



environmental affairs

Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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NEAS Reference: DEAT/EIA/12093/2010

Reference: 12/12/20/1746

Enquiries: Masina Litsokane

Telephone: 012-395-1778 Fax: 012-320-7539 E-mail: MLitsokane@environment.gov.za

Mr. Werner Engelbrecht
BioTherm Energy (Pty) Ltd
PO Box 98867
BRYANSTON
2021

Fax no: 011 301 1301

PER FACSIMILE / MAIL

Dear Mr. Engelbrecht

APPLICATION FOR ENVIRONMENTAL AUTHORISATION: PROPOSED ESTABLISHMENT OF KLIPHEUWEL / DASSIESFONTEIN WIND ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE NEAR CALEDON, WESTERN CAPE PROVINCE.

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation 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 facsimile: 012 320 7561;
By post: Private Bag X447,
Pretoria, 0001; or
By hand: 2nd Floor, Fedsure Building, North Tower,
cnr. Van der Walt and Pretorius Streets,
Pretoria.

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.

Please include the Department (*Attention: Director: Environmental Impact Evaluation*) in the list of interested and affected parties, notified through your notification letter to interested and affected parties, for record purposes.

Appeals must be submitted in writing to:

Mr T Zwane, Senior Legal Administration Officer (Appeals) of this Department at the above mentioned addresses or fax number. Mr Zwane can also be contacted at:

Tel: 012-310-3929

Email: tzwane@environment.gov.za

The authorised activity/ies shall not commence within twenty (20) days of the date of signature of the authorisation. Further, please note that the Minister may, on receipt of appeals against the authorisation or conditions thereof suspend the authorisation pending the outcome of the appeals procedure.

Yours sincerely



Mr Ishaam Abader

Deputy Director-General: Environmental Quality and Protection

Department of Environmental Affairs

Date: 27/06/2011

CC: Savannah Environmental (Pty) Ltd Attn: Ms. Alicia Govender
Tel: (011) 234 - 6621
Fax: (086) 684 - 0547

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 Water and 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 Water and 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 appeal 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:

- An appeal against a decision must be lodged with:-**
 - the Minister of Water and Environmental Affairs if the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;
 - the Minister of Justice and Constitutional Development if the applicant is the Department of Water Affairs and the decision was issued by the Director- General of the Department of Environmental Affairs (or another official) acting in his/ her capacity as the delegated Competent Authority;
- An appeal lodged with:-**
 - the Minister of Water and Environmental Affairs must be submitted to the Department of Environmental Affairs;
 - the Minister of Justice and Constitutional Development must be submitted to the Department of Environmental Affairs;
- An appeal must be:-**
 - submitted in writing;
 - 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

Authorisation register number:	12/12/20/1746
NEAS reference number:	DEAT/EIA/12093/2010
Last amended:	<i>First issue</i>
Holder of authorisation:	BIO THERM ENERGY (PTY) LTD
Location of activity:	WESTERN CAPE PROVINCE, <i>In Klipheuwel and Dassiesfontein near Caledon, within Theewaterskloof Local Municipality</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.

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, 2006 the Department hereby authorises –

BIO THERM ENERGY (PTY) LTD

with the following contact details –

Mr. Werner Engelbrecht

Bio Therm Energy (Pty) Ltd

PO Box 98867

bryanston

2021

Tel: (011) 300 6150

Fax: (011) 301 1301

E-mail: wengelbrecht@biothermenergy.com

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

GN R 387

Item 1(a): The construction of facilities or infrastructure, including associated structures or infrastructure, for the generation of electricity where (i) the electricity output is 20 megawatts or more; or (ii) the elements of the facility cover a combined area in excess of 1 ha.

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

Item 2: Any development, activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be 20 hectares or more.

GN R 386

Item 7: The above ground storage of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters but less than 1 000 cubic meters at any one location or site.

Item 1(m): The construction of facilities or infrastructure, including associated structures or infrastructure, for – any purpose in the one in ten year flood line of a river or stream, or within 32 meters from the bank of a river or stream where flood line is unknown, excluding purposes associated with existing residential use, but including – (i) canals; (ii) channels; (iii) bridges; (iv) dams; and (v) weirs.

Item 12: The transformation or removal of indigenous vegetation of 3 hectares or more or of any size where the transformation or removal would occur within critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

Item 14: The construction of masts of any material of type and any height, including those used for telecommunications broadcasting and radio transmission, but excluding (a) masts of 15m and lower exclusively used by (i) radio amateurs; or (ii) for lightening purposes (b) flagpoles; and (c) lightening conductor poles.

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

Within the Theewaterskloof Local Municipality in the Western Cape Province, hereafter referred to as "the property", for the establishment of Klipheuwel/Dassiesfontein wind energy facility and associated infrastructure near Caledon, as described in the Final Environmental Impact Assessment Report (EIAR) dated January 2011. The project will comprise a single wind energy facility of 16 wind turbines. The Klipheuwel site will accommodate 10 wind turbines within an area of approximately 350 hectares on the following farm portions:

- Klip Heuwel no. 410/5 (Remaining Extent);

- Klip Heuwel no. 410/8 (also known as Kruis Vley);
- Klip Heuwel no. 410/9;
- Klip Heuwel no. 410/10 (also known as Haasjes Kop);
- Boontjieskraal no. 417/0; and
- Farm no. 418/0 (Remaining Extent).

The Dassiesfontein site will accommodate 6 wind turbines within an area approximately 252 hectares on the following farm portions:

- 1 (Remaining Extent) of Huveltjes Kraal 426;
- 5 of Huveltjes Kraal 426; and
- Heuwelkraal a portion of the Farm Pampoenkraal 843/0.

The facility will have a generating power capacity of up to 53MW. Each turbine will be 3.3MW in capacity, depending on the turbine selected for implementation. The infrastructure associated with the wind energy facility includes:

- 16 wind turbine units, including a 100m high steel tower, a nacelle and 3 blades of up to 54m in length;
- Concrete foundations to support the turbines towers;
- Internal roads (approximately 6m in width) linking the wind turbines and other infrastructure on the site. Existing farm roads will be used as far as possible;
- Underground (approximately 1m deep) 33kV cabling, linking the wind turbines to the two proposed 33/66kV substations. In as possible, cabling will follow the internal access roads; and
- 2 X 33/66kV substations will each have a high-voltage (HV) yard footprint of approximately 80m X 90m.
- An on-site office/workshop building(s)/equipment store complex, with a combined footprint of approximately 400m².

Conditions

Scope of authorisation

1. The proposed Klipheuwel/Dassiesfontein wind energy facility is approved.
2. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The Department may by written notice to the holder of an environmental authorisation suspend with immediate effect an environmental authorisation if suspension of the authorisation is necessary to prevent harm or further harm to the environment.
4. The holder of the authorisation shall be 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.
5. The activities authorised may only be carried out at the property as described above.
6. The recommendations and mitigation measures recorded in the EIAR dated January 2011 must be adhered to.
7. 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.
8. This activity must commence within a period of three (3) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
9. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
10. 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.
11. Relevant legislation that must be complied with by the holder of this authorisation includes, *inter alia*:



- Archaeological remains, artificial features and structures older than 60 years are protected by National Heritage Resources Act, 1999 (Act No. 25 of 1999). Should any archaeological artefacts be exposed during excavation for the purpose of construction, construction in the vicinity of the finding must be stopped immediately. A registered Heritage Specialist must be called to the site for inspection. Under no circumstances shall any heritage material be destroyed or removed from the site and the relevant heritage resource agency must be informed about the finding. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the South African Heritage Resources Agency and/or any of their delegated provincial agencies.
 - All provisions of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).
 - All provisions of the National Water Act, 1998 (Act 36 of 1998).
 - All provisions of the National Forests Act, 1998 (Act No. 84 of 1998).
 - All provisions of the National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004).
 - All provisions of the National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003) and its Regulations.
 - Should fill material be required for any purpose, the use of borrow pits must comply with the provisions of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002) administered by the Department of Minerals and Energy.
12. The holder of an environmental authorisation has the responsibility to notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

Notification of authorisation

13. 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.
14. The notification referred to must –
- 14.1 specify the date on which the authorisation was issued;
 - 14.2 inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment (EIA) Regulations, 2010;

- 14.3 advise the interested and affected party that a copy of the authorisation will be furnished on request; and
- 14.4 give the reasons for the decision.

Management of the activity

15. The draft Environmental Management Plan (EMP) submitted as part of Application for EA must be amended and submitted to the Department for written approval prior to commencement of the activity. The recommendations and mitigation measures recorded in the EIAR dated January 2011 must be incorporated as part of the EMP. Once approved, the EMP must be implemented and adhered to.
16. Please note that this Department is compiling a guideline document on renewal energy installations. Once this guideline has been published in the Government Gazette in terms of section 24J of the National Environmental Management Act, 1989 (Act No. 107 of 1998), it will be expected that you adhere to the relevant sections of the guideline.

Monitoring

17. The applicant must appoint a suitably 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 authorisation are implemented and to ensure compliance with the provisions of the EMP.
18. The ECO shall be appointed before commencement of any authorised activities.
19. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.
20. The ECO shall keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
21. The ECO shall remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is handed over for operation.
22. 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.
23. Noise monitoring at potential receptors must be conducted on a quarterly basis. Annual feedback regarding noise monitoring must be represented to all stakeholders and other interested

and affected parties in the area. This report must also be made available to potential sensitive receptors in the area, or the contents explained to them to ensure that they understand all the potential risks that the development of a wind energy facility may have on them and their families.

Recording and reporting to the Department

24. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the *Director: Compliance Monitoring* at the Department.
25. The holder of the authorisation must submit an environmental audit report upon completion of the construction and rehabilitation activities.
26. The environmental audit report 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 EMP.
27. All compliance monitoring and audit reports must be submitted to the *Director: Compliance Monitoring*.

Commencement of the activity

28. The authorised activity shall not commence within thirty (30) days of the date of signature of the authorisation.
29. The applicant must obtain a Water Use Licence Authorisation (WULA) from the Department of Water Affairs prior to the commencement of the project should the applicant impact on any wetland or water resource. The WULA must be submitted to the *Director: Environmental Impact Evaluation* at the Department.
30. The applicant must submit a final layout plan for the entire wind energy facility for approval to the Department and the layout should indicate:
 - Turbine positions;
 - Foundation footprint;
 - Permanent laydown area footprint;
 - Construction period laydown footprint;



- Internal roads indicating width (construction period width and operation period width) and numbered sections between the other site elements which they serve (to make commenting on sections possible);
 - Wetlands, drainage lines, rivers, stream and water crossing of roads and cables indicating the type of bridging structures that will be used;
 - Heritage sites that will be affected by the turbines and associated infrastructure;
 - Substation(s) and/or transformer(s) sites including their entire footprint;
 - Cable routes and trench dimensions (where they are not along internal roads);
 - Connection routes to the distribution/transmission network;
 - Cut and fill areas at turbine sites along roads and at substation/transformer sites indicating the expected volume of each cut and fill;
 - Borrow pits;
 - Spoil heaps (temporary for topsoil and subsoil and permanently for excess material);
 - Buildings including accommodation; and
 - All "no-go" areas.
31. The applicant must appoint a qualified botanical, fauna specialists and an ornithologist to ground-truth every turbine footprint and their recommendations must form part of the final layout plan for the wind energy facility and EMP to be submitted to this Department for approval.
32. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.

Notification to authorities

33. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence. This notification period may coincide with the period contemplated in 13 above.



Operation of the activity

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

Site closure and decommissioning

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

Specific conditions

37. A bird monitoring programme must be implemented to document the effect of the operation of the wind energy facility on avifauna and bats. This must commence prior to construction (to provide a benchmark), and continue during operation of the wind energy facility.
38. The results of the pre-construction bird monitoring programme must inform the final layout and the construction schedule of the wind energy facility.
39. Reports regarding bird monitoring must be submitted to the Western Cape Department of Environmental Affairs and Development Planning (DEADP), Birdlife South Africa, Endangered Wildlife Trust (EWT), CapeNature and this Department on a quarterly basis. The report will assist all stakeholders in identifying potential and additional mitigation measures and to establish protocols for bird monitoring programmes of wind energy development in the country.
40. Should the results for monitoring reveal any fatal flaw at any phase of the proposed development, all work must cease immediately in that area, while all the relevant authorities including this Department are notified.
41. The baseline data collected and documented during the survey must be shared with the EWT and Birdlife South Africa for better understanding of the distribution or breeding behaviour of any of the priority species listed in the EIAR dated January 2011.

42. Habitat destruction must be kept to an absolute minimum by keeping the lay-down areas as small as possible, reducing the extent of the developed area.
43. Additional surveys around the area where Blue Cranes, Black Harrier and Long-billed Lark are present and most likely to fly, must be undertaken to confirm if high-flying areas must be excluded from the development footprint.
44. The applicant must ensure that lighting on the turbines is kept to a minimum, and is coloured (red or green) and intermittent, rather than permanent and white, to reduce confusion effects for nocturnal migrants.
45. The facility must be designed to discourage their use as perching or nesting substrates by birds.
46. The applicant must ensure the reduction of visual impact during construction by minimising areas of surface disturbance, controlling erosion, using dust suppression measures, and restoring exposed solid as closely as possible to their original contour and vegetation. Mitigation measures proposed in the Visual Impact Assessment included in the EIAR dated January 2011 must be implemented and adhered to.
47. 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.
48. Commercial advertising and graffiti on turbines must be avoided.
49. 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 to account to ensure minimum amount of damage id caused to natural habitats.
50. A transportation plan must be developed, particularly for the transport of turbine components, mainly assembly cranes and other large pieces of equipment. A permit must be obtained from the relevant transport department for the transportation of all components (abnormal loads) to the sites.
51. A traffic management plan must be prepared for the sites access to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted.
52. Signs must be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimise impacts on local commuter, consideration should be given to limiting construction vehicles on public roadways during the morning and late afternoon commuting time.
53. Roads must be designed so that changes to surface water runoff are avoided and erosion is not initiated.

54. Internal access roads must be located away from drainage bottoms and avoid wetlands, if feasible.
55. 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.
56. Existing drainage must not be altered, especially in sensitive areas.
57. A surface runoff and storm water management plan, indicating the management of all surface runoff generated as a result of the development (during both the construction and operation phases) prior entering any natural drainage system must be submitted to the Department prior to construction.
58. No activities will be allowed to encroach into a water resource without a water use authorisation being in place from the Department of Water Affairs.
59. No exotic plants may be used for rehabilitation purposes. Only indigenous plants of the area must be utilised.
60. Liaison with land owners/farm managers is to be done prior to construction in order to provide sufficient time for them to plan agricultural activities. If possible, construction must be scheduled to take place within the post-harvest, pre planting season, when fields are lying fallow.
61. Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.
62. A comprehensive habitat rehabilitation plan must be developed for the site. Restoration must be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery of natural habitats.
63. All electrical collector lines must be buried in a manner that minimizes additional surface disturbance.
64. Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
65. Topsoil from all excavations and construction activities must be salvaged and reapplied during reclamation.
66. The applicant is required to inform the relevant provincial Department and/or this Department should the removal of protected species, medicinal plants and "data deficient" plant species is required.
67. All hard infrastructures should be located within existing low sensitivity and disturbed areas, as far as possible.

68. No turbines, substations, roads, cable trenches and other associated infrastructure shall be placed within any natural vegetation or near any wetlands, streams or rivers.
69. The Dassiesfontein substation must be moved 175m (centred on the coordinates 34° 14' 37.9"S and 19° 17' 16.4"E) to the northwest, or alternatively immediately southwest of turbine 4, into a nearby area of agricultural land.
70. The final position of turbine 6 on the Klipheuwel site must be located at coordinates 34° 14' 07.6"S and 19° 22' 57.6"E.
71. The area of Critically Endangered vegetation within first 275m of the proposed access road (and cable trench) connecting turbines 2 and 3 at the Klipheuwel site must be fenced off in a 6m wide development corridor prior to any development to prevent inappropriate or unnecessary access to adjacent sensitive areas. Also, search and rescue of all translocatable plant species within this fenced off development footprint must be undertaken prior to construction and the cable trench through this area must be dug by hand, unless it can be routed within the designated road corridor.
72. Access road and cable trench connecting turbines 5, 6 and 7 at the Klipheuwel site must be re-routed as recommended by Flora Specialist.
73. All feasible (as determined by Cape Nature) areas of high botanical sensitivity (identified in Helme 2010) must be formally declared and registered as a Contract Nature Reserve with the CapeNature's Stewardship Program.
74. The buffer zone of 2km around Boontjieskraal homestead must be discussed and agreed further by the applicant and Heritage Western Cape prior to commencement of the proposed development. Such agreement must be submitted to the Director: Environmental Impact Evaluation at this Department.
75. The construction camp must be located in a disturbed area and must be screened off during the entire construction phase.
76. Hazardous materials must be stored in regularly serviced containers enclosed in bunded areas. The bunded areas must be provided with a tap-off system through which spillages and leakages that might occur will be removed without any spillage outside of the bunded areas.
77. Chemical ablution facilities must be available for use by construction staff at all times during the construction period. These facilities must be removed from the site when the construction phase is completed.
78. The applicant must ensure that an effective monitoring system is put in place to detect any leakage or spillage of all hazardous substances.

79. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No. 59 of 2008).
80. A health and safety programme must be developed to protect both workers and the general public during construction, operation and decommissioning of the wind energy facility. The programme must establish a safety zone for wind turbine generator 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 wind turbine generators.
81. The applicant must ensure that the operation of the wind facility has minimal electromagnetic interference (EMI) and should comply with the relevant communication regulation.
82. The applicant must obtain a written permit from South Africa Civil Aviation Authority that the wind facility will not interfere with performance aerodrome radio Communication, Navigation and Surveillance (CNS) equipment especially the radar and the airstrip in the vicinity of the proposed site prior to commencement of the activity. The approval/permit must be submitted to the Director: Environmental Impact Evaluation in this Department.
83. The applicant must ensure that all equipment and machinery are well maintained and equipped with silencers.
84. The applicant must provide a prior warning to the community when a noisy activity is to take place.
85. Constraints identified in the preliminary geology and soil report must be verified in a detailed geotechnical investigation which must be commissioned by the applicant before the design process is finalised.
86. Foundations and trenches must be backfilled with original excavated materials such as possible. Excess excavation materials must be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
87. Burrow materials must be obtained only from authorised and permitted sites.
88. Anti-erosion measures such as silt fences must be installed in disturbed areas.



General

89. A copy of this authorisation must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
90. Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the applicant must notify the Department as soon as the new details become known to the applicant.
91. The holder of the authorisation must notify the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance. 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 regulations.
92. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 19 July 2011


Mr Ishaam Abader
DEPUTY DIRECTOR GENERAL: ENVIRONMENTAL QUALITY AND PROTECTION
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Background

The applicant, BioTherm Energy (Pty) Ltd, applied for the following activities:

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- Item 1(a): *The construction of facilities or infrastructure, including associated structures or infrastructure, for the generation of electricity where (i) the electricity output is 20 megawatts or more; or (ii) the elements of the facility cover a combined area in excess of 1 ha.*
- Item 1(f): *The construction of facilities or infrastructure, including associated structures or infrastructure, for the transmission and distribution of above ground electricity with capacity of 120 kV or more.*
- Item 2: *Any development, activity, including associated structures and infrastructure, where the total area of the developed area is, or is intended to be 20 hectares or more.*

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- Item 7: *The above ground storage of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters but less than 1 000 cubic meters at any one location or site.*
- Item 1(m): *The construction of facilities or infrastructure, including associated structures or infrastructure, for – any purpose in the one in ten year flood line of a river or stream, or within 32 meters from the bank of a river or stream where flood line is unknown, excluding purposes associated with existing residential use, but including – (i) canals; (ii) channels; (iii) bridges; (iv) dams; and (v) weirs.*
- Item 12: *The transformation or removal of indigenous vegetation of 3 hectares or more or of any size where the transformation or removal would occur within critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).*
- Item 14: *The construction of masts of any material of type and any height, including those used for telecommunications broadcasting and radio transmission, but excluding (a) masts of 15m and lower exclusively used by (i) radio amateurs; or (ii) for lightening purposes (b) flagpoles; and (c) lightening conductor poles.*

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

- for the proposed establishment of Klipheuwel/Dassiesfontein wind energy facility and associated infrastructure near Caledon, in the Theewaterskloof Local Municipality in the Western Cape Province, as described in the Final Environmental Impact Assessment Report (EIAR) dated January 2011.

The applicant appointed Savannah Environmental (Pty) Ltd to undertake an environmental assessment process in accordance with the EIA Regulations, 2006.

2. Information considered in making the decision

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

- a) The information contained in the EIAR dated January 2011;
- b) The comments received from the Directorate: Biodiversity and Conservation, the Western Cape Department of Environmental Affairs and Development Planning, CapeNature, Heritage Western Cape and interested and affected parties as included in the EIAR dated January 2011;
- c) Mitigation measures as proposed in the EIAR dated January 2011 and the draft EMP;
- d) The information contained in the specialist studies contained within EIAR; and
- e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

3. 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 EAP indicate that the EAP is competent to carry out the environmental impact assessment procedures.
- b) The findings of all the Specialist studies conducted and their recommended mitigation measures.

- c) The need for the proposed project is to contribute towards the renewable energy generation target set by the Government, socio-economic and environmental sustainable growth, and kick start and stimulate the renewable energy industry in South Africa.
- d) The EIAR dated January 2011 included a 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.
- e) The EIAR dated January 2011 identified all legislation and guidelines that have been considered in the preparation of the EIAR dated January 2011 and the legislation and guidelines that will be considered in the preparation of the Environmental Impact Assessment.
- f) The methodology used in assessing the potential impacts identified in the EIAR dated January 2011 and the specialist studies have been adequately indicated.
- g) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2006 for public involvement.

4. Findings

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

- None of the proposed turbines are located within watercourses or wetland areas. However, two watercourses on the Klipheuwel section of the facility could potentially be affected by the proposed construction or underground cables and internal access roads.
- The connection will be on existing power lines passing by the site, no overhead power lines are going to be constructed.
- Existing tracks will be used for access to the site. However, internal roads need to be constructed.
- A comprehensive programme to fully monitor the actual impacts of the facility on the broader avifauna of the area will be undertaken, from pre-construction and into the operational phase of the project.
- The Heritage Assessment and Visual Assessment both concluded that the proposed wind energy facility will have a visual impact on the scenic resources and pastoral character of the region which will generally add new modern element onto an old rural landscape. The overall visual impact is considered medium to low with recommended mitigations.

- Based on the findings of the Social Impact Assessment, it would appear that none of the landowners who stand to be directly affected by the proposed wind energy facility are opposed to the development.
- The majority of impacts on the natural environment associated with the proposed wind energy facility are considered to be significant, but may be reduced to acceptable and sustainable levels by adherence to proposed mitigation measures.
- The identification and assessment of impacts are detailed in the EIAR dated January 2011 and sufficient assessment of the key identified issues and impacts have been completed.
- The procedure followed for impact assessment is adequate for the decision-making process.
- The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- All legal and procedural requirements have been met.
- The information contained in the EIAR dated January 2011 is accurate and credible.
- EMP 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 application is accordingly granted.

