

# MEETING NOTES

199 Bryanston Drive  
Bryanston  
2191

Tel: +27 11 361 1392  
Fax: +27 11 361 1381

[www.wspgroup.com](http://www.wspgroup.com)  
[www.pbworld.com](http://www.pbworld.com)

|                   |  |
|-------------------|--|
| Job Title         | BioTherm Wind EIA's  |
| Project Number    | 47579  |
| Date              | 22 February 2017   |
| DEA Reference No: | 14/12/16/3/3/2/967<br>14/12/16/3/3/2/963<br>14/12/16/3/3/2/962                       |
| Time              | 10:00 am   |
| Venue             | Municipal Chambers, Laingsburg   |
| Subject           | Authority Meeting for the Esizayo and Maralla (East and West) Wind Energy Facilities |
| Client            | BioTherm Energy (Pty) Ltd  |
| Present           | See <b>Appendix A</b>  |
| Apologies         | None   |
| Distribution      | As above   |

## MATTERS ARISING

## ACTION

### 1.0 WELCOME AND INTRODUCTIONS

- 1.1 WSP and BioTherm were introduced to the councillors by Mr Marthinus (Municipal Speaker and ward councillor for the Matjiesfontein area). He explained that WSP will answer the following:
- 1.1.1 Where the projects are;
  - 1.1.2 When they will be implemented;
  - 1.1.3 Job creation; and
  - 1.1.4 How many jobs.
- 1.2 Ashlea Strong introduced the Project Team and explained each of their roles.

### 2.0 AGENDA

- 2.1 Scoping & Environmental Impact Assessment (EIA) Process
- 2.2 Project Description and Location
- 2.3 Project Alternatives
- 2.4 Impacts Identification and Assessment (following the
- 2.5 Public Participation Process (PPP)
- 2.6 Way Forward

### 3.0 SCOPING AND EIA

- 3.1 Last time we meet with the Municipality we were still in Scoping Phase. The DEA have now approved the Scoping Reports allowing us to move onto the EIR phase.
- 3.2 The specialists have now completed their detailed studies which have been include with the Draft EIR.
- 3.3 The Draft EIR is currently out for public review.

| MATTERS ARISING   | ACTION |
|---|--------|
| <b>4.0 PROJECT DESCRIPTION</b>  |        |
| 4.1 BioTherm propose to establish three Wind Energy Facilities (WEF) in the Northern and Western Cape.  |        |
| 4.2 The development will include the following individual projects:   |        |
| → Esizayo WEF (up to 250MW)   |        |
| → Maralla East WEF (up to 250MW)  |        |
| → Maralla West WEF (up to 250MW)  |        |
| → Power Integration – Esizayo (132kV)   |        |
| → Power Integration – Maralla (132kV)   |        |
| 4.3 The Esizayo WEF is located adjacent to the road to Sutherland (R354)  |        |
| 4.4 The Maralla East and West WEFs are located approximately 34 km southeast of Sutherland  |        |
| 4.5 The power integration from the wind facility sites to the Eskom grid, at the Komsberg Substation, will require two separate BA's.   |        |
| 4.6 AS gave a technical overview of the project as per the table in the presentation ( <b>Appendix B</b> ).   |        |
| 4.7 Project Location:   |        |
| → Esizayo:  |        |
| ■ Farm Aanstoot 1/72  |        |
| ■ Farm Annex Joseph's Kraal 84  |        |
| ■ Farm Aurora 285   |        |
| ■ Approximately 70km south of Sutherland  |        |
| ■ Laingsburg Local Municipality   |        |
| ■ Central Karoo District Municipality   |        |
| ■ Western Cape  |        |
| → Maralla East:   |        |
| ■ Farm Welgemoed RE/268   |        |
| ■ Farm Schalkwykskraal RE/204   |        |
| ■ Portion of Farm Drie Roode Heuvels RE/180   |        |
| ■ Approximately 34km southeast of Sutherland  |        |
| ■ Laingsburg and Karoo Hoogland Local Municipalities  |        |
| ■ Central Karoo and Namakwa District Municipalities   |        |
| ■ Northern and Western Cape   |        |
| → Maralla West:   |        |
| ■ Portion of Farm Drie Roode Heuvels RE/180   |        |
| ■ Farm Annex Drie Roode Heuvels RE/181  |        |
| ■ Farm Wolven Hoek 1/182  |        |
| ■ Farm Wolven Hoek 2/182  |        |
| ■ Approximately 34km southeast of Sutherland  |        |
| ■ Karoo Hoogland Local Municipality   |        |
| ■ Namakwa District Municipality   |        |
| ■ Northern Cape   |        |
| <b>5.0 TECHNICAL DETAILS</b>  |        |
| 5.1 BioTherm were applying for all three WEF to have a generation capacity of 250MW however, DoE have a cap of 140 MW for the REIPPP.   |        |
| 5.2 BioTherm have reduced the number of turbines from 125 to 56 based on the outcomes and subsequent sensitivity mapping of the Specialist Studies.   |        |
| <b>6.0 LEGAL REQUIREMENTS</b>   |        |
| → National Environmental Management Act (NEMA) EIA- listed activities   |        |
| → National Water Act (NWA) - Linear infrastructure may cross water courses <ul style="list-style-type: none"> <li>■ If a WULA is required, it will only be processed once preferred bidder status is granted</li> </ul> |        |
| → Critical Biodiversity Areas (CBAs) have been identified in the area   |        |
| → Heritage and Paleontological impact assessments   |        |

| MATTERS ARISING  | ACTION |
|--|--------|
| → Renewable Energy Development Zones (REDZ) - not formalised as yet.   |        |
| <b>7.0 ALTERNATIVES</b>  |        |
| 7.1 AS showed the initial layout as per the image in the Presentation ( <b>Appendix B</b> ). This layout went to specialists to assess during the scoping phase.   |        |
| 7.2 Based on their assessments and recommendations, the layout was revised to include only 70 turbines.  |        |
| 7.3 The layout has been revised further based on the detailed specialist studies undertaken during the EIA phase. The number of turbines has now been reduced to 56 turbines.  |        |
| 7.4 Buffers have been implemented to reduced the potential impacts on sensitive areas.   |        |
| <b>8.0 IMPACT IDENTIFICATION AND ASSESSMENT</b>  |        |
| 8.1 Specialist studies undertaken as part of the Scoping Process:  |        |
| <ul style="list-style-type: none"> <li>→ Soil, land capacity and wetlands;</li> <li>→ Biodiversity;</li> <li>→ Avifauna;</li> <li>→ Heritage;</li> <li>→ Palaeontological;</li> <li>→ Bats;</li> <li>→ Visual;</li> <li>→ Social;</li> <li>→ Traffic; and</li> <li>→ Noise.</li> </ul>   |        |
| 8.2 Soils & Land Capacity:   |        |
| <ul style="list-style-type: none"> <li>→ The most significant impact is the loss of grazing land for animals during construction and operation.</li> <li>→ Medium significance across all three but with the implementation of all mitigation measures significance is Low.</li> <li>→ No sensitive areas identified.</li> </ul>   |        |
| 8.3 Biodiversity:  |        |
| <ul style="list-style-type: none"> <li>→ Most significant impact is the impact to biodiversity is the impact on both fauna and flora and protected species.</li> <li>→ There is also the increased risk of erosion following construction.</li> <li>→ Only small areas of vegetation will be cleared where the turbine will be constructed. There will be no need to clear the entire site.</li> </ul>   |        |
| 8.4 Avifauna:  |        |
| <ul style="list-style-type: none"> <li>→ Higher impact at Maralla East and West species such as the Verreaux's eagle, Martial Eagle, Jacke; nbuzzard and Black Harrior Hawk have been identified onsite. A 3km buffer has been placed around Verreaux nest identified.</li> <li>→ It is proposed that bird flight divertors (BFDs) are placed on powerlines to deter birds from flying close to the site. This will reduce the risk of collision with the turbines.</li> </ul> |        |
| 8.5 Bats:  |        |
| <ul style="list-style-type: none"> <li>→ The impacts are Medium to High across all three sites. Very difficult to mitigate.</li> <li>→ Barotrauma is a significant impact however, a SoP will be implemented to reduce the impact on Bats. This will include adjusting the operating hours, speed etc.</li> </ul>  |        |
| 8.6 Surface water:   |        |
| <ul style="list-style-type: none"> <li>→ Mostly to do with the ancillary infrastructure (powerlines, roads etc.) traversing a watercourse or wetland.</li> <li>→ Mitigation would be to avoid these areas all together.</li> </ul>   |        |
| 8.7 Heritage:  |        |

| MATTERS ARISING   | ACTION |
|---|--------|
| <ul style="list-style-type: none"> <li>→ No major heritage concerns on the farms identified for the development. There were some colonial ruins identified on Esizayo but no turbines are proposed for that area of the site. The ruins will be made no go zones.</li> </ul>  |        |
| <p>8.8 Palaeontology:</p> <ul style="list-style-type: none"> <li>→ Impacts on Palaeontology are of low significance as no palaeontological items or sensitive areas have been identified.</li> </ul>  |        |
| <p>8.9 Visual:</p> <ul style="list-style-type: none"> <li>→ All visual impacts are similar with exception of Esizayo, which is located along the R354 and will be visible to the road.</li> <li>→ Most significant impact is the visual intrusion of the turbines themselves. Not really possible to mitigate however a 500 m buffer between the R354 and the first turbines has been implemented.</li> <li>→ Visual impact is very subjective.</li> </ul>  |        |
| <p>8.10 Traffic:</p> <ul style="list-style-type: none"> <li>→ Impacts were of Low to Medium significance with the most significant being the noise, dust and exhaust pollution due to additional; trips on the access road.</li> <li>→ Due to the low traffic volumes on the access roads it is not anticipated that the transportation of the wind turbines will cause major traffic congestion.</li> </ul>  |        |
| <p>8.11 Noise</p> <ul style="list-style-type: none"> <li>→ Noise impacts are higher at Esizayo and Maralla West due to the proximity of homesteads to the WEF. These impacts were reduced to low significance once mitigation measures are introduced.</li> </ul>   |        |
| <p>8.12 Social:</p> <ul style="list-style-type: none"> <li>→ Most importantly are the positive impacts of Job creation and economic development.</li> </ul>   |        |
| <p>8.13 Cumulative impact</p> <ul style="list-style-type: none"> <li>→ The DEA requested that we look at the cumulative impacts of all the planned WEF within a minimum of 65km the study area.</li> <li>→ Some of the projects we got all the information we required (i.e. Specialist studies and other sites we did not.</li> <li>→ Bats, Palaeontology, Land Capacity, Surface Water, Social, Noise and Traffic were all Low impact.</li> <li>→ Avifauna, Biodiversity, Heritage and Visual were all of Low to Medium Significance.</li> <li>→ Most significant cumulative impacts were Biodiversity and Visual.</li> <li>→ AS briefly showed the sensitivity maps in the Presentation (Attached as <b>Appendix B</b>)</li> </ul> |        |
| <p><b>9.0 PUBLIC PARTICIPATION PROCESS</b></p>  |        |
| <p>9.1 Public participation process to date:</p> <ul style="list-style-type: none"> <li>→ Pre- Application consultation with the DEA;</li> <li>→ Newspaper adverts in: <ul style="list-style-type: none"> <li>■ The Courier</li> <li>■ Die Noordwester</li> </ul> </li> <li>→ Email notification of I&amp;APs;</li> <li>→ Site notice placement;</li> <li>→ DSR for 30-day public review (15 September – 17 October 2016);</li> <li>→ Public Meetings (Laingsburg and Sutherland);</li> <li>→ DEIR out for 30 day comment and review (2 February – 2 March 2017).</li> <li>→ Public Meetings <ul style="list-style-type: none"> <li>■ 23 February 2017</li> <li>■ 24 February 2017</li> </ul> </li> </ul>                             |        |
| <p><b>10.0 WAY FORWARD</b></p>  |        |
| <p>10.1 Stakeholder Meetings – 21 – 24 February 2017</p>  |        |

| MATTERS ARISING  | ACTION |
|--|--------|
| 10.2 Close of public review period- 2 March 2017   |        |
| 10.3 Finalisation of the DEIR and Submission- 3- 28 March 2017   |        |
| 10.4 Authority Review- 31 March- 17 July 2017  |        |
| 10.5 Receipt of EA- Mid- end July  |        |
| 10.6 Appeal Period- 20 days from receipt of EA   |        |
| <b>11.0 QUESTIONS</b>  |        |
| 11.1 G. Harding (G.H): You have reduced the number of Turbines, How does this affect the feasibility of the Project?<br>MY: This does not affect the feasibility as we will use higher MW turbines.  |        |
| 11.2 GH: You have reduced the number of turbines due to the nests identified onsite. are there still turbines within the local municipality or are they all in the Northern Cape?<br>AS: There are still turbines in the Western Cape for LM.  |        |
| 11.3 GH.: How far are you with the Biodiversity study?<br>AS: the study is complete and has been used to revise the layout. It is included in the DEIR.  |        |
| 11.4 Municipal Manager (MM): How will the power to Komsburg affect Laingsurg?<br>AS: The power will boost the National grid it is not specifically for one municipality.   |        |
| 11.5 Mike Gouws (MG): How many jobs will this really create? Will it be only a few jobs and what are the impacts to the community/ towns?<br>SK: BioTherm are committed to source local labour. Skills are sourced in the local community first and then moved out of the area.<br>BioTherm have 3 existing operational facilities (2 solar and 1 wind). Through these opportunities they have created jobs, assisted entrepreneurs and local businesses and provided bursaries for education.   |        |
| 11.6 MG: Eskom trained and uplifted locals to have skills. Now we have electrification. We need to train people to have the skills. What can we do to uplift the community?<br>SK: The biggest challenge is that before we get Preferred Bidder Status, you are not making money. Cant upskill before the project starts.  |        |
| 11.7 Municipal Speaker: Will there be a requirement in the contract with DoE for local labour to be sourced?<br>SK: The REIPP requires the preferred bidder to source local labour.  |        |
| 11.8 GH: What type of skills are likely to be required for the project? we will need to ensure we have community members with the correct skills.<br>AS: Would we be able to send through a list with the type of skills and skills level required for the construction and operation of a WEF? We can include it in the minutes. The list of skills is attached in <b>Appendix C</b> .<br>SK: Yes we can do that.   | AS     |
| 11.9 GH: In terms of the NIA and the VIA- what public comment have you received. how have landowners feel about it?<br>AS: we have had no specific comment, only one or two regarding the visual aspect and really only that they were concerned. We have had comments from people who own land in the area but live in Cape Town. They have stated that the visual impacts will be high and that's all they have really stated. Yes we agree that there will be a high visual impact and there has been a buffer placed between the road the turbines but it is a difficult thing to mitigate. You will see the turbines and it will affect the sense of place and there is not that much we can do about it until it is removed and dismantled in 30 years time. . |        |

## MATTERS ARISING

## ACTION

In terms of the NIA no comments, the only people it will impact is the landowners and everyone else is so far away so I don't think they are very concerned. The further away you are the less likely you are to hear them. We have also had some comment on heritage and the sense of place. Cape town Lifestyle farmers do not want turbines within 80km of Matjiesfontein. We haven't had comments from the tourist sector but looking at the socio-economic study, the tourist sector may change because people may want to see the turbines. You may lose some people who want the quiet and the sense of nothing but you may gain the more industrial tourist.

## 11.10 GH: which farmers have raised concerns?

AS: They haven't said which farms are theirs, they just mention that they don't want wind turbines within 80km of Matjiesfontien so I assume they are around there somewhere.

## 11.11 GH: Negative versus Positive comments? do they weight themselves out or which have you received more of?

AS: More positive at the moment than Negative. There are one or two people who like to submit negative comments but there are more positive comments like the local authorities and the farmers who see the job potential with the wind farms coming to the area. No major concerns or issues yet.

## 11.12 MG: Are people not happy about birds and Wildlife etc? This is happening all over the world.

AS: Every project impacts them on some level. Here you have the birds and the bats which are disturbed more at a larger level than a local level like biodiversity where you are just clearing a little section of vegetation for the wind turbines.

## 11.13 Municipal councillor (Bennie): When is the EIA cut off?

AS: The reports are currently out for review. The review period closes on the 2<sup>nd</sup> March 2017

## 11.14 Municipal councillor (Bennie): Did the municipality receive a copy as I haven't seen it?

AS: Yes it was hand delivered on the 2<sup>nd</sup> February 2017. We will make you a CD copy before we leave.

## 11.15 Bennie: What about a WEF being a tourist attraction?

MB: Yes, this is a possibility. In the USA people go on tours of WEF.

JV: They can also be an educational attraction.

## 11.16 Bennie: What are BioTherm doing about educating the children about renewable energy? Maybe a school program? Will there be more detail in the documents out for review?

AS: There won't be detail in our reports it will be something the client will need to think about if they are preferred bidders.

AS: Explained the REIPPPP system and how the client is working at risk as they can't submit without environmental authorisation.

SK: Once we are awarded preferred bidder status a certain percentage of the revenue to social development. BioTherm generally provides a bursary for tertiary and high school education.

Bennie: I am asking because with previous projects the owners of these projects never come and speak to us. The engagement should not stop in the council chambers. the poorest of the poor need to know about these projects, they need to be made optimistic. The owners never come but we appreciate that you are here but it makes it hard to make a decision on these projects.

| MATTERS ARISING   | ACTION |
|---|--------|
| <p>MY: BioTherm create an Environmental and Social Implementation Plan. BioTherm are very involved in the local communities. Even after construction, we are involved as that is when there are the most issues. There are grievance mechanisms in place for the community.</p>   |        |
| <p>11.17 Bennie: What does the client want from us here today? Is it a letter of support? Let's do it now so that we don't drag our feet.<br/>                     MY: At the moment it's far too early and we can't ask for anything more apart from you lending us an ear and your time. For the most part is for us to assist the municipality in understanding the process and timelines.</p> |        |
| <p><b>12.0 GENERAL MATTERS</b></p>  |        |
| <p>12.1 AS to send through the list of skills and the skills levels required for a WEF.</p>   | AS     |
| <p><b>13.0 CLOSING</b></p>  |        |
| <p>13.1 AS thanked everyone for listening and allowing us to present.</p>   |        |
| <p>13.2 Meeting closed at 11:15 am</p>  |        |





**NEXT MEETING**

No further Meetings are anticipated for this project.





## Appendix A: Attendance Register







## ATTENDANCE REGISTER 22 February 2017

| Name                  | Company Name    | Contact Details   | Signature   |
|-----------------------|-----------------|---|---|
| Simphine kulu         | BioTherm Energy | Tel: (011) 367 4600<br>Fax: 086 435 2104<br>Mobile: 076 011 8895<br>Email: skulu@biothermenergy.co.za |    |
| Mohammed Jusaid Yusof | BioTherm Energy | Tel: 011 367 4600<br>Fax: 086 435 2104<br>Mobile: 076 765 2789<br>Email: myusof@biothermenergy.com    |    |
| Bronwyn Fisher        | WSP             | Tel: 021 451 9662<br>Fax: 021 481 8779<br>Mobile:<br>Email: Bronwyn.Fisher@wspgroup.co.za             |  |
| Ashlea Strong         | WSP             | Tel: 011 361 1392<br>Fax:<br>Mobile:<br>Email: ashlea.strong@wspgroup.co.za                           |  |


## ATTENDANCE REGISTER 22 February 2017

| Name             | Company Name            | Contact Details   | Signature   |
|------------------|-------------------------|---|---|
| M. Gouns<br>Mike | Councillor              | Tel: 0786174616<br>Fax:<br>Mobile:<br>Email: Mike.gouns@damien.com                                |    |
| A. Hbenewald     | Laingsburg Municipality | Tel: 023-5511019<br>Fax: 023-5511217<br>Mobile:<br>Email: laingsadmin@x5inet.co.za                |    |
| Wilhelm Theron   | " Roodsid               | Tel: 0834474227<br>Fax:<br>Mobile:<br>Email: spealcer@laingsburg.gov.za                           |  |
| Irene Brown      | Councillor              | Tel: 023 5511 565<br>Fax: 023 5511 244<br>Mobile: 060 500 56 83<br>Email: irenebrown106@gmail.com |  |

## ATTENDANCE REGISTER 22 February 2017

| Name              | Company Name          | Contact Details  | Signature   |
|-------------------|-----------------------|--|---|
| JUBREY A. MATHIAS | LANSBURG MUNICIPALITY | Tel: 023 551 1019<br>Fax: 023 551 1019<br>Mobile: 060 561 7782<br>Email: mayor@langsburg.gov.za. |    |
| BERTIE VAN AS     | LANSBURG Municipality | Tel: 023 5511406<br>Fax: 023 5511406<br>Mobile: 0844244413<br>Email: bertievanas@gmail.com       |    |
| Benny Kleinboer   | LANSBURG Municipality | Tel: 023-5511565<br>Fax: 086618089<br>Mobile: 079 0605017832<br>Email: bkleinboer@icloud.com.    |  |
| Gwynne Haroina    | LLM                   | Tel: 023 5511019<br>Fax: 023 5511019<br>Mobile: 083 567 2783<br>Email: gpeker@langsburg.gov.za   |  |

## Appendix B: Presentation



# BioTherm Wind Energy Developments

*Public Meeting*

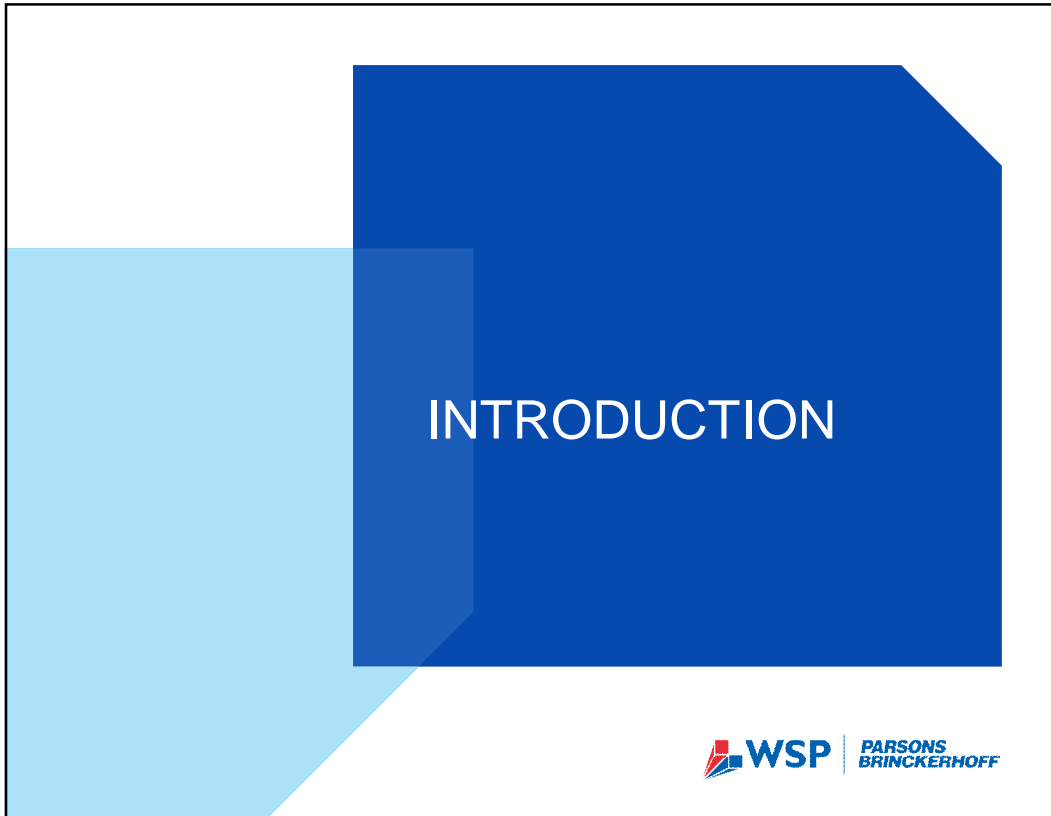
*Date: 22 February 2017*  
*Time: 10:00 – 12:00*  
*Venue: Laingsburg Municipal Offices*



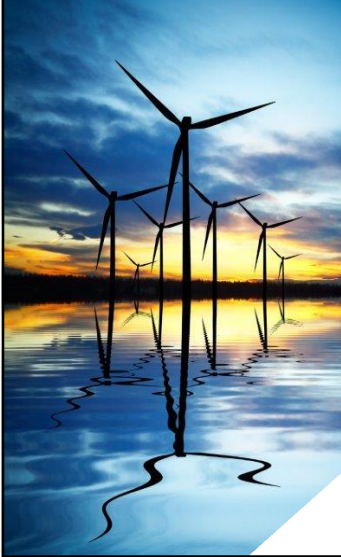
## AGENDA



- à **Welcome and Introductions**
  - § Purpose of the Meeting
  - § Conduct of the Meeting
  - § Responsibilities
- à **Environmental Authorisation Process**
- à **Project Description & Locality**
- à **Legal Requirements**
- à **Outline of the Alternatives**
- à **Impact Assessment**
- à **Public Participation Process**
- à **Way Forward**
- à **Questions**



## PURPOSE OF THE MEETING



- à **Provide stakeholders with information regarding:**
  - § The proposed project
  - § The Environmental Impact Assessment (EIA) process to date
  - § Findings of the Draft Environmental Impact Report (DEIR)
- à **Provide stakeholders with the opportunity to raise issues regarding the potential impacts of the project on the environment**
- à **Provide an opportunity for stakeholders to interact with the project team**



## CONDUCT OF THE MEETING



- à **Focus on issues at hand**
- à **Presentation will be presented in English**
- à **Questions should please raised through the facilitator**
- à **Be courteous and ensure equal opportunity**
- à **Cell phones to be switched off or on silent**



## RESPONSIBILITIES

| Roleplayer              | Responsibility   |
|-------------------------|--|
| Applicant<br>(BioTherm) | <ul style="list-style-type: none"> <li>• Appoint suitable, independent EAP</li> <li>• Ensure adequate resources are available to conduct an effective, efficient &amp; equitable S&amp;EIR process</li> <li>• Ensure that the EAP is provided with relevant information to undertake the S&amp;EIR process effectively</li> <li>• Ensure that the EAP provides all relevant information to the Authorities</li> </ul>  |
| EAP (WSP)               | <ul style="list-style-type: none"> <li>• Be independent with no vested interest</li> <li>• Have the necessary qualifications &amp; experience</li> <li>• Responsible for authorisation process, information &amp; reports</li> <li>• Provide relevant &amp; objective information to the authorities, the stakeholders &amp; the proponent</li> <li>• Ensure public participation process (PPP) is undertaken</li> <li>• Ensure all issues raised are addressed or responded to</li> </ul> |




## RESPONSIBILITIES CONT.

| Roleplayer  | Responsibility  |
|---|---|
| Stakeholders  | <ul style="list-style-type: none"> <li>• Provide input &amp; comment during the S&amp;EIR process</li> <li>• Review of reports <ul style="list-style-type: none"> <li>• Draft Scoping Report (DSR)</li> <li>• <b>Environmental Impact Report (EIR)</b></li> <li>• <b>Environmental Management Programme (EMPr)</b></li> </ul> </li> <li>• Provide input &amp; comment within specific timeframes</li> </ul> |
| Decision-making<br>Authority<br>(Department of<br>Environmental<br>Affairs) | <ul style="list-style-type: none"> <li>• Efficient &amp; expedient in evaluating proposals</li> <li>• Compliance with regulatory requirements</li> <li>• Inter-departmental co-operation &amp; consultation</li> <li>• Consultation with the Applicant &amp; the Consultant</li> <li>• Evaluation/review &amp; decision-making</li> <li>• Requiring sufficient detail to make informed decisions</li> </ul> |

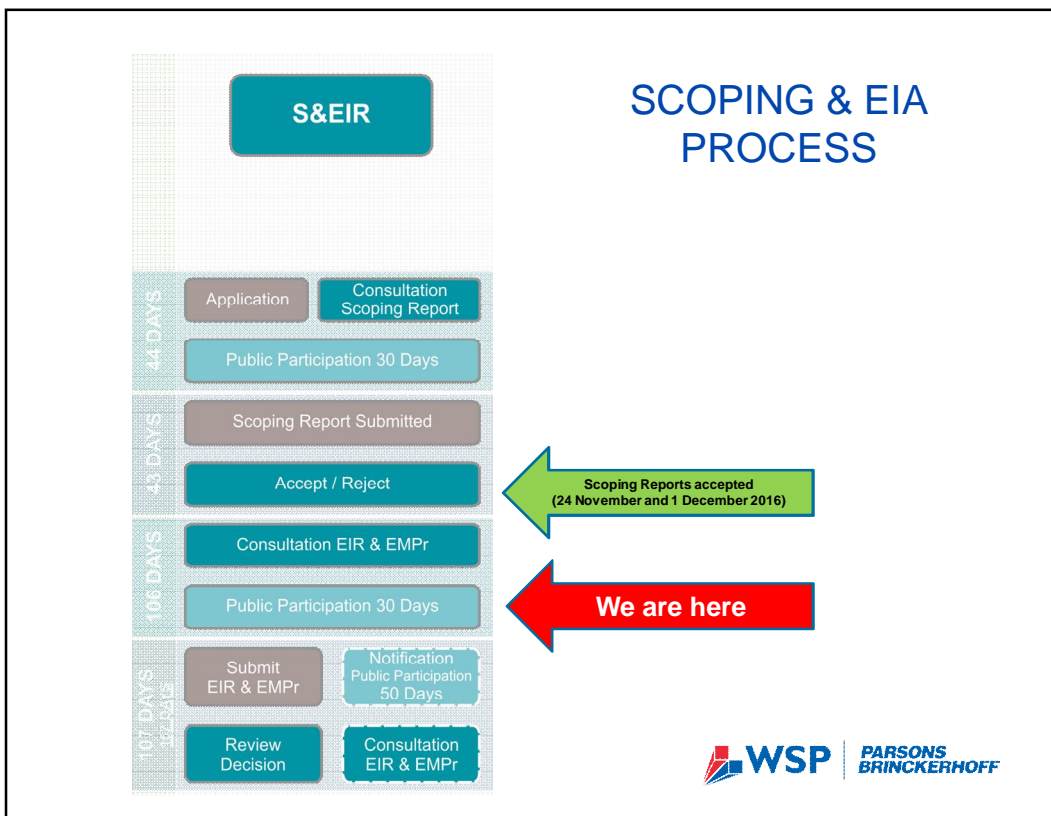




# ENVIRONMENTAL AUTHORISATION PROCESS



The slide features a large blue rectangle on the right side containing the title 'ENVIRONMENTAL AUTHORISATION PROCESS' in white, bold, uppercase letters. To the left of this rectangle is a light blue shape that overlaps its left edge. At the bottom right, the logos for WSP and PARSONS BRINCKERHOFF are displayed.





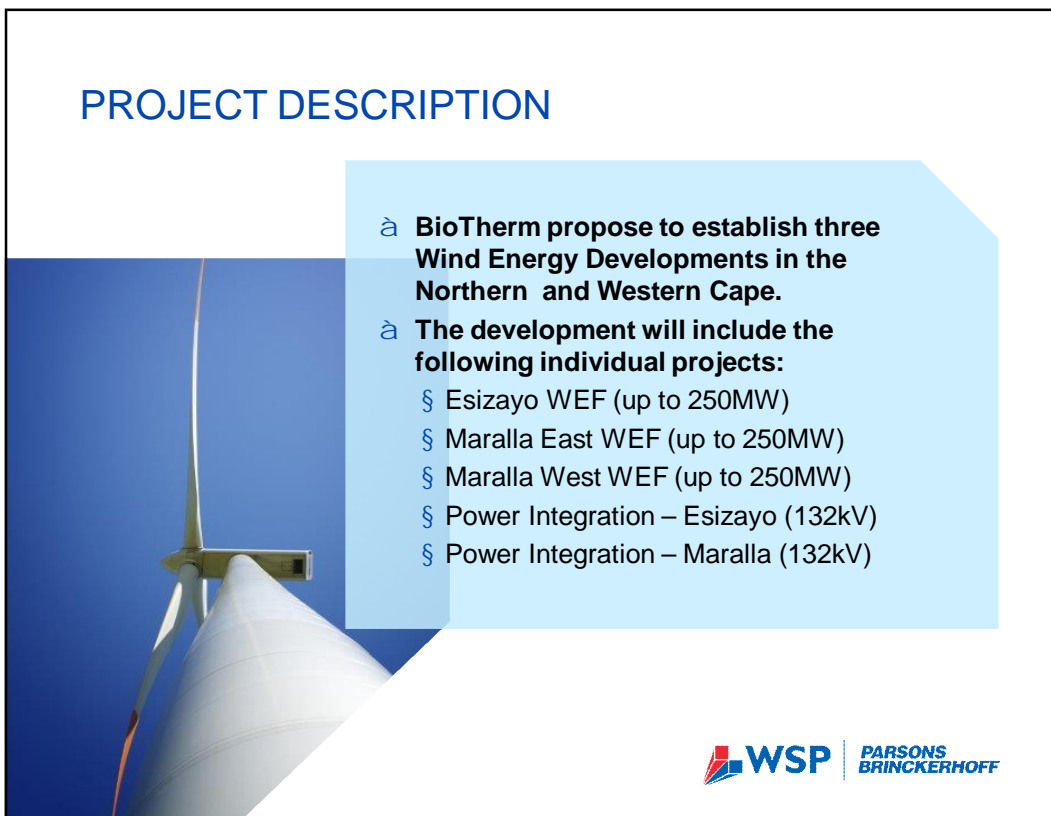
The slide features a dark blue background with a light blue geometric shape on the left. The text is centered in white and yellow.

# PROJECT DESCRIPTION

*Project and Technical Description and Locality*




**WSP** | PARSONS BRINCKERHOFF



The slide features a background image of a wind turbine against a blue sky. The text is overlaid on a light blue geometric shape.

## PROJECT DESCRIPTION

- à **BioTherm propose to establish three Wind Energy Developments in the Northern and Western Cape.**
- à **The development will include the following individual projects:**
  - § Esizayo WEF (up to 250MW)
  - § Maralla East WEF (up to 250MW)
  - § Maralla West WEF (up to 250MW)
  - § Power Integration – Esizayo (132kV)
  - § Power Integration – Maralla (132kV)



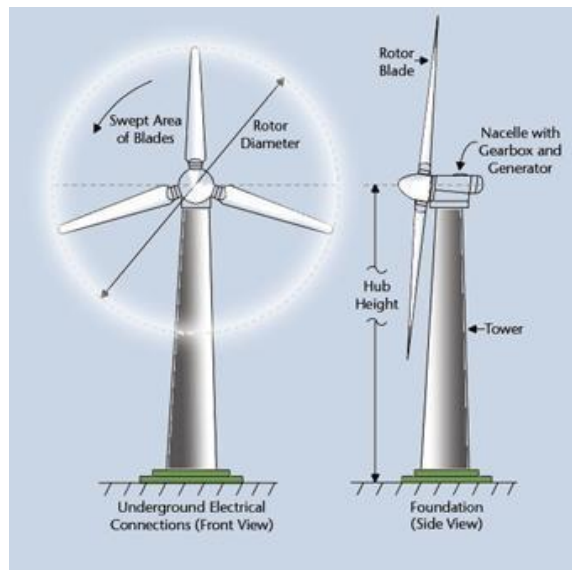
**WSP** | PARSONS BRINCKERHOFF

## TECHNICAL DETAILS

|  |  |
|--|--|
| <b>Generation Capacity</b>                     | Up to 250 MW   |
| <b>Number of turbines</b>                      | Up to 125 (Revised Layout includes 56 Turbines)  |
| <b>Area occupied by each turbine</b>           | 0.5 ha (85m x 60m)   |
| <b>Turbine hub height</b>                      | Up to 120m   |
| <b>Rotor Diameter</b>                          | Up to 150m   |
| <b>Width of internal roads</b>                 | Between 4.0m and 6.0m, however this may increase to 8m on bends  |
| <b>Footprint of internal onsite substation</b> | 150m x 150m  |
| <b>Onsite substation capacity</b>              | Up to 132kV  |
| <b>Width of the powerline servitude</b>        | 31m (15.5m either side)  |
| <b>Powerline tower types and height</b>        | Tower (suspension / strain) / Steel monopole structure, which may be self-supported or guyed suspension. |



## WIND ENERGY GENERATION PROCESS



Drawing of the rotor and blades of a wind turbine, courtesy of ESN



# PROJECT LOCATION

## Esizayo Development Location

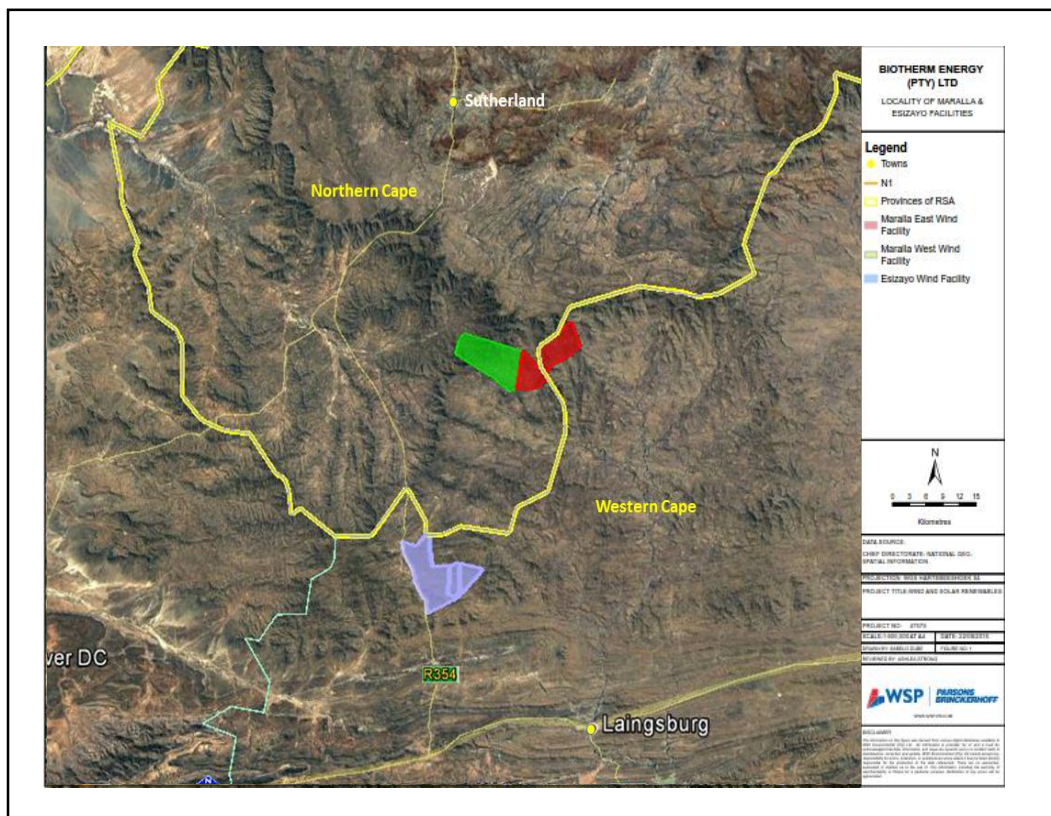
| FARM NAME & NUMBER                | FARM SIZE (HA) |
|-----------------------------------|----------------|
| Portion 1 of Aanstoot Farm No. 72 | 762.42 ha      |
| Annex Joseph's Kraal Farm No.84   | 913.32 ha      |
| Aurora Farm No. 285               | 4 385.29 ha    |

## Maralla East Development Location

| FARM NAME & NUMBER                     | FARM SIZE (HA) |
|--|----------------|
| Farm Welgemoed 268, Remainder          | 2 649 ha       |
| Farm Schalkwykskraal 204, Remainder    | 1 056 ha       |
| Farm Drie Roode Heuvels 180, Remainder | 3 929 ha       |

## Maralla West Development Location

| FARM NAME & NUMBER                           | FARM SIZE (HA) |
|--|----------------|
| Farm Drie Roode Heuvels 180, Remainder       | 3 929 ha       |
| Farm Annex Drie Roode Heuvels 181, Remainder | 329 ha         |
| Farm Wolven Hoek 182, Portion 1              | 763 ha         |
| Farm Wolven Hoek 182, Portion 2              | 625 ha         |

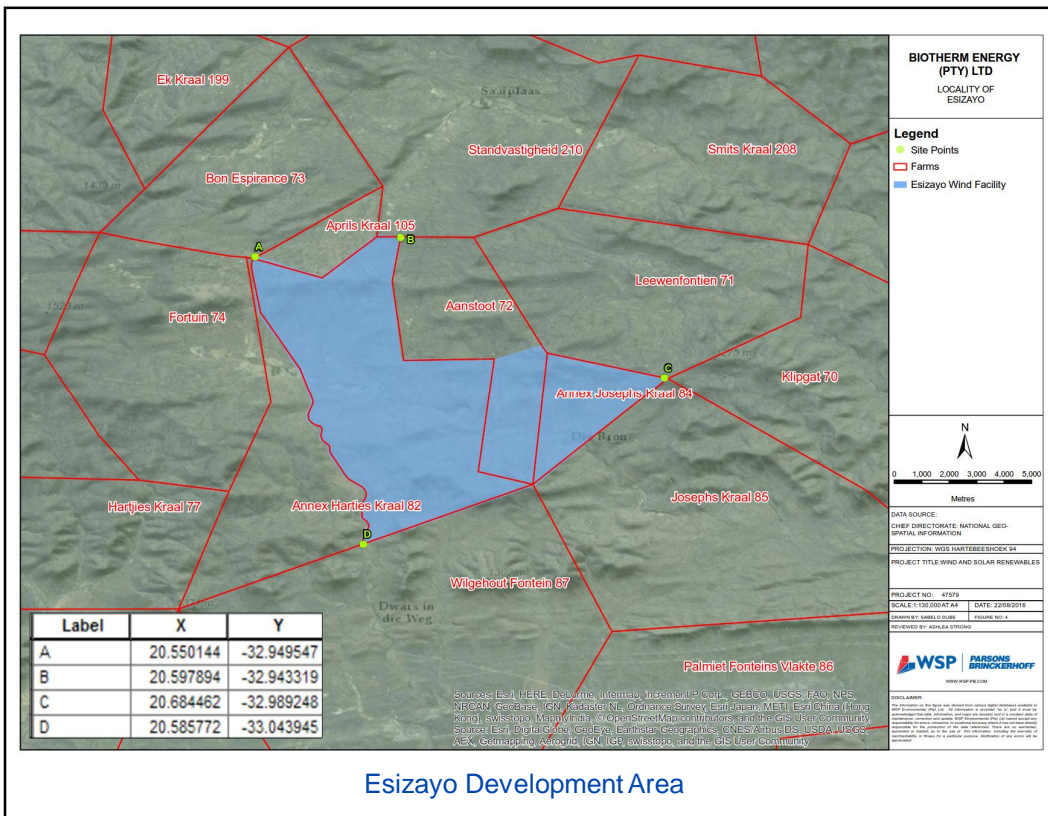


## PROJECT LOCATION- ESIZAYO



à **The Esizayo Wind Energy Development will be located:**

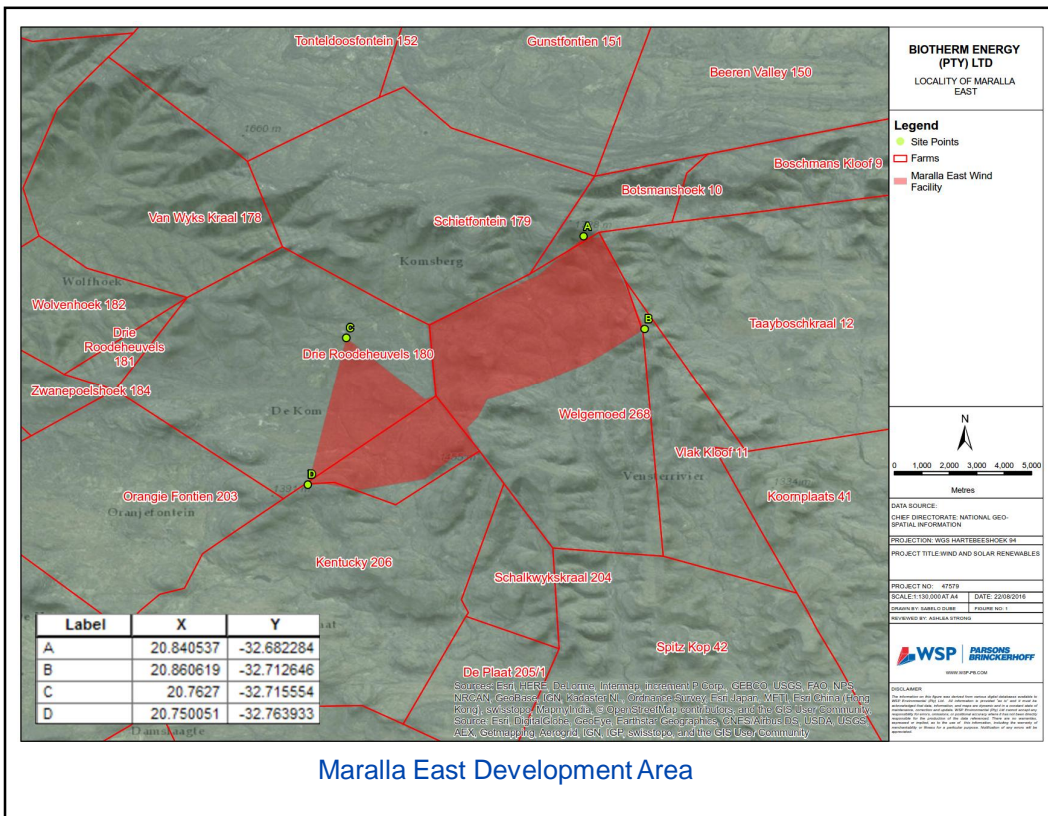
- § Farm Aanstoot 1/72
- § Farm Annex Joseph's Kraal 84
- § Farm Aurora 285
- § Approximately 70km south of Sutherland
- § Laingsburg Local Municipality
- § Central Karoo District Municipality
- § Western Cape



## PROJECT LOCATION- MARALLA EAST



- à **The Maralla East Wind Energy Development will be located:**
- § Farm Welgemoed RE/268
  - § Farm Schalkwyskraal RE/204
  - § Portion of Farm Drie Roode Heuvels RE/180
  - § Approximately 34km southeast of Sutherland
  - § Laingsburg and Karoo Hoogland Local Municipalities
  - § Central Karoo and Namakwa District Municipalities
  - § Northern and Western Cape

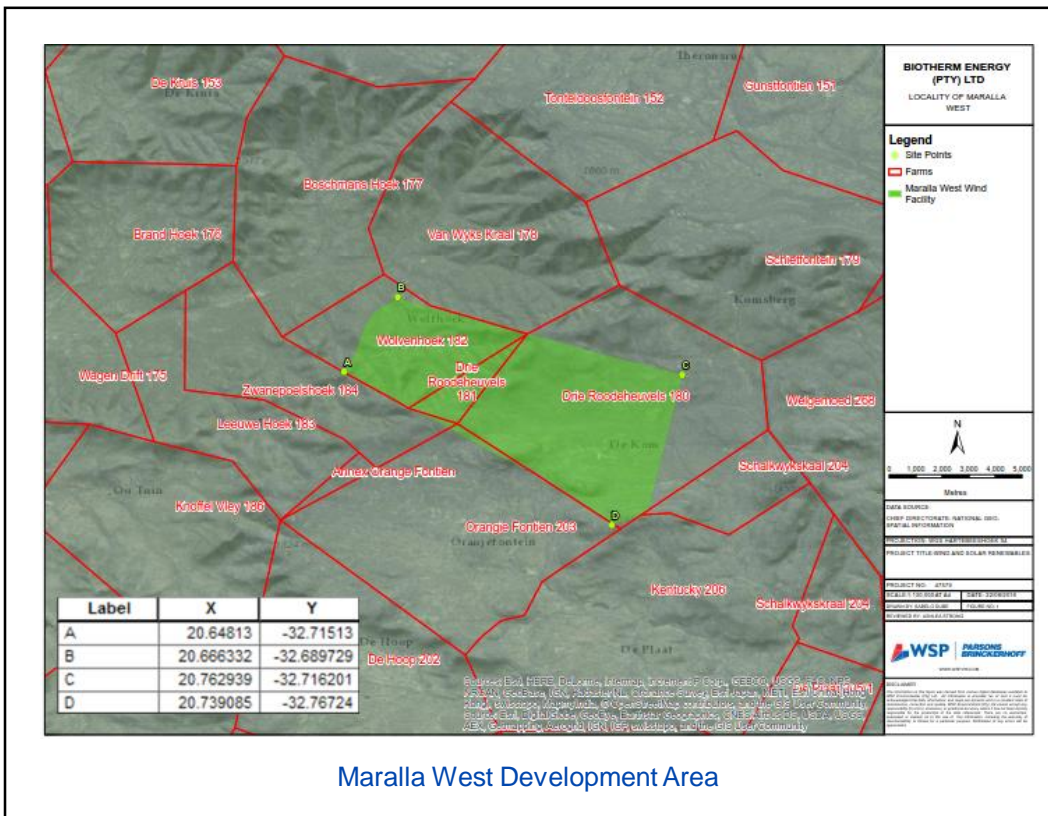


## PROJECT LOCATION- MARALLA WEST



à **The Maralla West Wind Energy Development will be located:**

- § Portion of Farm Drie Roode Heuvels RE/180
- § Farm Annex Drie Roode Heuvels RE/181
- § Farm Wolven Hoek 1/182
- § Farm Wolven Hoek 2/182
- § Approximately 34km southeast of Sutherland
- § Karoo Hoogland Local Municipality
- § Namakwa District Municipality
- § Northern Cape





## LEGAL REQUIREMENTS

| Relevant Act  | Competent Authority                              |
|---|--|
| <b>National Environmental Management Act (No. 107 of 1998) (NEMA)</b>   | <b>Department of Environmental Affairs (DEA)</b> |
| <ul style="list-style-type: none"> <li>• An environmental authorisation is required prior to the establishment of the Proposed Projects</li> <li>• A full S&amp;EIR Process is required to be conducted for the WEF Projects</li> <li>• A Basic Assessment is required to be conducted for the power integration projects</li> <li>• Listed Activities triggered under Government Notice Regulation (GNR) 983, 984 and 985 of 2014</li> </ul> |  |
| <b>National Water Act (No. 36 of 1998)</b>  | <b>Department of Water and Sanitation</b>        |
| <ul style="list-style-type: none"> <li>• The following water uses have been identified as potentially applicable:                             <ul style="list-style-type: none"> <li>• Section 21 (a) and 21 (b)</li> <li>• Section 21 (c) and 21 (i)</li> </ul> </li> <li>• Water Use Licence or General Authorisation required prior to the establishment of the Proposed Projects</li> </ul>   |  |
| <b>National Environmental Management: Biodiversity Act, 2004 (No. 10 of 2004)</b>   |  |
| <ul style="list-style-type: none"> <li>• The are Critical Biodiversity Areas (CBAs) in the study areas.</li> </ul>  |  |
| <b>National Heritage Resource Act (No. 25 of 1999)</b>  |  |
| <ul style="list-style-type: none"> <li>• A Heritage Impact Assessment (HIA) will be undertaken looking at Archaeology, Heritage and Palaeontology for each of the above mentioned projects</li> </ul>   |  |
| <b>Renewable Energy Development Zone</b>  |  |
| <ul style="list-style-type: none"> <li>• The project areas fall within the Komsberg Wind REDZ</li> </ul>  |  |



## WATER USE LICENSING

| Relevant Water Use | Description   | Applicability   |
|--------------------|---|---|
| Section 21 (a)     | Taking water from a water resource                                  | In the event that ground water abstraction is required for operational activities   |
| Section 21 (b)     | Storage of raw water  | In the event that the storage of raw water is required for operational activities   |
| Section 21 (c)     | Impeding or diverting the flow of water in a watercourse            | In the event that the powerlines or access roads cross a watercourse, drainage line or wetland area or if a turbine is constructed within 500m of a watercourse, drainage line or wetland |
| Section 21 (i)     | Altering the bed, banks course or characteristics of a water course |   |



## LISTED ACTIVITIES

| Project Name                           | Listing Notice | Activities Triggered |                |       |        |        |          |    |
|--|----------------|----------------------|----------------|-------|--------|--------|----------|----|
|  |                | 11(i)                | 12 (xii) (a&c) | 19(i) | 24(ii) | 28(ii) | 30       | 56 |
| Maralla West, Maralla East and Esizayo | GNR 983        | 11(i)                | 12 (xii) (a&c) | 19(i) | 24(ii) | 28(ii) | 30       | 56 |
|  | GNR 984        | 1                    | 15             | -     | -      | -      | -        | -  |
|  | GNR 985        | 4                    | 10             | 12    | 14     | 18     | 23 (iii) | -  |
| Power Integration                      | GNR 983        | 11(i)                | 12 (xii) (a&c) | 19(i) | 27     | 28(ii) | 30       | -  |
|  | GNR 985        | 4                    | 12             | 14    | -      | -      | -        | -  |



A title slide for 'PROJECT ALTERNATIVES'. The slide features a dark blue background with a light blue geometric shape on the left side. The text 'PROJECT ALTERNATIVES' is centered in white. At the bottom right, the logos for WSP and PARSONS BRINCKERHOFF are displayed.

# PROJECT ALTERNATIVES

**WSP** | **PARSONS BRINCKERHOFF**

## DEVELOPMENT AREA ALTERNATIVES

Site Selection was based on the following factors:

A vertical flowchart with five blue downward-pointing arrowheads on the left, each pointing to a rounded rectangular box containing a list of factors. The factors are: Environmental Factors (Google Earth, SANBI BGIS, FEPA, SEA, Other EIAs), Resources Factors (Satellite Data, Onsite Measurements), Grid Factors (Current Capacity, Future Capacity, Stability, Substations/Powerlines), Other Factors (Climate, Topography, Site Access, Competition, Existing Environmental Authorisations), and Land Owner Factors (Land Availability, Land Owner Approachability, Compensation, Competition).

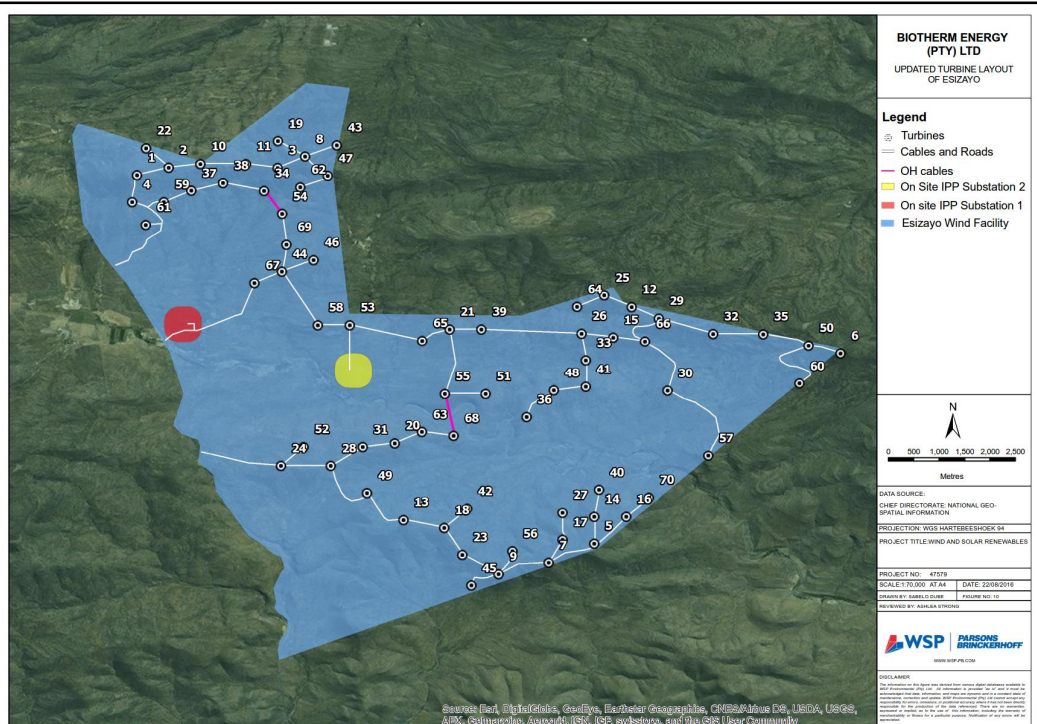
- Environmental Factors**
  - Google Earth
  - SANBI BGIS
  - FEPA, SEA
  - Other EIAs
- Resources Factors**
  - Satellite Data
  - Onsite Measurements
- Grid Factors**
  - Current Capacity
  - Future Capacity
  - Stability
  - Substations/Powerlines
- Other Factors**
  - Climate
  - Topography
  - Site Access
  - Competition
  - Existing Environmental Authorisations
- Land Owner Factors**
  - Land Availability
  - Land Owner Approachability
  - Compensation
  - Competition

**WSP** | **PARSONS BRINCKERHOFF**

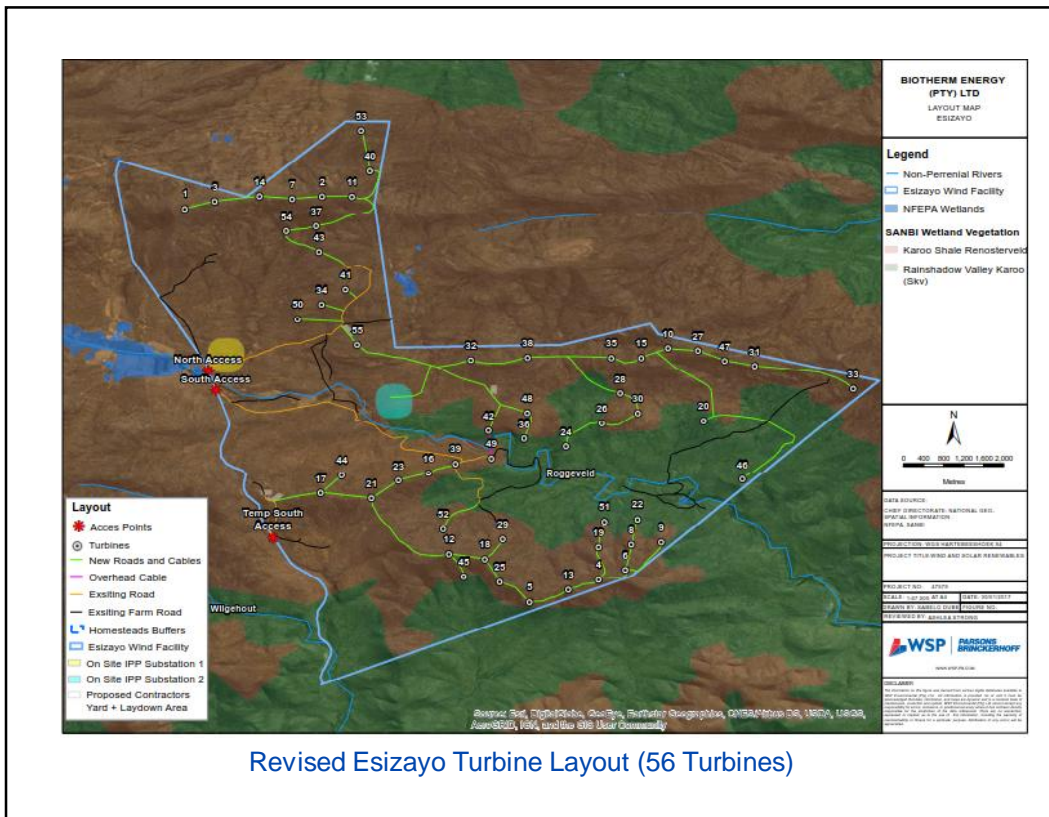
## LAYOUT ALTERNATIVES- ESIZAYO



Esizayo Initial Turbine Layout (125 Turbines – 250 MW)

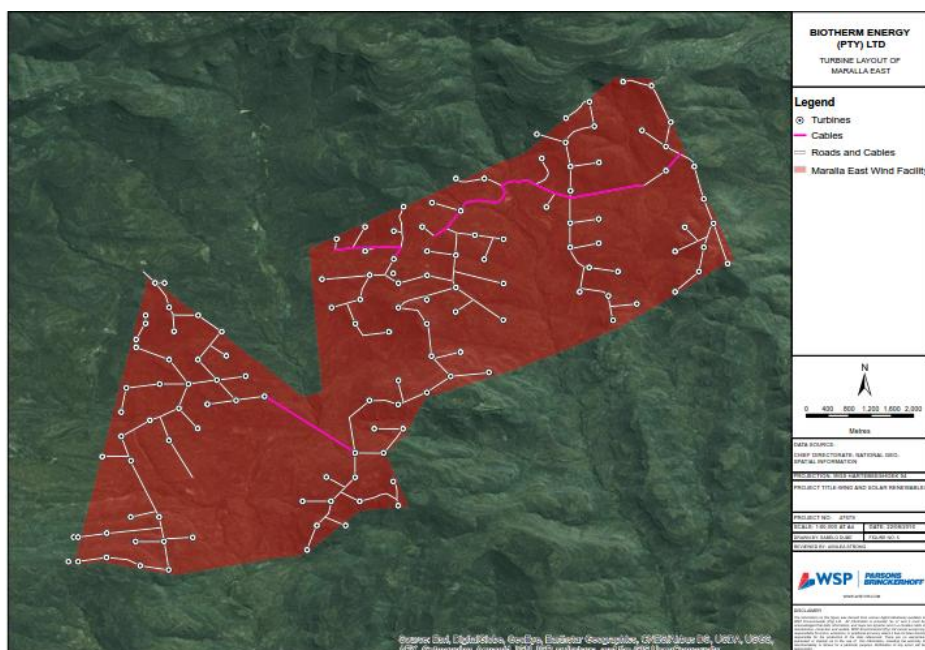


Revised Esizayo Turbine Layout (70 Turbines – 140 MW)

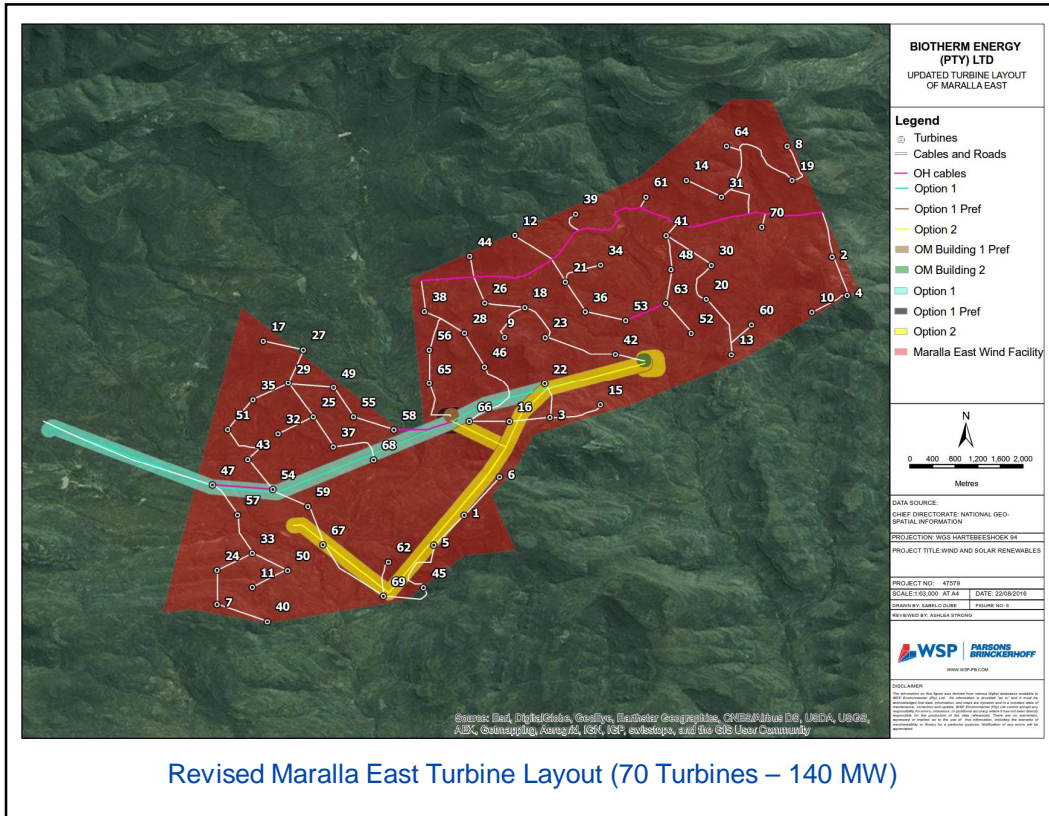


Revised Esizayo Turbine Layout (56 Turbines)

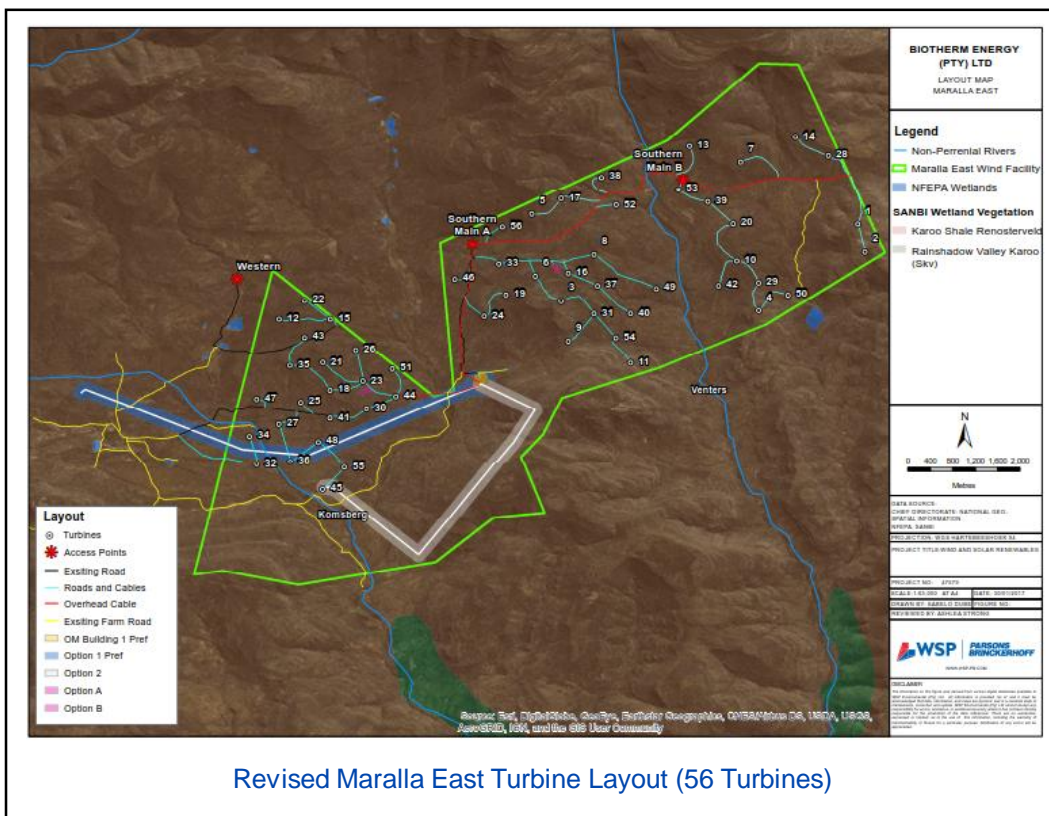
### LAYOUT ALTERNATIVES- MARALLA EAST



Maralla East Initial Turbine Layout (125 Turbines – 250 MW)



Revised Maralla East Turbine Layout (70 Turbines – 140 MW)

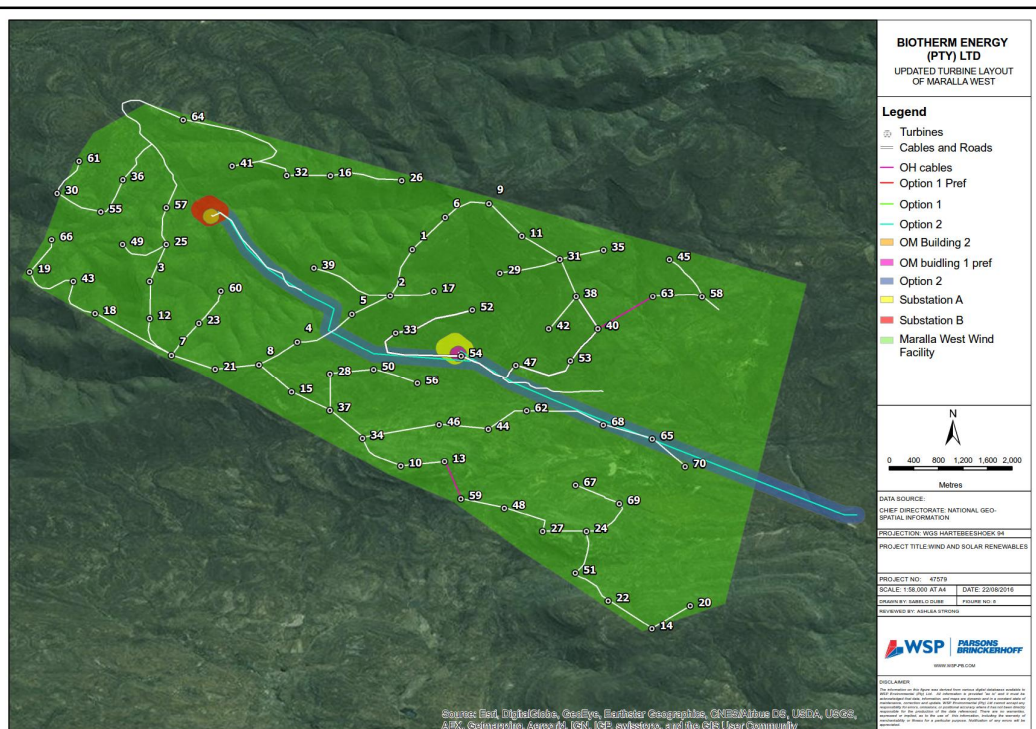


Revised Maralla East Turbine Layout (56 Turbines)

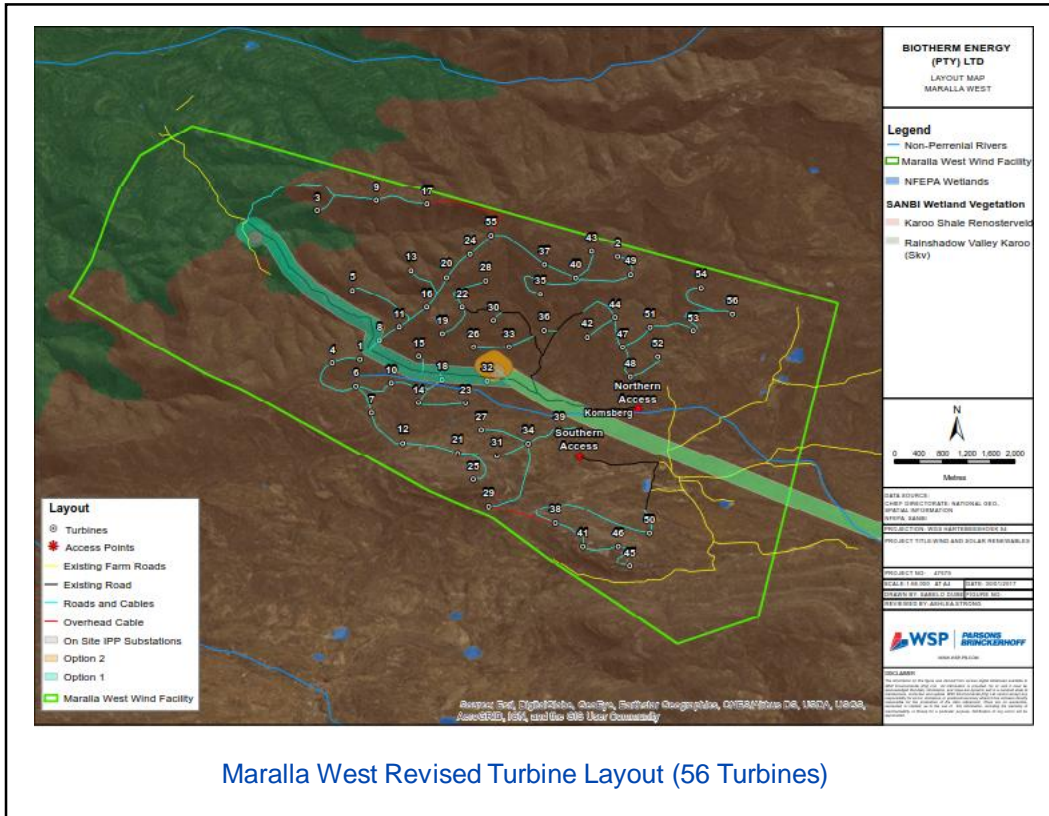
## LAYOUT ALTERNATIVES- MARALLA WEST



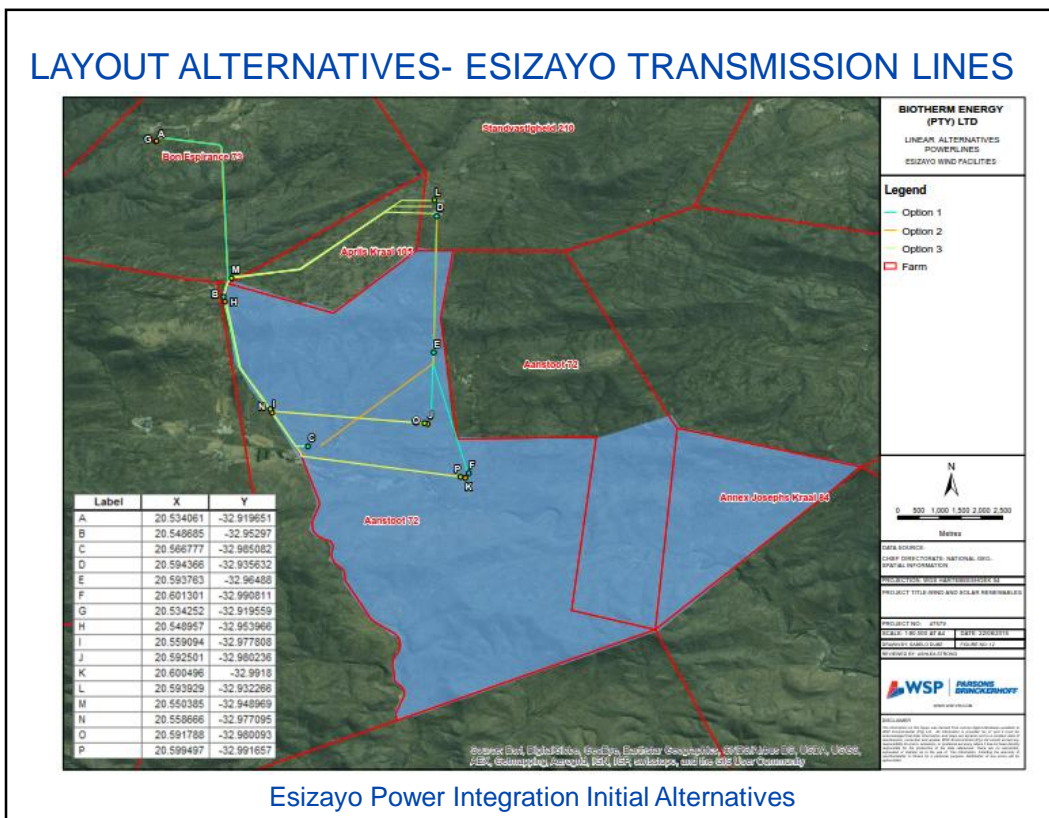
Maralla West Initial Turbine Layout (125 Turbines – 250 MW)



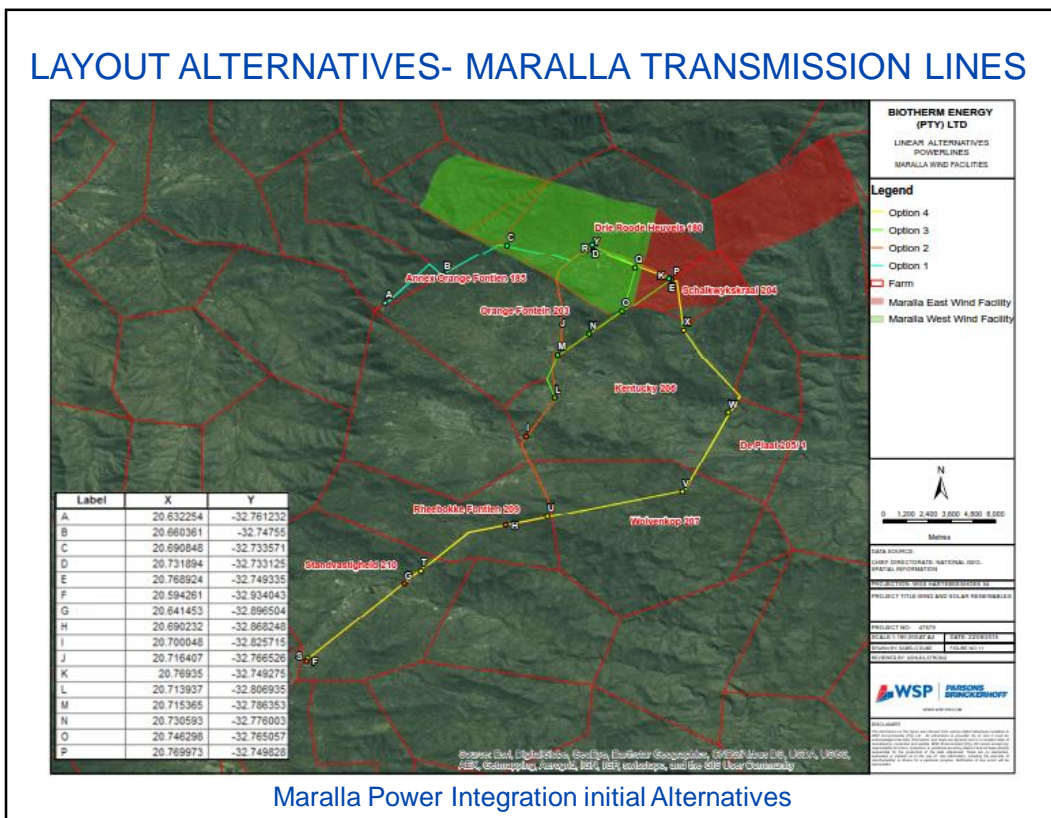
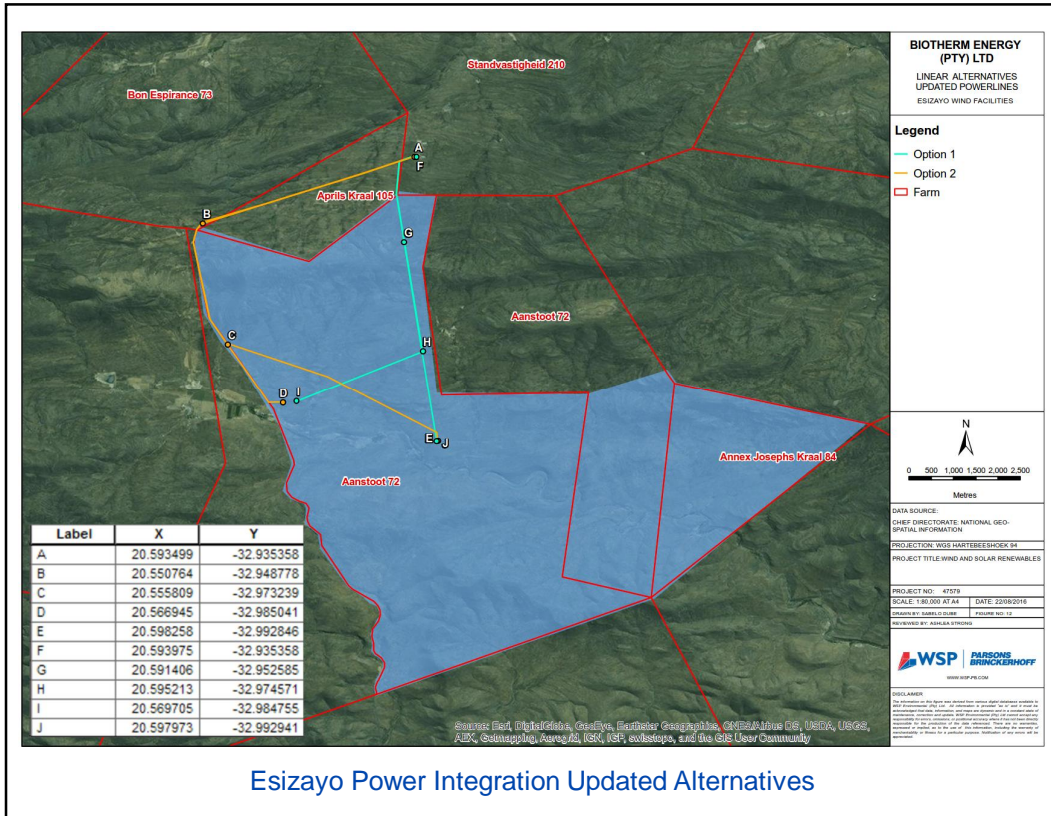
Maralla West Revised Turbine Layout (70 Turbines – 140 MW)



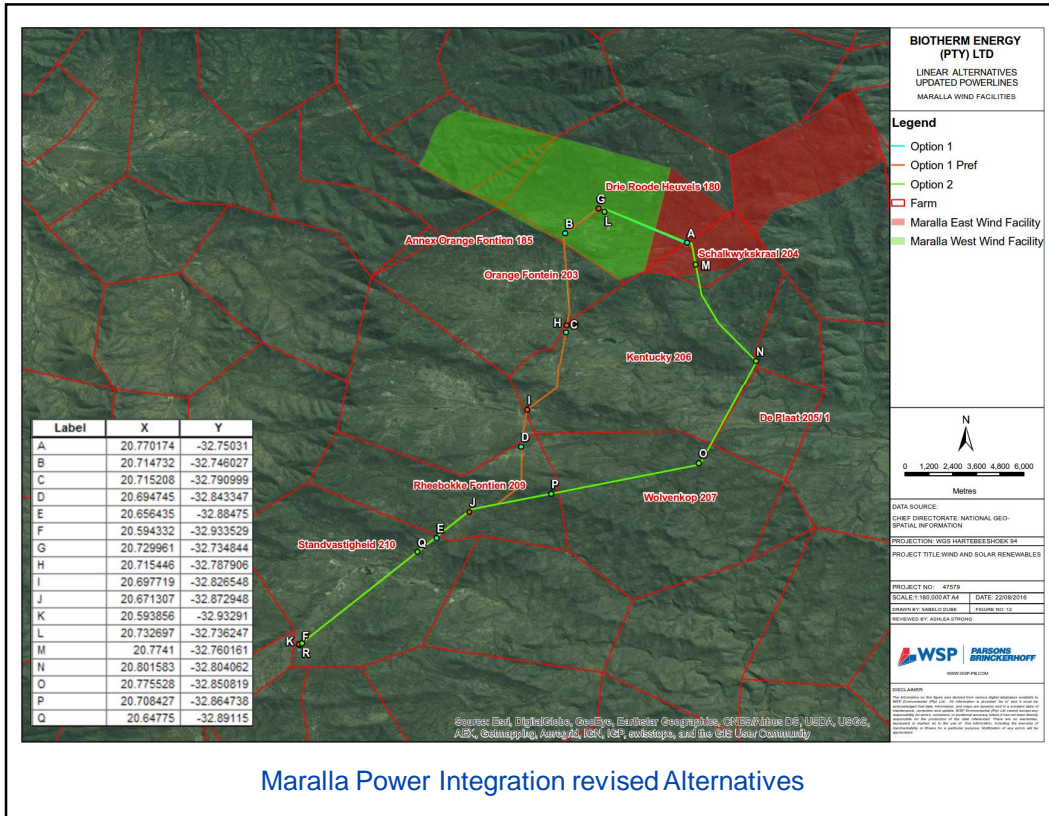
Maralla West Revised Turbine Layout (56 Turbines)



Esizayo Power Integration Initial Alternatives







# IMPACT ASSESSMENT

## SPECIALIST STUDIES

| SPECIALIST FIELD                   | COMPANY NAME                | TEAM MEMBERS                            | ASSESSMENT IN EIA PHASE |
|------------------------------------|-----------------------------|---|-------------------------|
| Soil, Land Capability and Wetlands | WSP Environmental (Pty) Ltd | Bruce Wickham, Gerg Matthews            | Yes                     |
| Biodiversity                       | Simon Todd Consulting       | Simon Todd                              | Yes                     |
| Avifauna                           | Chris van Rooyen Consulting | Chris van Rooyen, Albert Froneman       | Yes                     |
| Heritage                           | ACO Associates              | Tim Hart, Lita Webley, David Halkett    | Yes                     |
| Palaeontology                      | Natura Viva                 | John Almond                             | Yes                     |
| Visual                             | -                           | Belinda Gebhardt                        | Yes                     |
| Social                             | WSP Environmental (Pty) Ltd | Danielle Sanderson, Hillary Konigkramer | Yes                     |
| Traffic                            | WSP Group Africa (Pty) Ltd  | Christo Bredenhann                      | Yes                     |
| Noise                              | WSP Environmental (Pty) Ltd | Kirsten Collett                         | Yes                     |



## SOILS AND LAND CAPACITY

| Ref. | Impact Description   | Phase            | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|--|------------------|----------|-------------------------------|---|
| SLC1 | Loss of land (including wetlands) previously used for grazing.   | Construction     | Negative | Medium                        | Low                                     |
| SLC2 | Vegetation clearance, soil disturbance and high traffic movement on site, resulting in a higher potential for soil erosion       |                  | Negative | Low                           | Low                                     |
| SLC3 | Potential spillage of hazardous substances   |                  | Negative | Low                           | Low                                     |
| SLC4 | Loss of land (including wetlands) previously used for grazing.   | Operation        | Negative | Medium                        | Low                                     |
| SLC5 | Vegetation clearance, soil disturbance, and increased traffic movement on site, resulting in a higher potential for soil erosion |                  | Negative | Low                           | Low                                     |
| SLC6 | Potential land contamination from hazardous substances..   |                  | Negative | Low                           | Low                                     |
| SLC7 | Increased potential of soil erosion due to soil disturbance and a high traffic movement on site.                                 | De-commissioning | Negative | Low                           | Low                                     |
| SLC8 | Potential spillage of hazardous substances   |                  | Negative | Low                           | Low                                     |

The impacts are the same for all three WEFs

## NATURAL VEGETATION AND ANIMAL LIFE

| Ref. | Impact Description  | Phase            | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|---|------------------|----------|-------------------------------|---|
| BIO1 | Impacts on vegetation and protected plant species   | Construction     | Negative | Medium                        | Medium                                  |
| BIO2 | Faunal impacts due to construction activities   |                  | Negative | Medium                        | Medium                                  |
| BIO3 | Increased Soil Erosion risk during construction   |                  | Negative | Medium                        | Low                                     |
| BIO4 | Faunal impacts due to operational activities of the wind farm such as noise, and human presence during maintenance activities | Operation        | Negative | Medium                        | Medium                                  |
| BIO5 | Erosion   |                  | Negative | Medium                        | Low                                     |
| BIO6 | Alien Plant Invasion  |                  | Negative | Low                           | Low                                     |
| BIO7 | Faunal impacts due to decommissioning of the wind farm such as noise, and operation of heavy machinery on-site                | De-commissioning | Negative | Medium                        | Low                                     |
| BIO8 | Erosion   |                  | Negative | Medium                        | Low                                     |
| BIO9 | Alien Plant Invasion  |                  | Negative | Medium                        | Low                                     |

The impacts are the same for all three WEFs

## AVIFAUNA

| Ref. | Impact Description  | Phase            | Status   | Esizayo WEF                   |   | Maralla East and West WEF     |   |
|------|---|------------------|----------|-------------------------------|---|-------------------------------|---|
|      |   |                  |          | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
| AV1  | Displacement of priority species due to disturbance during construction operations    | Construction     | Negative | Medium                        | Medium                                  | Medium                        | Medium                                  |
| AV2  | Priority species mortality due to collision with the turbines                         | Operation        | Negative | High                          | Medium                                  | High                          | Medium                                  |
| AV3  | Displacement of priority species due to habitat transformation                        |                  | Negative | Medium                        | Low                                     | Medium                        | Low                                     |
| AV4  | Priority species mortality due to collision with the on-site powerlines               |                  | Negative | Medium                        | Medium                                  | High                          | Medium                                  |
| AV5  | Priority species mortality due to electrocution on the on-site powerlines             |                  | Negative | Medium                        | Low                                     | Medium                        | Low                                     |
| AV6  | Displacement of priority species due to disturbance during decommissioning operations | De-commissioning | Negative | Low                           | Low                                     | Low                           | Low                                     |

## BATS

| Ref. | Impact Description   | Phase            | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|--|------------------|----------|-------------------------------|---|
| BAT1 | Destruction of bat roosts due to earthworks and blasting -   | Construction     | Negative | Medium                        | Low                                     |
| BAT2 | Loss of foraging habitat.  |                  | Negative | Medium                        | Low                                     |
| BAT3 | Bat mortalities due to direct blade impact or barotrauma during foraging activities (not migration). | Operation        | Negative | High                          | Medium                                  |
| BAT4 | Artificial Lighting  |                  | Negative | Medium                        | Low                                     |
| BAT5 | Loss of foraging habitat.  | De-commissioning | Negative | Medium                        | Low                                     |

The impacts are the same for all three WEFs



## SURFACE WATER

| Ref. | Impact Description   | Phase            | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|--|------------------|----------|-------------------------------|---|
| SW1  | Alterations of flow regimes of watercourses,   | Construction     | Negative | Medium                        | Low                                     |
| SW2  | Increased potential of soil erosion due to vegetation clearance, soil disturbance and a high traffic movement on site. Subsequent potential sedimentation of watercourses. |                  | Negative | Low                           | Low                                     |
| SW3  | Potential land contamination from hazardous substances..   |                  | Negative | Low                           | Low                                     |
| SW4  | Temporary potential degradation of wetland habitat due to the proposed positioning of road access  |                  | Negative | Medium                        | Low                                     |
| SW5  | Alterations of flow regimes of watercourses  |                  | Negative | Medium                        | Low                                     |
| SW6  | Increased potential of soil erosion due to vegetation clearance, and more run-off from harden surfaces (i.e. roads). Subsequent potential sedimentation of watercourses.   | Operation        | Negative | Low                           | Low                                     |
| SW7  | Potential land contamination from hazardous substances.  |                  | Negative | Low                           | Low                                     |
| SW8  | Alterations of flow regimes of watercourses, in close proximity to the site, or that is proposed to be traversed by roads.   | De-commissioning | Negative | Medium                        | Low                                     |
| SW9  | Increased potential of soil erosion due to soil disturbance and a high traffic movement on site.   |                  | Negative | Low                           | Low                                     |
| SW10 | Potential land contamination from hazardous substances.  |                  | Negative | Low                           | Low                                     |

The impacts are the same for all three WEFs

## HERITAGE

| Ref.                | Impact Description   | Phase        | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|---------------------|--|--------------|----------|-------------------------------|---|
| <b>ESIZAYO</b>      |  |              |          |                               |   |
| H1                  | Impacts to buried archaeological material and graves   | Construction | Negative | Low                           | Low                                     |
| H2                  | Substation 1 will result in the destruction of South African War Military Outpost                      |              | Negative | Medium                        | Low                                     |
| H3                  | Access road ,au damage or destroy the Nuwerus Cemetery   |              | Negative | Medium                        | Low                                     |
| <b>MARALLA EAST</b> |  |              |          |                               |   |
| H1                  | Impacts to ruined settlement and graveyard on public access road through De KOM                        | Construction | Negative | Medium                        | Low                                     |
| H2                  | Impacts to late Stone Age sites along river bed  |              | Negative | Medium                        | Low                                     |
| H3                  | Impacts to the Farm House of Wolvenhoek  |              | Negative | Medium                        | Low                                     |
| <b>MARALLA WEST</b> |  |              |          |                               |   |
| H1                  | Impacts to a graveyard on the Komsberg River, Sckalkwykskraal  | Construction | Negative | Medium                        | Low                                     |
| H2                  | Impacts to a 19 <sup>th</sup> century stone stockpost and kraal on the Komsberg River, Sckalkwukskraal |              | Negative | Medium                        | Low                                     |
| H3                  | Impacts to graves and a rock art site on Venters River, Welgemoed                                      |              | Negative | Medium                        | Low                                     |



## PALAEONTOLOGY

| Ref. | Impact Description   | Phase        | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|--|--------------|----------|-------------------------------|---|
| P1   | Disturbance, damage or destruction of fossils (direct, negative impacts) preserved at or beneath the ground surface within the development footprint during the construction phase, mainly due to surface clearance or excavation activities | Construction | Negative | Low                           | Low                                     |

The impacts are the same for all three WEFs



## VISUAL

| Ref. | Impact Description   | Phase        | Status           | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|--|--------------|------------------|-------------------------------|---|
| V1   | Visual impact during construction due to dust, vehicles and equipment    | Construction | Negative         | Medium                        | Low                                     |
| V2   | Visual impact during construction due to vegetation clearing             |              | Negative         | Medium                        | Low                                     |
| V3   | Visual impact during construction on landforms                           |              | Negative         | Medium                        | Low                                     |
| V4   | Intrusion on sense of place and rural landscape                          | Operation    | Negative         | Medium                        | Medium                                  |
| V5   | Visual impact of wind turbines   |              | Negative         | High                          | Medium                                  |
| V6   | Visual impact of substation and other buildings and infrastructure       |              | Negative         | Medium                        | Medium                                  |
| V7   | Visual impact of shadow flicker  |              | Negative         | Low                           | Low                                     |
| V8   | Visual impact of lighting from facility                                  |              | Negative         | Medium                        | Medium                                  |
| V9   | Visual impact of additional roads and road widening                      |              | Negative         | Low                           | Low                                     |
| V10  | Visual impact during decommissioning due to dust, vehicles and equipment |              | De-commissioning | Negative                      | Medium                                  |

The impacts are the same for all three WEFs



## TRAFFIC AND TRANSPORTATION

| Ref. | Impact Description  | Phase        | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|---|--------------|----------|-------------------------------|---|
| T1   | Noise, dust and exhaust pollution due to vehicle trips on-site                | Construction | Negative | Low                           | Low                                     |
| T2   | Noise, dust and exhaust pollution due to additional trips on the access roads |              | Negative | Medium                        | Medium                                  |
| T3   | Noise and exhaust pollution due to additional vehicle trips on the R354       |              | Negative | Low                           | Low                                     |

The impacts are the same for all three WEFs

## NOISE

| Ref. | Impact Description                       | Phase            | Status   | Esizayo and Maralla West WEF  |   | Maralla East WEF              |   |
|------|--|------------------|----------|-------------------------------|---|-------------------------------|---|
|      |  |                  |          | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
| N1   | Acoustic impact on residential receptors | Construction     | Negative | Medium                        | Low                                     | Medium                        | Low                                     |
| N2   | Acoustic impact on residential receptors | Operation        | Negative | Medium                        | Low                                     | Low                           | Low                                     |
| N3   | Acoustic impact on residential receptors | De-commissioning | Negative | Medium                        | Low                                     | Medium                        | Low                                     |

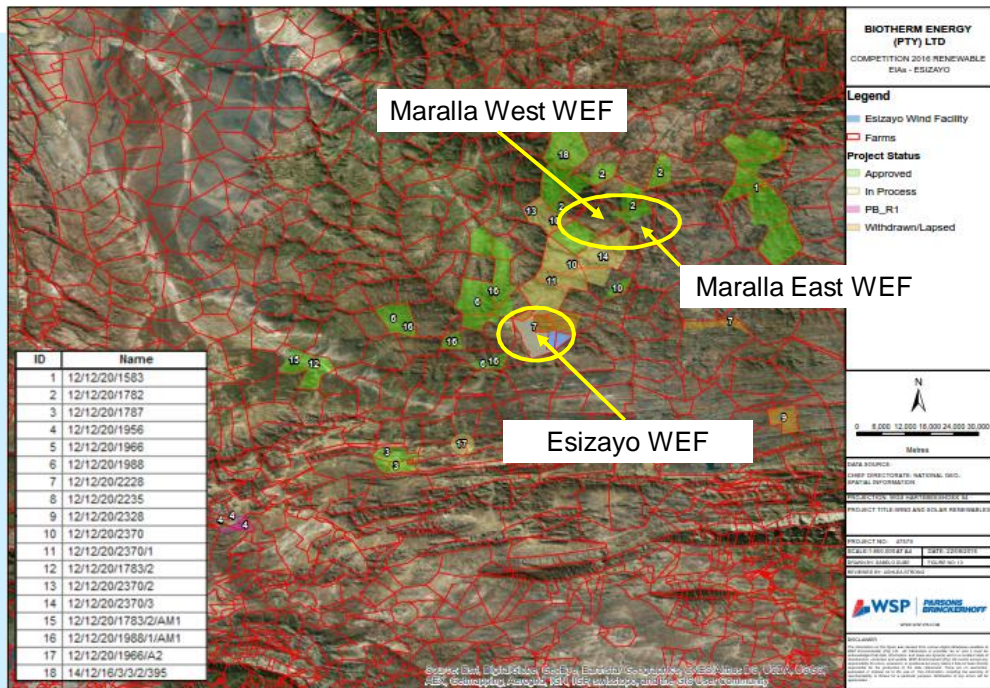


## SOCIAL ENVIRONMENT

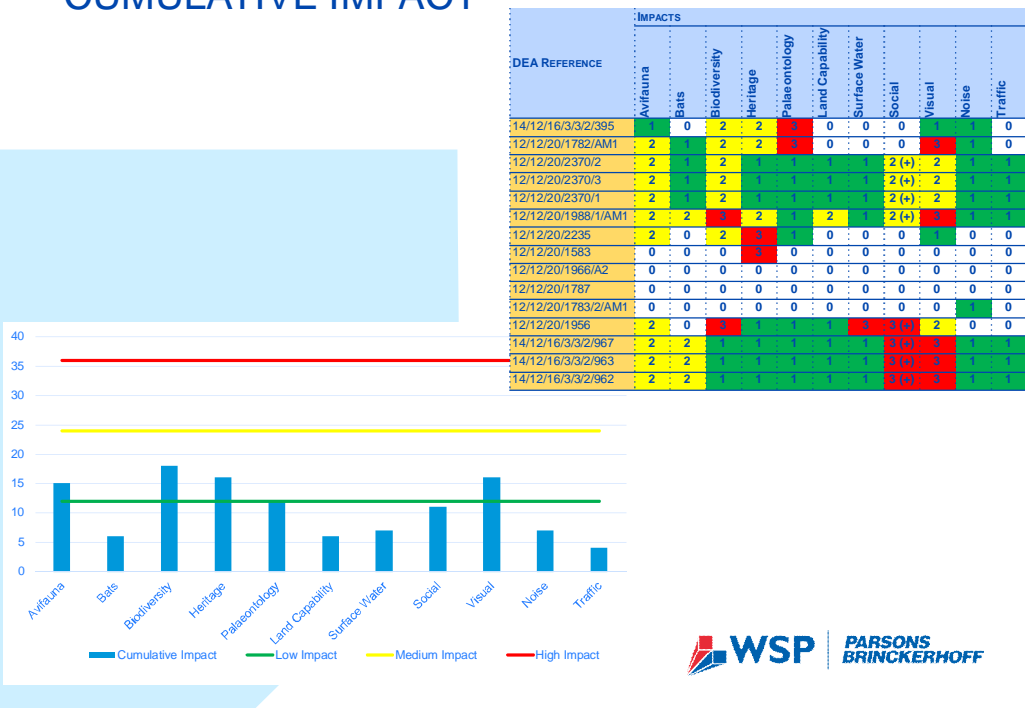
| Ref. | Impact Description  | Phase            | Status   | Significance (Pre-Mitigation) | Residual Significance (Post-Mitigation) |
|------|---|------------------|----------|-------------------------------|---|
| SE1  | Increase in Employment Opportunities                        | Construction     | Positive | Medium                        | High                                    |
| SE2  | Increased Economic Development Opportunities                |                  | Positive | Medium                        | High                                    |
| SE3  | Disruption due to influx of job seekers                     |                  | Negative | Medium                        | Medium                                  |
| SE4  | Increase in communicable diseases and reduced public health |                  | Negative | Medium                        | Medium                                  |
| SE5  | Change in sense of place                                    |                  | Negative | Medium                        | Low                                     |
| SE6  | Nuisance from noise, dust and traffic disturbances          |                  | Negative | Medium                        | Low                                     |
| SE7  | Increased risk to neighbouring land users                   |                  | Negative | Low                           | Low                                     |
| SE8  | Increased risk of veld fires                                |                  | Negative | Medium                        | Low                                     |
| SE9  | Increased employment opportunities                          | Operation        | Positive | Medium                        | High                                    |
| SE10 | Increased economic development opportunities                |                  | Positive | Medium                        | Medium                                  |
| SE11 | Change in sense of place                                    |                  | Negative | Medium                        | Medium                                  |
| SE12 | Loss of permanent employment                                | De-commissioning | Negative | Medium                        | Low                                     |
| SE13 | Gain of short term employment                               |                  | Positive | Low                           | Medium                                  |
| SE14 | Nuisance from dust, noise and traffic                       |                  | Negative | Low                           | Low                                     |
| SE15 | Increased risk to neighbouring land users                   |                  | Negative | Low                           | Low                                     |
| SE16 | Increased risk of veld fires                                |                  | Negative | Medium                        | Low                                     |

The impacts are the same for all three WEFs

# CUMULATIVE IMPACT



# CUMULATIVE IMPACT

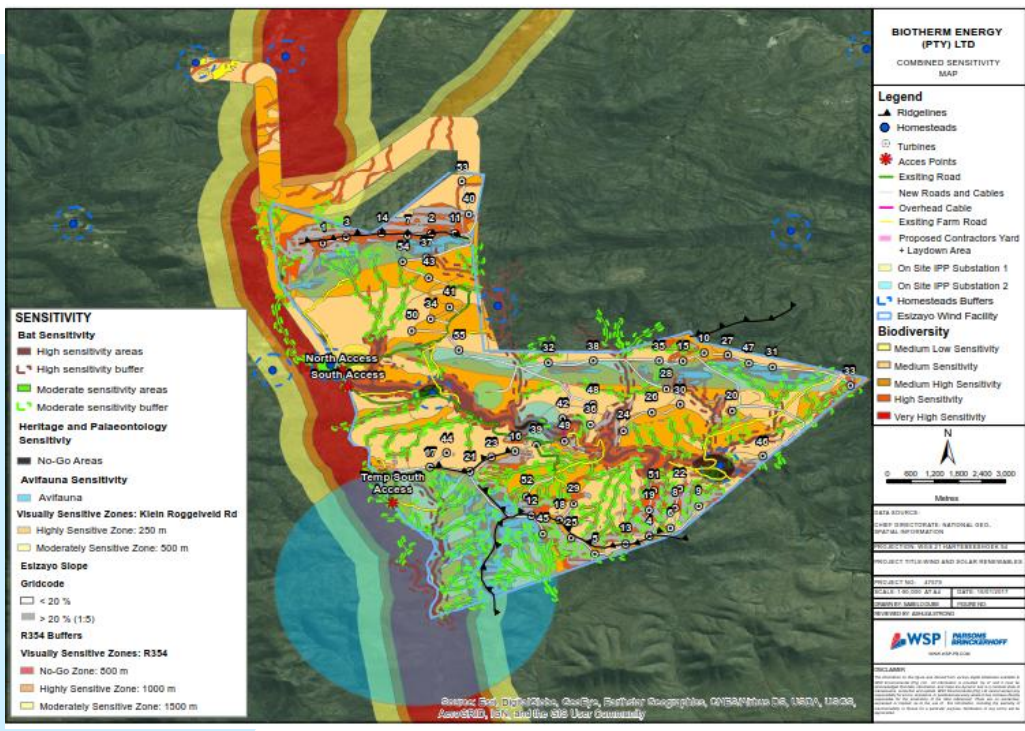


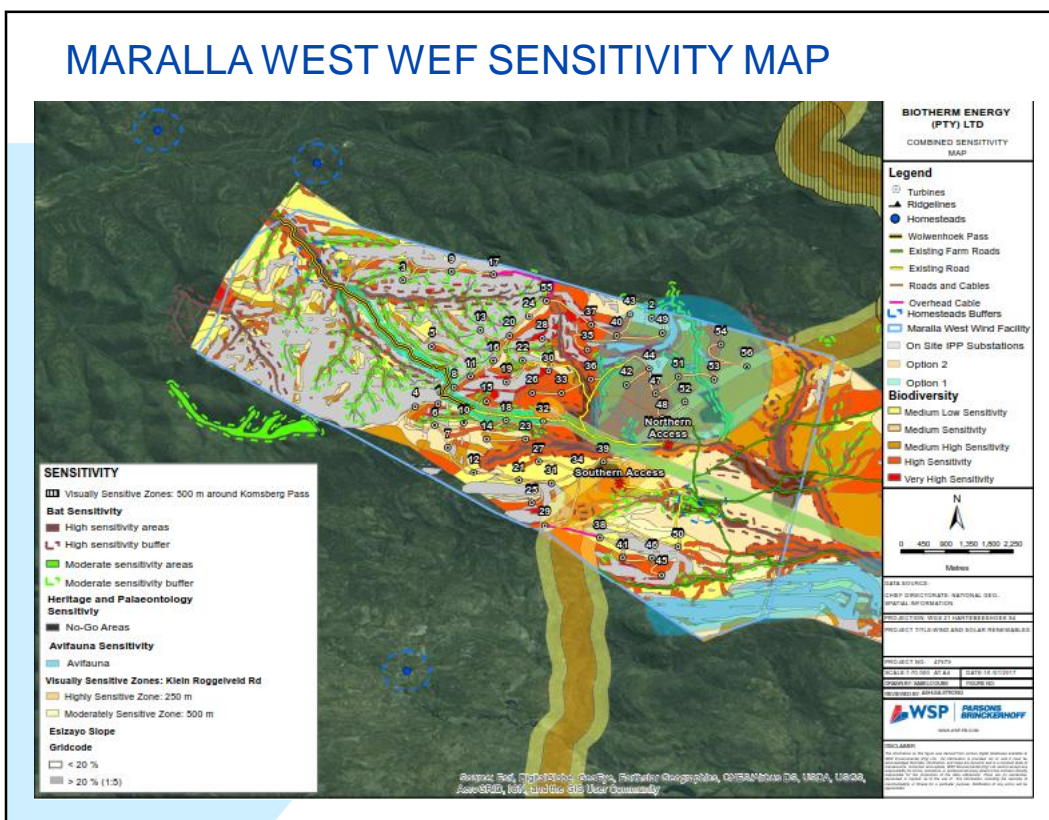
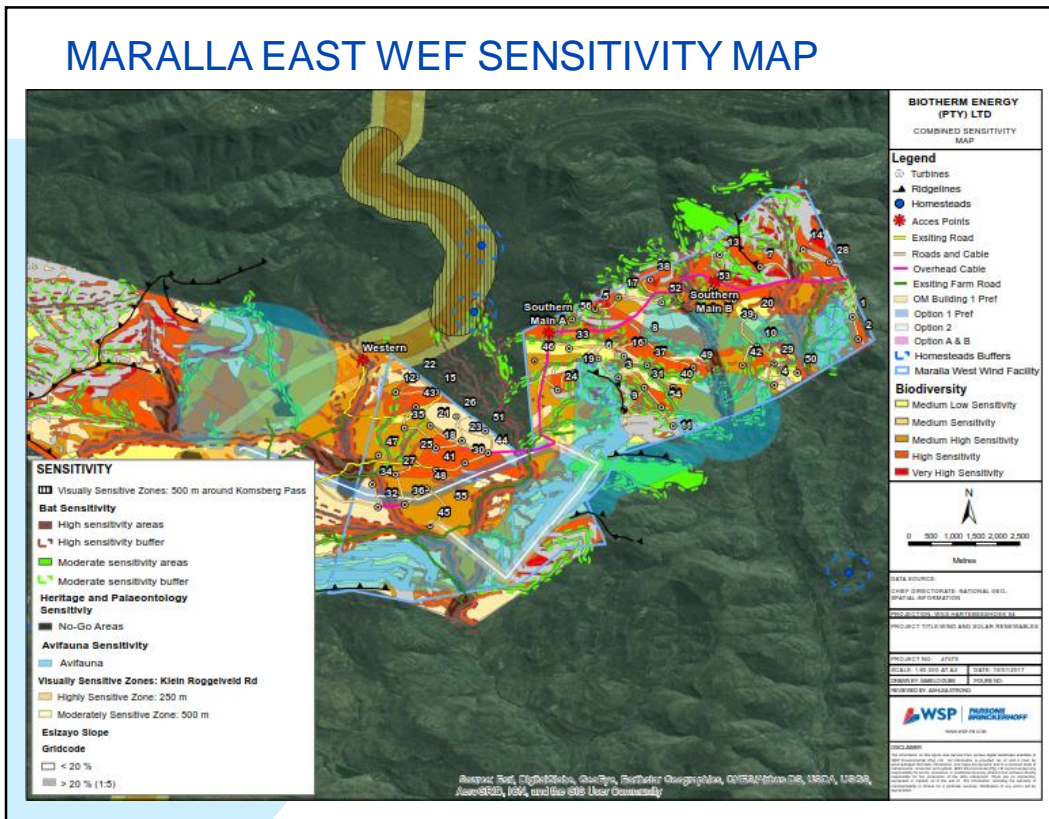


# SENSITIVITY MAPPING




## ESIZAYO WEF SENSITIVITY MAP





# PUBLIC PARTICIPATION PROCESS

 **WSP** | **PARSONS BRINCKERHOFF**

## PUBLIC PARTICIPATION PROCESS

|                 |  |   |
|-----------------|--|---|
| Pre-Application | Pre-application consultation with DEA                  | P |
|                 | Newspaper Adverts                                      | P |
| Scoping         | Submit Application                                     | P |
|                 | Notification of IAPS                                   | P |
|                 | Newspaper Adverts                                      | P |
|                 | Site Notices   | P |
|                 | Draft Scoping Report – 30 days                         | P |
|                 | Submit Final Scoping Report                            | P |
| EIA             | EIR – 30 Days  | P |
|                 | Submit EIR for Decision                                |   |
| Appeal          | Notification of decision                               |   |
|                 | Appeal Process   |   |
|                 | Must be submitted within 20 days from date of decision |   |

## PUBLIC PARTICIPATION PROCESS TO DATE



### à The Public Participation process has consisted of:

- § Pre-application Consultation with DEA
- § Newspaper adverts in:
  - The Courier (9 September 2016)
  - Die Noordwester (8 September 2016)
- § Email notification of I&APs
- § Site Notices placed at the entrance to the site
- § DSR for 30 day public review
- § Public Meetings
  - 29 September 2016 – Laingsburg
  - 30 September 2016 - Sutherland
- § DEIR for 30 day public review
- § Public Meetings
  - 23 February 2017 – Matjiesfontein
  - 24 February 2017 - Sutherland



## WAY FORWARD



## WAY FORWARD

| Activity   | Anticipated Timeframe          |
|--|--------------------------------|
| Stakeholder Meetings                               | 21 – 24 February 2017          |
| Close of public review period                      | 2 March 2017                   |
| Finalisation of DEIR and submission to authorities | 3 - 28 March 2017              |
| Authority review                                   | 31 March – 17 July 2017        |
| Receipt of Environmental Authorisation (EA)        | Mid – end July 2017            |
| Appeal Period                                      | 20 days from receipt of the EA |



**WSP Environmental (Pty) Ltd**  
**Contact Person: Ashlea Strong**  
**Tel: 011 361 1380**  
**Email: [Ashea.Strong@wspgroup.co.za](mailto:Ashea.Strong@wspgroup.co.za)**



## Appendix C: List of Skills

| Construction  | Operation   |
|---|---|
| <ul style="list-style-type: none"> <li>• Environmental coordinator</li> <li>• Project manager</li> <li>• Director</li> <li>• Technical buyer</li> <li>• Engineering manager</li> <li>• Engineering director</li> <li>• Site manager</li> <li>• Engineer</li> <li>• Logistic project manager</li> <li>• Substation and OHL manager</li> <li>• Telecontroller/telecommunications</li> <li>• Management committee control</li> <li>• General labourer</li> <li>• HR/IR officer</li> <li>• HSE manager</li> <li>• Wind turbine technicians and assistants</li> <li>• Climber</li> <li>• Foremen/section foremen</li> <li>• Carpenter</li> <li>• Site supervisor</li> <li>• Truck driver</li> <li>• Surveyor</li> <li>• Operator</li> <li>• Managing director</li> <li>• Site administrator</li> <li>• Supply chain manager</li> <li>• Buyer senior</li> <li>• Commercial manger</li> <li>• Construction manager</li> <li>• Contract manger</li> <li>• Sub-station site manager</li> <li>• Site admin clerk</li> <li>• H&amp;S representative</li> <li>• Bricklayer</li> <li>• Ecologists</li> </ul> | <ul style="list-style-type: none"> <li>• Ecologists</li> <li>• General workers</li> <li>• Buyers</li> <li>• Security guards</li> <li>• Operations managers</li> <li>• Bird specialists</li> <li>• Bat specialists</li> <li>• Data sorters</li> <li>• Office assistants</li> <li>• Office Administrators</li> <li>• Technician/Junior technicians</li> <li>• Assistant Engineer</li> <li>• HR Director</li> <li>• Operations and Maintenance Manager</li> <li>• Buyer Seniors</li> <li>• ED Director</li> <li>• Commercial manager</li> <li>• Engineers</li> </ul> |