

South African Heritage Resources Agency (SAHRA)
111 Harrington Street
CAPE TOWN
8001

Your reference: Case ID: 14397
Our reference: 15659 - Dwarsrug
Date: 13 December 2019

ATTENTION: MS / MRS NATASHA HIGGITT

VIA EMAIL

Dear Ms / Mrs Natasha Higgitt,

PROPOSED CONSTRUCTION OF THE DWARSRUG WIND FARM NEAR LOERIESFONTEIN, NORTHERN CAPE PROVINCE (DEA REFERENCE NO.: 4/12/16/3/3/2/690/AM2) – RESPONSE TO INTERIM COMMENT DATED 15 NOVEMBER 2019

The South African Heritage Resources Agency's (SAHRA's) Interim Comment letter dated 15 November 2019 (**Appendix A**) for the Part 2 Environmental Authorisation (EA) Amendment process for the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province (**DEA Reference No.: 14/12/16/3/3/2/690/AM2**) refers.

SAHRA's Archaeology, Palaeontology and Meteorites (APM) Unit requested that a field-based Palaeontological Impact Assessment (PIA) be conducted for the amended layout of the authorised Wind Energy Facility (WEF) as part of the EA Amendment application. It was further stated that the draft EA Amendment Motivation report must be amended to include the results of this study. In addition, it was advised that the EA amendment process be extended in terms of section 32(1)b of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) regulations, as amended, in order to comply with the interim comment provided.

According to Section 32(1)a of the NEMA Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), the final report must be submitted to the competent authority within 90 days of receipt of the application by the competent authority. Since the application for amendment was submitted to the competent authority, namely the Department of Environmental Affairs (DEA), on 12 August 2019, the applicant had until Monday 11 November 2019 to submit the Final EA Amendment Assessment Report to the DEA for decision-making. SAHRA only issued the Interim Comment on 15 November 2019, after the Final EA Amendment Assessment Report had been submitted to the DEA for decision-making, thus the field-based PIA could not be undertaken and the results could not be included in the Draft EA Amendment Assessment Report, as requested.

The Draft EA Amendment Assessment Report was made available for review and commenting for a period of 30 days from Friday 27 September 2019 to Monday 28 October 2019, excluding public holidays. All Interested and/or Affected Parties (I&APs), key stakeholders and Organs of State (OoS) / authorities registered on the project database were notified about the availability of the Draft EA Amendment

Assessment Report and were given 30 days to comment on the report. In addition, the key stakeholders / OoS / authorities were sent electronic copies (on CD) of the report (including all appendices) during the 30-day comment and review period. As such, SAHRA were provided with an opportunity to comment on the proposed amendments during the 30-day review and comment period of the Draft EA Amendment Assessment Report. Should SAHRA have provided these comments as part of the 30-day review and comment period for the Draft EA Amendment Assessment Report, this would have given the applicant enough time to appoint a suitably qualified Palaeontologist, have them undertake the field-based PIA and include the results in the Final EA Amendment Assessment Report before it was submitted to the DEA for decision-making.

It should also be noted that according to section 32(1)b of the NEMA EIA Regulations, 2014 (as amended), should an applicant wish to extend the timeframes for an EA amendment process, the applicant must submit a notification in writing that the final report will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the report. Due to the fact that SAHRA's Interim Comment was only issued on 15 November 2019, after the Final EA Amendment Assessment Report was submitted to the DEA for decision-making, the applicant was unaware that a time extension would be required. In addition, the applicant cannot request a time extension after the final report has already been submitted to the DEA. Should SAHRA have provided the Interim Comments as part of the 30-day review and comment period for the Draft EA Amendment Assessment Report, this would have given the applicant enough time to request a time extension from the DEA.

Despite the limitations mentioned above, the applicant has confirmed that a final PIA walkthrough of the WEF site will be undertaken by a suitably qualified Palaeontologist before construction commences and that the results of this walkthrough will be sent to SAHRA for review and commenting. It should be noted that Condition 127 of the Original EA for the Dwarsrug Wind Farm (**DEA Reference No.: 14/12/16/3/3/2/690**) (**Appendix B**) states that the exclusion of sensitive ecological, heritage and paleontological areas from construction activities must inform micro siting of all development activities. In light of this, a final PIA walkthrough will need to be undertaken by the applicant before construction commences so that the results can inform the micro siting of all development activities. It should also be noted that according to Condition 15 of the Original EA, the Environmental Management Programme (EMPr) submitted as part of the EIA Report (EIAR) was not approved and must be amended to include measures as dictated by the final site layout map and micro-siting. It was further stated that the EMPr must be made available for comments and the holder of the EA must consider such comments. Once amended, the final EMPr must be submitted to the DEA for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.

Since the EA is considered to be a legally binding document, the conditions mentioned above will need to be adhered to by the holder of the EA. In light of this, the holder of the EA will amend the EMPr which was submitted as part of the EIAR to include the results of the final PIA walkthrough as well as the measures as dictated by the final site layout map and micro-siting. This will be done before construction commences. In addition, the EMPr will be made available for comments prior to commencement of construction and SAHRA will therefore be provided an opportunity to comment on the results of the final PIA walkthrough as well as the measures / recommendations included in the final EMPr. As mentioned above, the holder of the EA must consider the comments received during the EMPr review and comment period. Once amended, the EMPr will be submitted to the DEA for written approval prior to commencement of construction. Once approved the EMPr will be implemented and adhered to.

As such, the Interim Comment issued by SAHRA on 15 November 2019 as part of the EA Amendment process for the Dwarsrug Wind Farm will be addressed by the holder of the EA prior to construction commencing. SAHRA will be consulted prior to construction commencing and will be provided with an opportunity to comment on the results of the final PIA walkthrough as well as the measures / recommendations included in the final EMP. Additionally, based on the Interim Comment issued by SAHRA on 06/08/2015 for the original EA application, the applicant has confirmed that the cemetery at DR04 will be restored and fenced, as requested.

We trust that this response letter has adequately addressed SAHRA's comments with regards to the EA Amendment process.

Please be advised that SAHRA's Interim Comment as well as this subsequent response letter will be forwarded to the relevant DEA Case Officer in order to assist with the decision-making process.

Please do not hesitate to contact SiVEST should there be any issues and/or queries in this regard.

Yours sincerely



Stephan Jacobs
Environmental Consultant
SiVEST Environmental

Appendix A: Interim Comment Letter dated 15 November 2019

Appendix B: Original Environmental Authorisation (EA)



Appendix A
Interim Comment Letter dated 15 November
2019

Our Ref:



an agency of the
Department of Arts and Culture

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South African Heritage Resources Agency | 111 Harrington Street | Cape Town
P.O. Box 4637 | Cape Town | 8001
www.sahra.org.za

Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 14397

Date: Friday November 15, 2019
Page No: 1

Interim Comment

In terms of Section 38(3), 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Sivest - Gauteng

PO BOX 2921
Rivonia
2128

Proposed Construction of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province

Sivest SA (Pty) Ltd has been appointed by South Africa Mainstream Renewable Power Developments (Pty) Ltd to undertake an Environmental Authorisation (EA) Amendment Application to amend the authorised Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province (DEA Ref: 14/12/16/3/3/2/690/AM2).

A draft EA Amendment Assessment Report has been submitted in terms of the National Environmental Management Act, No 107 of 1998 (NEMA), NEMA Environmental Impact Assessment (EIA) Regulations. The proposed amendments include increasing the turbine hub height from 160 m up to 200 m; and increasing the rotor diameter from 160 m up to 200 m. These increases may result in the reduction with the number of turbines to be constructed. The impacts regarding visual and noise impacts were found to be the same as part of the original EA Application in SAHRIS Case ID 6161 (<https://sahris.sahra.org.za/cases/dwarsrug-wind-farm>).

An Interim Comment was issued on the 06/08/2015 for the original EA application requesting that a field-based palaeontological assessment be undertaken for the proposed project. It appears that this has yet to be completed. Additionally, it was requested that the cemetery at DR04 be restored and fenced.

A letter has been submitted by PGS Heritage (Pty) Ltd regarding the proposed amendments.

Fourie, W. 2019. Proposed construction of the Dwarsrug Wind Farm near Loeriesfontein, Northern Cape Province: Heritage Statement.

The author found that the proposed amendments would not change the findings of the previous HIA submitted for the project.

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Department of Arts and Culture

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Enquiries: Natasha Higgitt
Tel: 021 462 4502
Email: nhiggitt@sahra.org.za
CaseID: 14397

Date: Friday November 15, 2019
Page No: 2

Interim Comment

As the previously requested field-based PIA has not been completed for the original EA, the SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit requests that a field-based PIA be conducted for the amended layout of the authorised WEF as part of the EA Amendment application. The field-based PIA must be conducted by a qualified palaeontologist and the report must comply with the SAHRA 2012 Minimum Standards: Palaeontological Component of Heritage Impact Assessments. The draft EA Amendment Motivation report must be amended to include the results of this study.

SAHRA advises the applicant to extend the EA amendment process in terms of section 32(1)b of the NEMA regulations in order to comply with this comment. Further comments will be issued upon receipt of the above reports.

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

Yours faithfully

Natasha Higgitt
Heritage Officer
South African Heritage Resources Agency

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

Our Ref:



an agency of the
Department of Arts and Culture

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Email: nhiggitt@sahra.org.za
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ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/529355>
(DEA, Ref: 14/12/16/3/3/2/690/AM2)



Appendix B

Original Environmental Authorisation (EA)



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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

DEA Reference: 14/12/16/3/3/2/690

Enquiries: Ms Thabile Sangweni

Telephone: (012) 399 9409 **E-mail:** TSangweni@environment.gov.za

Mr Michael Mangnall
PO Box 45063
CLAREMONT
7735

Telephone Number: (021) 657 4052
E-mail Address: Eugene.Marais@mainstreamrp.com

PER EMAIL / MAIL

Dear Mr Mangnall

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 543/544/545/546 FOR THE 140 MW DWARSRUG WIND ENERGY FACILITY AND ITS ASSOCIATED INFRASTRUCTURE NEAR LOERIESFONTEIN, HANTAM LOCAL MUNICIPALITY, 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 10(2) of the Environmental Impact Assessment Regulations, 2010 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) days of the date of the EA, of the Department's decision in respect of your application as well as the provisions regarding the submission of appeals that are contained in the Regulations.

Your attention is drawn to Chapter 7 of the Regulations, which prescribes the appeal procedure to be followed. This procedure is summarised in the attached document. Kindly include a copy of this document with the letter of notification to interested and affected parties.

Should the applicant or any other party wish to appeal any aspect of the decision a notice of intention to appeal must be lodged by all prospective appellants with the Minister, within 20 days of the date of the EA, by means of one of the following methods:

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

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

MJS

If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.

Appeals must be submitted in writing to:

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

Tel: (012) 399 9356

Email: AppealsDirectorate@environment.gov.za

The authorised activities must not commence within twenty (20) days of the date of signature of the environmental authorisation. Further, please note that in terms of section 43(7) of the National Environmental Management Act, 1998, an appeal under section 43 of that Act will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

Yours faithfully



Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Date: 28/09/2015

CC:	Ms Andrea Gibb	Sivest	Tel: (011) 798 0600	Email: andreag@sivest.co.za
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APPEALS PROCEDURE IN TERMS OF CHAPTER 7 OF THE NEMA EIA REGULATIONS, 2010 (THE REGULATIONS) AS PER GN R. 543 OF 2010 TO BE FOLLOWED BY THE APPLICANT AND INTERESTED AND AFFECTED PARTIES UPON RECEIPT OF NOTIFICATION OF AN ENVIRONMENTAL AUTHORISATION (EA)

APPLICANT	INTERESTED AND AFFECTED PARTIES (IAPs)
1. Receive EA from the relevant Competent Authority (the Department of Environmental Affairs [DEA]).	1. Receive EA from Applicant/Consultant.
2. Within 12 days of date of the EA notify all IAPs of the EA and draw their attention to their right to appeal against the EA in terms of Chapter 7 of the Regulations.	2. N/A.
3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA with the Minister of Environmental Affairs (the Minister).	3. If you want to appeal against the EA, submit a notice of intention to appeal within 20 days of the date of the EA with the Minister of Environmental Affairs (the Minister).
4. After having submitted your notice of intention to appeal to the Minister, provide each registered IAP with a copy of the notice of intention to appeal within 10 days of lodging the notice.	4. After having submitted your notice of intention to appeal to the Minister, provide the applicant with a copy of the notice of intention to appeal within 10 days of lodging the notice.
5. The Applicant must also serve on each IAP: <ul style="list-style-type: none"> • a notice indicating where and for what period the appeal submission will be available for inspection. 	5. Appellant must also serve on the Applicant within 10 days of lodging the notice, <ul style="list-style-type: none"> • a notice indicating where and for what period the appeal submission will be available for inspection by the applicant.
6. The appeal must be submitted in writing to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.	6. The appeal must be submitted to the Minister within 30 days after the lapsing of the period of 20 days provided for the lodging of the notice of intention to appeal.
7. Any IAP who received a notice of intention to appeal may submit a responding statement to that appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.	7. An Applicant who received notice of intention to may submit a responding statement to the appeal to the Minister within 30 days from the date that the appeal submission was lodged with the Minister.

NOTES:

1. An appeal must be:-
 - a) submitted in writing;
 - b) accompanied by:
 - a statement setting out the grounds of appeal;
 - supporting documentation which is referred to in the appeal; and
 - a statement that the appellant has complied with regulation 62 (2) or (3) together with copies of the notices referred to in regulation 62.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of Regulation 36 of the Environmental Impact Assessment Regulations, 2010

The 140 MW Dwarsrug Wind Energy Facility and its associated infrastructure located approximately 60km north of Loeriesfontein in the Hantam Local Municipality, Northern Cape Province

Namakwa District Municipality

Authorisation register number:	<i>14/12/16/3/3/2/690</i>
Last amended:	<i>First issue</i>
Holder of authorisation:	<i>South Africa Mainstream Renewable Power Developments (Pty) Ltd.</i>
Location of activity:	<i>Remainder of the Farm Brak Pan No. 212 Stink Puts North No. 229 Remainder of the Farm Narosies No. 228 Portion 1 of the Farm Ann De Karree Doorn Pan No. 213 Remainder of the Farm Kleine Rooiberg 227 Portion 5 of the Farm Kleine Rooiberg 227 Portion 4 of the Farm Rooiberg 263 Portion 1 of the Farm Sous No. 226 Remainder of the Farm Sous No. 226 Loeriesfontein 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.

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, 2010 the Department hereby authorises-

SOUTH AFRICA MAINSTREAM RENEWABLE POWER DEVELOPMENTS (PTY) LTD

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

with the following contact details –

Mr Michael Mangnall
PO Box 45063
CLAREMONT
7735

Telephone Number: (021) 657 4052
Fax Number: (021) 671 5665
Cell phone Number: (073) 871 5781
E-mail Address: Eugene.Marais@mainstreamrp.com

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1, Listing Notice 2 and Listing Notice 3 (GN R. 544, 545 & 546):

Listed activities	Activity/Project description
<p><u>GN R. 544 Item 10</u></p> <p><i>"The construction 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>A 132kV powerline and an on-site 33/132kV substation are required to connect the wind farm to the grid. The powerline would be located outside of an urban area.</p>
<p><u>GN R. 544 Item 11:</u></p> <p><i>"The construction of:</i></p> <p><i>(x) buildings exceeding 50 square metres in size; or</i></p> <p><i>(xi) infrastructure or structures covering 50 square metres or more,</i></p> <p><i>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse."</i></p>	<p>According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site. Although these were taken into account and avoided when determining the buildable area within the development site, construction activities will still take place within 32m of these water features. The administration and warehouse buildings will have a footprint of approximately 5000m². In addition, each turbine will have a hard standing area of approximately 400m².</p>
<p><u>GN R. 544 Item 18:</u></p> <p><i>"The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, grit, pebbles or rock of more than 5 cubic metres from:</i></p> <p><i>(i) a watercourse."</i></p>	<p>According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site and were taken into account and avoided when determining the buildable area. In order to reduce the environmental impact, the proposed access roads to the site and the internal access roads</p>

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Listed activities	Activity/Project description
	and cables were positioned to follow the existing roads where possible. These existing access roads traverse some of the identified surface water features. During the construction phase of the access roads and cables, soil may therefore be removed from watercourses.
<p><u>GN R. 544 Item 22:</u></p> <p><i>"The construction of a road, outside urban areas</i></p> <p><i>(ii) where no reserve exists where the road is wider than 8 metres."</i></p>	Internal access roads that are between 8 and 10m wide will be constructed. In some sections the road may need to be as wide as 12m at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. Laybys may need to go up to 15m, but this will be limited.
<p><u>GN R. 544 Item 47:</u></p> <p><i>"The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –</i></p> <p><i>(i) where the existing reserve is wider than 13,5 metres; or</i></p> <p><i>(ii) where no reserve exists, where the existing road is wider than 8 metres- excluding widening or lengthening occurring inside urban areas."</i></p>	An existing access road from the Granaatboskolk Road will need to be upgraded and widened to provide access to the site. In some sections the road may need to be as wide as 12 metres at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. Laybys may need to go up to 15m, but this will be limited.
<p><u>GN R. 545 Item 1:</u></p> <p><i>"The construction of facilities or infrastructure for the generation of electricity where the electricity output is 20 megawatts or more."</i></p>	It is proposed that a wind farm with a generation capacity of approximately 140MW will be constructed.
<p><u>GN R. 545 Item 15:</u></p> <p><i>"Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial,</i></p>	The proposed development will transform undeveloped, vacant or derelict land to

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Listed activities	Activity/Project description
<p><i>recreational, industrial or institutional use where the total area to be transformed is 20 ha or more; except where such physical alteration takes place for:</i></p> <ul style="list-style-type: none"> <i>(i) linear development activities; or</i> <i>(ii) Agriculture or afforestation where activity 16 in this Schedule will apply."</i> 	<p>industrial use (wind farm) and the total area to be transformed will be more than 20 ha. A maximum buildable area of 5210.045 ha has been identified, and the actual cumulative footprint covered by the hard standing area of all the turbines (approximately 70), substation site and administration and warehouse buildings is approximately 21 ha.</p>
<p><u>GN R. 546 Item 19:</u></p> <p><i>"The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</i></p> <ul style="list-style-type: none"> <i>(a) In Northern Cape:</i> <ul style="list-style-type: none"> <i>i. Outside urban areas, in:</i> <ul style="list-style-type: none"> <i>(ii) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined."</i> 	<p>An existing access road from the Granaatboskolk Road will need to be upgraded and widened to provide access to the site. In some sections the road may need to be as wide as 12 metres at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site. Both access road alternative 1 and 2 traverse some of the identified surface water features.</p>

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The following listed activities as described in Listing Notice 1, Listing Notice 2 and Listing Notice 3 (GN R. 983, 984 & 985):

Activity number	Activity description
<p><u>GN R. 983: Item 11:</u> <i>"The development of facilities or infrastructure for the transmission and distribution of electricity-</i> <i>(i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kV...."</i></p>	<p>A 132kV powerline and an on-site 33/132kV substation are required to connect the wind farm to the grid. The powerline would be located outside of an urban area.</p>
<p><u>GN R. 983 Item 12:</u> <i>"The development of –</i> <i>(x) buildings exceeding 100 square metres in size;</i> <i>and</i> <i>(xii) infrastructure or structures with a physical footprint of 100 square metres or more;</i> <i>where such development occurs –</i> <i>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse."</i></p>	<p>According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site. Although these were taken into account and avoided when determining the buildable area within the development site, construction activities will still take place within 32m of these water features. The administration and warehouse buildings will have a footprint of approximately 5000m². In addition, each turbine will have a hard standing area of approximately 400m².</p>
<p><u>GN R. 983 Item 19:</u> <i>"The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells grit, pebbles or rock of more than 5 cubic metres from -</i> <i>(i) a watercourse."</i></p>	<p>According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site and were taken into account and avoided when determining the buildable area. In order to reduce the environmental impact, the</p>

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	<p>proposed access roads to the site and the internal access roads and cables were positioned to follow the existing roads where possible. These existing access roads traverse some of the identified surface water features. During the construction phase of the access roads and cables, soil may therefore be removed from watercourses.</p>
<p><u>GN R. 983 Item 24:</u> <i>"The development of – (ii) 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>Internal access roads that are between 8 and 10m wide will be constructed. In some sections the road may need to be as wide as 12m at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. Laybys may need to go up to 15m, but this will be limited.</p>
<p><u>GN R. 983 Item 56:</u> <i>"The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre (ii) where the existing reserve is wider than 13,5 metres; or (iii) where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas."</i></p>	<p>An existing access road from the Granaatboskolk Road will need to be upgraded and widened to provide access to the site. In some sections the road may need to be as wide as 12 metres at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. Laybys may need to go up to 15m, but this will be limited.</p>
<p><u>GN R. 984 Item 1:</u> <i>"The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of</i></p>	<p>It is proposed that a wind farm with a generation capacity of approximately 140MW will be constructed.</p>

<p><i>facilities or infrastructure is for photovoltaic installations and occurs within an urban area."</i></p>	
<p><u>GN R. 984 Item 15:</u> <i>"The clearance of an area of 20 hectares or more of indigenous vegetation."</i></p>	<p>The proposed development will transform undeveloped, vacant or derelict land to industrial use (wind farm) and the total area to be transformed will be more than 20 ha. A maximum buildable area of 5210.045 ha has been identified, and the actual cumulative footprint covered by the hard standing area of all the turbines (approximately 70), substation site and administration and warehouse buildings is approximately 21 ha.</p>
<p><u>GN R. 985 Item 18:</u> <i>"The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre</i> <i>(a) In Northern Cape Province:</i> <i>ii. Outside urban areas, in:</i> <i>ii. Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined."</i></p>	<p>An existing access road from the Granaatboskolk Road will need to be upgraded and widened to provide access to the site. In some sections the road may need to be as wide as 12 metres at certain corners to accommodate the turning circle of the extended trucks transporting the turbine tower sections and turbine blades. According to the detailed surface water assessment undertaken during the EIA phase, a total of 1213 individual drainage line segments, 7 watercourses and 34 wetlands were identified within the development site. Both access road alternative 1 and 2 traverse some of the identified surface water features.</p>

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as described in the Environmental Impact Assessment Report (EIAR) dated June 2015 and additional information received in September 2015 at:

Site alternative

Alternative (preferred site)	Latitude	Longitude
	30° 28. 596' S	19° 35. 260' E
	30° 23. 890' S	19° 39. 447' E
	30° 28. 812' S	19° 39. 277' E
	30° 33. 538' S	19° 41. 047' E
	30° 31. 979' S	19° 43. 333' E

Substation alternative 1

Alternative (preferred)	Latitude	Longitude
	30°29. 979' S	19°37. 901' E
	30°29. 339' S	19°37. 723' E
	30°28. 010' S	19°36. 158' E
	30°28. 592' S	19°35. 227' E
	30°29. 539' S	19°34. 714' E
	30°29. 945' S	19°33. 725' E
	30°28. 008' S	19°36. 158' E

Access road alternative 1

Alternative (preferred)	Latitude	Longitude
	30°32. 703' S	19°33. 125' E
	30°32. 638' S	19°38. 366' E
	30°29. 559' S	19°38. 154' E

Access road alternative 2

Alternative (preferred)	Latitude	Longitude
	30°36. 561' S	19°32. 381' E
	30°33. 014' S	19°37. 403' E
	30°29. 559' S	19°38. 154' E

- for the 140 MW Dwarsrug Wind Energy Facility and its associated infrastructure on the Remainder of the Farm Brak Pan No. 212, Stink Puts North No. 229, Remainder of the Farm Narosies No. 228, Portion 1 of the Farm Ann De Karree Doorn Pan No. 213, Remainder of the Farm Kleine Rooiberg 227, Portion 5 of the Farm Kleine Rooiberg 227, Portion 4 of the Farm Rooiberg 263, Portion 1 of the Farm Sous No. 226 and Remainder of the Farm Sous No. 226, located approximately 60km north of Loeriesfontein within the Hantam Local Municipality of the Namakwa District Municipality in the Northern Cape Province, hereafter referred to as "the property".

The Dwarsrug Wind Energy Facility will comprise the following:

- Up to 70 individual wind turbines with a total generation capacity of 140 MW;
- Electrical connections;
- Substation;
- Roads;
- Temporary construction area;
- Borrow pits;
- Buildings; and,
- Other associated infrastructure including fencing, linking station (if required) and water treatment facility (if required).

Technical details for the proposed facility:

Component	Description/ Dimensions
Location of the site	~ 60km of Loeriesfontein
Extent of the proposed development footprint	~ 10701.04 Ha
SG Codes	» C0150000000021200000 » C0150000000022900000 » C0150000000022800000 » C0150000000021300001 » C0150000000022700000 » C0150000000022700005 » C0150000000026300004 » C0150000000022600001 » C0150000000022600000
Substation complex	One (1) on-site substation

Power line (number and voltage)	A 132 kV powerline with a length of up to 15km connecting the wind farm with the national distribution network at Helios MTS
Access road and width	Up to between 8m – 10m wide
Export capacity	140 MW
Number of Turbines	70

Conditions of this Environmental Authorisation

Scope of authorisation

1. The construction of the Dwarsrug Wind Energy Facility and its associated infrastructure with a maximum of 70 wind turbines with a total output capacity of 140 MW as described above is hereby 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 above.
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 five (05) years from the date of issue of this 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.

7. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
8. This authorisation does not negate the holder of the authorisations responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.
9. The holder of an environmental authorisation must 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

10. 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.
11. The notification referred to must –
 - 11.1. specify the date on which the authorisation was issued;
 - 11.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment Regulations, 2010;
 - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and,
 - 11.4. give the reasons of the competent authority for the decision.
12. The holder of the authorisation must publish a notice –
 - 12.1. informing interested and affected parties of the decision;
 - 12.2. informing interested and affected parties where the decision can be accessed; and,
 - 12.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in 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

13. A copy of the final development layout map must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final development layout map must be submitted to the Department for written approval prior to commencement of the activity. All available biodiversity
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information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The layout map must indicate the following:

- 13.1 Cable routes (where they are not along internal roads);
 - 13.2 Position of wind turbines and associated infrastructure;
 - 13.3 Internal roads indicating width;
 - 13.4 Wetlands, drainage lines, rivers, stream and water crossing of roads and cables;
 - 13.5 Substation(s) inverters and/or transformer(s) sites including their entire footprint;
 - 13.6 Connection routes (including pylon positions) to the distribution/transmission network;
 - 13.7 All existing infrastructure on the site, especially roads;
 - 13.8 Soil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - 13.9 Buildings, including accommodation; and,
 - 13.10 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 Road
Pretoria
0083

For Attention: Mr Muhammad Essop

Integrated Environmental Authorisations

Strategic Infrastructure Developments

Telephone Number: (012) 399 9406

Email Address: MEssop@environment.gov.za

15. The Environmental Management Programme (EMPr) submitted as part of the EIAr is not approved and must be amended to include measures as dictated by the final site lay-out map and micro-siting; and the provisions of this environmental authorisation. The EMPr must be made available for comments by registered Interested and Affected Parties and the holder of this environmental authorisation must consider such comments. Once amended, the final EMPr must be submitted to the Department for written approval prior to commencement of the activity. Once approved the EMPr must be implemented and adhered to.
 16. The EMPr amendment must include the following:
 - 16.1. The requirements and conditions of this authorisation.
 - 16.2. All recommendations and mitigation measures recorded in the EIAr.
 - 16.3. All mitigation measures as listed in the specialist reports must be included in the EMPr and implemented.
 - 16.4. The final site layout map.
 - 16.5. An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.
 - 16.6. A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site in consultation with the ECO and be implemented prior to commencement of the construction phase.
 - 16.7. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
 - 16.8. A traffic management plan for the site access roads to ensure that no hazards would 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.
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- 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 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.
- 16.10. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.
- 16.11. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.
- 16.12. A fire management plan to be implemented during the construction and operational phases.
- 16.13. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.
- 16.14. An environmental sensitivity map indicating environmental sensitive areas and features identified during the EIA process.
- 16.15. A map combining the final layout map superimposed (overlain) on the environmental sensitivity map. This map must reflect the proposed location of the turbine as stated in the 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 EMPr must be submitted to this Department for approval before such changes could be effected.
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.
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Environmental Control Officer (ECO) and duties

20. The holder of this authorisation must appoint an independent and qualified Environmental Control Officer (ECO) with experience or expertise in undertaking ECO functions. The ECO will have the responsibility to ensure that the conditions referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
21. The ECO must be appointed before commencement of any authorised activity.
22. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of this Department.
23. The ECO must meet with the contractors to discuss the conditions of the EA and the contents of the EMPr prior to any site clearing occurring.
24. 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.
25. Records relating to monitoring and auditing must be kept on site and made available for inspection to the competent authority in respect of this development.
26. The duties of the ECO must include the following:
 - 26.1. Keeping record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO.
 - 26.2. Keeping and maintaining 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.
 - 26.3. Keeping and maintaining a daily site diary.
 - 26.4. Keeping copies of all reports submitted to the Department.
 - 26.5. Keeping and maintaining a schedule of current site activities including the monitoring of such activities.
 - 26.6. Obtaining and keeping record of all documentation, permits, licences and authorisations such as waste disposal certificates, hazardous waste landfill site licences etc. required by this facility.
 - 26.7. Compiling a monthly monitoring report.

Recording and reporting to the Department

27. 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.
28. 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 this Department.

Environmental audit report

29. The holder of the authorisation must submit an environmental audit report to the Director: Compliance Monitoring of 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.
30. The environmental audit report must:
 - 30.1. Be compiled by an independent environmental auditor;
 - 30.2. Indicate the date of the audit, the name of the auditor and the outcome of the audit;
 - 30.3. Evaluate compliance with the requirements of the approved EMPr and this environmental authorisation;
 - 30.4. Include measures to be implemented to attend to any non-compliances or degradation noted;
 - 30.5. Include copies of any approvals granted by other authorities relevant to the development for the reporting period;
 - 30.6. Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring these issues are appropriately addressed;
 - 30.7. Include a copy of this authorisation and the approved EMPr;
 - 30.8. Include all documentation such as waste disposal certificates, hazardous waste landfill site licences etc. pertaining to this authorisation; and
 - 30.9. Include evidence of adherence to the conditions of this authorisation and the EMPr where relevant such as training records and attendance records.

Commencement of the activity

31. The authorised activity shall not commence within twenty (20) days of the date of signature of the environmental authorisation.

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. This notification period may coincide with the Notice of Intent to Appeal period.

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 this environmental authorisation shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

Avifauna and bats

35. Turbines, all powerlines, new roads, the on-site substation and other infrastructure must be kept out of all high sensitive areas.
 36. Feathering must be implemented for all instances where the blade turning speed is below the manufacturer's cut-in speed.
 37. All power lines linking wind turbines to each other and to the internal substation must be buried.
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38. The results of the pre-construction bat monitoring programme including all recommendations proposed by the report dated June 2015 must inform the final layout and the construction schedule of the energy facility.
39. A construction phase monitoring plan must survey bird communities at the Wind Energy Facility and must be implemented to monitor impacts resulting from the infrastructure installations. This plan must also detail the duration of the construction phase.
40. Post-construction bird and bat monitoring by an accredited monitor and/or specialist must take place for a minimum of two years. It must be done in accordance with 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 SABAAP best practice guidelines.
41. Reports regarding bird monitoring must be submitted to the relevant provincial environmental department, BirdLife South Africa, the Endangered Wildlife Trust (EWT) 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.
42. The facility must be designed in a manner that, infrastructure components could be used as perching or roosting substrates by birds and bats must be prohibited.
43. During construction 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.
44. Anti-collision devices such as bird flappers must be installed where power lines cross avifaunal corridors (e.g. grasslands, rivers, wetlands, and dams). The input of an avifaunal specialist must be obtained for the fitting of the anti-collision devices onto specific sections of the line once the exact positions of the towers have been surveyed and pegged. Additional areas of high sensitivity along the preferred alignment must also be identified by the avifaunal specialist for the fitment of anti-collision devices. These devices must be according to Eskom's Transmission and EWT's Guidelines.
45. A pre-construction walk through on the selected power line alignment by a bat specialist, avifaunal specialist and ecologist, must be conducted to ensure that the micro-siting of the turbines has the least possible impact, there are no nests sites of priority species on or close to the construction corridor, and all protected plant species impacted are identified.

Vegetation, wetlands and water resources

46. The 'no-go' areas of the development property must be clearly demarcated and must be excluded from the final layout plan.
47. Vegetation clearing must be limited to the authorised footprint.
48. 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.
49. Construction activities must be restricted to demarcated areas to restrict the impact on sensitive environmental features.
50. 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.
51. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
52. No exotic plants may be used for rehabilitation purposes; only indigenous plants of the area may be utilised.
53. 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.
54. Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing but must be temporarily stored in a demarcated area.
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. The holder of this authorisation must ensure that all the "No-go" and buffer areas are clearly demarcated (using fencing and appropriate signage) before construction commences.
57. Contractors and construction workers must be clearly informed of the no-go areas.
58. Where roads pass right next to major water bodies, provision shall be made for fauna such as toads to pass under the roads by using culverts or similar structures.
59. Bridge design must be such that it minimise impact to riparian areas with minimal alterations to water flow and must allow the movement of fauna and flora.
60. 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.

61. Electric fencing should not have any strands within 30cm of the ground, which should be sufficient to allow smaller mammals, reptiles and tortoises to pass through, but still remain effective as a security barrier.
62. Disturbed areas must be rehabilitated as soon as possible after construction with locally indigenous plants to enhance the conservation of existing natural vegetation on site.
63. Wetlands, rivers and river riparian areas must be treated as "no-go" areas and appropriately 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 by the ECO, except for rehabilitation work in these areas.
64. Workers must be made aware of the importance of not destroying or damaging the vegetation along rivers and in wetland areas and this awareness must be promoted throughout the construction phase.
65. No discharge of effluents or polluted water must be allowed into any rivers or wetland areas.
66. If construction areas are to be pumped of water (e.g. after rains), this water must be pumped into an appropriate settlement area, and not allowed to flow into any rivers or wetland areas.
67. Workers must be made aware of the importance of not polluting rivers or wetlands and of not undertaking activities that could result in such pollution, and this awareness must be promoted throughout the construction phase.
68. Freshwater ecosystems located in close proximity to the site must be inspected on a regular basis (but especially after rainfall) by the ECO for signs of sedimentation and pollution. If signs of sedimentation or pollution are noted, immediate action must be taken to remedy the situation and, if necessary, a freshwater ecologist must be consulted for advice on the most suitable remediation measures.

Roads and transportation

69. Existing road infrastructure must be used as far as possible for providing access to the proposed turbine positions. Where no road infrastructure exists, new roads should be placed within existing disturbed areas or environmental conditions must be taken into account to ensure the minimum amount of damage is caused to natural habitats.
 70. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuters, consideration should be given to limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time.
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71. 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.
72. A designated access to the site must be created and clearly marked to ensure safe entry and exit.
73. Signage must be erected at appropriate points warning of turning traffic and the construction site.
74. 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.
75. Road borders should be regularly maintained to ensure that vegetation remains short and that they therefore serve as an effective firebreak.
76. Roads must be designed so that changes to surface water runoff are avoided and erosion is not initiated.
77. All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such as snakes and tortoises.

Noise

78. The holder of this authorisation must ensure that the National Noise Control Regulations and SANS10103:2008 are adhered to and measures to limit noise from the work site are implemented.
79. A complaints register to record noise complaints must be kept at the wind facility and made available to affected parties.
80. The holder of this authorisation must ensure that the construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA must wear ear protection equipment.
81. The holder of this authorisation must ensure that all equipment and machinery are well maintained and equipped with silencers.
82. The holder of this authorisation must provide a prior warning to the community when a noisy activity e.g. blasting is to take place.
83. 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.

84. 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).
85. Construction staff must be trained in actions to minimise noise impacts.

Visual resources

86. The holder of this authorisation must reduce visual impacts during construction by minimising areas of surface disturbance, controlling erosion, using dust suppression techniques and restoring exposed soil as closely as possible to their original contour and vegetation.
87. 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.
88. Lighting of main structures (turbines) and ancillary buildings should be designed to minimise light pollution without compromising safety, and turbines must be lit according to Civil Aviation Regulations.
89. Signage on or near wind turbines must be avoided unless they serve to inform the public about wind turbines and their function.
90. Commercial messages and graffiti on turbines are prohibited.

Human health and safety

91. 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.
 92. Potentials interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.
 93. The holder of this authorisation must ensure that the operation of the wind facility shall comply with the relevant communication regulations or guidelines relating to electromagnetic interference, e.g. microwave, radio and television transmissions.
 94. The holder of this authorisation must obtain approval from the South Africa Civil Aviation Authority that the wind facility will not interfere with the performance of aerodrome radio Communication, Navigation and Surveillance (CNS) equipment, especially the radar, prior to commencement of the activity. A copy of the approval must be kept on site by the ECO.
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95. The holder of this authorisation must obtain approval from the South Africa Weather Services (WeatherSA) that the energy facility will not interfere with the performance of their equipment, especially radar, prior to commencement of the activity. A copy of the approval must be kept on site by the ECO.
96. The holder of this authorisation must ensure the implementation of shielding and filtering solutions to ensure installed plant equipment emissions remain approximately 20dB below the EN 55011 Class A limit.
97. The holder of this authorisation must train safety representatives, managers and workers in workplace safety. The construction process must be compliant with all safety and health measures as prescribed by the relevant act.
98. Liaison with land owners/farm managers must be done prior to construction in order to provide sufficient time for them to plan agricultural activities.
99. No unsupervised open fires for cooking or heating must be allowed on site.

Hazardous materials and waste management

100. The Batching plant must preferably be located within laydown areas outside sensitive ecological, heritage and paleontological areas.
 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 waste landfill site licensed to accept such waste.
 104. 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.
 105. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
 106. 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.
 107. Temporary bunds must be constructed around chemical storage to contain possible spills.
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108. Spill kits must be made available on-site for the clean-up of spills.
109. 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).
110. The holder of this authorisation must provide sanitation facilities within the construction camps and along the road so that workers do not pollute the surrounding environment. These facilities must be removed from the site when the construction phase is completed as well as associated waste to be disposed of at a registered waste disposal site.
111. The holder of this authorisation must take note that no temporary site camps will be allowed outside the footprint of the development area as the establishment of such structures might trigger a listed activity as defined in the Environmental Impact Assessment Regulations, 2014.

Excavation and blasting activities

112. Underground cables and internal access roads must be aligned as much as possible along existing infrastructure to limit damage to vegetation and watercourses.
113. Cabling routes outside internal access routes must be approved by this Department.
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 authorised and permitted sites. Permits must be kept on site by the ECO.
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 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.
120. Construction managers/foremen must be informed before construction starts on the possible types of heritage sites and cultural material they may be encountered and the procedures to follow when they find sites.
121. All buffers and no-go areas stipulated in this report must be adhered to for both the facilities and all roads and power lines.
122. Should any human remains be uncovered during development they must be immediately protected in situ and reported to the heritage authorities or to an archaeologist. The remains will need to be exhumed at the cost of the developer.
123. All construction and maintenance crew and vehicles (except small vehicles which may use existing farm tracks) should be kept out of the buffer zones.
124. The final layout should be shown to the appointed archaeologist before implementation to confirm that all significant heritage resources have been adequately protected.

Turbines position

125. The 70 approved turbines must be placed in a manner to avoid high visibility areas, "no-go" areas as well as its buffers.
126. The final placement of turbines must follow a micro siting procedure involving a walk-through and identification of any sensitive areas by botanical and avifaunal specialists.
127. Exclusion of sensitive ecological, heritage and paleontological areas from construction activities must inform micro siting of all development activities.
128. Turbines must be positioned in such a way that shadow flicker does not affect any farm buildings.

General

129. 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.
130. A copy of this authorisation and the approved EMPr must be kept at the property where the activity will be undertaken. The environmental authorisation and approved EMPr 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 undertakes work at the property.
131. 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 environmental authorisation as set out in this document or any other subsequent document emanating from these conditions of environmental authorisation.

Date of environmental authorisation: 28/09/2015


Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

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

- a) The listed activities as applied for in the amended application form received on 08 September 2015.
- b) The information contained in the EIAr;
- c) The comments received from: Hantam Local Municipality, SKA, Bird Life South Africa, SABAAP, ATNS, DAFF, SENTECH and interested and affected parties as included in the EIAr;
- d) The findings of the site visit conducted on 20/08/2015;
- e) Mitigation measures as proposed in the EIAr and the EMPr;
- f) The information contained in the specialist studies contained within the appendices of the EIAr and as appears below:

Title	Date
Biodiversity Impact Assessment	June 2015
Avifaunal Impact Assessment	June 2015
Bat Impact Assessment	June 2015
Noise Impact Assessment	June 2015
Visual Impact Assessment	June 2015
Heritage Impact Assessment	June 2015
Surface Water Impact Assessment	June 2015
Agricultural Potential and Soils Impact Assessment	June 2015
Socio-economic Impact Assessment	June 2015

- g) 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) Details provided of the qualifications of the Environmental Assessment Practitioner (EAP).
- b) The comments from Interested & Affected Parties.
- c) The findings of all the specialist studies conducted and their recommended mitigation measures.
- d) The need for the proposed project stems from the provision of electricity to the national grid in terms of the Renewable Energy Independent Power Producers Procurement Programme (RRIPPPP) as required by the Department of Energy.
- e) The EIAr identified all legislation and guidelines that have been considered in the preparation of the EIAr.
- f) The description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity.
- g) The methodology used in assessing the potential impacts identified in the EIAr and the specialist studies have been adequately indicated.
- h) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 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 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 manner in which concerns raised were dealt with is sufficient for the decision-making process.
- e) The information contained in the EIAr is deemed to be accurate and credible.

- f) EMPr measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIAR 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 environmental authorisation is accordingly granted.