
- 16.15. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.
- 16.16. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- 16.17. 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 EIAR and this authorisation.
17. The final amended EMPr (once approved) must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
18. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
19. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAR be discovered.

Frequency and process of updating the EMPr

20. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 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.

21. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
22. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
23. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of GN R. 982. Prior to approving an amended EMPr, the Department may request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.
24. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The 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

25. 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.
 - 25.1. The ECO must be appointed before commencement of any authorised activities.
 - 25.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
 - 25.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 25.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.

Recording and reporting to the Department

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

Notification to authorities

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

Operation of the activity

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

Site closure and decommissioning

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

Specific conditions

35. During the detailed design of the facility, the holder of this environmental authorisation must, in consultation with the Square Kilometre Array South Africa (SKA SA) Project office, conduct detailed Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI) studies in order to evaluate the impact the facility could have on the SKA radio telescope.
36. The Electromagnetic Interference (EMI)/ Radio Frequency Interference (RFI) reports, together with an appropriate Electromagnetic Compatibility (EMC) control plan, must be submitted to the SKA project office for approval, prior to the construction of the facility. The Electromagnetic Compatibility (EMC) control plan must address the proven technical and engineering design solutions that will be implemented to fully mitigate the risk of the proposed project. Proof of SKA's approval of the EMC control plan must be submitted to this Department for approval prior to commencement of construction.
37. Construction on site must not commence until all the required studies and EMC control plans are approved by the SKA project office.
38. Up to 47 wind turbines are approved and the final placement of turbines must follow a micro siting procedure involving a walk-through and identification of any sensitive areas by the ecological, avifaunal, bat, surface water and heritage specialists.
39. Exclusion of sensitive ecological, avifaunal, bat, surface water and heritage areas from construction activities must inform micro siting of all development activities.
40. A 300m "no-go" buffer must be applied around all identified water points as they serve as focal points for bird activity.
41. No turbines must be constructed in "no-go" areas, while associated infrastructure (roads, power lines and substations) must be avoided where possible in these areas.
42. All turbines must be curtailed below cut in speed and not allow for free-wheeling from the start of operation, for every night of the year from sunset to sunrise.
43. The following curtailment schedule must be implemented. The levels of curtailment must be adjusted according to the results of the operational monitoring, based on robust mortality data:

	Specific conditions of mitigation implementation
Peak activity (times to implement curtailment/ mitigation)	Met Mast (80m): 15 – 25 January over the time of sunset – 01:00
Environmental conditions in which to implement curtailment/ mitigation	Met Mast (80m): Wind speed below 7m/s <i>and</i> Temperature above 18°C
Peak activity (times to implement curtailment/ mitigation)	Met Mast (80m): 25 August – 30 November over the time of sunset – 00:00
Environmental conditions in which to implement curtailment/ mitigation	Met Mast (80m): Wind speed below 8m/s (non-normalised data used) <i>and</i> Temperature above 14°C

44. A construction and operational avifauna and bat monitoring plan must be developed and implemented according to the latest BirdLife South Africa/Endangered Wildlife Trust: Best practice guidelines for avian monitoring and impact mitigation at proposed wind energy development sites in Southern Africa and the latest South African Bat Assessment Advisory Panel's (SABAAP) guidelines.
45. As an absolute minimum, avifauna and bat monitoring, must occur during the construction period and continue for at least three years during the operation of the facility. The results of this monitoring must be made available to the DEA, Birdlife South Africa (BLSA) and the South African Bat Assessment Advisory Panel (SABAAP) and must further advise the EMPr where necessary.
46. The holder of the environmental authorisation must ensure that the implementation of an operational monitoring plan to survey impacts resulting from the infrastructure on the bird communities with focus on assessing the displacement and disturbance effects of the development on the bird communities, as well as bird collisions and continue to gather information on the bird communities present in the area and monitor the effectiveness of the mitigation measures for a minimum duration of at least three years.
47. The facility must be designed in a manner that prevents infrastructure components from being used as perching or roosting substrates by birds and bats, as such is prohibited.
48. Anti-collision devices such as bird flappers must be installed where power lines cross avifaunal corridors (e.g. drainage lines and wetland areas). The input of an avifaunal specialist must be obtained for the fitting of the anti-collision devices onto specific sections of the line once the exact positions of the towers have been surveyed and pegged. Additional areas of high sensitivity along the preferred alignment must also be identified by the avifaunal specialist for the fitment of anti-collision devices. These devices must be according to Eskom's Transmission and Endangered Wildlife Trust's Guidelines.
49. All internal power line/cables must follow internal access roads.
50. All power lines linking the turbines to the onsite substation must be buried.
51. The "no-go" areas of the development property must be clearly demarcated and must be excluded from the final layout plan.

52. The holder of this environmental authorisation must restrict the construction activities to the footprint area, no access to the remainder of the property is allowed.
53. Relevant permits must be obtained from relevant authorities for any removal or destruction of Threatened or Protected Species (TOPs).
54. 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 kept by the ECO.
55. 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).
56. Construction activities must be restricted to demarcated areas to restrict the impact on sensitive environmental features.
57. All areas of disturbed soil must be reclaimed using only indigenous grass and shrubs. Reclamation activities shall be undertaken according to the rehabilitation plan to be included in the final EMPr.
58. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
59. No exotic plants must be used for rehabilitation purposes; only indigenous plants of the area must be utilised.
60. No activities will be allowed to encroach into a water resource without a Water Use License being in place from the Department of Water and Sanitation.
61. Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing but must be temporarily stored in a demarcated area.
62. Contractors and construction workers must be clearly informed of the "no-go" areas.
63. Where roads pass right next to drainage lines and wetlands, provisions must be made for fauna such as toads to pass under the roads by using culverts or similar structures.
64. Bridge design must be such that it minimises impact to riparian areas with minimal alterations to water flow and must allow the movement of fauna and flora.
65. The final development area should be surveyed for species suitable for search and rescue, which should be trans-located prior to the commencement of construction.
66. Disturbed areas must be rehabilitated after construction with local indigenous plants to enhance the conservation of existing natural vegetation on site.
67. Wetlands and drainage lines areas must be treated as "no-go" areas and demarcated as such. No vehicles, machinery, personnel, construction material, fuel, oil, bitumen or waste must be allowed into these areas without the express permission of and supervision of the ECO, except for rehabilitation work in these areas.

68. Workers must be made aware of the importance of not destroying or damaging the vegetation along wetland and drainage lines areas and this awareness must be promoted throughout the construction phase.
69. No discharge of effluents or polluted water must be allowed into any drainage lines or wetland areas.
70. Existing road infrastructure must be used as far as possible for providing access to the proposed turbine positions. Where no road infrastructure exists, new roads must be placed within existing disturbed areas or environmental conditions must be taken into account to ensure that minimum amount of damage is caused to natural habitats.
71. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
72. Necessary permits must be obtained for the oversized construction vehicles to transport turbine components.
73. Construction vehicles carrying materials to the site must avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
74. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information to minimize impacts on possible faunal species. Signage must be erected at appropriate points warning of turning traffic and the construction site.
75. Road borders must be regularly maintained to ensure that vegetation remains short and that they therefore serve as an effective firebreak.
76. Roads must be designed such that changes to surface water runoff are avoided and erosion is not initiated.
77. The holder of this environmental authorisation must reduce visual impacts during construction by minimising areas of surface disturbance, controlling erosion, using dust suppression techniques and restoring exposed soil as closely as possible to their original contour and vegetation.
78. 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.
79. Lighting of main structures (turbines) and ancillary buildings must be designed to minimise light pollution without compromising safety, and turbines must be lit according to Civil Aviation Regulations.
80. Signage on or near wind turbines must be avoided unless they serve to inform the public about wind turbines and their function.
81. 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.
82. Potential interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.

83. The holder of this environmental authorisation must obtain approval from the South Africa Civil Aviation Authority that the wind facility will not interfere with the performance of aerodrome radio Communication, Navigation and Surveillance (CNS) equipment, especially the radar, prior to commencement of the activity. A copy of the approval must be kept on site by the ECO.
84. The holder of this environmental authorisation must ensure that the operation of the wind facility complies with the relevant communication regulations or guidelines relating to electromagnetic interference, e.g. microwave, radio and television transmissions.
85. The holder of this environmental authorisation must train safety representatives, managers and workers in workplace safety. The construction process must be compliant with all safety and health measures as prescribed by the relevant act.
86. Liaison with land owners/farm managers must be done prior to construction in order to provide sufficient time for them to plan agricultural activities.
87. No unsupervised open fires for cooking or heating must be allowed on site.
88. Areas around fuel tanks must be contained in an appropriate manner as per the requirements of SABS 089:1999 Part 1.
89. Leakage of fuel must be avoided at all times and if spillage occurs, it must be remedied immediately.
90. Hazardous waste such as bitumen, oils, oily rags, paint tins etc. must be disposed of at an approved waste landfill site licensed to accept such waste.
91. 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.
92. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
93. 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 lines with or without an extensive floodplain or hillside wetlands.
94. Temporary bunds must be constructed around chemical storage to contain possible spills.
95. Spill kits must be made available on-site for the clean-up of spills.
96. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling and re-use options where appropriate. Where solid waste is disposed of, such disposal shall only occur at a landfill licensed in terms of section 20(b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).
97. The holder of this environmental authorisation must provide sanitation facilities within the construction camps and along the road so that workers do not pollute the surrounding environment. These facilities

- must be removed from the site when the construction phase is completed as well as associated waste to be disposed of at a registered waste disposal site.
98. The holder of this environmental authorisation must take note that no temporary site camps will be allowed outside the footprint of the development area as the establishment of such structures might trigger a listed activity as defined in the Environmental Impact Assessment Regulations, 2014 as amended.
 99. The holder of this environmental authorisation must provide sanitation facilities for the operation staff.
 100. Underground cables and internal access roads must be aligned as much as possible along existing infrastructure such as roads to limit damage to vegetation, drainage lines and wetland areas.
 101. 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.
 102. Borrow materials must be obtained only from authorised and permitted sites. Permits must be kept on site by the ECO.
 103. Anti-erosion measures such as silt fences must be installed in disturbed areas.
 104. A walk-down of the final layout must be conducted by a qualified archaeologist prior to construction. A report detailing the results of the walk-down must be submitted to SAHRA for comment and approval prior to construction. Construction must not commence without approval from SAHRA.
 105. If concentrations of archaeological heritage material, fossils and human remains are uncovered during construction, all work must cease immediately and be reported to the South African Heritage Resources Agency (SAHRA) so that a systematic and professional investigation / excavation can be undertaken.
 106. Construction managers/foremen must be informed before construction starts of the possible types of heritage sites and cultural material that may be encountered and the procedures to follow when they find sites.
 107. All buffers and "no-go" areas stipulated in the EIAR must be adhered to for both the facilities and all roads and power lines.
 108. Commercial messages and graffiti on turbines are prohibited.

General

109. The recommendations of the EAP in the EIAR dated 17 January 2018 and the specialist studies attached must be adhered to. In the event of any conflicting mitigation measures and conditions of the Environmental Authorisation, the specific condition of this environmental authorisation will take preference.
110. A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-

- 110.1. at the site of the authorised activity;
 - 110.2. to anyone on request; and
 - 110.3. where the holder of the environmental authorisation has a website, on such publicly accessible website.
111. 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: 29/03/2018



Mr Sabelo Malaza

Chief Director, Integrated Environmental Authorisations

Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information used in making the decision

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

- a) The listed activities as applied for in the application form received on 21 June 2017 and amended on 29 January 2018.
- b) The information contained in the draft Scoping Report dated 21 June 2017 and received on 21 June 2017.
- c) The information contained in the final Scoping Report dated 04 August 2018 and received on 04 August 2018.
- d) The information contained in the draft EIAr dated 31 October 2017 and received on 31 October 2017.
- e) The information contained in the final EIAr dated 17 January 2018 and received on 17 January 2018.
- f) The comments received from the following authorities: SAHRA, the South African Weather Service, the Square Kilometre Array (SKA) SA, DWS, ESKOM, SENTECH, Vodacom, Telkom SA, BirdLife, NC DRPW, SANRAL, the Southern African Large Telescope (SALT) at the South African Astronomical Observatory (SAAO), Hantam Local Municipality, South African Civil Aviation Authority, Commission on restitution of Land Rights and various interested and affected parties.
- g) The information contained in all the specialist studies contained within the appendices of the final EIAr dated 17 January 2018.

2. Key factors considered in making the decision

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

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the provision of electricity to the national grid.
- c) The EIAr dated 17 January 2018 identified all legislations and guidelines that have been considered in the preparation of the EIAr.
- d) The location of turbine positions presented in the final EIAr and relative to other authorised developments in the area and the SKA-SA.
- e) The methodology used in assessing the potential impacts identified in the EIAr dated 17 January 2018 and the specialist studies have been adequately indicated.

- f) The findings of the site inspection held on 29 November 2017.
- g) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 (as amended) for public involvement.

3. Findings

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

- a) The identification and assessment of impacts are detailed in the EIAr dated 17 January 2018 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- d) The EMPr proposed the mitigation measures for the pre-construction, construction and rehabilitation phases of the development and were included in the EIAr. The Mitigation measures will be implemented to manage the identified environmental impacts during the construction phase.

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