

# AGRICULTURAL POTENTIAL ASSESSMENT:

ALBANY WIND ENERGY FACILITY & GRID INFRASTRUCTURE  
NEAR MAKHANDA, EASTERN CAPE PROVINCE

## ADDITIONAL INFORMATION FOLLOWING THE PUBLIC PARTICIPATION PROCESS

**CES Environmental and Social advisory Services**

36 Pickering Street, Newton Park,  
Port Elizabeth, 6001, Eastern Cape Province

**Compiled by**

Dr Andries Gouws

Index

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# CONTENTS

- 1 Background .....2
- 2 Impacts.....3
- 3 Conclusion .....4

# 1 BACKGROUND

Index was appointed by CES to conduct an agricultural study for Proposed Albany Wind Energy Facility & Grid Infrastructure that is located near Makhanda (Grahamstown), Eastern Cape Province.

The objective of the study was to assess the agricultural potential and give an indication of the loss of high potential land and of farm production if the project is to be implemented.

An agricultural assessment report was submitted to CES in February 2020 as part of the Scoping Report. A number of alterations on the layout followed the Public Participation Process – only 43 turbines will be retained, of these 7 will move from their original position.

Impacts of the construction are mostly low and of a temporary nature, the only lasting impact will be the footprints of the towers and the other infrastructure, however, only the footprints will be impacted on by the revision. For that reason, and because the impacts are insignificant, it was decided that a supplementary report be done rather than redoing the total report.

The site is located northeast of Grahamstown in the Eastern Cape Province.

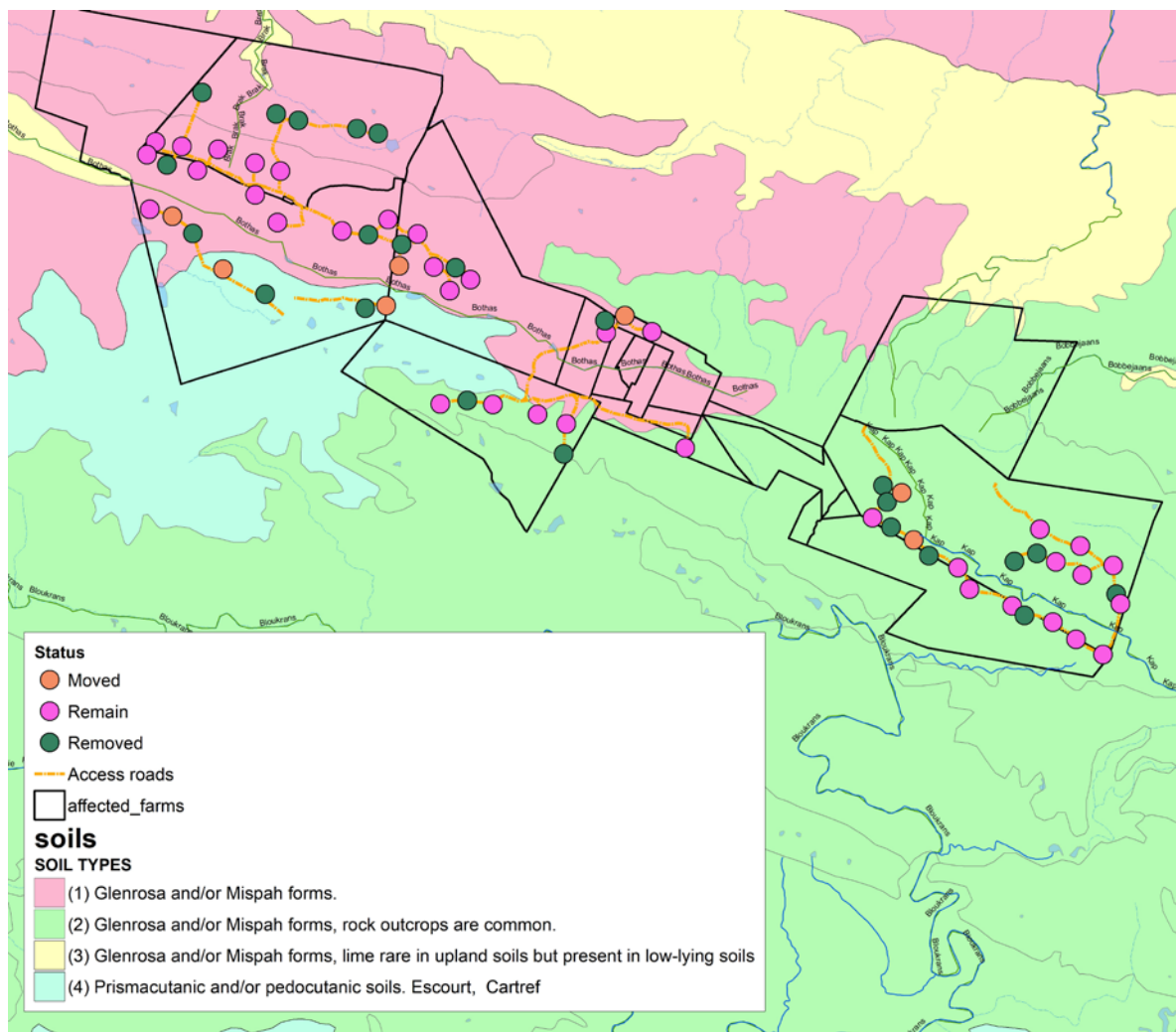


Figure 1. Locality of the proposed Albany energy generation area, indicating the revised status

## 2 IMPACTS

The only impact that was originally identified was a loss of grazing land. With the reduction of the number of turbines, the size of the land affected is also smaller. The final figures are indicated below.

The final land use table is provided in Table 1.

**Table 1. Land use table**

Component	Temporary loss	Permanent loss
<b>Energy facility</b>		
Laydown area (crane hardstand)	16.8	16.8
Temporary laydown area, batching plant and construction compound	9.0	-
Turbine foundation	2.4	2.4
Temporary Infrastructure (site camp and a laydown area)	0.2	-
Switchgear and/or Transformer	0.2	0.2
Internal Access Roads	50.4	28.8
Upgraded existing internal access roads	15.4	8.8
<b>Sub total</b>	<b>94.3</b>	<b>56.9</b>
<b>GRID INFRASTRUCTURE</b>		
IPP Switching Station (battery storage and site office)	2.3	2.3
Two (2) Collector Switching Stations	2	2
Overhead Line (monopole placement every 250m)	0.3168	0.0088
Collector Switching Station Collector Corridor (CSSC)	0.0144	0.0004
<b>Sub total</b>	<b>4.63</b>	<b>4.31</b>
<b>Corridor</b>		
Overhead Line servitude area (length and width of line servitude)	34.1	
Overhead Line - maintenance tracks		4.4
CSSC - overhead line servitude area		1.6
CSSC - maintenance tracks.		0.2
<b>Sub total</b>	<b>34.1</b>	<b>6.2</b>
<b>TOTAL</b>	<b>133.0</b>	<b>67.4</b>

The impact on the grazing land and livestock numbers are indicated in Table 2.

- The estimate is that only 60,7 hectares will be lost as measured against the original 77,6 hectares.

- The number of large animals (LSU) that will be lost due to the construction is now estimated as 13,0, which is 3,8 LSU less than the previous number of turbines.

*Table 2. Grazing lost due to the construction of the turbines*

Component	Ha/LSU	Hectare lost		LSU lost	
		Temp	Permanent	Temp	Permanent
<b>TOWERS</b>					
20	3.5	13.0	5.9	3.7	1.7
23	6.0	15.5	6.7	2.6	1.1
TOTAL		28.5	12.6	6.3	2.8
<b>ROADS</b>					
New	4.7	50.4	28.8	10.7	6.1
Upgraded	4.7	15.4	8.8	3.3	1.9
TOTAL		65.8	37.6	14.0	8.0
<b>Grid infrastructure</b>	4.7	4.6	4.3	1.0	0.9
<b>Corridor</b>	4.7	34.1	6.2	7.3	1.3
<b>TOTAL</b>		<b>133.0</b>	<b>60.7</b>	<b>28.5</b>	<b>13.0</b>

**IMPACTS**

Approximately 13 large livestock units (LSU) will now be lost. The potential gross income from that which is lost is R54 815 per year. The temporary loss of income during construction is estimated at R103 068.

The summary of impacts will remain largely the same as in the original report, but with the reduced turbine numbers, the area and potential loss of income will be slightly less.

### 3 CONCLUSION

All the assumptions and conclusions and recommendations in the main report will remain the same following the reduction in turbine numbers.