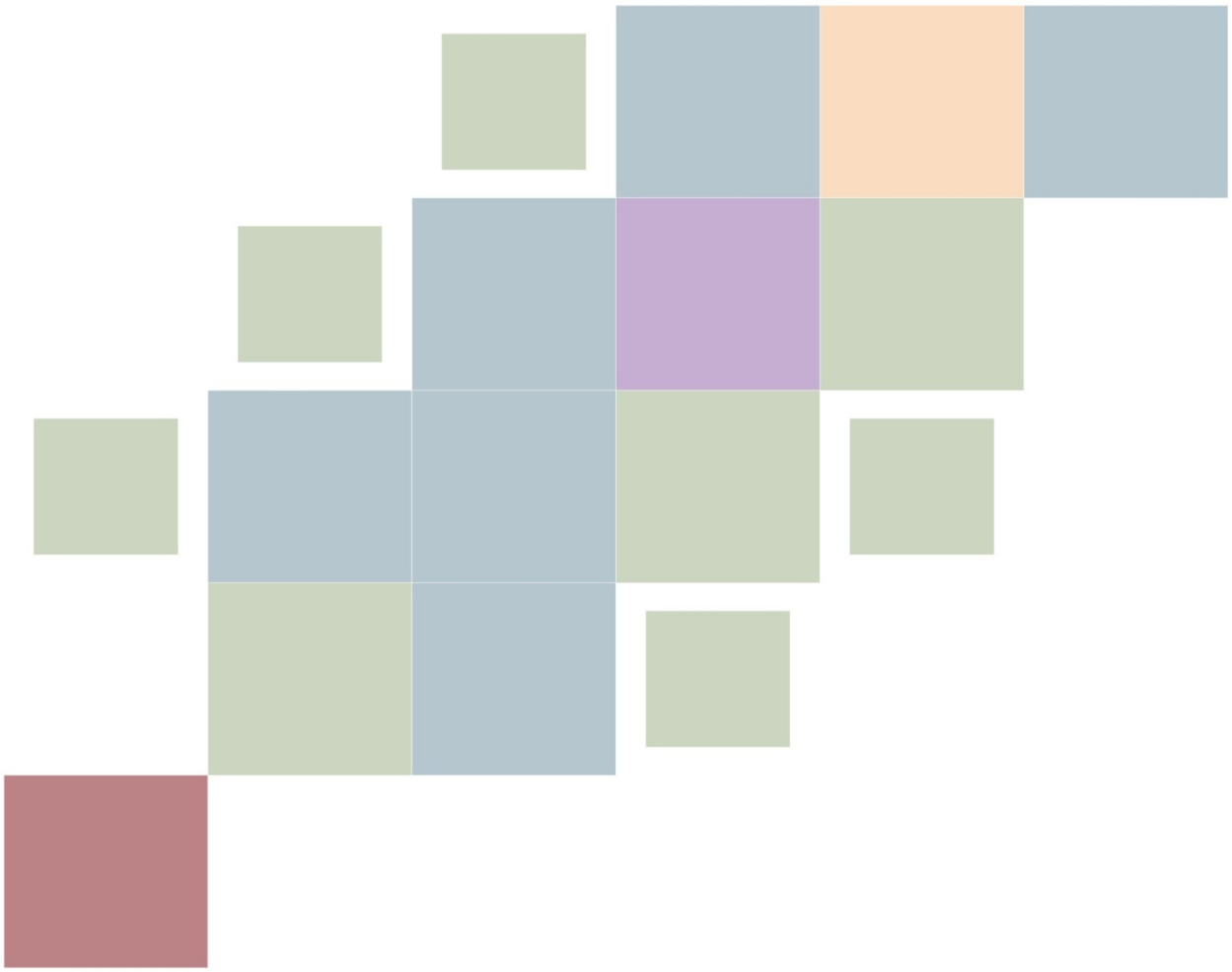
STRATEGIC ENVIRONMENTAL ASSESSMENT FOR WIND AND SOLAR PHOTOVOLTAIC ENERGY IN SOUTH AFRICA

Appendix B

Consultation Process



contents

Appendix B 1 – Introduction

B 1- 1. Background and Approach

The continued success of renewable energy development in South Africa to a great extent depends on the ability for different stakeholder groups to take a collective and holistic view to reach agreement on the way forward. This Strategic Environmental Assessment (SEA) process served as a platform that enabled engagement between all levels of stakeholders. At the highest level the SEA process was guided in matters of legislation and policy by a Project Steering Committee (PSC) consisting of relevant authorities. In terms of technical and procedural aspects the SEA process was informed by an Expert Reference Group (ERG) consisting of key relevant stakeholder organisations.

In addition to the formal PSC and ERG structures, dedicated provincial and local government consultation was undertaken to further inform and guide the process. Key stakeholder groups that were able to provide additional information and insight were furthermore consulted through focus group meetings and the broader public was provided the opportunity to engage with the process through an online platform, public meetings, conference proceedings as well as wide media coverage of the process.

The following sections provide a description of the extensive consultation process that formed part of the SEA. All formal and informal submissions and engagements have informed the process and the SEA report constitutes the official response to all submissions received before the time of finalising this section on 01 December 2014. In addition to the report as an official response, brief feedback is provided in this section to key official submissions received.

B 1-2. Brief Overview of Consultation

The following table provides a brief overview of key stakeholder engagements during the SEA process. These interactions are described in more detail in the following sections.

Table 1: Brief overview of stakeholder engagements

PSC and ERG meetings	
Stakeholders	**Date of public meeting**
PSC Meetings	27 March 2013
	19 February 2014
ERG Meetings	27 March 2013
	31 July 2013
	19 February 2014
	11 June 2014

Consultation with provincial government	
Department consulted	**Date of consultation**
Western Cape Department of Environmental Affairs and Development Planning (DEADP)	6 December 2012
	18 November 2013
	12 May 2014
Free State Department of Tourism, Environmental and Economic Affairs (DTEEA)	19 November 2013
Northern Cape Department of Environmental Affairs and Nature Conservation (DENC)	20 November 2012
Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT)	4 December 2013
Department of Economic Development, Environment, Conservation and Tourism (DEDECT)	6 December 2013
Consultation with District and Local Municipalities	
District municipality with their relevant local municipalities consulted	**Date of consultation**
Overberg District Municipality	19 March 2014
Central Karoo District Municipality	20 March 2014
Cacadu District Municipality	25 March 2014
Chris Hani District Municipality	27 March 2014
Lejweleputswa/Frances Baard District Municipality	1 April 2014
Dr Ruth Segomotsi Mompati District Municipality	2 April 2014
ZF Mgcawu District Municipality	4 April 2014
Namakwa District Municipality	7 April 2014
Focus Group Meetings	
Stakeholder group consulted	**Date of consultation**
ESKOM working groups	12 December 2012
	28 February 2013
	29-30 January 2014
Wind Atlas for South Africa (WASA) and South African National Energy Development Institute (SANEDI)	11 December 2012
	17 January 2013
Central Energy Fund (CEF) solar corridor	11 October 2013
Square Kilometre Array (SKA)	31 May 2013
South African Photovoltaic Industry Association (SAPVIA)	20 February 2013
	9 October 2013
	24 January 2013
South African Wind Energy Association (SAWEA)	28 February 2013
	30 August 2013
	24 January 2013
Birds and Bats Specialists (Birds & Wind Energy Specialist Group: BAWESG)	8 March 2013
	30 September 2013
Birdlife SA, South African Bat Assessment Advisory	29 August 2013

Panel (SABAAP) and Endangered Wildlife Trust (EWT)	20 May 2014
	2 July 2014
South African National Biodiversity Institute (SANBI)	05 June 2013
BRICS Academic Forum	7 March 2014
National Treasury and National Department of Energy Independent Power Producers Office	10 July 2013
National Department of Energy (DoE), Presidential Infrastructure Coordinating Commission (PICC), Industrial Development Corporation (IDC) and ESKOM	25 June 2014
Public Meetings	
Public meeting	**Date of public meeting**
Bredasdorp	18 March 2014
Laingsburg	19 March 2014
Grahamstown	24 March 2014
Queenstown	26 March 2014
Kimberley	31 March 2014
Vryburg	2 April 2014
Upington	3 April 2014
Springbok	7 April 2014
Conferences and Seminars	
Events	**Date**
International Association for Impact Assessment South Africa Conference 2013	16 – 18 September 2013
3rd Annual Solar Indaba Conference	2 – 5 September 2013
WINDaba Conference 2013	25 – 27 September 2013
World Bank: Energy Sector Management Assistance Program (ESMAP) Knowledge Exchange Forum	29 November 2013
Provincial and Metro Biodiversity Planning Work Session	7 – 9 October 2013
SAPVIA 14th Networking Event	22 May 2014
Wind Energy Update: Wind Energy Summit South Africa 2014	9 – 10 April 2014
Renewables and Mining Summit	23 – 24 June 2014
WINDaba Conference 2014	3 – 5 November 2014

Appendix B 2 - Consultation with Relevant Authorities

B 2- 1. Project Steering Committee

Since the inception of the SEA process, the project team received guidance and advice from the PSC at a strategic and governmental level. The PSC has made significant contributions to the SEA process. All members of the PSC also served on the ERG and were provided the opportunity to review the process and technical data used for the analysis. The Department of Environmental Affairs (DEA) was the lead agent and chair at all PSC meetings, which were hosted at the CSIR Knowledge Commons venue on the Pretoria CSIR campus.

The main objective of the PSC was to identify means of giving effect, in the most effective and expeditious manner, to the implementation of the SEA's findings while ensuring compliance with all plans, policies or legislation which are relevant to the SEA. The PSC has contributed to the identification of conditions for streamlining the environmental authorisation application process for renewable energy developments within the Renewable Energy Development Zones (REDZs). The following authorities were represented on the PSC:

- Department of Economic Development, Environment, Conservation and Tourism in the North West Province (DEDECT);
- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT);
- Eskom;
- Free State Department of Tourism, Environmental and Economic Affairs (DTEEA);
- National Department of Agriculture, Forestry and Fisheries (DAFF);
- National Department of Defence (DoD);
- National Department of Energy (DoE);
- National Department of Environmental Affairs (DEA);
- National Department of Mineral Resources (DMR);
- National Department of Public Enterprises (DPE);
- National Department of Rural Development and Land Reform (DRDLR);
- National Department of Trade and Industry (DTI);
- National Department of Water and Sanitation (DWS);
- National Department of Energy Independent Power Producer Office (DoE IPP);
- National Treasury;
- Northern Cape Department of Environment and Nature Conservation (DENC);
- Presidential Infrastructure Coordinating Commission (PICC);
- South African Air Force (SAAF);
- South African Local Government Association (SALGA);
- South African National Biodiversity Institute (SANBI); and
- Western Cape Department of Environmental Affairs and Development Planning (DEADP).

B 2- 2. Consultation on the Study Areas

In addition to provincial government departments being consulted through the PSC and ERG project structures, the SEA team also consulted these departments on a regular basis through electronic communication and focus group meetings at their provincial offices.

The first round of dedicated provincial authority consultation was undertaken in May 2013 and consisted of email and telephonic communication with representatives of the Western Cape, Eastern Cape, North West, Free State and Northern Cape provincial departments. The purpose of the consultation was to inform the positive and negative criteria used to identify Phase 1 study areas as described in Part 2: Section 1 of the SEA report. The SEA team received inputs from provincial government representatives on the local municipalities with high social needs and high development potentials for use during the positive mapping exercise. As described in Part 2: Section 1 of the SEA report, the seats of the local municipalities with the highest social needs and development potentials were used as a pull factor for wind and solar photovoltaic (PV) development. The officials who represented the different provincial departments during this consultation process are listed in Box 1 below.

Box 1: Contact persons

- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism:
  - Alistair McMaster - Senior Manager: Sustainable Energy; and
  - Justin Visagie - Senior Manager: Economic Planning and Research.
- Free State Department of Tourism, Environmental and Economic Affairs:
  - Laetitia Van Rensburg - Acting Deputy Director General: Environmental Affairs.
- North West Department of Economic Development, Environment, Conservation and Tourism:
  - Thami Matshego - Chief Director: Environmental Services; and
  - Kgomotso Gaobepe - Acting Director – Policy and Planning Directorate.
- Northern Cape Department of Environmental Affairs and Nature Conservation:
  - Raylene Nel - Director: Environmental Policy, Planning and Coordination; and
  - Enrico Oosthuysen - Environmental Information Management.
- Western Cape Department of Environmental Affairs and Development Planning:
  - Helen Davies - Director: Climate Change and Biodiversity; and
  - Paul Hardcastle - Director: Planning and Policy Coordination.

Taking into consideration provincial authorities' inputs, Phase 1 ended with the identification of 8 study areas for solar PV energy development and 15 study areas for wind energy development. Following further consultation that included a prioritisation exercise with the industry, 8 focus areas were identified. A second round of provincial authority consultation was then undertaken, consisting of five meetings during November and December 2013 with representatives of the Western Cape, Eastern Cape, North West, Free State and Northern Cape provincial government and held at the relevant departments' regional offices. This provincial consultation process aimed at discussing the prioritised focus areas and the alignment with provincial and regional

planning in terms of renewable energy and electricity generation. The key outcomes of the meetings with the provincial departments are listed in Box 2.

Box 2: Key outcomes of the meetings with provincial government departments

Meeting on 18 November 2013 at the DEADP offices in Cape Town:
- optimal utilisation of investment: study areas should be considered for both wind and solar PV development;
- all Critical Biodiversity Areas (CBAs) should be considered during Phase 2 of the SEA; and
- further inputs to be given in synergy with DEADP Western Cape wind energy SEA.

Meeting on 19 November 2013 at the DTEEA offices in Bloemfontein:
- prioritising the Kimberley study area in Free State for the solar PV SEA makes sense based on social and economic aspects;
- DTEEA to provide CSIR with an updated dataset for protected areas in the province; and
- the province supports a negotiated approach between the developers and the land owners (especially for owners of private nature reserves).

Meeting on 20 November 2013 at the DENC offices in Kimberley:
- desert areas where neither food production nor other agricultural activities are possible should be targeted for renewable energy development;
- the Orange River area has already been identified for other land uses; and
- the Kuruman area should be targeted due to decreasing mining activity in this area.

Meeting on 4 December 2013 with the DEDEAT at the Premier Hotel EL ICC in Port Elizabeth:
- Cape vulture tracking study in the Stormberg area commissioned by DEDEAT;
- the Central Eastern Cape study area (study area 13) should be extended into the Ciskei and the lower part of the Alexandria/Grahamstown/ Cookhouse study area (study area 12) is sensitive from a tourism and hunting perspective and should be removed; and
- need for training case officers in implementation of SEA findings inside and outside the Renewable Energy Development Zones (REDZs).

Meeting on 6 December 2013 at the DEDECT offices in Vryburg:
- Vryburg area is specifically designated for agricultural activities and game farming;
- Mahikeng area has been specifically earmarked for solar PV development
- CSIR to prepare a report describing the identification of Vryburg as preferred area for renewable energy development for presentation to the Executive Committee (Exco)

B 2- 3. Consultation on the Focus Areas

At the end of Phase 2 of the SEA process, eight focus areas were identified based on the activities and consultation of Phases 1 and 2. The SEA team undertook a roadshow in March and April 2014 traveling to all five provinces included in the extent of the SEA and meeting with local stakeholders as well as local government. The purpose of the meetings with the district and local municipalities was to inform regional and local government on the SEA process, consult on additional information available at local and regional levels, verify the issues and benefits, and finally discuss the inclusion of the SEA findings into the Spatial Development Frameworks (SDFs) and Integrated Development Plans (IDPs).

The first meeting was held on 19 March 2014 at the Department of Agriculture's Offices in Bredasdorp and included representatives from the Overstrand, Hessequa, and Cape Agulhas

Local Municipalities. The Overberg District Municipality, Cape Nature, WC DEADP, and the WC Department of Agriculture were also present at the meeting. The local government welcomed the fact that the SEA will enable a proper integration of cumulative impacts into the environmental sensitivity assessment and the results of the SEA should be incorporated into municipal SDFs. Representatives emphasized the importance of the development protocol requirements which should be incorporated into the SDFs and accepted in the land use planning application. It was agreed among the representatives that the local authorities should be involved in the implementation of the SEA findings and that training will be necessary to promote a better understanding of the REDZs and related requirements.

On 20 March 2014, a meeting was held at the Tourism Auditorium Hall in Laingsburg with representatives from the Laingsburg and Witzenberg Local Municipalities being present. Representatives from the Central Karoo District Municipality and the WC DEADP were also in attendance. The representatives agreed that the SDFs and IDPs are the guiding strategic documents for the municipal areas and contain all potential projects for the municipal area and it is therefore important to include the SEA findings into the IDPs and SDFs. Further discussion points included the necessity to upgrade local roads for the REDZs and who would carry this responsibility within the province, and the need for a rehabilitation fund to be available at the decommissioning stage of a wind or solar PV facility. Land and property tax were also discussed during the meeting, and the municipalities of the Western Cape are of the opinion that developers should pay appropriate rates and taxes to local government.

The SEA team then travelled to the Eastern Cape province to meet with the DEDEAT, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Department of Local Government and Traditional Affairs, the Eastern Cape Department of Transport, the Eastern Cape Parks and Tourism Agency, as well as the Amathole Cacadu District Municipality at the Department of Economic Development and Environmental Affairs in Grahamstown. The likelihood of importing components for RE development through the Nqgura Port and then transporting it to project sites in the Eastern, Northern and Western Cape provinces and the concern with associated traffic impacts of abnormal loads was discussed. The local governments emphasized the need for local investigations of the potential impacts, socially and economically, on the general public during the construction of wind and solar PV projects in the REDZs. The example of the pass on the N10 between Coega and Cookhouse, which needed to be closed when 60 m long abnormal truck loads need to use the roads for the construction of wind farms in the area, was mentioned during the meeting. The possibility of straightening the pass versus the cost of closing down the roads was discussed. Other potential future uses of the road in this area include the shale gas exploration which would result the N10 becoming an even more congested route.

On 27 March 2014, a meeting was held at the Department of Economic Development and Environmental Affairs in Queenstown with representatives of the DEDEAT, the Chris Hani District Municipality, the Department of Local Government and Traditional Affairs, the South African Local Government Association (SALGA), the Department of Rural Development and Agrarian Reform, as well as the Emalahleni and Malekwai Local Municipalities. The local governments emphasized once more the need for the SEA findings to be integrated into the local IDPs and SDFs. SALGA offered to facilitate the presentation of the project to local municipalities so that municipalities

can add their comments. Further discussion focused on the new terms and concepts which have been added in new legislation, especially the social and spatial justice. The dynamics in terms of spatial injustice from the past must be understood especially with the history of the Eastern Cape province. The local government representatives indicated that the specialist studies should be equally weighted (i.e. the socio-economic study is as important as the birds and bats specialist studies). There is a need to unlock the former homelands and although renewable energy may not be the perfect vehicle to do so, it is an opportunity for developing energy infrastructure that will enable support for economic development.

The next destination for the SEA team was Kimberley, to meet with representatives of the Northern Cape and Free State local government. Attendees of the meeting at the DENC offices in Kimberley included the DENC, the IDC, the Sol Plaatje Local Municipality. The Lejweleputswa, Xhariep, Pixley Ka Seme and ZF Mcgawu District Municipalities were also represented at the meeting. It was mentioned by DEA local agents that DEA is currently engaging with local municipalities and collecting information through the IDPs and SDFs in order to ensure that there is uniformity with respect to implementation of bylaws and regulations for land uses. The development protocols will be circulated and the minimum requirements of the various authorities compiled so that proactive advice can be provided to developers. The aim is to work towards an integrated authorisation process rather than a cascading one. The Free State and Northern Cape local government representatives emphasised the need for social upliftment and better service delivery to poorer communities.

Further traveling to the North West province (NW), the SEA team met with the DEDECT, the NW Local Government & Traditional Council, the NW Department of Finance, the NW Development Corporation, the Office of the Premier Planning Commission, the NW Sport & Culture Department, the NW Department of Agriculture and Rural Development, as well as the Mamusa, Kagispuwo Molopo, Naledi, Bhwainu, and Mahikeng Local Municipalities at the Naledi Local Municipality offices in Vryburg. The Ngaka Modim Molema District Municipality was also represented at the meeting. The attendees agreed that it is essential to have an alignment in the three tiers of government in terms of requirements and development protocols for land use applications and renewable energy developments in the REDZs. Municipalities were interested in the opportunity for developers connecting into a municipal substation and selling electricity to the municipality directly. It was then discussed that the integration of land uses that is mutually beneficial such as grazing and solar PV development should be promoted.

The SEA team then travelled to the Northern Cape and held a meeting on 4 April 2014 at the Tol Speelman Hall in Upington. Representatives of the DENC, the National Council of Provinces, the ZF Mgcawu District Municipality, the !Kheis Local Municipality, the South African Local Government Association (SALGA), the DEA Local Government Support, the Department of Water Affairs, the Department of Co-operative Governance, and the Human Settlements and Traditional Affairs (CoGHSTA) were present. Local government indicated that there is a serious misalignment between departments and their involvement in the process. The sector plan requirements must be clear at municipal levels, and there should be more emphasis on relaying information back to communities.

The final meeting with local government as part of the roadshow occurred on 7 April 2014 at the Namakwa District Municipality in Springbok. Representatives of the DENC, the Namakwa District Municipality as well as the Richtersveld, Hantam, Nama Khoi, Khai-Ma, and Kamiesberg Local Municipalities were present. Local government indicated their concerns regarding the unrest of local communities in terms of promised benefits from a project development which are not realised when a project is delayed or cancelled. Further, the potential integration of renewable energy and farming activities was discussed. Attendees of the meeting presented an example of land use integration in which a farmer is using his property for both sheep grazing and solar PV energy generation. The sheep are kept within the fenced solar PV development area, which protects them from potential predators. Land use legislation in South Africa calls for land use integration where possible. There is a possibility for integration of renewable energy and agriculture land uses and, as illustrated by this example, is already taking place in South Africa.

Appendix B 3 - Consultation with Key Stakeholders

B 3- 1. Expert Reference Group

Since the inception of the SEA process, the project team received technical guidance from the ERG. The The Department of Environmental Affairs (DEA) was the lead agent and chair at all ERG meetings, which were hosted at the CSIR Knowledge Commons venue on the Pretoria CSIR campus.

The main objective of the ERG was to provide technical review, inputs and insight to the SEA process. The following agencies and associations were represented on the ERG:

- Air Traffic Navigational Services (ATNS);
- Birdlife South Africa (Birdlife SA);
- Cape Nature;
- Civil Aviation Authority (CAA);
- Council for Geoscience (CGS);
- CSIR Defence, Peace, Safety and Security (DPSS);
- Department of Economic Development, Environment, Conservation and Tourism in the North West Province (DEDECT);
- Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (DEDEAT);
- Endangered Wildlife Trust (EWT);
- Eskom;
- Free State Department of Tourism, Environmental and Economic Affairs (DTEEA);
- Industrial Development Corporation (IDC);
- National Department of Agriculture, Forestry and Fisheries (DAFF);
- National Department of Defence (DoD);
- National Department of Energy (DoE);
- National Department of Environmental Affairs (DEA);
- National Department of Mineral Resources (DMR);
- National Department of Public Enterprises (DPE);
- National Department of Rural Development and Land Reform (DRDLR);
- National Department of Trade and Industry (DTI);
- National Department of Water and Sanitation (DWS);
- National DoE Independent Power Producer Office (DoE IPP);
- National Heritage Council South Africa (NHCSA);
- National Treasury;
- Northern Cape Department of Environment and Nature Conservation (DENC);
- Presidential Infrastructure Coordinating Commission (PICC);
- Sentech;
- South African Air Force (SAAF);
- South African Bat Assessment Advisory panel (SABAAP);
- South African Heritage Resources Agency (SAHRA);

- South African Local Government Association (SALGA);
- South African National Biodiversity Institute (SANBI); and
- South African National Energy Development Institute (SANEDI);
- South African National Roads Agency Limited (SANRAL);
- South African Photovoltaic Industry Association (SAPVIA);
- South African Weather Services (SAWS);
- South African Wind Energy Association (SAWEA); and
- Square Kilometre Array (SKA) South Africa as part of the Department of Science and Technology (DST);
- Sustainable Energy Society of Southern Africa (SESSA); and
- Western Cape Department of Environmental Affairs and Development Planning (DEADP).

B 3- 2. Consultation on the Study Areas

The "Phase I Study Areas Metadata and Notes" report containing the details of Phase 1 positive and negative mapping and identification of the 15 study areas was released in August 2013 for comments. An official commenting form was provided to the all stakeholders for submitting comments on the study areas to the SEA team. The report, commenting form and the kmz file of the study areas was uploaded to the website and a notification was sent to all stakeholders registered on the SEA database indicating the availability of those documents for download. In the case that a stakeholder did not have access to internet for download, a paper version of the documents was sent to the person via post. All commenting forms completed and sent back to the SEA team within the commenting period are included in Appendix B5. The study areas were also presented to the ERG as well as at various focus group meetings with key stakeholders.

Based on the comments received on the study areas and further consultation with key stakeholders, the 15 study areas including 5 solar PV study areas and 8 wind study areas were then refined into 8 focus areas.

B 3- 2. Consultation on the Focus Areas

The consultation on the focus areas with key stakeholders was undertaken during Phase 2 of the SEA process. The groups of stakeholders targeted included:

- Conservation organisations (including Birds and Bats Associations, Endangered Wildlife Trust, and the South African National Biodiversity Institute)
- Energy organisations (including ESKOM, South African National Energy Development Institute, and the National Department of Energy Independent Power Producers office)
- Strategic level government representatives (National Department of Energy (DoE), the Presidential Infrastructure Coordinating Commission (PICC), the Industrial Development Corporation (IDC))
- Wind and Solar PV industry (the South African Photovoltaic Industry Association (SAPVIA) and the South African Wind Energy Association (SAWEA))

The feedback from the industry was important to prioritise the areas presenting the highest potential for local and foreign investments as well as to plan pro-actively the construction (or upgrade) of the necessary supporting infrastructure e.g. substations and power lines. Due to the competitive nature of the renewable energy industry sector and the current bidding process managed by the National Department of Energy Independent Power Producers office, an anonymous survey process was conducted with the two south African associations for wind and solar PV energy development: the South African Photovoltaic Industry Association (SAPVIA) and the South African Wind Energy Association (SAWEA). A grid covering the nine South African provinces and composed of 100 km by 100 km grid cells was provided in kmz file format with a feedback form requesting private developers to select:

- 5 grid cells where wind and solar PV development should be prioritised in the next 5 years,
- 5 grid cells where wind and solar PV development should be prioritised in 5 to 10 years' time from now, and
- 5 grid cells where wind and solar PV development should be prioritised in 10 to 15 years' time from now.

The kmz file and the feedback form were distributed by SAPVIA and SAWEA to their members, and the feedback was sent directly to CSIR. Individual results were kept confidential. The combined prioritisation results for solar PV development and for wind development were released to the public. The consultation with the industry occurred in November 2013. The maps below illustrate the results of this consultation process. Further consultation was then undertaken with key stakeholders on the combined prioritisation grid results.

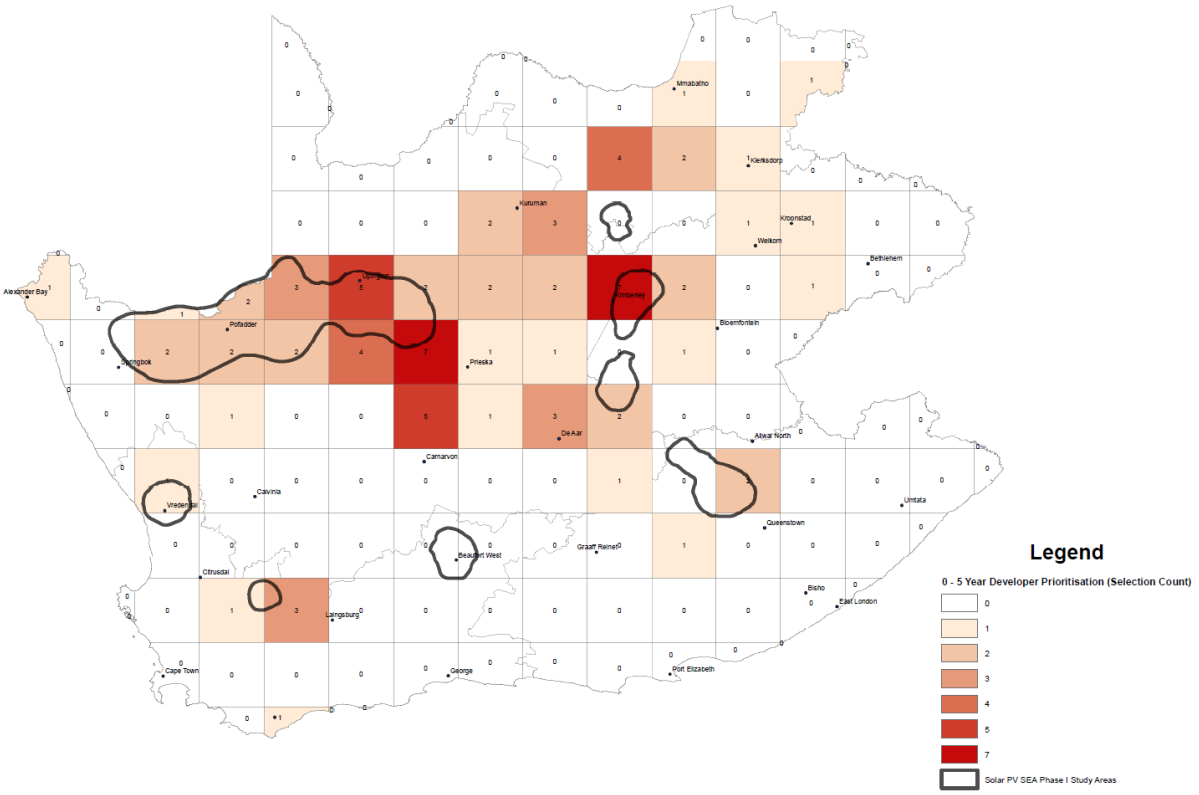


Figure 1: Solar PV Energy Development Prioritisation Exercise Results: 0 to 5 year scenario

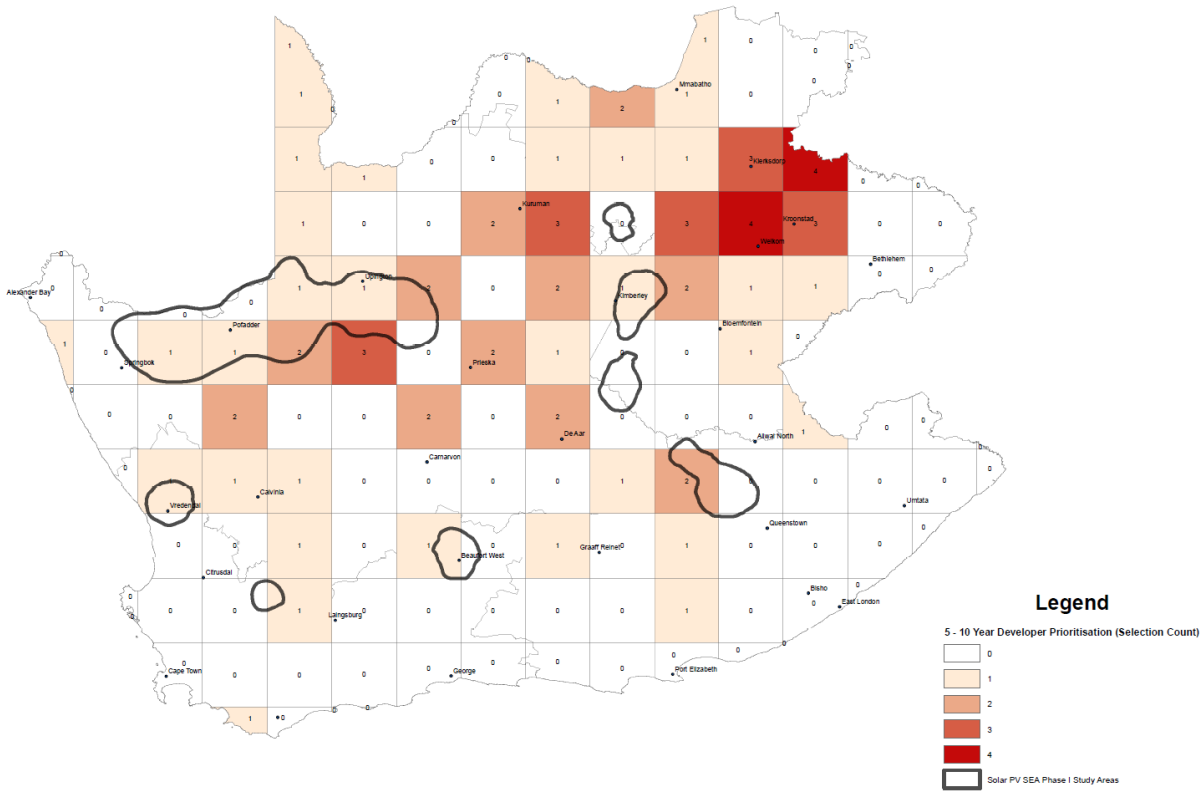


Figure 2: Solar PV Energy Development Prioritisation Exercise Results: 5 to 10 year scenario

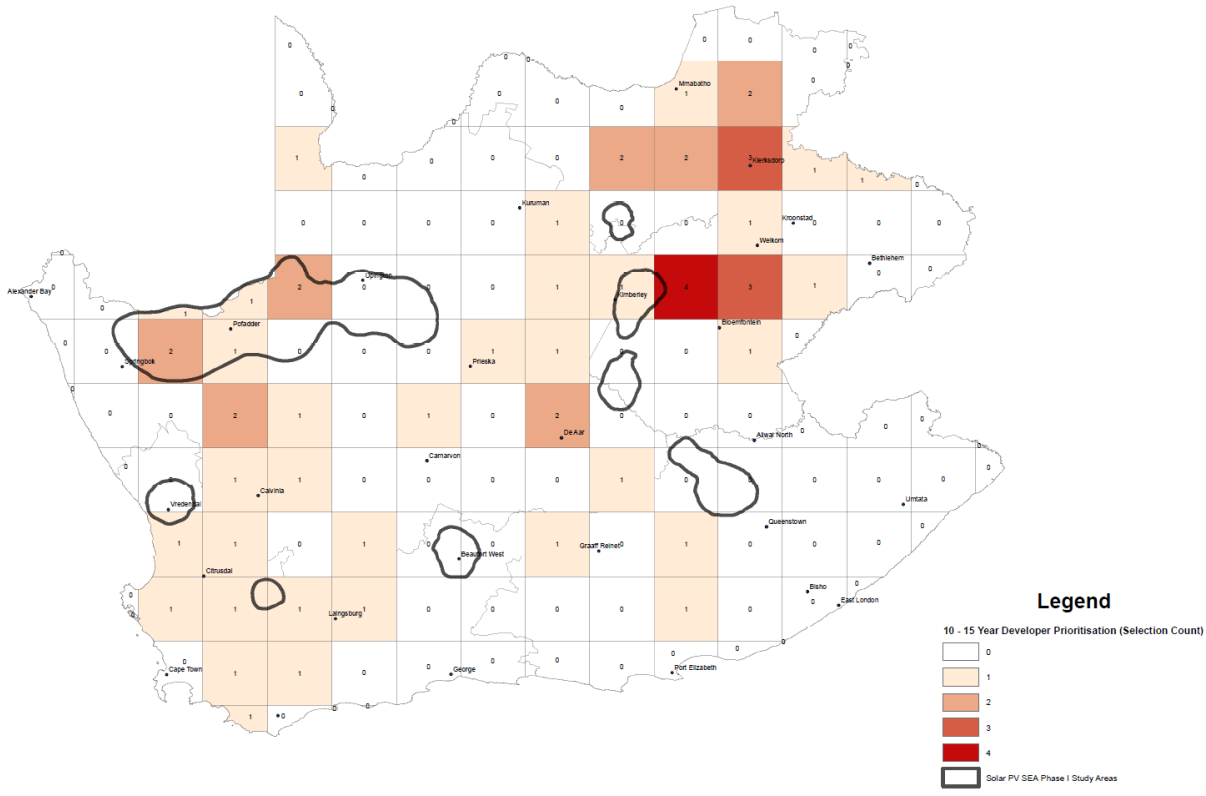


Figure 3: Solar PV Energy Development Prioritisation Exercise Results: 10 to 15 year scenario

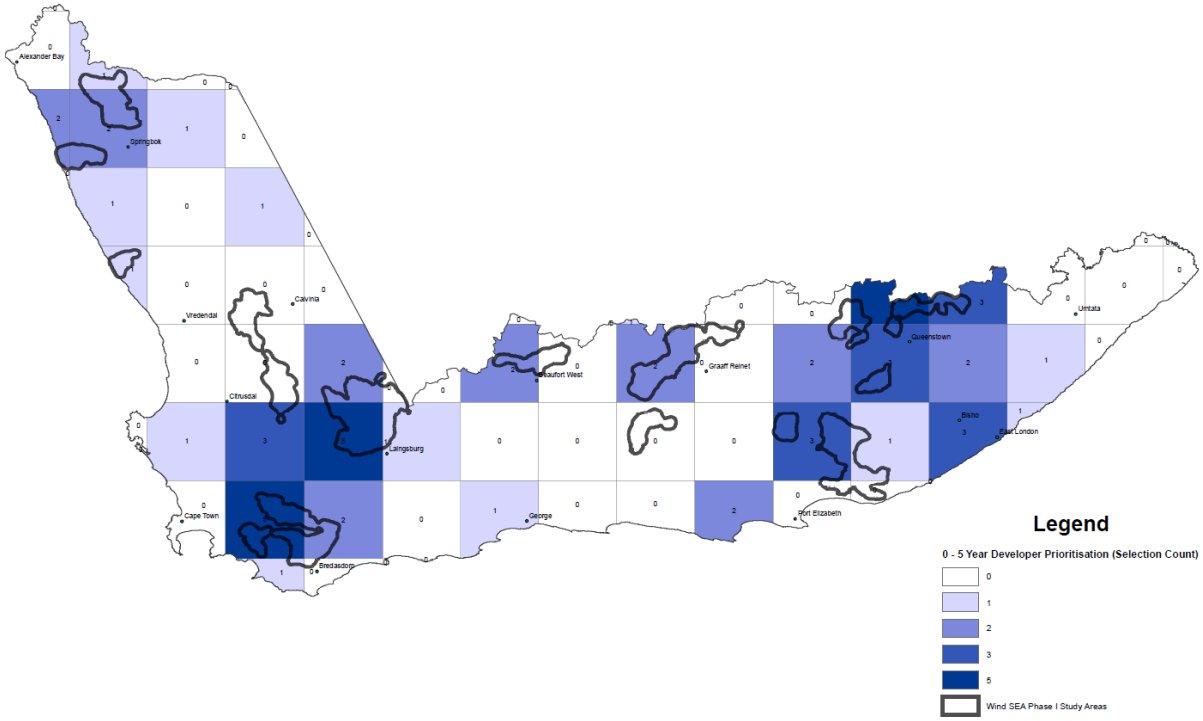


Figure 4: Wind Energy Development Prioritisation Exercise Results: 0 to 5 year scenario

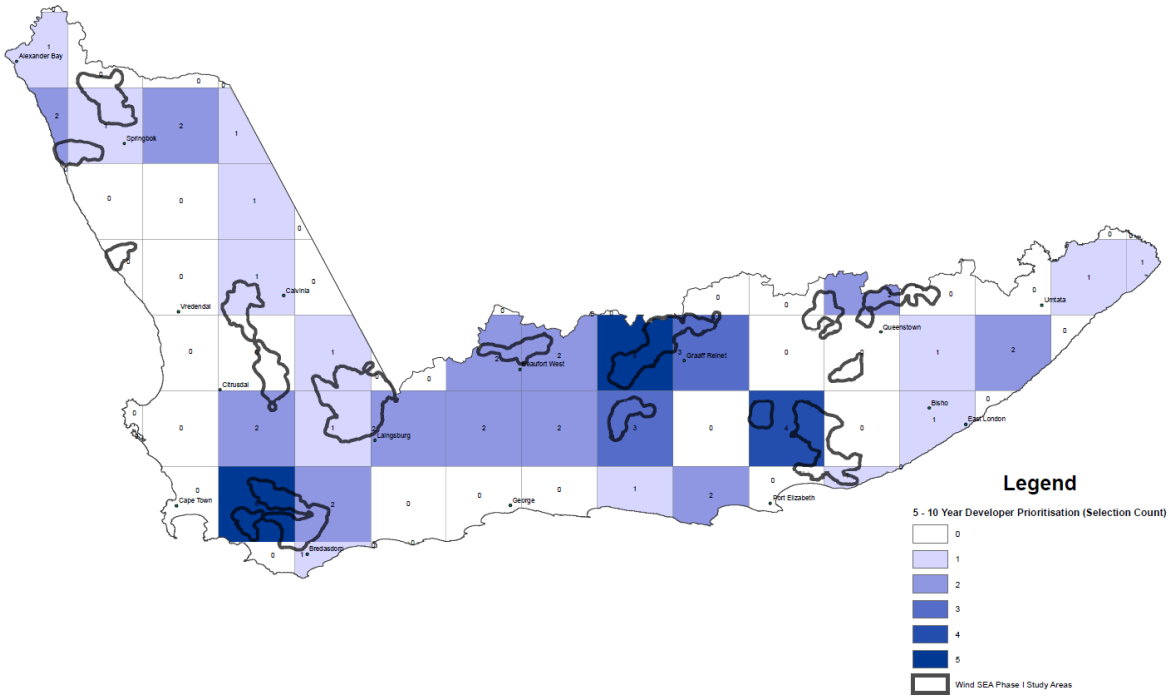


Figure 5: Wind Energy Development Prioritisation Exercise Results: 5 to 10 year scenario

Appendix B 4 - Consultation with the Public

B 4 - 1. Project Initiation

The public consultation process undertaken for this SEA aimed at providing any interested stakeholder the opportunity to engage with the process. For this purpose, various means of communication were used and included public meetings, newspaper notifications, and a project website. Announcements for the initiation of the SEA and invitations to public meetings were published in local, provincial and national newspapers. The announcement of the SEA was published in eleven newspapers across the extent of the SEAs (Western Cape, Eastern Cape, Free State, North West and Northern Cape). The announcement provided a brief background on the launched SEA and invited stakeholders to take part in the process by registering on the project database. The invitation to public meetings undertaken as part of the roadshow in March and April 2014 contained details on the date and location of the meetings in each of the eight focus areas and were published in 5 local or regional newspapers that covered all of the focus areas. All newspaper notices for the initiation of the SEA and invitations to public meetings are provided as Figures 7 to 22. The enlarged version of the notice for the initiation of the SEA is provided below.

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

NOTICE

NOTIFICATION OF INTEREST TO BE PART OF A PROCESS TO DEVELOP A STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE ROLL OUT OF RENEWABLE ENERGY IN THE COUNTRY

The **Department of Environmental Affairs (DEA)** hereby informs all interested stakeholders of its intention to embark on a process to develop a **Strategic Environmental Assessment (SEA)** to identify the most appropriate development corridors/zones for the efficient and effective rollout of wind and solar energy technologies including the associated energy grid in the country. Should you wish to contribute to the **SEA** development process you are requested to register your interest with the **DEA**. You are also requested to make an initial input by identifying issues which should be considered by the **DEA** in the development of the **SEA**. As a registered interested party you will be informed of the availability of any draft documents for your input.

Please register by submitting your name and e-mail address to the below-mentioned address or on the national **SEA** website: **http://csir.co.za/nationalwindsolarsea** (please note that should you not receive a response from the Department within one month from date of your submission, your interest has not been registered and you will need to resubmit your details).

Ms Patricia Baloyi, e-mail: **pbaloyi@environment.gov.za**

For any information you are also welcome to call Ms D. Fischer at the Department of Environmental Affairs at: tel. (012) 310 3857.

www.ursonline.co.za URS 12575

Figure 6: Sunday Independent, 3 February 2013

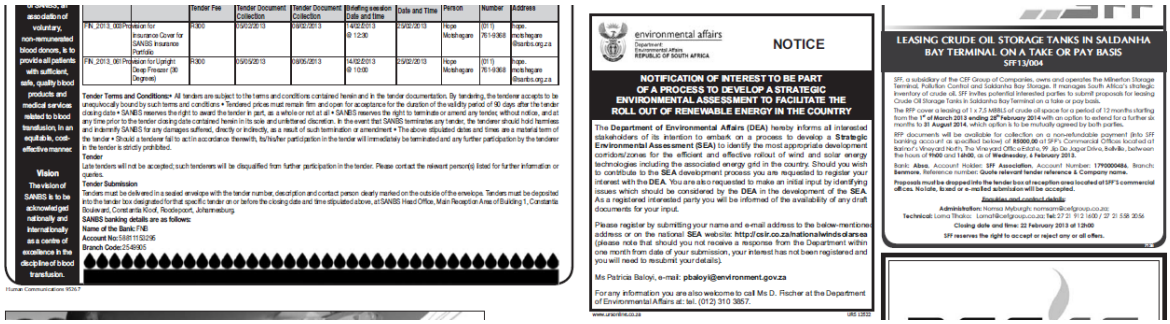
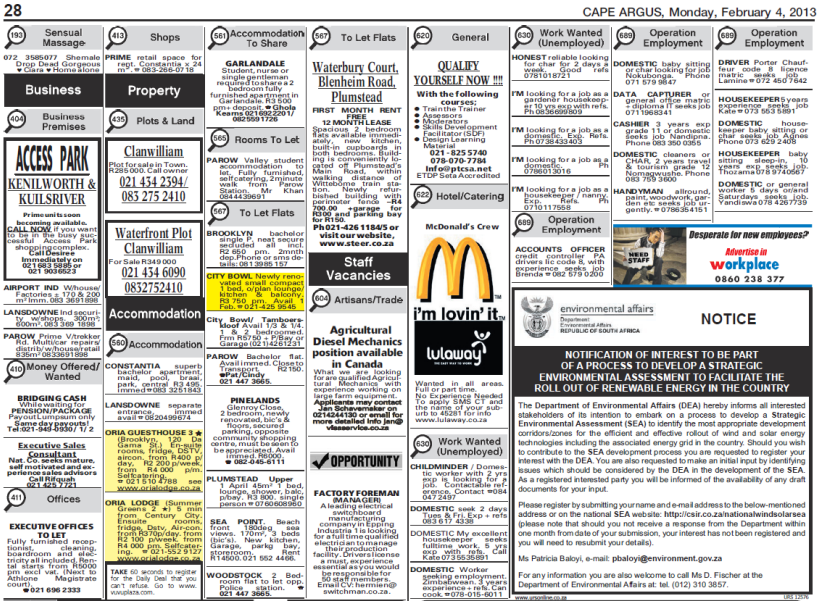


Figure 7: Sunday Times, 3 February 2013

Figure 8: Business Day, 4 February 2013



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CAPE ARGUS, Monday, February 4, 2013

Business

Property

ACCESS PARK
KENILWORTH & KUILSRIVER

Clanwilliam
Plot for sale in Town. R285 000. Call owner
021 434 2394/
083 275 2410

Waterfront Plot Clanwilliam
For Sale R349 000
021 434 6090
0832752410

Accommodation

Waterbury Court, Blenheim Road, Plumstead

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NOTICE

NOTIFICATION OF INTEREST TO BE PART OF A PROCESS TO DEVELOP A STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE ROLL OUT OF RENEWABLE ENERGY IN THE COUNTRY

Figure 9: Cape Argus, 4 February 2013

The Star, MONDAY FEBRUARY 4, 2013 13

The Star

Legals & Tenders

Tenders

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REPUBLIC OF SOUTH AFRICA

NOTICE

NOTIFICATION OF INTEREST TO BE PART OF A PROCESS TO DEVELOP A STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE ROLL OUT OF RENEWABLE ENERGY IN THE COUNTRY

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Invitation to Prospective Bidders

Gauteng

roads and transport
Department: Roads and Transport
GAUTENG PROVINCE

TENDER NOTICE AND INVITATION TO TENDER

Figure 10: Star, 4 February 2013

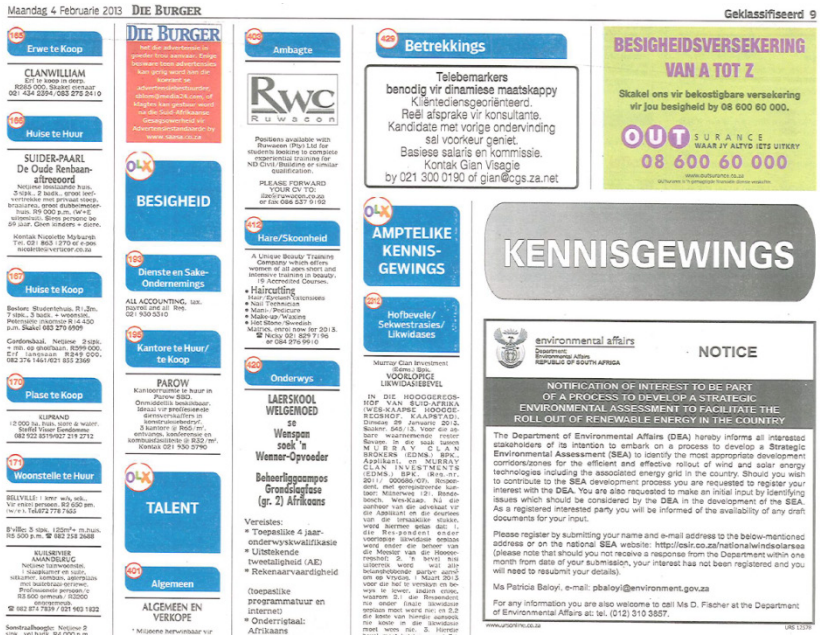


Figure 11: Die Burger, 4 February 2013

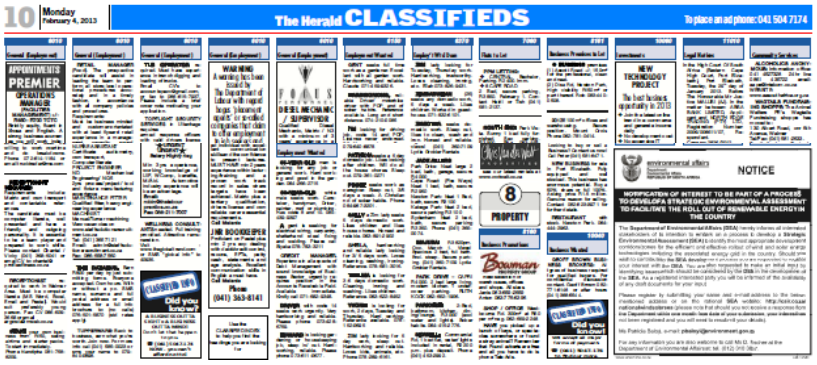


Figure 12: Herald, 4 February 2013

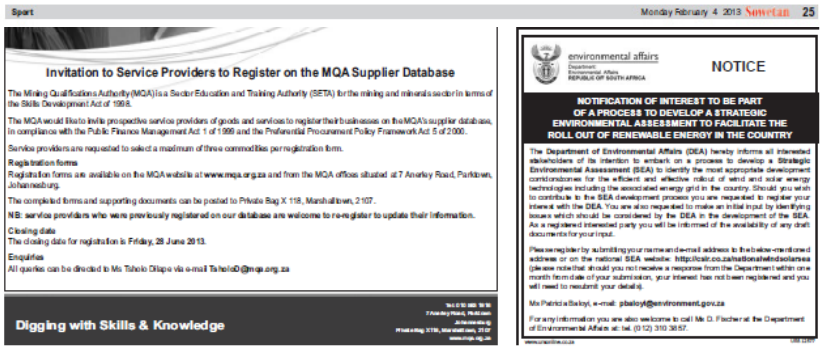
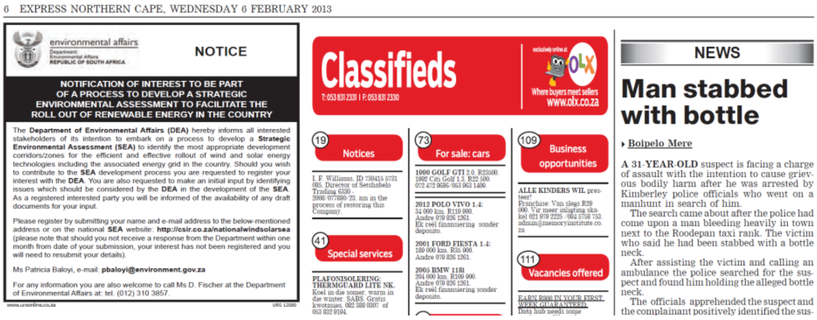


Figure 13: Sowetan, 4 February 2013



6 EXPRESS NORTHERN CAPE, WEDNESDAY 6 FEBRUARY 2013

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

NOTICE

NOTIFICATION OF INTEREST TO BE PART OF A PROCESS TO DEVELOP A STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE ROLL OUT OF RENEWABLE ENERGY IN THE COUNTRY

The **Department of Environmental Affairs (DEA)** hereby informs all interested stakeholders of its intention to embark on a process to develop a **Strategic Environmental Assessment (SEA)** to identify the most appropriate development corridors/zones for the efficient and effective rollout of wind and solar energy technologies including the associated energy grid in the country. Should you wish to contribute to the **SEA** development process you are requested to register your interest with the **DEA**. You are also requested to make an initial input by identifying issues which should be considered by the **DEA** in the development of the **SEA**. As a registered interested party you will be informed of the availability of any draft documents for your input.

Please register by submitting your name and e-mail address to the below-mentioned address or on the national **SEA** website: **http://csir.co.za/nationalwindsolarsea** (please note that should you not receive a response from the Department within one month from date of your submission, your interest has not been registered and you will need to resubmit your details).

Ms Patricia Baloyi, e-mail: **pbaloyi@environment.gov.za**

For any information you are also welcome to call Ms D. Fischer at the Department of Environmental Affairs at: tel. (012) 310 3857.

www.ursonline.co.za URS 12580

Classifieds

NEWS

Man stabbed with bottle

Boipelo Mere

A 31-YEAR-OLD suspect is facing a charge of assault with the intention to cause grievous bodily harm after he was arrested by Kimberley police officials who went on a manhunt in search of him.

The search came about after the police had come upon a man bleeding heavily in town next to the Roodepan taxi rank. The victim who said he had been stabbed with a bottle neck.

After assisting the victim and calling an ambulance the police searched for the suspect and found him holding the alleged bottle neck.

The officials apprehended the suspect and the complainant positively identified the sus-

Figure 14: Express Northern Cape, 6 February 2013

Woensdag 6 Februarie 2013 **Volksblad** Nuus 11

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

KENNISGEWING

KENNISGEWING VIR BELANGSTELLING VIR DEELNAME AAN 'N PROSES OM 'N STRATEGIESE OMGEWINGSBERAMING VIR DIE ONTPLOOIING VAN HERNUBARE ENERGIE IN DIE LAND TE ONTWIKKEL

Die Departement van Omgewingsake (DOS) lig alle belangstellende belanghebbers in van sy voorneme om 'n proses te ontwikkel om 'n Strategiese Omgewingsberaming (SOB) te ontwikkel om die mees toepaslike ontwikkelingskorridors/-sones vir die doeltreffende en doelmatige ontplooiing van wind- en sonenergietegnologie, insluitend die gepaardgaande energierooster in die land, te identifiseer. Indien u 'n bydrae wil lewer tot die **SOB-ontwikkelingsproses**, word u versoek om u belangstelling by die **DOS** te registreer. U word ook versoek om 'n aanvanklike inset te lewer deur sake wat die **DOS** vir die ontwikkeling van die **SOB** behoort te oorweeg, te identifiseer. As 'n geregistreerde belanghebbende party sal u in kennis gestel word oor die beskikbaarheid van enige konsepdokumente vir u insette.

Registreer deur u naam en e-posadres te stuur na die onderstaande webwerf of na die nasionale **SOB**-webwerf: **http://csir.co.za/nationalwindsolarsea** (neem kennis dat indien u nie binne een maand na u indiening reaksie van die Department ontvang nie, was u belangstelling nie geregistreer nie en word u versoek om weer u besonderhede te stuur).

Me. Patricia Baloyi, e-pos: **pbaloyi@environment.gov.za**

Skakel me. D. Fischer by die Departement van Omgewingsake by tel. 012 310 385 vir meer besonderhede.

Indien u belangstel om betrokke te raak by die hervorming van die ekonomiese profiel van die Noord-Kaap-provinsie, stuur u besonderhede aan die onderstaande e-pos-adres.

U besonderhede moet die volgende insluit:
* Naam, van en titel
* Die bedryf wat u verteenwoordig of wil verteenwoordig
* Organisasie waaraan u behoort
* 'n Verkorte CV wat u ervaring in die spesifieke bedryf reflekteer

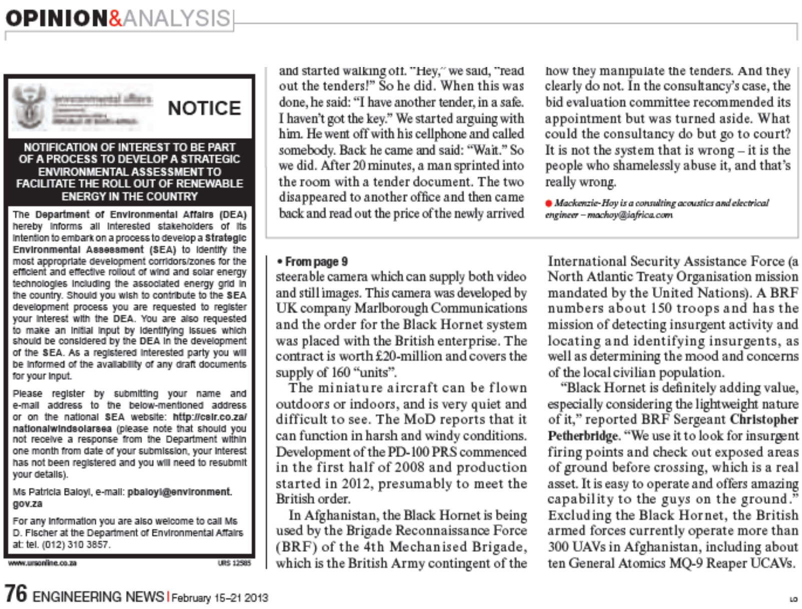
Dit sal waardeer word indien u aansoeke voor of op Vrydag 15 Februarie 2013 ingedien word.

Voorleggings en navrae kan by die volgende persoon gedoen word:
Mnr. Yanda Gqabaza
Sel: 082 339 9340
E-pos: ygqabaza@ncpg.gov.za of gqabaza@gmail.com

northern cape

Tel: 053 839 4000, Fax: 053 831 3668, Metlife towers, Market square, Private Bag X6108, Kimberley 8300, Republic of south Africa

Figure 15: Volksblad, 6 February 2013



OPINION&ANALYSIS

NOTICE

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Ms Patricia Baloyi, e-mail: **pbaloyi@environment.gov.za**

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www.ursonline.co.za URS 12585

and started walking off. "Hey," we said, "read out the tenders!" So he did. When this was done, he said: "I have another tender, in a safe. I haven't got the key." We started arguing with him. He went off with his cellphone and called somebody. Back he came and said: "Wait." So we did. After 20 minutes, a man sprinted into the room with a tender document. The two disappeared to another office and then came back and read out the price of the newly arrived how they manipulate the tenders. And they clearly do not. In the consultancy's case, the bid evaluation committee recommended its appointment but was turned aside. What could the consultancy do but go to court? It is not the system that is wrong – it is the people who shamelessly abuse it, and that's really wrong.

Mackenzie-Hoy is a consulting acoustics and electrical engineer – machoy@iafrica.com

• From page 9

steerable camera which can supply both video and still images. This camera was developed by UK company Marlborough Communications and the order for the Black Hornet system was placed with the British enterprise. The contract is worth £20-million and covers the supply of 160 "units".

The miniature aircraft can be flown outdoors or indoors, and is very quiet and difficult to see. The MoD reports that it can function in harsh and windy conditions. Development of the PD-100 PRS commenced in the first half of 2008 and production started in 2012, presumably to meet the British order.

In Afghanistan, the Black Hornet is being used by the Brigade Reconnaissance Force (BRF) of the 4th Mechanised Brigade, which is the British Army contingent of the International Security Assistance Force (a North Atlantic Treaty Organisation mission mandated by the United Nations). A BRF numbers about 150 troops and has the mission of detecting insurgent activity and locating and identifying insurgents, as well as determining the mood and concerns of the local civilian population.

"Black Hornet is definitely adding value, especially considering the lightweight nature of it," reported BRF Sergeant **Christopher Petherbridge**. "We use it to look for insurgent firing points and check out exposed areas of ground before crossing, which is a real asset. It is easy to operate and offers amazing capability to the guys on the ground."

Excluding the Black Hornet, the British armed forces currently operate more than 300 UAVs in Afghanistan, including about ten General Atomics MQ-9 Reaper UCAVs.

76 ENGINEERING NEWS | February 15–21 2013

Figure 16: Engineering News, 15 February 2013

07 Maart 2014 [DIE PLATTELANDER - NUUS VIR ALMAL OP DIE N-7 & N-14] Bladsy 7

NOTIFICATION OF PUBLIC MEETING

Invitation to attend a public meeting to discuss the eight strategic focus areas identified through the Department of Environmental Affairs' national wind and solar PV energy Strategic Environmental Assessment (SEA) process

Background:

As part of facilitating the efficient implementation of the Presidential Infrastructure Coordinating Commission (PICC) Strategic Integrated Project 8 (SIP8), which is the promotion of green energy in support of the South African economy; the Department of Environmental Affairs (DEA) and the Council for Scientific and Industrial Research (CSIR) are conducting a SEA aiming at identifying strategic geographical areas best suited for the effective and efficient roll-out of large scale wind and solar PV energy projects, referred to as Renewable Energy Development Zones (REDZs). Through a process of positive and negative mapping as well as wide stakeholder consultation, eight focus areas have been identified as potentially being of national strategic importance for wind and solar PV development. DEA and CSIR are planning on undertaking a Provincial Roadshow to engage with local communities within the 8 focus areas. You are invited to attend your local public meeting at the following applicable venues and dates:

No	Province	Focus Area	Venue	Date and Time
1.	Western Cape	Bredasdorp	Nelson Mandela Hall	18 March 2014 17:30-19:30
2.	Western Cape	Laingsburg	Tourism Auditorium Hall	19 March 2014 17:30-19:30
3.	Eastern Cape	Grahamstown	Grahamstown Recreation Hall	24 March 2014 17:30-19:30
4.	Eastern Cape	Queenstown	Queenstown Town Hall	26 March 2014 17:30-19:30
5.	Northern Cape	Kimberley	Kimberly City Hall	31 March 2014 17:30-19:30
6.	North West	Vryburg	Huhudi Hall	02 April 2014 17:30-19:30
7.	Northern Cape	Upington	Tol Speelman Hall	03 April 2014 17:30-19:30
8.	Northern Cape	Springbok	Show Hall	07 April 2014 17:30-19:30

For more information, please visit:

Project website: http://www.csir.co.za/nationalwindsolarsea/

Contact person: Surina Brink, Email: sbrink1@csir.co.za, Telephone: 021 888 2490

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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Persverklaring

JJ LAMBERT LAERSKOOL - Lyle McNeill is 'n Gr.7 leerder wat Saterdag, 22 Februarie 2014, sy skool se naam hoog gedra het by die Namakwa Distrik Atletiek te Springbok. Lyle het deurgedruk by die 100m en ook aflos en moet nou Namakwa gaan verteenwoordig in Kimberley.

Lyle is 'n pragtige leerder met groot deursettingsvermoë en ons almal in Garies gemeenskap wil hom met hierdie prestasie wat hy behaal het, gelukwens. Ons dra hom in ons gebede op, want om 'n uitblinker in enige sportsoort te wees, verg baie selfdissipline.

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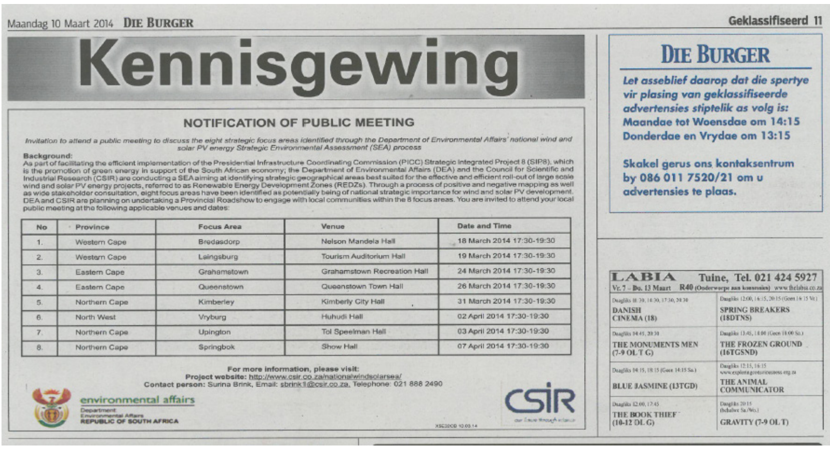
Figure 17: Die Plattelander, 7 March 2014



Maandag 10 Maart 2014 DIE BURGER Geklassifiseerd 11

Kennisgewing

NOTIFICATION OF PUBLIC MEETING

Invitation to attend a public meeting to discuss the eight strategic focus areas identified through the Department of Environmental Affairs' national wind and solar PV energy Strategic Environmental Assessment (SEA) process

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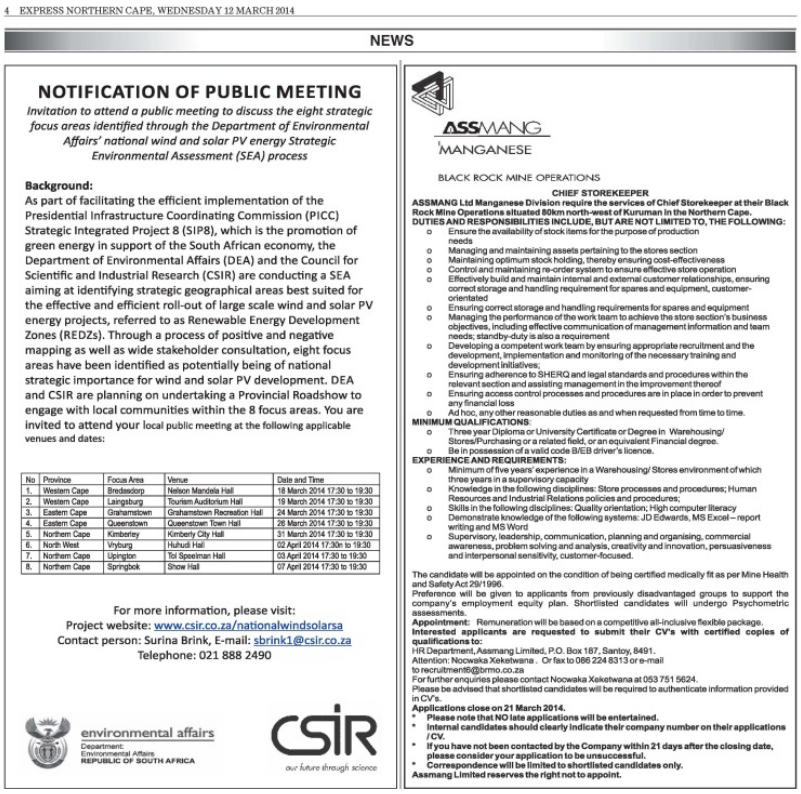
SPRING BREAKERS (18DTNS)
THE MONUMENTS MEN (7-9 OL T G)
THE FROZEN GROUND (16TGSND)
BLUE JASMINE (13TGD)
THE ANIMAL COMMUNICATOR
THE BOOK THIEF (10-12 DL G)
GRAVITY (7-9 OL T)

Figure 18: Die Burger, 10 March 2014



4 EXPRESS NORTHERN CAPE, WEDNESDAY 12 MARCH 2014

NEWS

NOTIFICATION OF PUBLIC MEETING

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For more information, please visit:
Project website: www.csir.co.za/nationalwindsolarsa
Contact person: Surina Brink, E-mail: sbrink1@csir.co.za
Telephone: 021 888 2490

environmental affairs
Department:
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BLACK ROCK MINE OPERATIONS

CHIEF STOREKEEPER

ASSMANG Ltd Manganese Division require the services of Chief Storekeeper at their Black Rock Mine Operations situated 80km north-west of Kuruman in the Northern Cape.
DUTIES AND RESPONSIBILITIES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- Ensure the availability of stock items for the purpose of production needs
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- Maintaining optimum stock holding, thereby ensuring cost-effectiveness
- Control and maintaining re-order system to ensure effective store operation
- Effectively build and maintain internal and external customer relationships, ensuring correct storage and handling requirement for spares and equipment, customer-orientated
- Ensuring correct storage and handling requirements for spares and equipment
- Managing the performance of the work team to achieve the store section's business objectives, including effective communication of management information and team needs; standby-duty is also a requirement
- Developing a competent work team by ensuring appropriate recruitment and the development, implementation and monitoring of the necessary training and development initiatives;
- Ensuring adherence to SHERQ and legal standards and procedures within the relevant section and assisting management in the improvement thereof
- Ensuring access control processes and procedures are in place in order to prevent any financial loss
- Ad hoc, any other reasonable duties as and when requested from time to time.

MINIMUM QUALIFICATIONS:

- Three year Diploma or University Certificate or Degree in Warehousing/ Stores/Purchasing or a related field, or an equivalent Financial degree.
- Be in possession of a valid code B/EB driver's licence.

EXPERIENCE AND REQUIREMENTS:

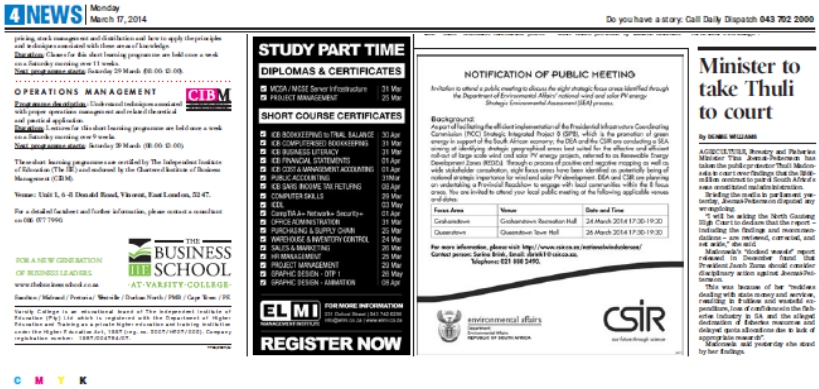
- Minimum of five years' experience in a Warehousing/ Stores environment of which three years in a supervisory capacity
- Knowledge in the following disciplines: Store processes and procedures; Human Resources and Industrial Relations policies and procedures;
- Skills in the following disciplines: Quality orientation; High computer literacy
- Demonstrate knowledge of the following systems: JD Edwards, MS Excel – report writing and MS Word
- Supervisory, leadership, communication, planning and organising, commercial awareness, problem solving and analysis, creativity and innovation, persuasiveness and interpersonal sensitivity, customer-focused.

The candidate will be appointed on the condition of being certified medically fit as per Mine Health and Safety Act 29/1996.
Preference will be given to applicants from previously disadvantaged groups to support the company's employment equity plan. Shortlisted candidates will undergo Psychometric assessments.
Appointment: Remuneration will be based on a competitive all-inclusive flexible package.
Interested applicants are requested to submit their CV's with certified copies of qualifications to:
HR Department, Assmang Limited, P.O. Box 187, Santoy, 8491.
Attention: Noowaka Xeketwana . Or fax to 086 224 8313 or e-mail to recruitment6@brmo.co.za
For further enquiries please contact Noowaka Xeketwana at 053 751 5624.
Please be advised that shortlisted candidates will be required to authenticate information provided in CV's.
Applications close on 21 March 2014.

- **Please note that NO late applications will be entertained.**
- **Internal candidates should clearly indicate their company number on their applications / CV.**
- **If you have not been contacted by the Company within 21 days after the closing date, please consider your application to be unsuccessful.**
- **Correspondence will be limited to shortlisted candidates only.**

Assmang Limited reserves the right not to appoint.

Figure 19: Northern Cape Express, 12 March 2014



4NEWS | Monday March 17, 2014

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PUBLIC ACCOUNTING	31Mar
JDE SARS INCOME TAX RETURNS	08 Apr
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IC3	03 May
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WAREHOUSE & INVENTORY CONTROL	24 Mar
SALES & MARKETING	25 Mar
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PROJECT MANAGEMENT	25 Mar
GRAPHIC DESIGN - DTP 1	25 May
GRAPHIC DESIGN - ANIMATION	08 Apr

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NOTIFICATION OF PUBLIC MEETING

Invitation to attend a public meeting to discuss the eight strategic focus areas identified through the Department of Environmental Affairs' national wind and solar PV energy Strategic Environmental Assessment (SEA) process.

Background:
As part of facilitating the efficient implementation of the Presidential Infrastructure Coordinating Commission (PICC) Strategic Integrated Project 9 (SIP8), which is the promotion of green energy in support of the South African economy, the DEA and the CSIR are conducting a SEA aiming at identifying strategic geographical areas best suited for the effective and efficient roll-out of large scale wind and solar PV energy projects, referred to as Renewable Energy Development Zones (REDZs). Through a process of positive and negative mapping as well as wide stakeholder consultation, eight focus areas have been identified as potentially being of national strategic importance for wind and solar PV development. DEA and CSIR are planning on undertaking a Provincial Roadshow to engage with local communities within the 8 focus areas. You are invited to attend your local public meeting at the following applicable venues and dates:

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Grahamstown	Grahamstown Recreation Hall	24 March 2014 17:30-19:30
Queenstown	Queenstown Town Hall	26 March 2014 17:30-19:30

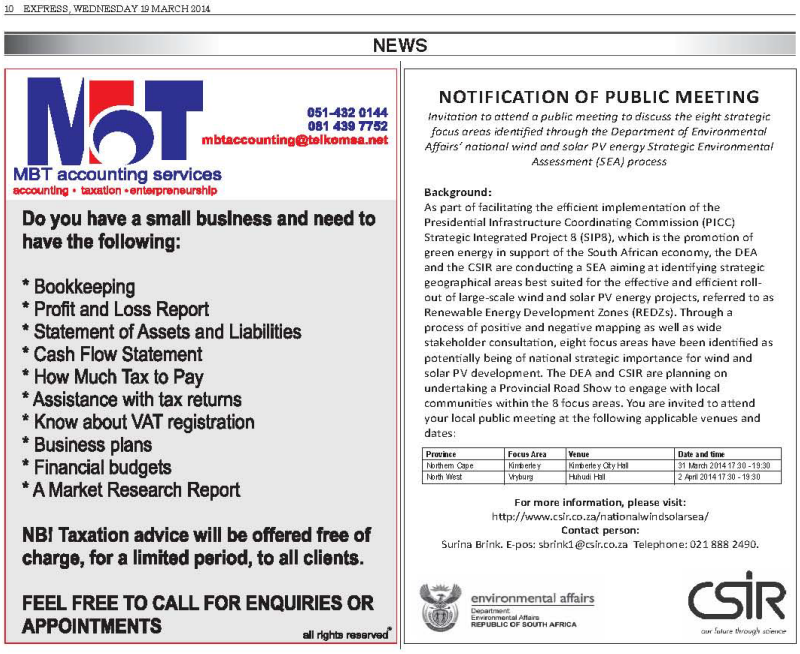
For more information, please visit: http://www.csir.co.za/nationalwindsolarsea/
Contact person: Surina Brink, Email: sbrink1@csir.co.za.
Telephone: 021 888 2490.

environmental affairs

CSIR

Minister to take Thuli to court

Figure 20: Daily Dispatch, 17 March 2014



10 EXPRESS, WEDNESDAY 19 MARCH 2014

NEWS

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North West	Vryburg	Hotvuti Hall	2 April 2014 17:30 - 19:30

For more information, please visit:
http://www.csir.co.za/nationalwindsolarsea/
Contact person:
Surina Brink. E-pos: sbrink1@csir.co.za Telephone: 021 888 2490.

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

CSIR
our future through science

Figure 21: Express, 19 March 2014

A project website was launched at the inception of the project. The project website was created as a platform for the exchange of information and data between the SEA team and all stakeholders including government officials, local communities, industry representatives, and anyone else interested in renewable energy development in South Africa.

The project website is accessible at: https://redzs.csir.co.za/ and enables stakeholders to register on the SEA database and also send comments to the SEA team via an online form. Figure 26 illustrates the front page of the project website.

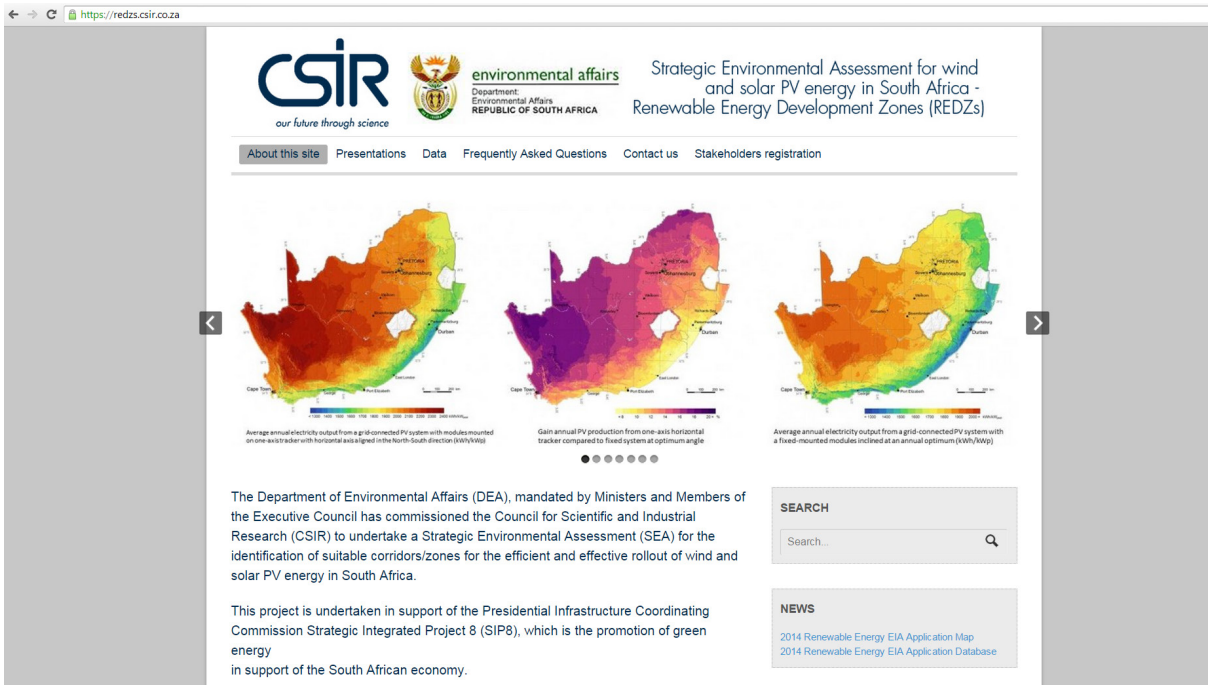

Figure 22: Front page of the project website

B 4 - 2. Stakeholder Database

During Phase 1 of the SEA process (January 2013 to March 2014), a total of 366 stakeholders registered on the SEA database via the website, phone calls or emails directly sent to the SEA team. During Phase 2 of the SEA (April 2014 to December 2014) another 165 stakeholders registered on the SEA database. The names of Phase 1 and Phase 2 registered stakeholders are provided in Table 3.

Table 2: Stakeholders registered on the SEA database

PHASE 1 STAKEHOLDER DATABASE: FROM JANUARY 2013 TO MARCH 2014 TOTAL REGISTERED STAKEHOLDERS DURING PHASE 1: 357	
AFFILIATION	**NAME OF REGISTERED STAKEHOLDER**
ACRENASL	Alvaro Camina
Solar Capital	Nathan Schmidt
3E Renewable Energy	Nicola Cencelli
	Richard Doyle
4GREEN Development Africa	Jonathan Visser
A&R Law	Andre van der Lingen
Academic	Alan Brent
	Akinwale Aboyade
	Brendan Argent
	Carli Steenkamp
	Daniel Schneider
	Erik Breuer

	Farai Dondofema
	Julia Benz
	Miranda Deutschlander
	Peter Taylor
	Luke Sandham
	Fadiel Ahjum
	Mascha Moorlach
	Tiisetso Maseela
	Willem van Zyl
	Morgan Pfeiffer
	Gilbert Bokanga
Acciona	Marcos Gallego
Acciona Energy	Javier Viscarret
ACED	Pikwe Vasey
ADP Group	Jan Venter
Adventure Power	Lodewyk Bronn
	Mark Ristow
AE-AMD Renewable Energy	Charlie Berrington
AECOM	Brian Homann
AfriBugs Consulting Specialists	Peter Hawkes
African Clean Energy Developments	Mary Waller
African Crabon Energy (Africary)	Elmar Roberg
Afri-Coast Engineers	Johan Minnie
	John McGillivray
Afrimage	Albert Froneman
Alstom	Laure Gautier
	Luvhengo Nemathithi
Alternativ	Lucky Masutha
AltGen Recruitment	Sean Gibson
Animalia Zoological & Ecological Consultation	Werner Marais
ArcelorMittal	Jan Kotze
	Peter van Wyk
Arcus Consultancy Services	Jennifer Slack
	Jonathan Aronson
	Stuart Clay
Arup	Paul Cosgrove
	Yolandi Olivier
Ascendancy Management Specialists	Prof John Chibaya Mbuya
Aurecon	At van der Merwe
	Justine Barnard
	Karen Versfeld
	Nickey Felix
	Patrick Killick
	Shane Eglinton
	Warrick Pierce
Aurora Power Solutions	Daniel Goldstuck
	Oliver Johnston
	Steven Burnett

AVDS Environmental Consultants	Andre van der Spuy
Aveng EPC	Bruce Wenman
Basil Read	Michelle Schroder
BergWind Energy	Dawid Roux Pretorius
Bermuda	Jopie Fourie
Bioinsight	Ricardo Ramalho
Biotherm Energy	Irene Richardson
	Tonderai Munthumbira
	Uri Epstein
BirdLife South Africa	Dale Wright
	Daniel Marnewick
	Nicholas Theron
	T Anderson
	Reg Schonborn
Bright Source Energy	Daniel Schwab
Burger Family Trust	Burger Familie Trust
C4 EcoSolutions	Taryn Kong
Camco Clean Energy	Glen Louwrens
CapeNature	Genevieve Pence
	Kerry Maree
	Rhett Smart
CBI Solutions Group	Damian Coetzee
CCA Environmental	Jeremy Blood
Cennergi	Casper du Plessis
	Takalani Maswime
Chris van Rooyen Consulting	Chris van Rooyen
Ciel & Terre	Yoann Joyeux
Clean Energy Projects	Clyde Mallinson
Climate System Analysis Group	Christopher Lennard
Consultant	Donald McGillivray
Consulting Engineers South Africa and SACPE	Ian Fitz
CSIR	Eric Prinsloo
	Stefan Szewczuk
	Johan Maritz
Creamer Me	Mariaan Webb
Cresco Project Finance	Andy Tant
CRSES	Alejandro Lupion
	Athi Ntisana
	Josh Reinecke
	Sinovuyo Poni
DB Farmbrokers	Des Brasington
DB Thermal	Alan van Rooyen
DEA	JR Pretorius
	Nicolene Fourie
	Muhammad Essop
Delta Built Environment Consultants	Cilliers van der Merwe
	Gerhard Schoeman
DAFF	Hein Lindemann

DETEA	Nacelle Collins
DEDECT	Ray Schaller
DENC	Maxie Jonk
	E. Julius
	Peter Ramollo
Drivequip	Louis Andrag
DSA Architects	Ian Kullin
Durban Natural Science Museum	David Allan
Eastern Cape Development Corporation	Rory Haschick
Eastern Cape Parks & Tourism Agency	Asanda Sontsele
ECOSOL GIS	Philip Desmet
ECPTA	Bev Geach
	Dave Balfour
	Jan Venter
Enerfin Sociedad de Energia SL	Alberto Varela Soria
	Juan Pablo Vicente
Energy Consultant	Chris Ahlfeldt
Energy Research Centre	Bryce McCall
Energy Solutions Africa	Moeketsi Thobela
ENILAW	Jacquline Magwenzi
ENS	James Brand
ENVIRO LOGIC	Gert Pretorius
EnviroAfrica	Jerry Avis
Environmental Forward Observer	Mark Hodges
Environmental Resources Management	Karen Opitz
EON	Enrico Misino
	Sonia George
Escience Associates	Knowledge Molokoane
Eskom	Ketrine Ijumba
	Kevin Leask
	Mmbengeni Makungo
	Riaan Smit
	Sonja Coetsee
	Tonderayi Gumunyu
	Tsheppo Tshivhasa
	Zoe Lincoln
ESP Consulting Group	Fa Mulumba
ESRI South Africa	Caroline Shepherd
ESRI South Africa	Rentia McLaughlin
Endangered Wildlife Trust	Andrew Pearson
	Christy Bragg
	Genevieve Jones
	Ronelle Visagie
Exheredo	Attie Botha
Ezemvelo KZN Wildlife	Dinesree Thambu
First Solar	Vladimir Chadliev
Fotowatio Renewable Ventures	Andres Carretero
Franco Afrique Technologies	Anthony Corin

FRV Energy	Romaya Dorasamy
G7 Renewable Energies	Methuli Mbanjwa
	Nicolas Rolland
	Kilian Hagemann
Gamesa Corporation	Fernando Herranz
GeoSUN Africa	Riaan Meyer
Gestamp Solar	Arnold Rix
	JA Perez
GIBB	David Crombie
	Deon de WItt
	Jaana-Maria Ball
GL Garrad Hassan	Caroline Faasen
	Francis Langelier
	Jack Marriott
Globeleq	Paolo de Michelis
Golder Associates	Sarah Watson
Green South Developments	Dion WIlmans
GreenCape	Anthony Williams
	Mike Mulcahy
Hatch	Dieter Matzner
	Pieter Etsebeth
	Roger Thompson
HILTI	Manuel Unterweger
HS Housing	Simpiwe Mavela
IAIAsa, IAIA, IWMSA, SACNASP, WISA	Patrick Sithole
IFC Asset Management Company	Tatiana Chkourenko
Ikhwezi Solar	Willy Gauss
Inala Technologies (Pty) Ltd	Laurentius Human
Industrial Development Corporation	Gerrit Kruyswijk
Inkomba Energy	Anton Badenhorst
InnoWind	Louis Dewavrin
	Warren Randall
Integrated Sustainable Services	Joel Houdet
JA Visagie	Jan Visagie
Just Energy	Neil Townsend
	Zukisani Jakavula
Juwi Renewable Energies	Chris Bellingham
Kgatelopele Energy	Tshepo Mabena
KYD Consulting Engineers	Harry Mohloare
Lloyd and Hill Inc	Revai Nyamuranga
Mainstream Renewable Power SA	David Dean
	Hein Reyneke
	Jonathan Frick
	Linda Thompson
	Sheldon Vandrey
map(this)	Henry Holland
Marakabele	Mbuti Diale
Masithu Consulting	Sizwe Mchunu

Mast Energy	Mashite Tisane
McGregor Museum Kimberley	Beryl Wilson
MDT Energy	Craig Morkel
Melozhori Game Reserve	Ismail Bhorat
MetroGIS	Dawie Jansen van Vuuren
	Lourens du Plessis
Moeller & Poeller Engineering	Florian Soldner
Mott MacDonald	Helen Pickard
	Jo Reeves
Mr Bolt and Nut	De Wet Ehlers
NCC Environmental Group	Penny-Jane Cooke
	Sebastian Siljeur
Nelson Mandela Bay Municipality	Nadia Wessels
Nordex Energy South Africa	Christopher Brooks
Norton Rose Fulbright	Chantel Bredenhann
	Clinton Slogrove
	Coldron Denichaud
	Fathima Dildar
	Gary Rademeyer
	Katia Mengel
	Matt Ash
	Paul Hedderwick
Obelisk Energy	Justin Burnett
Overberg Wind Power	DC Ganz
Parsons Brinckerhoff	Craig Hart
Pele Green Energy	Obakeng Moloabi
Phaki Phakanani Environmental Consultants	Kabedi Mashilo
Picturing Africa	Wayne Conradie
Ponelopele	Nico Sikwane
Private	Alan Lesle Mckie
	Amilcar Stuurman
	Ancois de Villiers
	Andreas Engelbrecht
	Arnold Schoombee
	Aubrey Mpungose
	Caroline Pringle
	David Cotton
	Dewald Pieterse
	Elmien du Plessis
	Heini Nel
	Jarrad Wright
	Kasper van Rooyen
	Ken Fraser
	Lucia Rodrigues
	Marianne Strohbach
	Marienne de Villiers
	Marlei Martins
	Mervyn Lotter

	Nathan Neumann
	Paul Martin
	Phathu Mudau
	Phumlani Mkhize
	Robert Fraser
	Ross Botes
	Samantha de la Fontaine
	Stuart Pringle
	Brian McMahon
	Van der Merwe
Promethium	Robb Stockill
Rainmaker Energy	Simon Lawless
Red Cap	Lance Blaine
	Mark Tanton
Renewable Strategy	Brent van der Merwe
RES Southern Africa	Jennifer Cronin
	Duncan Ayling
	Njabulo Ngema
	Tracy Hutcheon
RHDHV	Luke Moore
RMB	Mark Schaman
Robor	Stephen Leatherbarrow
Romano Sustainable Solutions	Robert du Preez
SA German Chamber of Commerce and industry	Dennis Thiel
Safetech	Brett Williams
SAGIT Energy Ventures	Botha Schabort
	Kasper van Rooyen
	Mich Nieuwoudt
SANEDI	Resmun Moonsamy
	Saheed Okuboyejo
Santam Ltd	Pamela Ramagaga
Savannah Environmental	Jo-Anne Thomas
	Lusani Rathanya
	Ravisha Ajodhapersadh
	Sheila Muniongo
	Steven Ingle
	Umeshree Naicker
Scatec Solar	Øystein Lundem
Scherman Colloty & Associates	Brian Colloty
Sembcorp	Thabani Myeza
SES	Kayne Kingwill
Setplan Port Elizabeth	Erna van Zyl
	Jared Petzer
Shoney Consulting	Paul Rogerson
Sibuya Game Reserve, Indalo	Nick Fox
Siemens	Andile Mgudlwa
SiVEST	Kerry Schwartz
	Rebecca Thomas

SLR Consulting	Gordon Kernick
Solafrica	Nasi Rwigema
Solairedirect	Reginald Niemand
Solar Capital	Charl Jooste
SolarReserve	Leanna Rautenbach
	Terence Govender
Solek	Johannes Wolmarans
Sondereind Wind Energy	Douglas Harrowsmith
SACAA	Werner Kleynhans
SANBI	Fhatani Ranwashe
SAN Parks	Letsie Coetzee
South African Renewable Energy Technology Centre	Howard Fawkes
SAWEA	Marilize Stoltz
Southern Cape Renewables	Dawid Pretorius
SRK Consulting	Robin Gardiner
St Francis Kromme Trust	Maggie Langlands
STAC Consulting Engineers	Jannie du Toit
STC/3Foxes	Simon Todd
STEAG Energy Services	Michael Goth
Steinmuller	Yusuf Coovadia
STENDO s.r	Stefano Cecutta
Stoma Energy Solution	AmosS Osadebe
Subsolar	Dick Berlijn
Sun Cybernetics	Gys Niesing
SunEdison	Monique Jordaan
SunPower Corporation	Chantal Prince
	Paula Korkie
	Thibaud Vibert
SunSpot	Mark Bleloch
Suzlon	Leon Nel
Tabacks Attorneys	Nanri Labuschagne
Terra Power	Howard Ramsden
Terramanzi	Fabio Venturi
The Energy Blog	Stephen Forder
Tilo Infrastructure Africa	Joseph Padbury
Tshwane academic	Mabel Olanipekun
TUB	Ian Leonard
Unaffiliated	Stuart Shearer
Vanguard	Steve Francis
VentuSA Energy	David Peinke
Veroniva	Claude Bosman
Visual Resource Management	Stephen Stead
White & Case LLP	Gail Dendy
Wilderness Foundation	Andrew Muir
Wildskies Ecological Services	Jon Smallie
Willis South Africa	Chris Nivison
Wind Prospect	Ben Campbell

	Khwezi Mahlungulu
	Niall McCoy
	Ollie Davies
Windlab	Francis Jackson
	Shane Quinnell
WKN Windcurrent	David Wolfromm
WSP Group	Andrew Gemmell
	Danielle Michel
	Kerry Buchanan
WWF-SA	Justin Phama
PHASE 2 STAKEHOLDER DATABASE: FROM APRIL 2014 TO DECEMBER 2014 TOTAL REGISTERED STAKEHOLDERS DURING PHASE 2: 126	
AFFILIATION	**NAME OF REGISTERED STAKEHOLDER**
Abengoa So	Ian Smit
Absa Bank	Edwin Mavhungu
Academic	Andrew Dos Santos
	Grete Simanauskaite
	Sakhile Nkosi
	Thabile Gomo
	Xolani Boloko
	Olanipekun, Mabel
	Grace Wu
	Holle Wlokas
	Steve chang
	Masike Malatji
	Candis Lubbe
	Joe Wagner
ADM	Luyanda Mafumbu
Adventure Power	Ristow
Africoast	Hylton Newcombe
Atlantic Energy Partners	David Peinke
Aubrey	Mpungose
Aurecon	Angela van Schalkwyk
	Janice Foster
	Louise Corbett
	Stephen Sepale
	Ettiene Spykerman
Aurora Power Solutions	Tonderai Munthumbira
Aveng	Michael dos Santos
Bennett Pr	Scott Pringle
CIVIDESIGN	Raul Carbonero
Consultant	McGillivray
CSIR	Loyiso
DAFF	Carel Fourie
DC2AC Power	Mark Cole
DENC	Conrad Geldenhuys
DEDEAT	Alan Southwood
Distribute	Santa Scheepers

EAB Astrum	William Hove
EBF Group	Carsten Hollaender Laugesen
ECDC	Haschick
Eco Internasionaal (Edms) Bpk	Roelof van der Merwe
EIMS	Gideon Kriel
Element Co	Amor Venter
Enerfin Sociedad de Energia SL	Vicente
Environmental Law Association	Johan van der Merwe
ERM Southern Africa	Dean Alborough
Eskom	Sanjeev Hirachund
	Mark Lyons
	Gerhard Brits
eta Wind	Felix Bielefeld
EWT	G. Jones
Geratech	Dawie Fourie
GIBB	Urishanie Govender
	Sukie Paras
GIGSA, ECSA	Colin Gewanlal
Greenhouse Power Utilities	David Morudu
Hatch Goba	Ian Potgieter
Imali	Stephan Rautenbach
Inala Technologies (Pty) Ltd	Human
IRENA	Kudakwashe Ndhlukula
ISC2	Thapeli Matsabu
Kabi Solar	Frederic de Laforcade
Kaiser Economic Development Partners	Brie Freeman
Karoo News Group	D. Oliphant
Linkd Environmental Services	John-Luke Hutchinson
MCA Urban	Elzette henshilwood
McKinsey	Bontle Senne
Melozhori Private Game Reserve	Will Fowlds
MM Energy	Daniele ventura
MSAIEE	Richard Goodland
Mulilo Renewable Energy	Iaan Rossouw
	Warren Morse
Nelson Mandela Bay Municipality	Wessels
Nordex	Lorenzo Termite
OST Energy	Oliver Davies
Private	Andrew Barson
	Danielle Welgemoed
	Andries Kruger
	Anveer Chanderman
	Christian van blerk
	Frowin Becker
	Gerhard Prinsloo
	Jack Armour
	Johann Koen
	Kate Webster

	Kathy Hardy
	King, LG
	Lourens Leeuwner
	Mamoso Dikgale
	Mandhlazi
	Marab Macks Lesufi
	Martin
	Neumann
	Patricia Leal
	Pieter Stuivenberg
	Pretorius
	Raymond Castelyn
	Reynier Meyer
	Sikhulile Ngcobo
	Tihan Kuypers
	Wayne Rubidge
	Willie De Beer
Red Cao In	Jadon schmidt
Renewable Energy Engineers	Wiehann van Zyl
Renewable Energy Systems SA	Parry Llion
RES	Sergio Boggio
reSA Energy	Vincenzo Bellini
RHDHV	G.A. van Weele
Rosenthal	Philip Rosenthal
S28 Energy	Sterrenberg Bester
SALGA	Aseza Dlanjwa
	Zona Cokie
SAPVIA	Keobakile Sedupane
Savannah Consulting	Karen Jodas
	Candice Hunter
SAWEA / G7 Renewable Energies (Pty) Ltd	Hagemann
Scatec Sol	Mitchell Hodgson
SESSA	James Shirley
Shell	Nigel Rossouw
Solar PV CEO	Werner Fuls
Solek	Emma van der Merwe
STEISA	Maaike Kallenborn
SunPower	Billy Murray
Tabacks Attorneys	Francois Joubert
	Labuschagne
VentuSA Energy	Ingo Stinnes
Wind Prospect	Brian Cunningham
WSP Environmental	Janna Bedford-Owen

B 4 - 3. Frequently Asked Questions

Among all comments received from stakeholders since the start of the SEA process, several issues have been recurring and were summarised into a "Frequently Asked Questions" (FAQs) document. This FAQ document was uploaded onto the project website enabling stakeholders to pro-actively access information that would potentially address questions/concerns. The FAQs are presented in the box below (see Box 3).

Box 3: Frequently Asked Questions

Purpose of the Strategic Environmental Assessment (SEA): "How will the SEA process facilitate the efficient and effective roll-out of Wind and Solar Photovoltaic (PV) development in South Africa?"

Integration

The SEA process is aimed at integrating environmental, economic and social factors to identify geographical areas (Renewable Energy Development Zones: REDZs) where in the medium to long term wind and solar PV development will have the lowest possible impact on the environment while yielding the highest possible social and economic benefit to the country.

Agreement

The SEA process provides a platform for government authorities, private sector developers, and the public to provide inputs into where development should be prioritised and REDZs established. The intent is for agreement and commitment to be officiated through Cabinet approval and a gazetting process.

Alignment

The cabinet approval and gazetting of the REDZs will allow for alignment of the three spheres of government by adopting REDZs and its associated processes into future policies and spatial plans (e.g. Integrated Development Plans: IDPs and Spatial Development Framework: SDFs).

Strategic Investment

The certainty resulting from the adoption of the REDZs will allow for proactive infrastructure investment (e.g. grid) to enable sustained growth of the South African wind and solar PV industry.

"What will incentivise developers to develop in the REDZs rather than outside?"

Decreased Risk

The high level agreement and commitment to the REDZs will decrease the risk of not obtaining authorisation or a lack of infrastructure investment blocking proposed development.

Streamlined Process

In addition to scoping level assessment of the REDZs, interdepartmental and intergovernmental alignment will allow for streamlined authorisation processes.

Environmental authorisation in the REDZs: "What will be the environmental authorisation process and/or requirements for wind and solar PV in the REDZs?"

Legislated
The environmental authorisation process in the REDZs is intended to be a Basic Assessment (BA) process for which the scope of assessment is informed by the development protocols produced through the SEA.

Focused
Based on scoping level assessment, the environmental authorisation process for individual projects proposed in the REDZs will be focused on the assessment of significant impacts associated with the pre-identified sensitivities on the site.

Investor confidence and streamlined authorisation process in REDZ: "Will investors and banks fund projects in the REDZs and accept the streamlined authorisation process?"

Decreased Risk
The decreased development risk resulting from the high level agreement and commitment should make individual projects in the REDZs more attractive to investors.

Environmental Authorisation
Individual projects in the REDZs will be authorised through a BA process and receive an environmental authorisation that is already accepted by funding institutions.

Implications for projects falling outside the REDZs: "What will happen to current and future proposed wind and solar PV projects proposed outside the REDZs?"

Future Planning
The SEA is a proactive planning tool and is not intended to impact on projects that are currently being proposed or which have been already approved. The SEA and REDZs might, however, impact on current proposed projects requiring strategic infrastructure upgrades. The intent is for such investments to be focused in, but not limited to, the REDZs.

Guidance
The intent is to guide development and focus infrastructure investment without limiting wind and solar PV development to the REDZs. There will inevitably be high development potential areas suitable for individual projects falling outside the REDZs. The REDZs represent the areas that are considered to be of the highest strategic priority for large scale development clusters.

Own Merit
Following the implementation of the REDZs, individual project applications outside the REDZs should be considered on their merit, and the existing authorisation processes (EIA and BA processes) will remain outside the REDZs. No project should be refused based on the fact that it does not fall inside a REDZ.

Renewable Energy Independent Power Producer Procurement Program (RE IPP PP) consideration of REDZs: "How will the REDZ be taken into consideration in the RE IPP PP?"

Competition
How the Department of Energy (DoE) will take the REDZs into consideration in the RE IPP PP has not yet been confirmed. It is, however, likely to be done in a way that still allows for the greatest possible industry competitiveness while allowing for proactive infrastructure investment.

Precautionary approach and assessment of cumulative impacts: "How was the precautionary principle and cumulative impacts taken into consideration?"

Remaining Impact Assessment

The precautionary principle is implemented by not removing completely the need for an "on the ground impact assessment process" at a project level in the REDZs. The scoping level assessments undertaken as part of the SEA process inform and focus the project level impact assessments.

Regional Assessment

The SEA process does not quantify and assess particular impacts, but rather aims at addressing cumulative impacts by (1) guiding development away from high sensitivity areas at a regional scale, and (2) determining development density thresholds in the REDZs.

Compliance monitoring: "Who will be the competent authority for environmental authorisation in the REDZs and what will the compliance monitoring entail?"

Competent Authority

It is envisaged that the same competent authorities that are currently responsible for environmental authorisations and compliance monitoring in terms NEMA outside the REDZs will be responsible for environmental authorisations inside the REDZs. It is unlikely that a different monitoring process be established in the REDZs.

Authorisation Conditions

As is currently the case, an Environmental Authorisation with conditions will be issued for projects proposed in the REDZs, and compliance will be monitored in terms of these conditions of authorisation.

Integrated authorisation: "How will the REDZs facilitate integrated authorisation?"

Development Protocol

The SEA process provides a platform for competent authorities and other permitting or commenting agencies to provide upfront requirements for development in the REDZs. Consensus will be reached on how these requirements will be incorporated into the development protocol. If a proposed project complies with the development protocol's requirements it would imply that all authorising and permitting authorities' requirements have been met, and thus either a single or multiple authorisations and permits can be issued.

Eskom's responsibility: "What is Eskom's commitment in terms of grid supply in the REDZs?"

Grid Infrastructure Delays

Socialising the cost of infrastructure development can only be justified once there is sufficient certainty where the infrastructure is required. Due to the inherent uncertainty associated with the renewable energy bidding process, the certainty required for Eskom to invest in grid development is only obtained once a project receives preferred bidder status. From this time it might take Eskom several years to unlock the funding and construct the required grid infrastructure, especially where transmission level upgrades are required. This delay in grid infrastructure availability is currently a major concern for the renewable energy industry in South Africa.

Proactive Grid Development
The high level agreement and commitment to the REDZs can provide the certainty required for Eskom to unlock funding to proactively construct grid infrastructure to evacuate generation capacity from these areas.

Commitment
Eskom can only commit to supplying additional grid capacity to the REDZs once there is certainty and commitment to these areas (i.e. subsequent to the Cabinet approval and a gazetting process).

Impact on land prices: "Will the REDZs have an impact on land price?"

Size
The areas inside the REDZs will be large enough to enable competition between land owners. This should keep the price of the land competitive in the REDZs.

Competition with areas outside the REDZs
Since the SEA does not aim at restricting development to the REDZs there will still be competition with land outside the REDZs, which would further limit the increase of land prices in the REDZs.

Updating the REDZs: "Will the REDZ be continuously updated?"

Reiterative Process
The intent is for the SEA process to be reiterative with regular updates to consider new information.

Data validity: "What level of data was used and is it sufficiently accurate to identify REDZs?"

Best Available
The best available information was used in the SEA process to make the best possible informed decision on where REDZs should be located. The specialist scoping level assessment undertaken in the REDZs contributes to the data quality in these areas.

Strategic Planning
The SEA is a strategic planning process, therefore the data used is sufficient for this purpose. It is, however, not sufficient at a project level and an impact assessment including ground truthing is still required.

Timeframes of the SEA process: "What are the timeframes for the SEA process?"

Completion of SEA
It is planned that the SEA process will be completed by end-2014.

Cabinet Approval and Gazetting
It is aimed for the Cabinet approval and gazetting process to be completed by mid-2015.

Existing land uses inside REDZs: "How are existing land uses that might be impacted by wind and solar PV development considered in REDZs?

Sensitivity
Where data are available, existing land uses such as game farming, mining activities and tourism that might be negatively impacted by wind and solar PV development are being considered as sensitivities in the REDZs.

Land Use Integration
Where possible land use integration is promoted.

B 4 - 4. Consultation on the Study Areas

The "Phase I Study Areas Metadata and Notes" report containing the details of Phase 1 positive and negative mapping and identification of the 15 study areas was released in August 2013 for public comments. An official commenting form was provided to the public for submitting comments on the study areas to the SEA team. The report, commenting form and the kmz file of the study areas was uploaded to the website and a notification was sent to all I&APs registered on the SEA database indicating the availability of those documents for download. In the case that an I&AP did not have access to internet for download, a paper version of the documents was sent to the person via post. All commenting forms completed and sent back to the SEA team within the commenting period are included in Appendix B5. The study areas were also presented to the ERG as well as at various focus group meetings with key stakeholders.

Based on the comments received on the study areas and further consultation with key stakeholders, the 15 study areas including 5 solar PV study areas and 8 wind study areas were then refined into 8 focus areas.

B 4 - 5. Consultation on the Focus Areas

The public participation process on the focus areas was undertaken during Phase 2 of the SEA process through a series of public meetings within the eight focus areas during March and April 2014. The purpose of the public meetings was to inform local communities and various stakeholder groups of the project methodology, objectives and most recent findings and to get feedback in terms of additional information or considerations. Attendance registers of the meetings and meeting notes are provided in Appendix B 7. The notes provide inputs received during the meetings as well as the responses from the SEA team (DEA and CSIR).

It is important to note that during the roadshow in March and April 2014, the name of the 8 focus areas were based on the district municipalities that the largest part of the focus areas were made up of. Those names were then changed for practical reasons to mention relevant features in the area (see Table 2). The new names represent municipality (Overberg), features (Komsberg, and Stormberg), and main towns (Cookhouse, Kimberley, Vryburg, Upington, and Springbok) included in the focus areas. The names therefore changed from "A" to "B" as indicated in the table below.

Table 3: Focus Areas names change

A: Name of the Focus Area during the roadshow	B: New name of the Focus Area
Overberg Focus Area	Overberg Focus Area
Central Karoo Focus Area	Komsberg Focus Area
Cacadu Focus Area	Cookhouse Focus Area
Chris Hani Focus Area	Stormberg Focus Area
Lejweleputswa Focus Area	Kimberley Focus Area
Dr Ruth Focus Area	Vryburg Focus Area
Mgcawu Focus Area	Upington Focus Area
Namakwa Focus Area	Springbok Focus Area

The letters of invitation to the public meetings were emailed to all stakeholders registered on the project database as well as authorities and non-governmental organization (NGO)/associations involved in the SEA process. The letters served to provide information on the location and date of the meeting, a brief background on the SEA as well as an illustration of the focus area boundaries (see Figure 1 for the national invite and Figure 2 for the Overberg Focus Area invite provided as an example). The contact details of the SEA team were provided on all letters of invitation to enable stakeholders to obtain more information if necessary. In addition to the invitations sent to the 366 registered stakeholders, notifications were sent to key local stakeholders identified in consultation with local government within the various focus areas. Key stakeholders included amongst others nature reserves, tourism bodies, business and agricultural organisation. The list of the key stakeholders contacted in each focus area is provided below in Tables 4 to 11.

Table 4: Additional public stakeholders invited in the Overberg Focus Area

Organisations/ Stakeholders directly contacted in FA1	
• Overberg Air Traffic Controller	• Cape Agulhas Business Chamber
• SANParks	• Fishermans Association
• NCC Environmental Services	• Overberg Tourism and Events
• Overberg Lowlands Conservation Trust	• Arniston Alive
• CapeNature	• AgriMega
• Overberg Crane Group	• Overberg Agri
• Cape Agulhas Tourism Bureau - Overberg	• Roggeveld Nature Reserve
• Nuwejaars River Nature Reserve	• Vroue Landbou Association
• Cape Pork Producers Association	• Ouberg Guest Farm
• National Wool Growers Association: Caledon	• Blesfontein Guest Farm
• Botanical Society	• Tankwa Guest Farm
	• Sutherland Tourism

Table 5: Additional public stakeholders invited in the Komsberg (also called Central Karoo) Focus Area

Organisations/ Stakeholders directly contacted in FA2	
• Laingsburg Business Association	• Jakkalsdans Guest Farm
• Roggeveld Nature Reserve	• Blesfontein Guest Farm
• Community Development Workers Programme (CDWP) Laingsburg	• Tankwa Guest Farm
• Eskom	• Sutherland Tourism
• ANC Kantoor Laingsburg	• Cape Nature
• Vroue Landbou Association	• Gamkapoort Nature Reserve

• SANParks	• Huis Malan Jacobs
• NCC Environmental Services	• Rietfontein Reserve
• Laingsburg Tourism Central Karoo	• Bosch Luys Kloof Private Nature Reserve
• Seweweekspoort Conservancy and Accommodation	• Cape Pork Producers Association
• Ouberg Guest Farm	• National Wool Growers Association: Caledon
• Saaiplaas Guest Farm	• Arniston Alive

Table 6: Additional public stakeholders invited in the Cookhouse (also called Cacadu) Focus Area

Organisations/ Stakeholders directly contacted in FA3	
• Brown and Green Solutions	• Wildlife and Environment Society of South Africa (WESSA)
• Rhodes University	• Eskom
• Adventure Power	• Agri Eastern Cape
• Scherman Colloty & Associates	• Eastern Cape Development Corporation
• Diocesan School	• EC Parks and Tourism
• South African Police Service	• National African Farmers' Union
• Eastern Cape Agricultural Research Project (ECARP)	• Independent Electoral Commission
• Association for the physically disabled	• SANParks
• SAHRA Grahamstown	• Provincial Heritage Resources Authority
• Eluxolweni	• Parks and Tourism Agency
• South African National Defence Force (SANDF)	

Table 7: Stormberg (also called Chris Hani) Focus Area public stakeholders

Organisations/ Stakeholders directly contacted in FA4	
• Eastern Cape Development Corporation	• South African Police Service
• EC Parks and Tourism	• South African Social Security Agency
• National African Farmers' Union	• Aids council
• Independent Electoral Commission	• Older persons forum Chris Hani District
• SANParks	• Education and Training Unit
• Provincial Heritage Resources Authority	• Walter Sisulu University
• Parks and Tourism Agency	

Table 8: Kimberley (also called Lejweleputswa) Focus Area public stakeholders

Organisations/ Stakeholders directly contacted in FA5	
• Agri Free State	• National Wool Growers Association
• Agri Northern Cape	• African Farmers' Association of South Africa (AFASA) Northern Cape
• National African Farmers' Union	• WESSA Northern Cape
• Free State Agricultural Union	• Northern Cape Hunters Association
• Northern Cape Tourism	• Augrabies Falls National Park
• Free State Tourism	• Kgalagadi Transfrontier Park
• Richtersveld Tranfontier Park	• Namaqua National Park
• Doringkloof Nature Reserve	• Akkerdam Nature Reserve
• Department of Tourism and Environment	• Goegap Nature Reserve
• Independent Electoral Commission Provincial Offices (Tokologo LM, Mangaung LM, Mosilinyana LM, Kopanong LM, Letsemeng LM, Tswelepele LM)	• Goodhope Private Reserve
• Agri North West	• Mattanu Private Game Reserve
• Black Management Forum	• Rooipoort Nature Reserve
• Boer Goat Breeders Association	• Thuru Private Lodge
• Master Builder Association	• Tswalu Private Reserve

Table 9: Vryburg (also called Dr Ruth) Focus Area public stakeholders

Organisations/ Stakeholders directly contacted in FA6
• Molopo Game Reserve
• Bloehof Dam Nature Reserve
• Lombard Nature Reserve
• Barberspan Bird Sanctuary

Table 10: Upington (also called Mgcawu) Focus Area public stakeholders

Organisations/ Stakeholders directly contacted in FA7	
• Spitskopmonate: Kalahari Monate lodge and Spitskop Nature Reserve	• Exporters
• Fruits Du Sud	• Nooitgedacht Dorperstoet
• Siyanda Tourism	• Hoogland Animal Feed
• Upington Microlight & RAF 2000 Training School	• Radio Riverside
• Kalahari Guest House & Farm stall - Kalahari Accommodation	• Upington Golf Club
• Picardi Guest Rooms	• Kriek Helicopters -Northern Cape Scenic Flights
• Belurana Guest Lodge	• National Wool Growers Association: Northern Cape
• A Riviera Garden Bed and Breakfast	• African Farmers' Association of South Africa (AFASA) Northern Cape President
• Africa River Lodge	• WESSA Northern Cape
• African Vineyard Guest House	• Northern Cape Hunters Association
• Afrique Guesthouse	• Augrabies Falls National Park
• Carina Schneider Painter	• Kgalagadi Transfrontier Park
• Vezokuhle Quilters	• Namaqua National Park
• Kalahari Desert Products	• Akkerdam Nature Reserve
• Carpe Diem Estate	• Goegap Nature Reserve
• Calabash (largest producer and supplier of calabash products in the Northern Cape)	• Goodhope Private Reserve
• Lake Grappa - Ski School	• Mattanu Private Game Reserve
• Kalahari Safaris	• Rooipoort Nature Reserve
• YMC Travel	• Thuru Private Lodge
• Agri-Estate	• Tswalu Private Reserve
• Koenie Kotze	• Black Management Forum
• Wit Dorperstoet	• Boer Goat Breeders Association
• Brabees Kwekery	• Master Builder Association

Table 11: Springbok (also called Namakwa) Focus Area public stakeholders

Organisations/ Stakeholders directly contacted in FA8	
• Richtersveld Challenge Contacts	• Akkerdam Nature Reserve
• Goegap Nature Reserve	• Goegap Nature Reserve
• Biesjesfontein Bed and Breakfast	• Goodhope Private Reserve
• National Wool Growers Association	• Mattanu Private Game Reserve
• African Farmers' Association of South Africa (AFASA) Northern Cape President	• Rooipoort Nature Reserve
• WESSA Northern Cape	• Thuru Private Lodge
• Northern Cape Hunters Association	• Tswalu Private Reserve
• Augrabies Falls National Park	• Black Management Forum
• Kgalagadi Transfrontier Park	• Boer Goat Breeders Association
• Namaqua National Park	• Master Builder Association

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

NOTIFICATION OF PUBLIC MEETING

Invitation to attend a public meeting to discuss the eight strategic focus areas identified through the Department of Environmental Affairs' national wind and solar PV energy Strategic Environmental Assessment (SEA) process

Background:

As part of facilitating the efficient implementation of the Presidential Infrastructure Coordinating Commission (PICC) Strategic Integrated Project 8 (SIP8), which is the promotion of green energy in support of the South African economy; the Department of Environmental Affairs (DEA) and the Council for Scientific and Industrial Research (CSIR) are conducting a SEA aiming at identifying strategic geographical areas best suited for the effective and efficient roll-out of large scale wind and solar PV energy projects, referred to as Renewable Energy Development Zones (REDZs). Through a process of positive and negative mapping as well as wide stakeholder consultation, eight focus areas have been identified as potentially being of national strategic importance for wind and solar PV development. DEA and CSIR are planning on undertaking a Provincial Roadshow to engage with local communities within the 8 focus areas. You are invited to attend your local public meeting at the following applicable venues and dates:

Details of public meetings:

No.	Province	Focus Area	Meeting Town	Venue	Date and Time
1.	Western Cape	OVERBERG FOCUS AREA	Bredasdorp	Nelson Mandela Hall	18 March 2014 17:30-19:30
2.	Western Cape	CENTRAL KAROO FOCUS AREA	Laingsburg	Tourism Auditorium Hall	19 March 2014 17:30-19:30
3.	Eastern Cape	CACADU FOCUS AREA	Grahamstown	Grahamstown Recreation Hall	24 March 2014 17:30-19:30
4.	Eastern Cape	CHRIS HANI FOCUS AREA	Queenstown	Queenstown Town Hall	26 March 2014 17:30-19:30
5.	Northern Cape	LEJWELEPUTSWA FOCUS AREA	Kimberley	Kimberly City Hall	31 March 2014 17:30-19:30
6.	North West	DR RUTH FOCUS AREA	Vryburg	Huhudi Hall	02 April 2014 17:30-19:30
7.	Northern Cape	SIYANDA FOCUS AREA	Upington	Tol Speelman Hall	03 April 2014 17:30-19:30
8.	Northern Cape	NAMAKWA FOCUS AREA	Springbok	Show Hall	07 April 2014 17:30-19:30

Project website: http://www.csir.co.za/nationalwindsolarsea/
For any enquiries, please contact: Wisaal Osman
Email: wosman@csir.co.za; Telephone: 021-888-2400

Figure 23: National Invitation to the Wind and Solar PV SEA Roadshow Public Meetings

B 4 - 6. Public Meeting Notes

Content

Notes of the public meeting in Bredasdorp on 18 March 2014

Noel Greef (Botrivier):

- Why is there a focus on wind energy? It has a number of negative implications and impacts. Overberg is the reservoir of the South African national bird, the Blue Crane. Wind turbines kill birds and bats and represent a serious constraint for the Overberg area.

Cornelius van der Westhuizen (CSIR):

- This SEA is conducted in support of SIP 8 which is "Green Energy in support of the South African Economy". Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts.
- Birds and bats are known sensitivities for wind development. These sensitivities can be addressed with specialist studies. The impact of wind turbines on Blue Cranes is not known because Blue Cranes are not found anywhere else in the world. During Phase 2 of the SEA, specialist scoping assessments will be conducted to identify the sensitive areas in the focus areas and therefore be able to make informed decisions with regard to development. Bird and bat monitoring will always be conducted, but the intensity of the monitoring might vary according to the sensitivity area. If the development is occurring in a highly sensitive bird and bat area, then monitoring will be more intense than if the development was occurring in a less sensitive area.

Odette Curtis (Overberg Lowlands Conservation Trust):

- Will the SEA prevent substandard scoping work from being conducted for EIAs?
- Will there be a botanical survey? Who is the specialist?

Cornelius van der Westhuizen (CSIR):

- It is foreseen that the scoping work for the SEA will improve the quality of future assessment studies conducted for environmental assessments in those areas, as the highly sensitive areas would have been flagged as being unsuitable for development.
- As a result of the SEA process, the South African National Biodiversity institute (SANBI) is establishing a Bird and Bat online database into which all EIA monitoring data will be uploaded. Birdlife-SA and the South African Bat Assessment Advisory Panel (SABAAP) are creating a protocol for monitoring and data capturing so that the information uploaded to the database will standardised and so improve the data quality and prevent substandard monitoring and data collection. The data will be verified by an external specialist to ensure the integrity of the data is maintained.
- The team of specialists conducting the terrestrial and freshwater aquatic ecosystems and biodiversity assessment includes Andrew Skowno and Simon Todd from Ecosol GIS which is a biodiversity planning and conservation consultancy, and, Justine Ewart-Smith and Kate Snaddon from the Freshwater Consulting Group which is a specialist river and wetland consultancy.
- This is a strategic level scoping assessment and not an impact assessment. An on-ground assessment will be necessary in the sensitive areas of the REDZs and the initial screening of this on site verification will be informed by the current high level scoping assessment.

Noel Hunt (Botriver Aesthetics Committee):

- Current EIAs had scoping assessments which were very poor. Will these issues be re-examined as a result of the SEA process before final approval is provided?

Cornelius van der Westhuizen (CSIR):

- Environmental Authorisations (EAs) are valid for 3 years. If and EA lapses and the approval needs to be renewed, then all new sensitivities and potential impacts that have been flagged during the SEA will be taken into consideration before the new approval is granted.
- Legislation is currently being drafted to address these issues and in future there will be minimum requirements for specialists to conduct a specialist study and case officers to approve an EIA.

Noel Greef (Botriver Ratepayers):

- The quality of the EIA reports is questionable. It seems like developers are using specialists with questionable credentials and thus the reports produced do not address the sensitivities within the area adequately.

Surprise Zwane (DEA):

- Comment is noted.

Mark Townsend (Botriver Aesthetics Committee):

- The wind resource map available on the website identifies the West Coast (Hopefield) area as having a low wind resource whereas the Overberg area is identified as having the highest wind resource potential. This does not make sense as a large wind farm was developed in Hopefield. A map is displayed but no information source has been provided. The community is unable to query the map and its information. The public should have access to this information. What evidence exists to support this claim?
- Do developers bid on the same piece of land? Is there competition between developers?

Cornelius van der Westhuizen (CSIR):

- The fact that the Hopefield project was financed and built, does not mean that the area had a better wind resource potential than the surrounding area, but rather that the resource potential justified the cost of the project at that specific time. The bidding process for Renewable Energy (RE) projects is becoming more competitive and as such, areas with high wind resource potential are being considered for development.
- The Wind Atlas of South Africa (WASA) uses modelled data and is not measured data. The modelled data is verified with wind measurements taken from 11 masts across the Northern, Western and Eastern Cape. The methodology regarding the modelled data as well as the measured data used to verify the modelled data is publicly available from the WASA website.
- There is a certain degree of uncertainty with regard to modelled data. There are different requirements for wind measurement data required by WASA and Private Industry. The measurements conducted by Industry could not be taken into consideration when the WASA map was developed, thus there was consultation between CSIR and Industry regarding where development should take place. If there was agreement between the WASA modelled data and Industry consultation regarding where development should take place, then there is certainty that the resource potential is high.
- The eight focus areas have been identified as having higher development potential than the surrounding areas for large strategic cluster development of RE projects. However, it does not mean that smaller projects cannot be developed in areas where the resource might be lower, but where the development make sense.
- The IRP allocates an amount of energy that needs to be generated, but not where the energy should be generated. A developer can go anywhere in South Africa and negotiate a price with the landowner. Developers go to landowners, sign agreements with the landowners, develop project for that specific piece of land, get all authorisations in place and then approach the DoE and bid on the project. It is a tender process and all projects across the country compete with each other.

Andre van der Spuy (AVDS Environmental Consultants):

- The focus areas include private game reserves and private farms which currently deliver socio-economic benefits through eco-tourism. How does the SEA take cognisance of those land uses which are a benefit to the community and are more environmentally sustainable?
- Once the focus areas have been gazetted, will EIAs no longer be conducted within the areas?
- Wind farm developments are environmentally damaging and thus an EIA tends to be a long drawn out process because the project is being proposed in an area that is not suitable for development.
- The impact of the wind farm extends far beyond the original size of the development. In the Eastern Cape in particular, land has been bought because it is a rural environment and a high CBA (Critical Biodiversity Area) with low agricultural use and development.
- The SEA is creating special land uses to allow for industrialisation of rural land.

Cornelius van der Westhuizen (CSIR):

- The intent of the SEA is to identify the sensitivities within the focus areas, i.e. low sensitivity, medium sensitivity and high sensitivity. No department has the right to sterilise a land use, but rather to gazette a highly sensitive land use and thus it would be more difficult to motivate for development within those highly sensitive areas. It remains the discretion of the game farm owner to accept or refuse wind energy or solar PV energy facilities on his/her land.
- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under NEMA, but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area. The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas. However, the process has not been finalised yet and is currently being considered by DEA.
- Wind farms do have environmental impacts and these will be assessed through the specialist study.
- The EIA is a good tool but it is sometimes being used inappropriately, i.e. an EIA cannot do strategic planning or assess cumulative impacts because it is conducted at an individual project level.
- There will always be an impact of development (wind farms, housing) and the question that needs to be examined is what level of impact is acceptable?

Odette Curtis (Overberg Lowlands Conservation Trust):

- Is permission required to build houses on agricultural land as is required for wind farms?

Cornelius van der Westhuizen (CSIR):

- 10% of agricultural land can be used for golf estates, housing development, etc., but authorisation needs to be obtained as is the case with RE project development.

George de Kock (Driefontein Farms):

- Climate change is a problem that affects us all and will definitely influence land uses in the future. We need to move past personal short term interests in order to tackle the more pressing problem of global warming through RE projects.
- What source of energy do we want: coal power station, nuclear energy or renewable green energy?

Cornelius van der Westhuizen (CSIR):

- Comments noted.
- We are looking for a high level agreement regarding where development should take place in South Africa and it will also be an incentive for socio-economic development to take place. The social spend from clusters of projects can be pooled and reinvested in the community through necessary developments, i.e. schools, clinics, etc.

Surprise Zwane (DEA):

- The SEA allows for proactive planning and thus issues can be identified and haphazard actions are not taken.

Cornelius van der Westhuizen (CSIR):

- There needs to be consensus across the three tiers of government (national, provincial and local) to facilitate strategic planning which can then be implemented at the local municipal level through Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs).

Mark Townsend (Botriver Aesthetics Committee):

- Will the public be able to participate in the demarcation of the Overberg focus area?
- Will nature reserves that occur within the area be highlighted as no-go areas?

Cornelius van der Westhuizen (CSIR):

- All reasonable concerns and comments submitted to the SEA team are noted and will be considered during the SEA process for the further evaluation and refinement of the focus areas boundaries

- Any proclaimed gazetted nature reserve is not available for renewable energy development.

Odette Curtis (Overberg Lowlands Conservation Trust):

- What is the process for the finer scale assessment of the focus areas?
- Will there be GIS mapping followed by comments from experts on the map?
- What is the impact on current and future EIA applications? When will the SEA be completed? What is the timing?

Cornelius van der Westhuizen (CSIR):

- The output of each specialist assessment will be a four-tier sensitivity map for wind and solar PV technologies within each focus area which will feed into a protocol stipulating how to interpret and implement the sensitivity map.
- The specialists are doing the mapping and provide recommendations on how it should be implemented. The development protocol, with inputs from the various local competent authorities, will be different for each of the eight focus areas. For instance a low sensitivity (green) zone in the Overberg area will have different requirements and conditions for development than in a low sensitivity (green) zone in the Springbok area, based on the various sensitivities and characteristics of the environment in those areas.
- The SEA will be completed at the end of 2014 and it will then be handed over to DEA for the gazetting process. The SEA will not affect the current EIA system until the SEA outputs are gazetted. EIA applications that have been approved will not be affected by the SEA unless they need to be re-evaluated for another approval.

Surprise Zwane (DEA):

- We are aiming for a sign-off date of April 2015. This is the date when the REDZs will be gazetted and the SEA process and outputs will be used for the environmental authorization process in the REDZs.

Mich Nieuwaldt (Sagit Energy):

- Technical note on the working corridors of the EGI SEA map: there is an incomplete ring of medium voltage lines around the Overberg which Eskom is addressing.

Cornelius van der Westhuizen (CSIR):

- The corridors depicted for the Electricity Grid Infrastructure (EGI) SEA are future planning only, it focuses on power lines and substations that need to be upgraded or added to the current network in the 20 years.
- The EGI SEA will address infrastructure expansion that will be independent of the various energy scenarios being considered (i.e. gas imports, fracking, nuclear, coal mining, Renewable Energy (RE)).

Noel Greef (Botriver Ratepayers):

- Why are we considering building technology that is proven to have failed elsewhere?

Cornelius van der Westhuizen (CSIR):

- All electricity generation types have pros and cons. Renewable energy technologies are used efficiently in many countries. Evident advantages of RE are their availability over wide geographical areas in contrast to the concentrated location of fossil fuels sources, their participation to energy security, climate change mitigation, and moving towards a clever and greener way of producing power from natural renewable resources. The wind resource can be unpredictable, i.e. a 30% capacity factor, but if the development is spread over the country, there is a base load that can be derived from wind energy.
- The IRP calls for diverse energy generation sources to move away from the strong dependence of SA on coal power generation.

Odette Curtis (Overberg Lowlands Conservation Trust):

- The period until gazetting can take approximately two years. In the meantime, will draft maps be available? Will the information be available to inform decision making regarding developments in the area?

Cornelius van der Westhuizen (CSIR):

- Currently, the specialist maps are not available yet as the studies are being conducted. The maps will not be legally enforceable until such time as the products of the SEA are gazetted.
- All documents and information is available in the public domain. Use of the information will depend on the user.

List of attendees:

Organisation	Name	Email	Telephone
Floraland Pty Ltd	Rudy Visser	rudy@floralandpty.co.za	028-424-2627
Sagit Energy	Mich Nieuwoldt	mich@sagitenergy.co.za	083-253-2469
Botrivier Aesthetics	Johnny Swanepoel	jpswan01@gmail.com	083-251-4164
Botrivier Ratepayers	Noel Greeff	greeff.nobl@gmail.com	083-703-0272
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	Frances Hendricks	franceshendricks4@gmail.com	072-827-3840
Driefontein Farms	George de Kock	george@twk.co.za	076-420-1846
Swellendam Municipality	Willie Hattingh	whattingh@swellendam.co.za	084-402-7715
Overberg Lowlands Conservation Trust	Odette Curtis	odette@orcawireless.co.za; info@overbergrenosterveld.org.za	083-551-3341
Western Cape Department of Environmental Affairs & Development Planning (WC DEADP)	Zaahir Toefy	zaahir.toefy@westerncape.gov.za	021-483-2700
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	Noel Hunt	bethhunt@telkomsa.net	028-284-9417
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National Department of Environmental Affairs (DEA)	Londeka Phetha	lphetha@environment.gov.za	076-277-1877
	Surprise Zwane	SZwane@environment.gov.za	012-310-3145
Council for Scientific and Industrial Research (CSIR)	Cornelius van der Westhuizen	CvdWesthuizen1@csir.co.za	021-888-2408
	Lydia Cape-Ducluzeau	LCapeDucluzeau@csir.co.za	021-888-2429
	Wisaal Osman	wosman@csir.co.za	021-888-2482

Notes of the public meeting in Laingsburg on 19 March 2014

D. Wolfromm (Windcurrent):

- Will the scoping exercise be a desktop study? Is it not dangerous to declare exclusion zones using a desktop study?

C. van der Westhuizen (CSIR):

- This is a strategic level scoping assessment and not an impact assessment. An on-ground assessment will be necessary in the sensitive areas of the REDZs and the initial screening of this on site verification will be informed by the current high level scoping assessment. It is foreseen that the scoping work for the SEA will improve the quality of future assessment studies conducted for environmental assessments in those areas, as the highly sensitive areas would have been flagged as being unsuitable for development.
- This SEA is conducted in support of SIP 8 which is "Green Energy in support of the South African Economy". Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts.

W. Theron (Laingsburg Municipality):

- What about Environmental Impact Assessments (EIAs) that have already been approved in the focus area?

C. van der Westhuizen (CSIR):

- Environmental Authorisations (EAs) are valid for three years. If the project has not been constructed within the three years after receiving the EA, a new EA needs to be obtained. If new information becomes available during that time, it needs to be addressed before the authorisation will be granted. If projects occurring within the focus areas need to be re-authorised, then the sensitivities and information generated by the SEA project will need to be taken into consideration.
- Scoping level assessments will not be conducted outside of the focus areas. Projects that occur outside of the focus areas will follow the normal EIA route.

W. Theron (Laingsburg Municipality):

- When will the focus areas of the project be finalised and implemented?
- There are a few wind developments proposed inside the focus areas. Will it be an easier process for them?

C. van der Westhuizen (CSIR):

- The SEA study will be completed by end 2014. The project outputs will then go through the cabinet approval and gazetting process. The aim is to have the Renewable Energy Development Zones (REDZs) implemented and legally binding by the second half of the year 2015.
- From a strategic point of view, development should be focussed and incentivised in the REDZs but development cannot be strictly limited to the REDZs. Projects proposed outside of the REDZs will be considered on their own merit by the relevant competent authorities.
- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under NEMA, but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area. The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas. However, the process has not been finalised yet and is currently being considered by DEA.

D. Wolfromm (Wiln Windcurrent):

- Were all potential developers contacted?

L. Cape-Ducluzeau (CSIR):

- The South African Photovoltaic Industry Association (SAPVIA) and the South African Wind Energy Association (SAWEA) representatives are part of the Expert Reference Group of the SEA and are responsible for distributing the available data and documentation to all their members.

C. Matthee (Farmer):

- Is fracking included in the SEA project?

C. van der Westhuizen (CSIR):

- No, this SEA is conducted in support of SIP 8 which is "Green Energy in support of the South African Economy". Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts.

J. Venter (Laingsburg Municipality):

- Why was CSP not included?

L. Cape-Ducluzeau (CSIR):

- Wind and Solar PV technologies were selected based on the majority of EIA applications submitted to DEA up to December 2012 as well as most of the bids submitted in round 1 and round 2 of the RE (Independent Power Producers) IPP process.
- There has been interaction with the CSP industry association and they have requested that an additional study be conducted for CSP technology.

C. van der Westhuizen (CSIR):

- In addition to this, the CSP allocation within the IRP (Integrated Resource Plan) is not significant, so fewer projects will be proposed. Different criteria need to be considered for CSP than for CPV, e.g. water usage.

D. Wolfromm (Wiln Windcurrent):

- Inside the REDZs, will developers go through a different bidding process?
- When will Eskom begin their planning? Is the planning taking the focus areas into consideration or only once the REDZs are formally declared?

C. van der Westhuizen (CSIR):

- The bidding process has not been decided yet. It is currently being discussed by DoE and Treasury. The SEA results are already being used to inform Eskom transmission planning. However, access to funding will only be confirmed once the REDZs are gazetted

L. Cape-Ducluzeau (CSIR):

- The REDZs represent a high level agreement for development to take place in specific geographic areas.
- Before Eskom can build infrastructure, it needs to motivate why funding is needed to build infrastructure in specific areas. The REDZs provide a spatial commitment to motivate for the release of funds for the necessary infrastructure to connect the project to the grid in these specific geographical areas.

M.A. Mokgobo (ESKOM):

- Does the DoE view RE as a long term source of energy?

C. van der Westhuizen (CSIR):

- The IRP stipulates that 17.8 GW will be allocated to RE by 2030. That is a long term plan, but it is not legally binding.

- The REIPPP programme first targeted 3 725MW of renewable energy power to be online by 2016. In December 2012, the DoE announced a further allocation of 3 200MW of renewable energy power to be online by 2020.
- So far 1416 MW has been allocated during Window 1 to Solar PV, Wind and CSP projects; 1044 MW has been allocated during Window 2 to Solar PV, Wind, CSP and Small Hydro projects; and 1456 MW has been allocated during Window 3 to Solar PV, Wind, CSP, Small Hydro, Landfill Gas, and Biomass projects.

M.A. Mokgobo (ESKOM):

- What percentage of electricity consumption will be generated by RE?

L. Cape-Ducluzeau (CSIR):

- Currently, approximately 72% of South Africa's energy consumption comes from coal, then about 22% is generated by oil, 3% by natural gas and nuclear, and less than 1% by renewables (primarily from hydropower). The country installed electricity capacity is about 46 MW minus the amount the power station uses to operate. Currently 95% of our electricity is supplied by ESKOM. The renewable energy industry is small but it is planned that our renewable electricity capacity will increase to about 18 GW by 2030.

D. vd Vyven (Farmer):

- Do other renewable energy sources, e.g. ocean energy technologies, have an influence on the development of wind and solar energy technologies?

D. Wolfromm (Wiln Windcurrent):

- A big factor that contributed to the development of RE in South Africa was the need to have energy security in South Africa. There were issues regarding the supply of energy as well as energy blackouts within the country. The country therefore needed alternative forms of energy which is spread across the country to reduce distribution losses.

C. van der Westhuizen (CSIR):

- Renewable energies were started in the country because South Africa made a commitment to reduce carbon emissions.
- South Africa has a centralised energy supply which is a high risk model. A decentralised energy supply reduces the risk because there is a variety of an energy generation source.

J. Venter (Laingsburg Municipality):

- What is the current timeframe for projects to be developed?

C. van der Westhuizen (CSIR):

- Projects needs to be issued a positive environmental authorisation then be selected as preferred bidder in the RE IPP PP process. After reaching financial closure they will be able to start construction of the facility. They will however only be able to feed electricity into the grid if there is a substation with available connection to the grid. ESKOM needs to upgrade the Transmission network at national level to allow for penetration of more renewable energy projects into the grid. This s currently the problem.
- Clustering of development is naturally occurring in South Africa, but the development within an area still needs to be controlled to prevent 'a forest of turbines'. The SEA will examine cumulative impacts of development. Density thresholds for development within an area will be determined to ensure that cumulative impacts are below the maximum level. An EIA is conducted for an individual project and does not examine cumulative impacts.

D. vd Vyven (Farmer):

- What is the minimum wind speed that is required for the development? I have heard that the lower the bidding price, the higher the wind speed needs to be.

C. van der Westhuizen (CSIR):

- The bidding process is becoming more and more competitive which does affect the bidding price and therefore the location of development. The lower the price, the higher resource is needed for the projects location.
- RE cannot be the base load of energy. There still needs to be a diverse energy mix available to compensate when the natural resource is not at its optimal peak.

List of attendees:

Organisation	Name	Email	Telephone
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Notes of the public meeting in Grahamstown on 24 March 2014

Philip Machanick:

- Why does the project only involve solar PV energy and not include CSP?
- Why is the SEA identifying focus areas instead of balancing out the geographic regions so that development is spread out?

Lydia Cape-Ducluzeau (CSIR):

- The scope of work and budget does not allow for CSP energy to be included in the current SEA. Wind and Solar PV technologies were selected based on the majority of EIA applications submitted to DEA up to December 2012 as well as most of the bids submitted in round 1 and round 2 of the RE (Independent Power Producers) IPP process.
- There has been interaction with the CSP industry association and they have requested that an additional study be conducted for CSP technology. The CSP technology needs to be addressed in a different study.
- The spread of development was examined during Phase 1 of the SEA process. Originally, development for solar energy was concentrated in the Northern Cape but at a later phase in the SEA process the development was spread according to the highest development potential per province for wind and solar PV energy.

Patsy Scherman (Scherman Colloty & Associates):

- When the exclusion mask was determined in the study, how were wetlands considered?

Cornelius van der Westhuizen (CSIR):

- The National Freshwater Ecosystem Priority Areas (NFEPA) dataset was used to identify wetlands and rivers for the exclusion mask.
- A team of specialists is currently conducting a terrestrial and freshwater aquatic ecosystems and biodiversity assessment to confirm the location and sensitivities associated with wetlands and other aquatic features.

Patsy Scherman (Scherman Colloty & Associates):

- During these specialist studies, will there be ground truthing of the FEPA maps? Will specialists visit the identified study areas?

Cornelius van der Westhuizen (CSIR):

- This is a strategic level scoping assessment and not an impact assessment. An on-ground assessment will be necessary in the sensitive areas of the REDZs and the initial screening of this on site verification will be informed by the current high level scoping assessment.

Patsy Scherman (Scherman Colloty & Associates):

- How will the buffers around wetlands be managed?

Cornelius van der Westhuizen (CSIR):

- Currently, there is a discussion with the National Department of Water Affairs to get a high level agreement about the buffer to use within the focus areas.
- It is foreseen that the scoping work for the SEA will improve the quality of future assessment studies conducted for environmental assessments in those areas, as the highly sensitive areas would have been flagged as being unsuitable for development.

Louis Dewavrin (Innowind):

- Are the boundaries identified in the focus areas set in stone?

Cornelius van der Westhuizen (CSIR):

- The current 8 focus areas are not the final REDZs. Specialist scoping assessments are currently being conducted to identify and the sensitivities in those areas and to inform the refinement of the boundaries.

- Once the boundaries around the focus areas have been gazetted, the sensitivity maps which have been created should be updated continually.

Louis Dewavrin (Innowind):

- There are a number of concerns with the demarcations of the boundaries of the Cacadu focus area namely; 1) there are three wind farms which have been approved to the north east outside the boundary of the Cacadu focus area with a large substation situated in this area which has not been included in the study area; 2) there are many game farms in the delineated Cacadu focus area; 3) other wind projects which are close to the boundary of this focus area are not included; 4) approximately 30km east of Grahamstown there are no game farms and yet this is area is excluded from the Cacadu focus area; and 5) the highest level of poverty in the Eastern Cape is found in the former homelands and the focus areas do not include the former homelands.

Cornelius van der Westhuizen (CSIR):

- Existing renewable energy projects were not used for determining the eight focus areas.
- The aim is to incentivize development in the least sensitive areas within the focus areas. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts.
- Eskom needs certainty for a concentration of RE projects within a geographical area before upgrading a substation or building new transmission lines. A new substation or new transmission power line cannot be built for one project only. We need an economy of scale.
- The existence of game farms in the area has been noted as an issue which needs to be addressed. For the privately owned game farms, it is up to the land owner to decide if they want RE development on their game farm.
- It is currently unknown what the impact of the focus areas will be on the current procurement process. With regards to the former homelands, there can only be a push for development where resources are present. The focus areas are based on availability of wind and solar resource, amongst other factors which were mentioned in the presentation.
- The Eastern Cape Province has requested that the former homelands be included in the focus areas to enable socio economic development through construction and/or upgrade of the necessary infrastructure. For example, in the Stormberg area, the Eastern Cape Province has commissioned a vulture study to track vultures in this area to determine whether the area is sensitive to vultures or not, so that the study area can be extended into the former Transkei.

Hylton Newcombe (Africoast Engineers):

- A coastal buffer has been included in the negative mapping during Phase 1 however the coastal region currently has projects which are in bidding rounds 1-3. There is currently a race amongst developers for grid capacity.
- The lack of grid capacity in the study areas may force developers to stay away from the incentivized focus areas and go to areas where resources are available. These focus areas will not stop developers from developing outside the REDZs where wind resources are abundant and the financial model makes sense.

Cornelius van der Westhuizen (CSIR):

- Development will be incentivized within the REDZs but not limited to the REDZs. You have correctly said that the biggest issue currently for Renewable Energy (RE) projects is the connection to the grid. A RE project may be an area with high wind and solar resource but may not be able to get connection to the grid in line with the timeframe of the RE IPP PP.

Chris Pike (Caracal Reserve Development Solutions):

- What were the negative mapping criteria which were considered? Were these criteria development- or ecological-based?

Lydia Cape-Ducluzeau (CSIR):

- A number of criteria were used in the negative mapping process including protected areas; RAMSAR sites; Critical Biodiversity Areas (CBAs); threatened ecosystems; coastal ecosystems and buffer including estuaries; rivers; wetlands; birds; bats; agricultural field crop boundary; Square

Kilometre Array (SKA); building buffers; safety distance from roads; safety distance from power infrastructure; airports; communication towers; as well as technical features. The CSIR has been working closely with DEA, DAFF, SANBI, Cape Nature, Birdlife SA, SABAAP and SAHRA to develop the list of criteria used in the exclusion map which informed the negative mapping exclusion mask.

Johnny de Beer (Bowmans Ridge Game Farm):

- This study is promoting an area without knowing how the land owners feel about RE projects occurring on their land.

Cornelius van der Westhuizen (CSIR):

- This roadshow across the eight focus areas and public meetings aim at gathering local communities and local landowners inputs.
- Development of wind and solar PV energy is incentivized in those areas at a national strategic level however the negotiation for the specific land parcels within the focus areas is up to the land owners.

Johnny de Beer (Bowmans Ridge Game Farm):

- The study should include consultation with all the affected game farmers.
- We request that you sterilize the area so that RE projects do not occur. As a game farmer I do not want any part of this project.
- This project is removing the processes that allow for game farmers to object to any RE projects occurring on their land as it aims to incentivize development in focus areas.

Cornelius van der Westhuizen (CSIR):

- This SEA is conducted in support of SIP 8 which is "Green Energy in support of the South African Economy". Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts.
- The question the study is attempting to answer is not whether RE projects should take place or not but rather where RE projects should take place.

Lydia Cape-Ducluzeau (CSIR):

- The intent of the SEA is to identify the sensitivities within the focus areas, i.e. low sensitivity, medium sensitivity and high sensitivity. No department has the right to sterilise a land use, but rather to gazette a highly sensitive land use and thus it would be more difficult to motivate for development within those highly sensitive areas. It remains the discretion of the game farm owner to accept or refuse wind energy or solar PV energy facilities on his/her land.
- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under NEMA, but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area. The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas. However, the process has not been finalised yet and is currently being considered by DEA.

Bill Rowlston (Coastal & Environmental Services Pty Ltd):

- Does the SEA process take away the Environmental Impact Assessment (EIA) process?

Lydia Cape-Ducluzeau (CSIR):

- All RE projects proposed outside the REDZs will still follow the current EIA process.
- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under NEMA, but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area.
- The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas.
- There will always be public participation on the ground to be undertaken as part of this Environmental Authorisation process.

Cornelius van der Westhuizen (CSIR):

- Development of projects inside the REDZs will also be subject to a development protocol which will be based on specialists scoping assessment and the competent authorities' requirements. There will be a different protocol for each REDZ and also for different technology i.e. wind and solar PV.

Richard Gush (Woodbury Lodge/Amakala Game Reserve):

- It is pleasing to see analytical planning of RE projects because up until now it has been a free for all with no structure or method. Was the data and information used to identify the focus areas from EIA projects?

Lydia Cape-Ducluzeau (CSIR):

- The information which was used varied from publically available data to data purchased by the DEA and other associations. The datasets were carefully reviewed and approved by DEA, as well as SANBI and other competent authorities before it was used in the SEA.
- DEA is currently working on a map of private game farms.

Richard Gush (Woodbury Lodge/Amakala Game Reserve):

- Will there be an opportunity for the public to input directly to specialist studies which will occur?

Lydia Cape-Ducluzeau (CSIR):

- Yes, the public can provide local knowledge to specialists via the CSIR. For instance, one can send shapefiles or kmz file of land parcels which should be red flagged for business activities reason (game farming) or ecological reasons.
- Spatial data is needed because the project works with GIS and will need to integrate this data with the dataset used in the SEA thus far.
- CSIR, DEA, SANBI, and Birdlife South Africa are currently working together on a "birds and bats monitoring tool" where data can be provided by local experts, and the public. The data will then be verified and standardized, and uploaded onto an online platform where and the data and the tool will be available to the large the public.

Howard Ramsden (Terra Renewables):

- Game farmers want to request sterilization of land for RE projects. There is no problem with game farmers refusing RE projects on their own land; however sterilizing other people's land is unacceptable. There must be ways of working together with game farmers. The extent to which South Africa is using coal for the production of electricity is unacceptable and alternatives must be investigated.

Graeme Mann (Graeme Mann (Kwandwe Private Game Reserve):

- The majority of game reserves are not against wind RE in general but wind energy projects cannot be built in areas where game farming occurs. The issue is finding the right areas for developing RE projects.
- We are willing to give the data. We as game farmers have pushed for a socio-economic study in the area and would like to be in contact with the specialist responsible for the socio-economic study to provide the information.

Lydia Cape-Ducluzeau (CSIR):

- Information can be provided to the SEA team and this will be compiled into an information package for specialists to use in the scoping assessment of the 8 focus areas.

Graeme Mann (Kwandwe Private Game Reserve):

- It is important for us that we provide the specialist with information.
- We have tracked socio-economic development in this area for 15 years and would like to contribute to the information the specialist will use.

Lydia Cape-Ducluzeau (CSIR):

- We appreciate this and the information provided will be taken into consideration by the specialist.

Peter Moll (Trumperers Drift Safaris):

- The problem is the environmental specialists who do conduct the EIAs for RE projects as they are not all governed by the same mandate. Is there a document stipulating how specialist studies should be conducted?
- We need a document stipulating what specialist studies must comprise. Is there a framework from which specialist should work with when conducting specialist studies?
- I would like to see a 10km radius around a potential RE project in which all farmers must be notified of any RE projects that will occur in that area.
- What effect will turbines have on animals immediately below the wind turbines? How will mortality rate be affected? What will the effect be on breeding?
- Game farmers and game ranchers should be consulted more on RE development projects. The development of a project should be documented clearly.
- There should be proof of money paid every year to the communities that these projects have promised to assist. The whole process should be documented in an orderly manner.

Lydia Cape-Ducluzeau (CSIR):

- Game farming is a large industry in this Cacadu focus area and the issues have been noted.
- The intent of the SEA is to identify the sensitivities within the focus areas, i.e. low sensitivity, medium sensitivity and high sensitivity. No department has the right to sterilise a land use, but rather to gazette a highly sensitive land use and thus it would be more difficult to motivate for development within those highly sensitive areas. It remains the discretion of the game farm owner to accept or refuse wind energy or solar PV energy facilities on his/her land.
- The effects of turbines on animals immediately below the wind turbines and more specifically on breeding are not well-documented in South Africa since the wind industry is still very small and only a few projects have recently been built. However there are many cases in the world where stock farming and wind energy land uses are integrated.

Cornelius van der Westhuizen (CSIR):

- Legislation is currently being drafted to address these issues and in future there will be minimum requirements for specialists to conduct a specialist study and case officers to approve an EIA.
- According to the EIA regulations as it currently stands, the cadastral landowners and local stakeholders in the surrounding of the proposed project should be informed of the EIA process being conducted.
- A strategic decision was taken by the DoE and Treasury regarding the social spend from RE project developments, i.e. a certain percentage of the income derived from RE projects must be reinvested in the community. Developers themselves decide how the money should be re-invested in the local community. The second method was chosen because the community would be able to see the direct benefits of the development rather than money being channeled via the municipality. It is beyond the scope of the SEA to address questions regarding the finance from RE development because the decision is made by DoE and Treasury.

Attendee 1:

- Local municipalities charges all game farms rates. The municipality charges different rates for agricultural land and game farms. Obtain a list of all the rate paying farms from the local municipality and flag them as high sensitivity areas.

Cornelius van der Westhuizen (CSIR):

- The request of flagging game farms as high sensitivity area has been noted and it will definitely be discussed with the specialist teams.
- However it should remain the land owner decision if they want RE projects on their land or not.

Richard Gush (Woodbury Lodge/Amakala Game Reserve):

- There are structures and mechanisms to canvas and engage the owners of game farms. The data of game farm owners is available - you just have to ask the right people.

Lydia Cape-Ducluzeau (CSIR):

- As far as we know there is no spatial dataset of all game farms in SA.

- The Eastern Cape Government is currently verifying spatial information on game farms in the Eastern Cape and this will be provided to the SEA team for the specialist assessment.
- North West Government has also provided the team with a hunting activity layer indicating where game farms offering hunting activities are located in the North West province.
- We have not found a national dataset for game farms that has been verified so far.

William Foles (East Cape Private Nature Reserve Association):

- With regards to the process undertaken in the SEA, I see that it is developer-oriented as developers have been consulted first and then environmental sensitivities are being considered after. Should the process not have begun with environmental concerns now the project is approaching the public at such a late stage?
- The database of private game farms is available for the DEA, why is it up to the game farmers to approach the DEA and prove to them why they do not want development in our specific areas?
- We are not objecting to solar renewable energy. The main area of concern is the issue of visual impact of RE development. This will change the landscape as it will not be natural anymore.

Lydia Cape-Ducluzeau (CSIR):

- This is incorrect the SEA is not developer-oriented. The SEA aims at combining the 3 spheres of sustainability namely Environmental, Economic, and Social Components. The vision of the SEA is "Wind and Solar PV projects in South Africa are developed in an efficient and effective manner that avoids significant environmental impacts and optimises the social and economic benefits, resulting in projects that are supported by strategic planning, endorsed by government, embraced by stakeholders, and attractive to investors.".
- As presented earlier in this meeting, the focus areas were identified through a high level desktop study of the country by overlaying the results of the positive mapping, i.e. high development potential and the exclusion mask created through the negative mapping, i.e. where large renewable energy development should not occur. The industry was consulted during Phase 2 to inform a prioritisation scenario for wind and solar PV development i.e. the remaining clusters of land were presented to the industry for their input to achieve agreement about where development should take place. A number of criteria were used in the negative mapping process during Phase 1 including protected areas; RAMSAR sites; Critical Biodiversity Areas (CBAs); threatened ecosystems; coastal ecosystems and buffer including estuaries; rivers; wetlands; birds; bats; agricultural field crop boundary; Square Kilometre Array (SKA); building buffers; safety distance from roads; safety distance from power infrastructure; airports; communication towers; as well as technical features.
- Private reserves are included in the Protected Areas dataset of DEA however there is no recent and verified dataset including all game farms in SA.
- All electricity generation types have pros and cons. Renewable energy technologies are used efficiently in many other countries and do not have the biggest visual impacts especially if you compare with the visual impacts of coal power stations or nuclear plants. Evident advantages of RE are their availability over wide geographical areas in contrast to the concentrated location of fossil fuels sources, their participation to energy security, climate change mitigation, and moving towards a clever and greener way of producing power from natural renewable resources.

Cornelius van der Westhuizen (CSIR):

- The SEA process is not specifically oriented towards developers or agriculture or Eskom. The problem is everyone is concerned with their own land use and the issues that affect their land use. If a consensus can be reached on where the least sensitive areas within the focus areas are and steer development towards these areas, this would be a good outcome.
- The precautionary principle will always be there, the SEA will inform the authorization process which needs to happen on the ground in the focus area. There will always be some form of authorization process to be followed within the focus areas.

William Foles (East Cape Private Nature Reserve Association)

- No wind farms should have happened without SEA process happening first. We have called for this process since 2010. Now the SEA is four years late. The map of the focus area has not taken into

consideration game farms in the area as exclusion zones. It looks like game farms are an afterthought in the SEA process.

Louis Dewavrin (Innowind):

- A large area in the Cacadu focus area is game farm area. There is a developing project in the Peddie area and there were no objections in this area. What about the concentration of different projects in one area?

Cornelius van der Westhuizen (CSIR):

- Clustering is currently already taking place. The issue now is whether clustering should continue undirected or should the study inform future development and attempt to come up with ways to minimize the impacts of RE developments.

Owen Poultney (Lanka Safaris):

- Was one of the exclusion concerns a layer of game farms in the focus area?

Lydia Cape-Ducluzeau (CSIR):

- As mentioned previously, there was no spatial data available for privately owned game farms.

Joe Cloete (Shamwari Game Reserve):

- From a photographic safari perspective, the socio-economic reports of the region are readily available.

Cornelius van der Westhuizen (CSIR):

- The socio economic specialist is looking at existing socio-economic reports of EIA conducted in the focus areas as well as local SDF and IDP which will provide some information on local businesses and eco-tourism activities.
- Some areas of the Cacadu focus areas are game farming areas, this has been noted, however can one prevent another farmer from having RE development on their land based on the opinion of another game farmer?

Peter Moll (Trumperers Drift Safaris):

- You cannot build a wind farm on a neighbor's land which will diminish the view and take away the value of my land.

Pieter Grobler (Stock farmer):

- I hear game farmers taking the attitude that they are the only people being affected by RE projects. We have different businesses and interests however we must look at the issue in a holistic manner. The stock farmers can accept wind energy developments however the approach must be the identification of sensitive areas and development should take place in the least sensitive areas. We need the electricity generated from the projects and we need to accept the development of wind and solar PV energy.

Andre van der Spuy (AVDS Environmental consultant):

- The Eastern Cape has unique biodiversity and the proposal of RE development is an assault on the biodiversity in the area. Unlocking the area with RE development closes the opportunity to unlock the area with ecotourism efforts.
- If developers get the opportunity to comment on the comments made in this meeting, I think the process is developer oriented.
- The public should get the opportunity to comment on the comments made by developers.
- The SEA is driven by the DEA but the DEA is doing nothing to protect the environment.

Lydia Cape-Ducluzeau (CSIR):

- The extent of comments made by developers were for the three scenarios of where developers would like to see development taking place and not on comments made by the public.

Cornelius van der Westhuizen (CSIR):

- The Integrated Resource Plan (IRP) calls for RE development and the mandate of DEA is to facilitate the efficient and effective rollout of RE. The environmental sensitivities are surely taken into consideration in the SEA process. Strategic areas have been identified based on wind or solar resource, environmental concerns and other factors.

Attendee 2:

- There have been a few people saying they were not notified of this public meeting, are you going to improve the public participation communication methods?

Lydia Cape-Ducluzeau (CSIR):

- The public meetings were advertised in various newspapers covering the extent of the SEA, invitations to the public meetings were circulated to all registered project stakeholders, announcement of the public meetings were posted on the project website, and finally four of our interns spent few days phoning various stakeholders including SALGA, farmers associations, schools, libraries, workers associations, tourism agencies, clinics and other local business and associations as included on each municipality's general stakeholder lists. The SEA team really did its best to inform the larger public of the public meetings but it is obvious that not all stakeholders can be contacted.

Johnny de Beer (Bowmans Ridge Game Farm):

- There is a Farmers Weekly which should have been used to advertise.

Cornelius van der Westhuizen (CSIR):

- Noted.
- One can register on the CSIR SEA RE website as an I&AP and information on updates and meetings and other notifications will be sent.

Graeme Mann (Graeme Mann (Kwandwe Private Game Reserve):

- It is important for the public to give meaningful input in the strategic planning of the project.

Cornelius van der Westhuizen (CSIR):

- Agreed. We welcome all meaningful input in the project.
- If one signs the register, they will be added to the I&APs database and anyone can be an I&AP.

Attendee 2:

- There is a battle to hear properly in the chosen venue. Can better venues be chosen where the acoustics are better? There are many other suitable venues in the town which could have been used.

Cornelius van der Westhuizen (CSIR):

- The venue location was strategically chosen so that all stakeholder groups with and without access to transportation could attend.

Surprise Zwane (DEA):

- Thank you for your attendance. There will be a another public meeting which will happen sometime in May 2015 once the focus areas have been gazetted and there will be a 30 day opportunity for the public to comment on the official release.

List of attendees:

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Notes of the public meeting in Queenstown on 26 March 2014

Cornelius van der Westhuizen (CSIR):
Some frequently asked questions before we open the floor:

- The SEA process is strategic planning process and is not an impact assessment process. It identifies areas where it makes sense to develop and where infrastructure should be built. It however does not limit development to those areas.
- Specialist teams are currently undertaking scoping level assessments of the focus areas and this would then inform the authorization process on the ground which would be more or less stringent than the current Environmental Impact Assessment (EIA) process depending on the sensitivities of the area.
- The focus areas are very large, about 80 000km^2; there is more than enough land in these focus areas to enable competitive bidding by developers.
- The focus areas as they are now are not yet Renewable Energy Development Zones (REDZs). They still need to be assessed and gazetted before they become REDZs. They can still change in the number, shape and size.
- A word about the future plan transmission grid; Eskom did a scenario analysis which went up to the year 2040. They looked at the current Integrated Resource Plans (IRP), a green scenario where they increased the use of renewable energy and a gas and nuclear scenario where gas and nuclear energy are increased. For each of the scenarios, the necessary grid for each of the scenarios was modelled. They modelled the scenario independent of the energy sources, meaning if the scenario independent grid is constructed, it doesn't matter which energy scenario pans out, the grid that is needed will be available.
- These are the transmission corridors which have been presented.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- With regards to the specialist studies that are currently underway, what is the timeframe for these studies to be completed?

Cornelius van der Westhuizen (CSIR):

- The specialist studies will continue until the end of July. The specialists scoping assessment will be reviewed by the competent authorities before they are finalized.
- Just to reiterate, this is not an impact assessment study it is a desktop to interpret available information.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- How long until the final REDZs are gazetted

Surprise Zwane (DEA):

- The plan is mid-2015. Following this there will be a 30 day period for public comment and then public comment before they are gazetted. They will be taken to local and provincial government.

Cornelius van der Westhuizen (CSIR):

- One of the objectives of the SEA is to align the three tiers of government being national, provincial and local government. If the REDZs are gazetted at a national level, they must be adopted in the IDPs and SDFs of local municipalities.

Ian Macdonald (Windlab):

- What were the boundaries of the focus areas based on?

Cornelius van der Westhuizen (CSIR):

- The boundaries of the 8 focus areas were delineated based on existing roads.

Johnathan Visser (4Green development Africa):

- The Stormberg area is a big birds and bats area. The results of the SEA process are positive as the bird monitoring is not being taken away, rather informing the specific study to be done on the ground and takes away the costly full EIA process.

Cornelius van der Westhuizen (CSIR):

- Yes this is correct, there will always be bird and bat monitoring within the REDZs.
- This results from a consultation with South African Wind Energy Association (SAWEA), Birdlife South Africa and the wind energy industry, where the conclusion was that taking away bird monitoring puts a project and investment at risk. Based on the upfront scoping study by specialists in the focus areas and the information available, this can inform the level of monitoring which should occur in different areas of the focus areas.
- One thing that will come out of the SEA process is a birds and bats database to make information publically available so that more informed decisions can be made. The South African National Biodiversity Institute (SANBI) is currently working on the bird and bat database. The data capturing process needs to be standardized. People must agree to what bird monitoring entails. Currently a 12 month monitoring is required for authorization, but what exactly does monitoring entail? The data will also need to be captured in a specific format so that it can be fed into the database. The data must also be verified before it is included in the database.

Swithan Webster (Red Meat Association):

- There is a case where Eskom can construct a transmission line through my farm. The environmental impact assessment was done by someone who did not come to the farm to inspect the site. I as a farmer had to do my own EIA and found massive numbers of birds. Sometimes environment impact assessors could be in developer's pockets, meaning they are paid to ensure a favorable EIA for the developer.

Lydia Cape-Ducluzeau (CSIR):

- It is completely unacceptable that an environmental impact assessment was done by someone who did not come to the farm to inspect the site.
- Legislation is currently being drafted to address these issues and in future there will be minimum requirements for specialists to conduct a specialist study and case officers to approve an EIA.
- According to the EIA regulations as it currently stands, the Environmental Assessment Practitioner managing the EIA must conduct a site visit and the specialist studies must include site surveys. The landowner of the site must provide his/her consent to the EIA process and must be involved in the EIA process. The cadastral landowners and local stakeholders in the surrounding of the proposed project should be informed of the EIA process being conducted.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- Three quarters of western side of the Chris Hani focus area is a migratory route of vultures. Who will monitor the compliance to the development protocol in the REDZs?

Cornelius van der Westhuizen (CSIR):

- The competent authority will monitor compliance to the development protocol within the REDZs; currently the competent authority is DEA.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- What is the current status of the vulture tracking study which had been commissioned?

Alistair McMaster (DEDEAT):

- There is a vulture tracking study at Msukaba initiated 2 years ago. It is a collar tag study. That study has been extended up to Elliot area however it didn't go any further than the Elliot area because of a lack of funding.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- It is critical for the study to go further. I know for a fact that the area is a summer migratory route, it is an endangered species in South Africa but the SEA is going ahead with the focus area in the migratory route of vultures.

Cornelius van der Westhuizen (CSIR):

- The SEA is not disregarding the vulture migratory route. Vulture sensitivity has been noted in that area and the birds specialists are undertaking a scoping assessment to identify the different sensitivities and provide recommendations for the focus area
- There is a need to develop the former homelands and this is where the migratory route is. The SEA will not take away monitoring on the ground.

Lydia Cape-Ducluzeau (CSIR):

- This is also why the public meeting is taking place, to gather information in the local area and acquire any data to integrate into the specialist studies.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- There are not enough studies done on Cape Vultures.

Cornelius van der Westhuizen (CSIR):

- It is a known issue in the area. The major roosts are known, the bird migration routes are known. The questions to ask is how high they migrate and what is the flight path and this is why tracking devices are used.

Alistair McMaster (DEDEAT):

- Eastern Cape Parks and Tourism Services are overseeing the study and Morgen Phipher is the student on the ground for the vulture study.

Swithan Webster (Red Meat Association):

- From a red meat producer's view, people do not eat electricity, they eat food. Solar power farms will require ground where cattle and sheep can graze. Transforming my farm into a large solar farm will reduce land for food.
- I have been fighting with Eskom for the last 2 years as they want to put solar panels on a shared roof. It emerged recently that their kv lines cannot handle the electricity which will be produced from the solar panel and so cannot feed the electricity back into the grid.

Mark Ristow (Adventure Power):

- Have you applied for grid connection? The process is one applies, Eskom then does a study stability of generation and if your line is suitable that you can connect your solar panels and they will reverse your meter. If one has an installation less than 350kv, it's free.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- There will be REDZs but development will also be taking place outside of the REDZs. Why is the process not controlled?
- There are wind farms that are up and running but cannot connect to the grid. Why is the process not more controlled?

Cornelius van der Westhuizen (CSIR):

- The Integrated Resource Plan (IRP) has specific allocation towards RE generation but does not give any spatial reference, and as such the entire SA is available for developers to seek out areas where they can develop. The problem with this scenario is that there cannot be any strategic planning as it is not known where development will take place in the future.
- Currently the country is running out of substations and grid connection, so the investment in infrastructure upgrade and construction must be directed towards specific areas. Before Eskom can build infrastructure, it needs to motivate why funding is needed to build infrastructure in

specific areas. The REDZs provide a spatial commitment to motivate for the release of funds for the necessary infrastructure to connect the project to the grid in these specific geographical areas.
- There will always be pockets of excellence outside the REDZs, where one individual project can be developed therefore developers should still be allowed to seek out the pockets of excellence, as this reduces electricity prices.

Kate Webster (Cape Vulture in Crisis/ Vulpro):
- Wind energy is new in South Africa. If a project fails, who carries that cost?

Cornelius van der Westhuizen (CSIR):
- If a project needs to be decommissioned, the decommissioning fund from the developer can be used to decommission the wind farm.
- In South Africa, land use planning is done at a municipal level; most of the provinces are supposed to have processes governing land use planning. The Spatial Planning and Land Use Management Act (SPLUMA) intend to standardise land use planning across all provinces. In the Western Cape, under the Land Use Planning Ordinance (LUPO), a developer can apply for consent to use a land portion for RE. Under that authorisation consent, there is provision being made in the fund from the developer to the municipality, stating that if development would stop, the fund is available to the municipality to decommission the wind farm.
- It is unlikely a project will be stopped before it has lived its 20 years. After the 20 years, there is scope in the project's budget for decommissioning.

Mark Ristow (Adventure Power):
- From a socio-economic upliftment aspect, in the former homelands it is difficult to get land tenure. What kind of mechanism is being examined to encourage leasing the land as there is a need for job creation in the former homelands. What type of guidelines will be used to ensure the process of land tenure is better in the former homelands?

Surprise Zwane (DEA):
- The rural development and traditional affairs department will be approached for policy level clarity on this matter. The two director generals (DoE and Department of rural development and traditional affairs) would need to sit and agree on a way forward and to sell the concept of the REDZs and RE to the MECs and amakhosi (chiefs).

Mark Ristow (Adventure Power):
- There is a substantial amount of money to be made on the lease agreement. As a developer one would like to see money from RE development reach the people and not end up with one person.

Cornelius van der Westhuizen (CSIR):
- The former homelands were a pull factor for development because of the social need, but it is known that there is an issue with land tenure. Before one can resolve the issues one needs leverage therefore one needs gazetted area which has been signed off by cabinet.

Alistair McMaster (DEDEAT):
- So far one of the things holding back development in the former homelands is the land. If the area is gazetted it opens the door for development. The experience so far has been that traditional leaders and local leaders are on board and are keen.

Cornelius van der Westhuizen (CSIR):
- Gazetting of geographical areas opens up opportunity for ring fence development in the area and to treat the area as a unit of development. One can ring fence the socio-economic spend and use it more efficiently within an area. This currently not happening and it is unclear whether it will happen in future, but it is an opportunity if geographical areas are gazetted.

Surprise Zwane (DEA):

- REDZs will have development protocols. Treasury has asked that the project focus on key socio-economic questions as part of the socio-economic study. The concern is that treasury does not want to lose investors.

Ian Macdonald (Windlab):

- As it stands currently, it is up to developer to decide how the money is spent.
- Who would administer the fund?

Surprise Zwane (DEA):

- Many developers have raised issues about not seeing where money is going in the communities.

Cornelius van der Westhuizen (CSIR):

- It is beyond the scope of the SEA to address questions regarding the finance from RE development because the decision is made by DoE and Treasury.

Ian Macdonald (Windlab):

- From an Eskom point of view, how involved and how committed are they to the REDZS?

Surprise Zwane (DEA):

- The issue that Eskom is facing now is where should they develop first and they need certainty of Independent Power Producers (IPPs).

Cornelius van der Westhuizen (CSIR):

- Eskom is currently under a lot of pressure to connect RE projects to the grid, which they are struggling to do. Eskom can only go to treasury when the project is selected as a preferred bidder.
- Eskom needs certainty for a concentration of RE projects within a geographical area before upgrading a substation or building new transmission lines. A new substation or new transmission power line cannot be built for one project only. We need an economy of scale.
- This is why we went to industry and asked where they want to develop so that there is more certainty in the REDZs as Eskom needs certainty of where development will take place. Eskom requires motivation to take to NERSA and treasury to unlock the funding.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- What guarantee do you have a farmer will continue to farm once a RE project is developed on their land?
- There is a need ensure that a commercial farm will still be productive even though there is RE development on the ground.

Cornelius van der Westhuizen (CSIR):

- It is difficult to impose a land use on a land owner however the additional income provided by the RE project lease agreement can be re-invested for improving the farming activities on the land. The Department of Agriculture needs to approve long term lease agreements.

Ian Macdonald (Windlab):

- If one leases the full property, one does not need consent from the Department of Agriculture.
- Farmers do it for the passion of farming. Additional revenue gives them scope to increase their farming.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- I doubt it.

Cornelius van der Westhuizen (CSIR):

- This is high level discussion. In land use legislation it states that integration of land uses should come first. If land uses can be integrated, it should be explored.
- A group of employees from the Department of Agriculture recently went to Germany to explore the integration of RE and agriculture land uses.

Swithan Webster (Red Meat Association):

- The French prime minister granted 100 million euros for renewable energy what happened to that money?

Cornelius van der Westhuizen (CSIR):

- No idea what happened to that money.
- There are a number of international incentives towards the development of the renewable energy industry in South Africa. The Danish government is funding the WASA project and there is the green fund as well.

Philipp Glaeser (GIZ/BUCOB):

- Germany is a good example of a technical and infrastructure situation where RE generation increases in short period to a high level.
- On the Northern coast there are wind turbines and a huge amount of electricity is produced both offshore and onshore. There is a need for the electricity in the south of Germany but there is no grid to transport electricity from the north to south. The energy is transported outside of Germany as a result of lack of grid. Germany still has problems with its infrastructure to transport the energy.

Cornelius van der Westhuizen (CSIR):

- That is currently a problem for Sub Saharan Africa where most electricity generation is in north.
- Highest development potential for Solar PV was in the Northern Cape but there was a need to spread the development for political and technical reasons and that is why there are currently eight focus areas.
- Grid is always an issue as it is expensive to build and Eskom must be sure of development before it builds the grid. The decentralization of electricity generation assists in creating more security in the generation network.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- Is it possible that within the REDZs there will be no-go areas?

Cornelius van der Westhuizen (CSIR):

- The DEA cannot sterilize land therefore cannot say one cannot develop in an area however they can say it will be difficult to get authorization in a very high sensitivity area.

Lydia Cape-Ducluzeau (CSIR):

- If there is a high concentration of very high sensitivity areas on the border of a focus area then that area may be removed from the focus area.

Cornelius van der Westhuizen (CSIR):

- The specialist studies are identifying the least sensitive areas. The aim is to incentivize development in these areas so that development can stay away from sensitive areas.

Kate Webster (Cape Vulture in Crisis/ Vulpro):

- How many wind farms have been approved?

Ian Macdonald (Windlab):

- There are 22 wind energy preferred bidders in total of which 15 farms are under construction and 12 farms are located in the Eastern Cape.

- When will the updated version of the EIA applications map be released?

Lydia Cape-Ducluzeau (CSIR):

- This will hopefully be released in April.
- The register will be used to register Interested and Affected Parties (I&APs). Notifications of the releases of data and information as well as invitations to future meetings will be sent to the registered I&APs.

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Notes of the public meeting in Kimberley on 31 March 2014

Ranelle Visagie (EWT):

- There is a case where a solar farm has been constructed. The neighbours have seen the benefits that the landowner is receiving, i.e. increased income and now everyone wishes to develop their own solar or wind farm. However, the feedback received regarding the transmission line to which the electricity would be supplied, is that it is full. Can a transmission line be full?

Cornelius van der Westhuizen (CSIR):

- A transmission line is essentially a pipe and there are limits to the amount of electricity that can be supplied.
- A Renewable Energy (RE) project cannot feed into a transmission line, it has to feed its electricity into a distribution line. Both transmission and distribution lines can reach capacity, i.e. the maximum amount of electricity that the line can transport.
- If the lines have reached their capacity, the cost of upgrading the lines is too expensive for a single project to bear the cost. Eskom requires agreement regarding where lines should be upgraded or new lines should be built so that they are able to motivate to Treasury to unlock the necessary funding. The current situation is that the majority of lines are at capacity with the result that RE projects cannot be constructed because they are waiting on Eskom to build or upgrade the necessary infrastructure.
- This highlights the need for focus areas. When RE development is focused in strategic areas, it makes it easier for Eskom to motivate for funding from Treasury to build or upgrade the necessary infrastructure because there is certainty that a number of RE projects will be built within that specific area.

Stoffel Visagie (Farmer):

- I have encountered negative attitudes from Eskom employees towards renewable energy.

Cornelius van der Westhuizen (CSIR):

- Eskom is an electricity provider, and since RE is predominantly generated by private companies, they are losing a share of the electricity market.
- It is also difficult to accommodate electricity generation by RE within the network because of its variable nature. It is therefore difficult to stabilize the electricity network using RE, but it is not impossible.

Ranelle Visagie (EWT):

- Will CSP technology not be developed because of water constraints?
- There is a CSP farm in the area with which I was involved as an Interested and Affected Party (I&AP). The farm has only erected the solar panels but none of the other necessary equipment. I know that CSP requires water, but the Kalahari does not have water readily available. The waste substances produced (oil and salts), must also be disposed of correctly. How will they get water and how will they dispose of the waste substances?
- Another area that was demarcated for CSP construction is still bare and no construction has taken place.

Cornelius van der Westhuizen (CSIR):

- CSP technology will be developed. Eskom is in favour of CSP technology because the electricity generated can be stored. The stored electricity can then be used to assist during peak times. Solar PV technology represents a challenge because it generates electricity during the day when the sun is shining, but when the peak hour occurs at night, there is no electricity available from solar PV. The electricity generated by solar PV cannot be stored.
- CSP is an expensive technology and has its constraints, but it would assist Eskom from a technical perspective. CSP technology requires a large flat area because it essentially uses mirrors that focus the sun's energy. If solar panels have been already been erected, it is possible that the technology has changed. Solar panels absorb the sun's energy whereas the CSP 'mirrors' reflect the sun's energy.

- Not all projects that are proposed are actually constructed. The typical lifecycle of a RE project is as follows: a project is proposed, an Environmental Impact Assessment (EIA) is conducted after which an Environmental Authorisation (EA) is received and it is at this point the developer enters the bidding process run by the Department of Energy (DoE). This is a very competitive process in which 50 to 100 projects are proposed, but as few as 10 projects may be selected by the DoE as preferred bidders. Only once a project is selected as a preferred bidder, it has to finalise necessary licenses and agreements and when reaching financial closure than can project construction actually begin.

Ranelle Visagie (EWT):

- There are very few natural scenic landscapes in the Karoo, i.e. the hills and koppies. Wind farm development may spoil the landscape.

Cornelius van der Westhuizen (CSIR):

- There will always be impacts resulting from development. The main objective is to identify the development footprint and technology type that would have the least impact on the environment and surrounding area.

Stoffel Visagie (Farmer):

- What are the different colours referring to within the focus area map?

Cornelius van der Westhuizen (CSIR):

- The colours represent RE projects that are currently proposed within the focus area.

Ranelle Visagie (EWT):

- Would all the proposed projects be using solar technology?

Cornelius van der Westhuizen (CSIR):

- I could not say for certain by only looking at the map, but would estimate that 80% of projects proposed within this area would use solar technology.

Stoffel Visagie (Farmer):

- Will a project construct its own substation and not necessarily use the existing substation?

Cornelius van der Westhuizen (CSIR):

- Even if a substation is available in the area, a step-up connection must be constructed before the project can be connected to the substation. It is also possible to build a 'loop in-loop out' connection to the power line.

Stoffel Visagie (Farmer):

- This area is very open and flat and when thunderstorms occur, a large amount of water is deposited in a short period of time. The flow of water off the equipment of the solar and wind farms could represent an erosion risk for the area.

Cornelius van der Westhuizen (CSIR):

- The potential for erosion must still be examined. However, the solar farm should be constructed in such a manner so that the erosion risk is minimized. For example, gutters could be constructed under the solar panels to catch the flowing water which is then re-used or discarded in a responsible manner.
- When re-using the water to clean the solar panels, a biodegradable soap should be used. The Department of Water Affairs (DWA) is recommending that should the water be harvested and re-used for cleaning the panels, a water-use licence is required. It can take two years for a water-use licence to be granted and developers feel that the benefits of a water-use licence would not outweigh the cost, i.e. "not worth the effort". The water would just be discarded which could contribute to erosion.

Stoffel Visagie (Farmer):

- When developers consult with farmers, they indicate that a solar farm and sheep farming can be integrated on the same land. However, the grass growth under the solar panels would be a problem because it would not be able to cut with a lawnmower and would therefore pose a fire risk. The sheep would be able to climb on the panels and then either damage the panels or injure themselves.

Cornelius van der Westhuizen (CSIR):

- The grass growth will have to be managed. The best method would be to use the sheep to graze the grass.
- There would be an impact on grass growth depending on the amount of sunlight and water available. The solar panels would create shadows so there should not be much grass growth.
- Natural succession of the plants will occur.

Stoffel Visagie (Farmer):

- Why does the west coast not feature higher as development potential for wind farms? There is a cold ocean next to a warm land mass and a result there is always wind blowing at some point during the day.

Cornelius van der Westhuizen (CSIR):

- The west coast has seasonal winds, i.e. periods where the wind is very high and periods when there is no wind. That is not an ideal situation, as it is preferable to have a constant wind blowing even if the wind is blowing at a slow speed. Gale force winds are also not ideal because they will cause to turbine to cut-out and no electricity would be generated.
- Available infrastructure is also a problem, e.g. there are not many tarred roads. It is difficult to drive on the sandy-gravel paths and it is also difficult to build roads on the sandy-gravel paths.

Stoffel Visagie (Farmer):

- The aesthetic value is an important feature of an area. What weighting is assigned to the landscape assessment?

Cornelius van der Westhuizen (CSIR):

- The aesthetic value of an area is very subjective. No ratings have been assigned for each specialist assessment. Each specialist study has equal rating.

Stoffel Visagie (Farmer):

- Have you received written queries or objections from people in the area?

Cornelius van der Westhuizen (CSIR):

- There are individuals who do not support wind energy in principle. However, their objections are usually based on emotions rather than facts.
- Objections can be lodged if the proposed development would interfere with the current land-use, e.g. tourism. If a development should negatively change the atmosphere of a touristic feature or landscape, then that would be a valid reason for an objection. An objection cannot simply be raised because the development is not appealing to an individual person.
- Development will always have an impact, but the aim is to identify the development which would have the least impact on the environment. If RE is not developed, then other sources of energy would need to be considered, e.g. nuclear, coal, gas, etc. The fact is that electricity is needed to facilitate economic development within the country.

Stoffel Visagie (Farmer):

- There should be better areas suited for RE development.

Cornelius van der Westhuizen (CSIR):

- The SEA aims to identify which areas are the best for RE development. Currently eight focus areas have been identified.
- It is very expensive to build the necessary infrastructure needed to facilitate development, e.g. power lines, roads, etc. If this infrastructure investment is made, it should be used in the most effective manner. It is for this reason that all eight focus areas will be assessed by specialists for

their potential to develop both wind and solar energy projects, i.e. what are the negative and positive impacts. If the technologies can be combined, then it would be maximizing on the investment made in the area. However, the relevant technology will only be developed where it makes sense, i.e. build a wind turbine where the wind resource is strong enough.

Stoffel Visagie (Farmer):

- As an example, if information suggests that a wind farm is not feasible, but a developer still wishes to construct one, will that project go ahead?

Cornelius van der Westhuizen (CSIR):

- A project will not be constructed if it does not make financial sense. The resource needs to be strong enough so that the project can compete with other projects in the DoE's bidding round.

Stoffel Visagie (Farmer):

- Workers are taken from the local communities to assist with the projects.

Cornelius van der Westhuizen (CSIR):

- Project development is encouraged in the smaller towns so as to facilitate economic development within the rural areas of South Africa.

Stoffel Visagie (Farmer):

- There are many trucks that are using the roads and this has an impact on the state of the roads. There are railway lines that run from the coast to the major towns. Can the railway lines not be used to transport the equipment?

Cornelius van der Westhuizen (CSIR):

- Wind turbines cannot be transported by rail. The components are too large.

List of attendees:

Organisation	Name	Email	Telephone
EWT	Ranelle Visagie	ranellev@ewt.org.za	053-683-7010
Private	Stoffel Visagie	dwaalhoek@rooksein.co.za	053-683-7010
National Department of Environmental Affairs (DEA)	Surprise Zwane	SZwane@environment.gov.za	012-310-3145
Council for Scientific and Industrial Research (CSIR)	Cornelius van der Westhuizen	CvdWesthuizen1@csir.co.za	021-888-2408
	Lydia Cape-Ducluzeau	LCapeDucluzeau@csir.co.za	021-888-2429
	Wisaal Osman	wosman@csir.co.za	021-888-2482

Notes of the public meeting in Vryburg on 2 April 2014

Donato Di Noia (Letsatsi Solar Tech):

- You are speaking about gigawatt (GW)-sized projects and I assume the projects will feed into the grid. What about the instances where there is line saturation? Is the SEA planning done with consultation from Eskom?

Lydia Cape-Ducluzeau (CSIR):

- Yes, Eskom is involved in the SEA process. Many projects are being built and need to be connected to the grid, but there is no capacity on the grid. There is a need for strategic planning hence the SEA is being conducted. The SEA results are already being used to inform Eskom transmission planning. However, access to funding will only be confirmed once the REDZs are gazetted.
- The REDZs represent a high level agreement for development to take place in specific geographic areas. Before Eskom can build infrastructure, it needs to motivate why funding is needed to build infrastructure in specific areas. The REDZs provide a spatial commitment to motivate for the release of funds for the necessary infrastructure to connect the project to the grid in these specific geographical areas.

Zacharia Pitso Tolo (Letsatsi Solar Tech):

- Does the SEA examine both wind and solar technologies?

Lydia Cape-Ducluzeau (CSIR):

- The SEA does examine wind and solar PV technologies but not solar CSP.

Charl Jooste (Solar capital):

- Which Generation Connection Capacity Assessment (GCCA) report was used?

Cornelius van der Westhuizen (CSIR):

- It was the second GCCA report.

Charl Jooste (Solar capital):

- Were mining rights used as an exclusion criterion as well?

Lydia Cape-Ducluzeau (CSIR):

- Mining rights data sets were made available, but the quality of the data did not allow for it to be used in the study. For inputs on mining rights, the focus areas will be sent to the Department of Mineral Resources (DMR) for their comments and inputs.

Sampie van der Merwe (NW Parks Board Bird Sanctuary):

- We are responsible for the protection of migratory waterbirds at the Ramsar site in the NW province. The fly route of birds coincides with the focus areas. Will this be taken into consideration when specialist studies are conducted?
- Wind turbines pose a great threat to the birds. Solar panels do not pose a threat to birds.

Lydia Cape-Ducluzeau (CSIR):

- Birds and bats are known sensitivities for wind development. These sensitivities can be addressed with specialist studies. The specialists are examining existing data sets, e.g. South African Bat Assessment Advisory Panel (SABAAP) 1 and 2, as well as all other available information. The Ramsar sites will be considered to check if there are migration corridors between major wetlands and estuaries.

Cornelius van der Westhuizen (CSIR):

- During Phase 2 of the SEA, specialist scoping assessments will be conducted to identify the sensitive areas in the focus areas and therefore be able to make informed decisions with regard

to development. Bird and bat monitoring will always be conducted, but the intensity of the monitoring might vary according to the sensitivity area. If the development is occurring in a highly sensitive bird and bat area, then monitoring will be more intense than if the development was occurring in a less sensitive area.

Sampie van der Merwe (NW Parks Board Bird Sanctuary):

- For the NW Province, is this the only focus area that is being considered? There are 14 nature reserves spread across the province.

Lydia Cape-Ducluzeau (CSIR):

- At the moment, the Dr Ruth focus area is the only focus area identified in the NW Province.
- The SEA process will be reiterative and be updated at intervals, however, at the moment only the Vryburg area has been identified.

Cornelius van der Westhuizen (CSIR):

- There needs to be a spread of development and thus one focus area was identified in each of the provinces (WC, NC, EC, NW, FS).
- Vryburg was identified as a better focus area rather than Mafikeng for a number of reasons: 1) higher resource potential; 2) there is existing infrastructure in Vryburg whereas Mafikeng has a lack of infrastructure; 3) higher social need; 4) Negative environmental criteria were lower in Vryburg than in Mafikeng, i.e., land that is not mined within Mafikeng is under protection; and 5) Vryburg has more available land for development.

Zacharia Pitso Tolo (Letsatsi Solar Tech):

- There are solar farms being proposed in other areas, e.g. Marikana, Rustenburg, Bloemhof, Christiana which do not fall in the proposed focus areas.

Cornelius van der Westhuizen (CSIR):

- The SEA examines clusters of development. It does not mean that development is limited to the Renewable Energy Development Zones (REDZs). If development applications are made in areas outside of the REDZs, they cannot be rejected because they do not fall within the REDZs. The project needs to be evaluated on its own merit and then either accepted/rejected.

Donato Di Noia (Letsatsi Solar Tech):

- With regards to time taken to receive approval, projects that are proposed inside the REDZs will be approved faster than those proposed outside of the REDZs?
- The colour sensitivity is relative, and if a project is proposed it will be assessed on its merit, e.g. if there is a pressing need for an energy source?

Cornelius van der Westhuizen (CSIR):

- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under the National Environmental Act (NEMA), but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area. The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas. There will always be public participation on the ground to be undertaken as part of this Environmental Authorisation process.
- In most case, the connection to the grid is a much bigger time constraint than the time taken to receive Environmental Authorisation (EA). Eskom needs certainty for a concentration of RE projects within a geographical area before upgrading a substation or building new transmission lines. A new substation or new transmission power line cannot be built for one project only. We need an economy of scale.

Surprise Zwane (DEA):

- The precautionary principle will always be adopted and an impact assessment will always be implemented. We are aiming to have a protocol which contains minimum requirements from the various competent authorities (DAFF, DWA, etc.) thus streamlining the process and allowing for

integrated authorisation. The minimum requirements would be specific to the sensitivity level in which the development is being proposed and thus inform the impact assessment that will be conducted.

Donato Di Noia (Letsatsi Solar Tech):

- Is Eskom trying to increase the number of connection points within the focus areas?

Cornelius van der Westhuizen (CSIR):

- Currently the country is running out of substations and grid connection, so the investment in infrastructure upgrade and construction must be directed towards specific areas. Before Eskom can build infrastructure, it needs to motivate why funding is needed to build infrastructure in specific areas. The REDZs provide a spatial commitment to motivate for the release of funds for the necessary infrastructure to connect the project to the grid in these specific geographical areas. The SEA results are already being used to inform Eskom transmission planning. However, access to funding will only be confirmed once the REDZs are gazetted. Once the REDZs have been gazetted, it is the high level agreement and leverage needed by Eskom to motivate for the release of funds to build infrastructure in these specific geographical areas.

Zacharia Pitso Tolo (Letsatsi Solar Tech):

- How big is the renewable energy (RE) market?

Surprise Zwane (DEA):

- There is a big market for RE projects. However, the current problem is that the country lacks the necessary infrastructure to support the RE projects.

Cornelius van der Westhuizen (CSIR):

- The Integrated Resource Plan (IRP) stipulates that 18 GW of electricity should be generated by RE by 2030. That is a guideline document, it is not legally binding.

Sampie van der Merwe (NW Parks Board Bird Sanctuary):

- Will the information and reports be available for download from the website?

Lydia Cape-Ducluzeau (CSIR):

- Once finalised the information will be available for download from the website. The specialist reports will be reviewed by the SEA team, then updated and then reviewed by the competent authorities, after which they will be finalised before they are released to the public. Project update notifications will be sent to the Interested and Affected Party (I&AP) database. An overall report detailing the entire SEA process and results will be released end of this year.

Donato Di Noia (Letsatsi Solar Tech):

- Are there any rules regarding construction of new buildings? Are there minimum requirements for green buildings?
- If there are no incentives, how will RE grow?

Lydia Cape-Ducluzeau (CSIR):

- This SEA is conducted in support of SIP 8 which is “Green Energy in support of the South African Economy”. Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts. The SEA does not look into green buildings incentives or requirements specifically.
- There are international regulations and guidelines documents looking into the building sector in terms of reducing greenhouse gas emissions. SA also applies regulatory instruments and control instruments, such as building codes and appliance standards.

Charl Jooste (Solar capital):

- There is the Carbon tax that will be implemented in future.

- If there are new housing developments, the developer could impose certain conditions on the development, e.g. a solar geyser or solar panels must be installed. However, there is no standard requirement.

Lydia Cape-Ducluzeau (CSIR):

- The introduction of a carbon tax was delayed to 2016 in SA. It was mentioned in the press that the carbon tax will be associated with subsidies for installing solar water geysers on houses.
- The use of solar energy for domestic purpose such as solar geyser or rooftop solar panels is not included in the scope of work of this project.

List of attendees:

Organisation	Name	Email	Telephone
Solar Capital	Charl Jooste	charl@solarcapital.co.za	082-882-7170
North West Parks & Tourism Board	Andrew Mvundle	andrew.mvundle@gmail.com; barberspresearchteam@nwptb.co.za	078-921-1916
North West (NW) Parks Board Bird Sanctuary	Sampie van der Merwe	barbersp@lantic.net	082-443-9777
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Council for Scientific and Industrial Research (CSIR)	Cornelius van der Westhuizen	CvdWesthuizen1@csir.co.za	021-888-2408
	Lydia Cape-Ducluzeau	LCapeDucluzeau@csir.co.za	021-888-2429
	Wisaal Osman	wosman@csir.co.za	021-888-2482

Notes of the public meeting in Upington on 3 April 2014

Kenneth Sinclair (NCOP Parliament):

- A great concern is that the Environmental Impact Assessment (EIA) process takes a long time. The ideal situation for the wind and solar SEA would be to speed up this EIA process. There are a number of bills and legislation which have recently been passed with regards to special economic zones (SEZ). The REDZs and the SEZs are two different things and it is important to differentiate.
- I have motivated to the Department of Trade and Industry (DTI) about the SEZs in the Northern Cape. The solar corridor cannot start in Upington and end in Prieska; it must be extended further.
- The value added to the marginalized communities cannot focus on RE projects solely. In terms of the Strategic Integrated Projects (SIPs), government has a strong drive for beneficiation.
- The SEZs for the Northern Cape cannot solely be energy driven; there must be other elements.
- One of the largest job creators in this area is agriculture. The SEZs should be modified to include other development mechanisms.
- There are two dams in the middle of South Africa namely the Gariep and Van der Kloof. The areas around these dams are bare and represent possibilities for investments. In terms of the socio-economic impact around De Aar, these are poor areas and there needs to be more development within these areas.
- The Industrial Development Corporation (IDC) initially did high level research in terms of the type of alternate energy, the alternate energy that is most cost effect remains biomass and bio gas. These energy alternatives are not mentioned in this study. These energy alternatives can be used for job creation and should be considered.
- Eskom grid capacity is hampering development. In the Department of Energy (DoE) budget there are funds available to assist with transmission of energy. The funds need to be made available.

Surprise Zwane (DEA):

- The main focus of the SEA is Renewable Energy Development Zones (REDZs). The zones are spread geographically across the country.
- The SEA process is reiterative. As shown in the presentation, development migrates over time and there will be development outside of the REDZs. The SEA tool and development protocol must be flexible enough to address changes that occur over time.
- In terms of the transmission capacity, Eskom is in conversation with treasury, NERSA and DoE to best see where RE development can be unlocked and where development can be focused.

Cornelius van der Westhuizen (CSIR):

- The time it takes to complete the EIA process is an issue that is currently secondary to problems with grid connection. The grid connection currently takes seven years to achieve and the EIA takes approximately two years to complete.
- The SEA REDZs and the SEZs are two separate processes. The findings of the SEZs feed into the wind and solar PV SEA process as pull factors. SEZs must examine a wider range of development tools other than energy generation.
- With regards to the development around the two dams: De Aar, Tuispunt and Jeffrey's Bay are examples of clusters that have been built but are outside the eight focus areas identified in the SEA study. Eskom requires focussed areas where development can be unlocked. There are funds available for the transmission grid however there must be certainty of RE developments before the infrastructure can be built. If there is an agreement on strategic areas and cabinet signs off on the SEA study for RE developments, Eskom is able to request funding from Treasury with more certainty.
- There is allocation for biomass energy generation in the Integrated Resource Plan (IRP). The reason it was not considered in the SEA is that there are not many biomass projects that are proposed and the allocation of biomass is not high in the in the IRP.

Frikki Rupping (ZFM District Municipality):

- Sometimes councillors of the area are very vague in terms of RE plans and projects. It is reassuring that national government is trying to synchronise the role players on the RE theme.

Surprise Zwane (DEA)

- There will be a government meeting that will occur in this focus area on the 4th April 2014. The aim is to inform local municipalities and ensure that the SEA feeds into Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs).

Amogelang (DEA Local government Support):

- For the specialist studies; will hydrology studies be conducted for information of flood lines and ground water?
- After the scoping phase of the SEA process, will an EIA process follow on the ground?
- Are the specialists contracted for the SEA conducting the study at a national level or for each of the focus areas?

Lydia Cape-Ducluzeau (CSIR):

- The freshwater aquatic biodiversity specialists will look at water features such as wetlands and rivers. Hydrologist studies are usually done in a geo-technical survey to assess specific hydrology characteristics such as flood lines.
- Development occurring in the REDZs will still need to obtain an Environmental Authorisation (EA) under NEMA, but the further assessment that will take place will depend on whether the development is being proposed in a less sensitive (green) area or a highly sensitive (red) area. The authorisation process should be less laborious for the low sensitive areas and thus development would be incentivised to occur in the less sensitive areas. There will always be public participation on the ground to be undertaken as part of this Environmental Authorisation process.
- Legislation is currently being drafted to address these issues and in future there will be minimum requirements for specialists to conduct a specialist study and case officers to approve an EIA
- The SEA specialists include 7 teams (presented earlier) doing the scoping assessment at desktop level (with verification on the ground when necessary in the form of a drive-through or ground trothing of specific areas within the focus areas).

Surprise Zwane (DEA):

- The precautionary principle will always remain. Government should be able to provide direction with regards to where less sensitive areas are located and development should be prioritised. There will still be some form of authorization process on the ground in the focus areas. The intention is to have a process where the authorization required before development can take place will differ for the different sensitivities. In more sensitive areas, the authorization process may be more stringent whereas a less stringent authorization process may be in place in areas identified by specialist studies as having low sensitivities. If a developer complies with the development protocol, there would be compliance with a number of different departments as the development protocol would adhere to different competent authorities' standards, and integrated authorisation would be achieved. There would be an alignment of policies in national, provincial and local government institutions with regards to the REDZs.

Kenneth Sinclair (NCOP Parliament):

- Some of the difficulties are that various councils interpret the EIA process differently. Is the South African Local Government Association (SALGA) being engaged to facilitate the interaction with local government?

Surprise Zwane (DEA):

- SALGA is being engaged for training for EIAs.
- For the SEA, SALGA has offered to assist in the process of organising meetings with local municipalities.

List of attendees:

Organisation	Name	Email	Telephone
ZF Mgcawu District Municipality	Frikki Rupping	fpr@zfm-dm.gov.za	071 972 1122
Kobus Davenhage	Frederik Henzen	safety@kdbuild.co.za	076 528 8347
National Council Of Provinces-Parliament (NCOP Parliament)	Kenneth Sinclair	kennethasinclair@gmail.com	076 392 6893
Department of Environmental Affairs Local government Support (DEA Local government Support)	Amogelang Sefara	asefara@environment.gov.za	061 484 9928
National Department of Environmental Affairs (DEA)	Surprise Zwane	SZwane@environment.gov.za	012-310-3145
Council for Scientific and Industrial Research (CSIR)	Cornelius van der Westhuizen	CvdWesthuizen1@csir.co.za	021-888-2408
	Lydia Cape-Ducluzeau	LCapeDucluzeau@csir.co.za	021-888-2429
	Wisaal Osman	wosman@csir.co.za	021-888-2482

Notes of the public meeting in Springbok on 7 April 2014

No public attended the meeting.

Appendix B 5 - Formal Submissions from I&APs

The SEA team has received numerous inputs from a range of stakeholders throughout the SEA process. Although all inputs received were taken into consideration during the process, only key official submissions are included in this Appendix. Other forms of contact with stakeholders that are not included in this document include telephone conversations and emails. While the SEA report constitutes the official response to all inputs, short responses from the SEA team are additionally provided below.

CONTENT

DAFF, 05/09/2013

agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Directorate: Land Use and Soil Management, Department of Agriculture, Forestry and Fisheries
Private Bag X 120, Pretoria 0001

Enquiries: A. Collett • Tel number: 012 – 319 7508 • Fax number: 012 – 329 5938 • E-mail address: AnnelizaC@daff.gov.za
Reference: Proposed REDZs Version 1

Ms. Lydia Cape-Ducluzeau
CSIR Environmental Services

Comments on the proposed Renewable Energy Development Zones version 1

Your report: "*DEA National Strategic Environmental Assessment for the efficient and effective rollout of wind and solar photovoltaic energy: Phase 1 Study Areas Metadata and notes*" as well as the supporting spatial information has reference.

The Department of Agriculture, Forestry and Fisheries (DAFF) has done a comprehensive review of the proposed sites and a report on the evaluation of each of the sites is attached to this letter.

It should be noted that the review was done from an agricultural perspective with the main focus to protect agricultural land for food security purposes and to ensure the sustainable use of the natural agricultural resources.

Our recommendation on the proposed sites can be summarized as follows:

- Some of the proposed sites are acceptable to DAFF.
- Certain of the proposed sites' boundaries should be amended as per description for the relevant site.
- A few of the sites should be reconsidered as the proposed renewable energy activities will have a negative impact on current and future agricultural activities.

It should further be taken into consideration that within a proposed site, the lowest agricultural production potential areas should be demarcated and used for the proposed renewable energy projects, whilst the higher agricultural potential areas should be retained for future agricultural use.

DAFF requests that the next round and / or final selection of the proposed sites again be submitted to the department for review.

Yours faithfully

NAME: **MS. R L. BOSOGA**
DESIGNATION: DIRECTOR LAND USE AND SOIL MANAGEMENT
DATE: 05/09/2013

REVIEW OF THE IDENTIFIED RENEWABLE ENERGY SITES UNDER THE PROJECT:

"DEA STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT ROLL OUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY"

Background

The Department of Energy has entered into a bidding process for the procurement of 3725 MW of renewable energy (solar and wind) from independent power producers by 2016 to assist with power generation in the country. Since the initiation of this process constraints have been experienced between the proposed renewable energy projects and the impact thereof on the environment and on agricultural production.

As part of the bid process (and as per tender documentation requirements) an Environmental Impact Assessment (EIA) with specific requirements has to be done that is evaluated by the Department of Environmental Affairs (DEA). A positive Record of Decision (RoD) has to be issued before an applicant can tender.

Within DEA constraints were experience in adherence to the principles as encompassed within the National Environmental Management Act (NEMA). DEA has therefore commenced with a process to develop a spatial tool to guide possible placement of the renewable energy projects through the demarcation of *Renewable Energy Development Zones (REDZs*) to assist with the evaluation of EIA documentation.

In order to ensure a comprehensive and active participation process the Department of Agriculture, Forestry and Fisheries (DAFF), as a relevant government stakeholder was requested to be one of the main stakeholders in this project. All relevant spatial data used by DAFF in its evaluation process for the mentioned applications was made available to the appointed consultants. This was followed up by several direct communications with the consultants explaining DAFF's position and also to give insight into the use of the relevant datasets within the context of this project.

Department of Agriculture, Forestry and Fisheries's (DAFF) position:

Authorization for possible bidding through the above-mentioned process also has to be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) specifically under the provisions of the Sub-division of Agricultural Land Act, 70 of 1970 (SALA). This mainly includes authorization for a long-term lease as well as a recommendation for the change of land use from agriculture to other land uses (the proposed re-zoning classification from agricultural to another land use differs depending on the province applicable. In the Western Cape "Consent use" is required). Although no approval is required from DAFF under the Conservation of Agricultural Resources Act 43 of 1983 (CARA), the impact of the proposed structures, if not managed carefully, may lead to the degradation of the status of the natural agricultural resources. The principles therefor under CARA also need to be taken into consideration.

Within DAFF a Guideline has been developed to guide the site evaluation for proposed renewable energy projects and to limit the possible negative impact thereof on agricultural production (a copy of the Guideline is attached for reference purposes). This guideline was made available for comments to various role-players but is based on the principles included within SALA and CARA.

Two main criteria / factors that are a priority from DAFF in the evaluation process include that renewable energy structures will not be supported if placed on high potential agricultural land / unique agricultural land ***and / or*** if placed within existing cultivated areas, irrespective of the type of crop planted. Consideration was also given on the impact that the proposed project will have on existing farming activities, including grazing, both on and off farm.

DEA National Rollout project:

The first outcome of the DEA project has now been submitted to DAFF for review.

The report that accompanied the demarcated REDZ's did not include a description of the methodology that was followed for the identification and demarcation of the proposed REDZ's. A list of relevant datasets impacting on the possible demarcation of suitable sites, including the data supplied by DAFF was included, but no indication was given whether in fact the data was used and if a priority rating or a weight was given to any of the datasets. Therefore it was not possible to comment on the methodology and whether there are any other possible suitable sites. The review was therefore only conducted on the proposed identified REDZ's.

Each demarcation of the proposed REDZs reviewed by DAFF was based on the spatial demarcation data supplied by DEA, via the appointed consultants. In the evaluation of the proposed demarcated REDZ's relevant applicable DAFF data was used but it should be noted that these data is at a national scale (1:250 000) and discrepancies may occur within the area concerned due to scale. This will however only become relevant once the final demarcated areas are known and the areas have been surveyed in detailed. The evaluation was also based on the principles and requirements as is set out in the DAFF Guideline for the evaluation of Renewable energy projects.

It should further be emphasized that according to the report, the demarcated sites is a first attempt and based on comments received from the relevant stakeholders further investigation will result in a second round of proposed REDZ's.

In addition to the comments given per each individual site in the review, the principle of firstly utilizing the lowest agricultural potential areas within a proposed site should be followed. In other words if a proposed demarcated site consist of land capability classes V and VI, the priority for possible development of a renewable energy project should focus on the placement thereof on the land capability class VI and not the V.

Any revised product as a result of this project should again be presented to DAFF for comments.

Review of identified sites

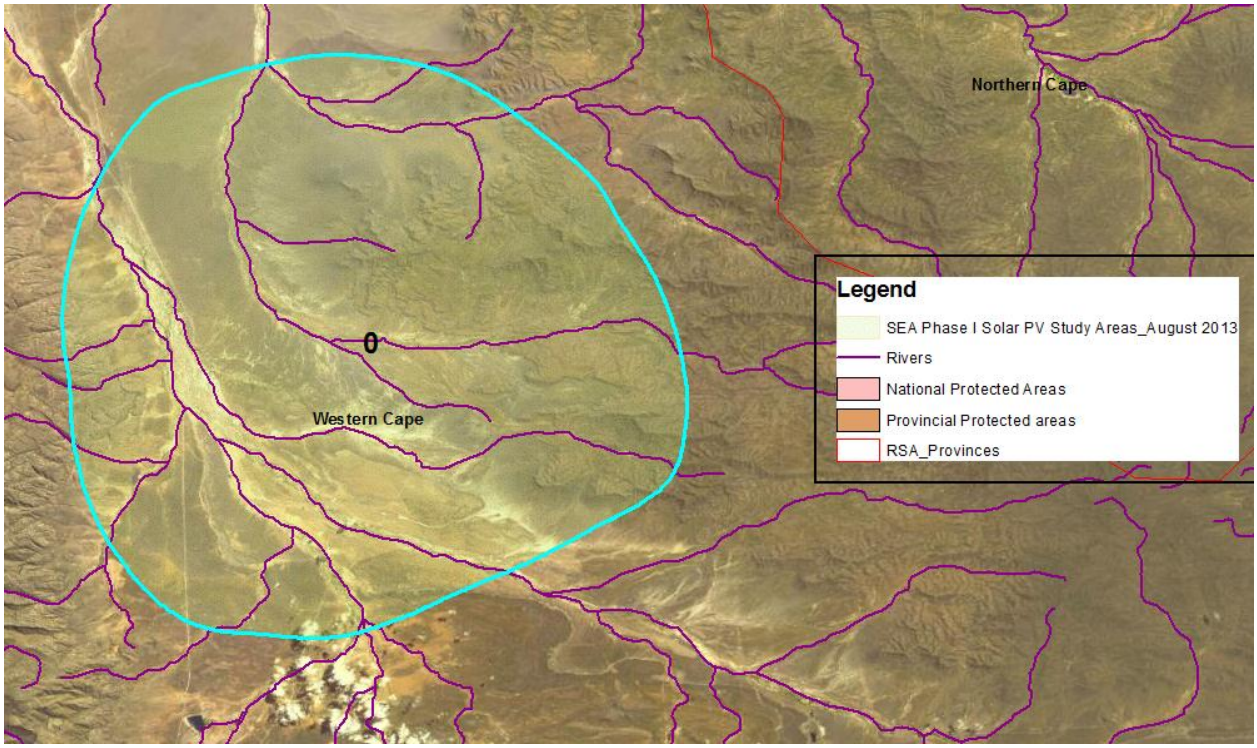
The review was conducted through the allocation of site numbers for each identified site. Site numbers were allocated randomly and are in no specific order of priority.

The locality of the sites per site number is indicated in Annexure 1 – Solar Energy Sites and Annexure 2 – Wind Energy.

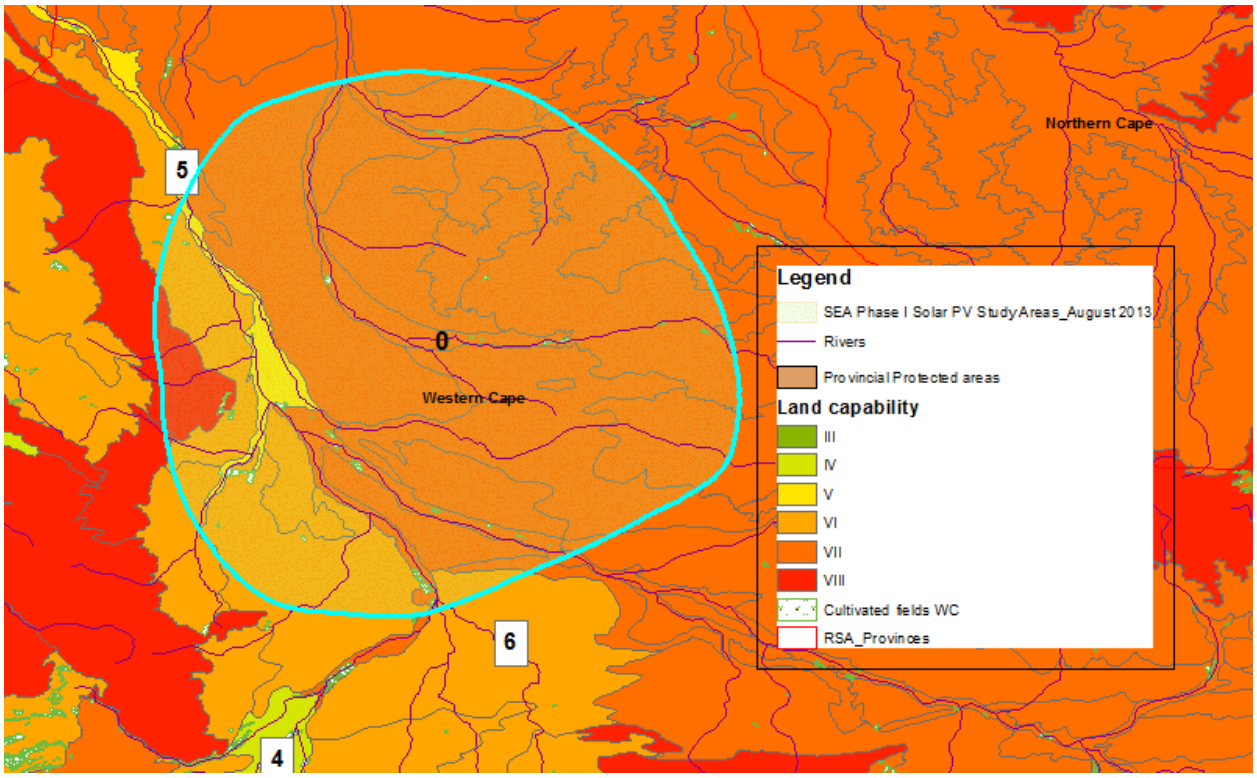
SOLAR SITES

Site 0

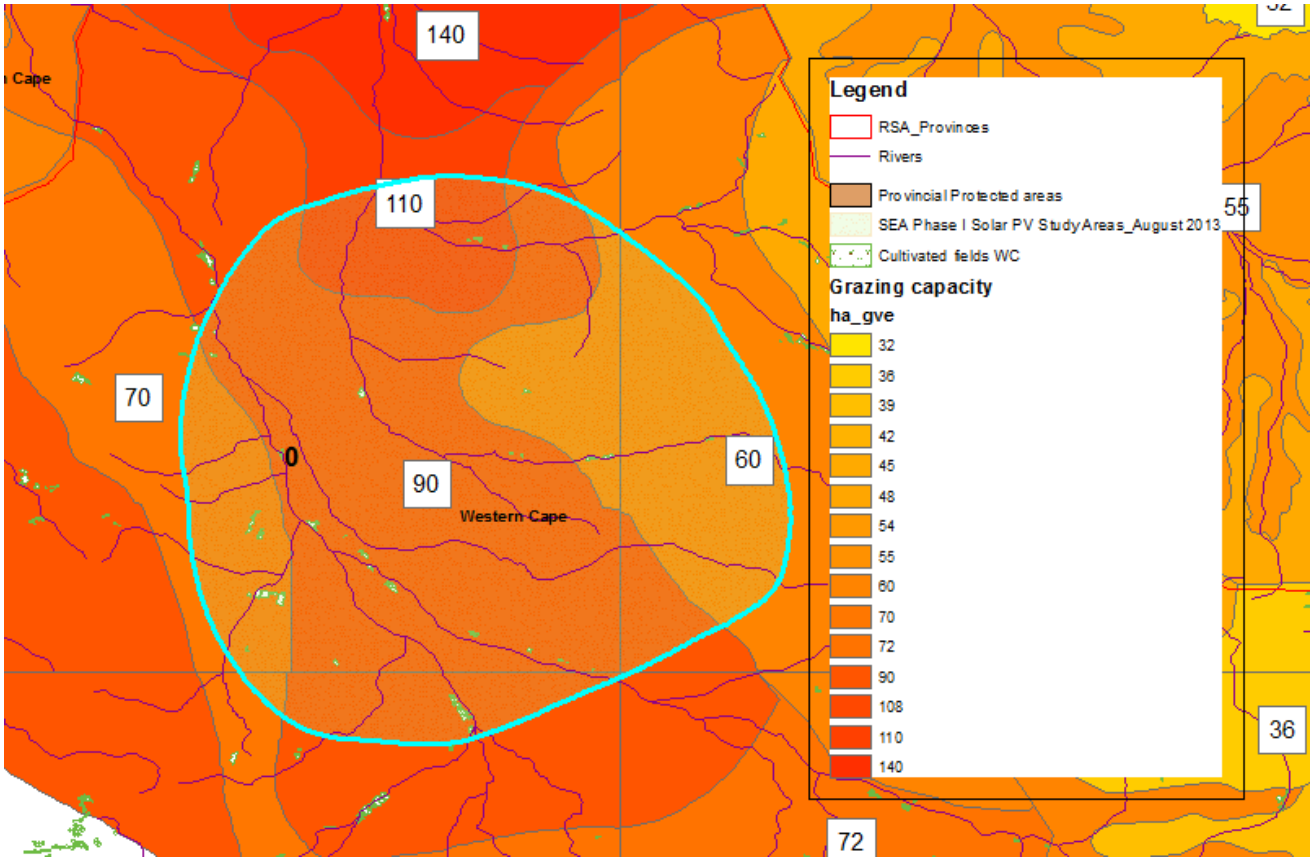
Evaluation criteria	Comment
Site number	0
Province	Western Cape
Area (ha)	1457
Land capability	V – VII (mostly VII)
Grazing capacity	90 – 110 ha/lsu
Agricultural land use	Mostly rangeland. There are very limited cultivated areas within this proposed site and it is highly possible that the cultivated areas are under irrigation due to the presence of non-perennial rivers and the limited agricultural potential as a result of restrictive climatic conditions.
Other comments	None
Recommendation	This identified site for renewable energy projects will have limited impact on agriculture, provided that existing agricultural production practices are not affective negatively and that it adheres to requirements as are specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983. This site, with its proposed boundaries can therefore be retained as a possible area for solar projects.
Images	
SPOT 2010	



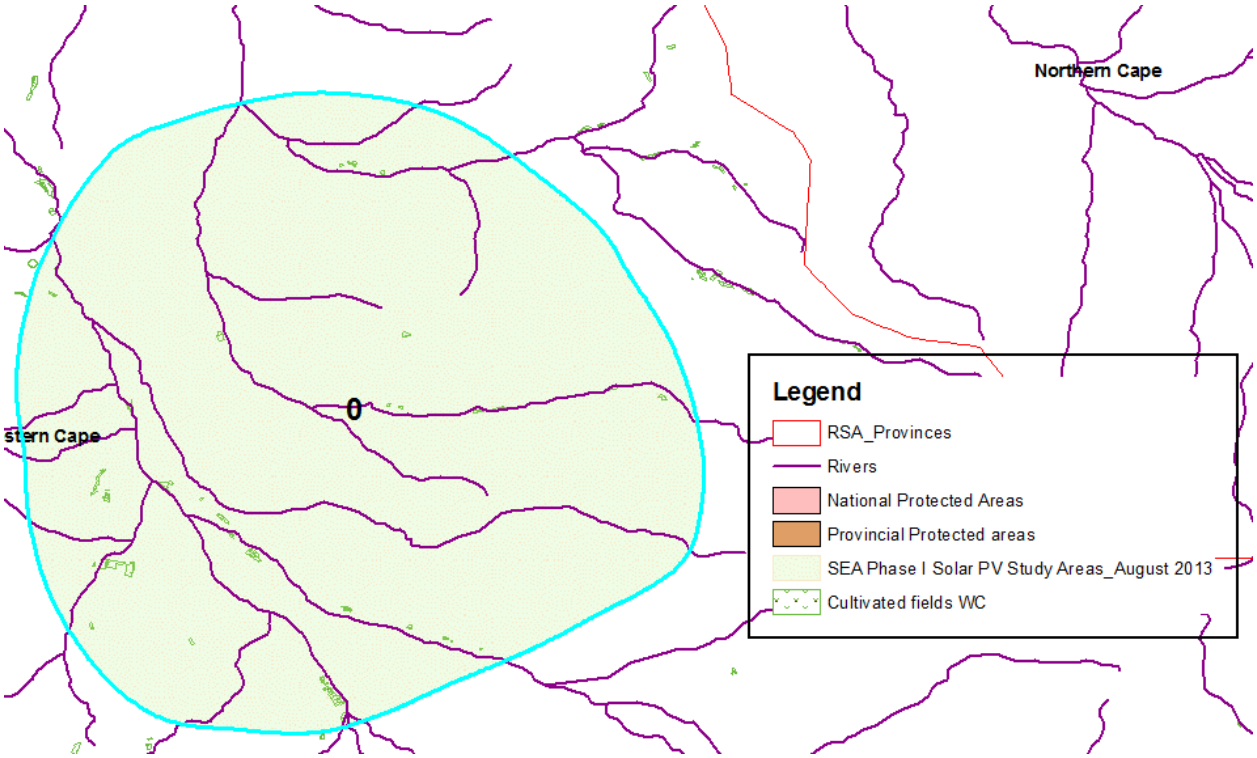
Land capability



Grazing capacity



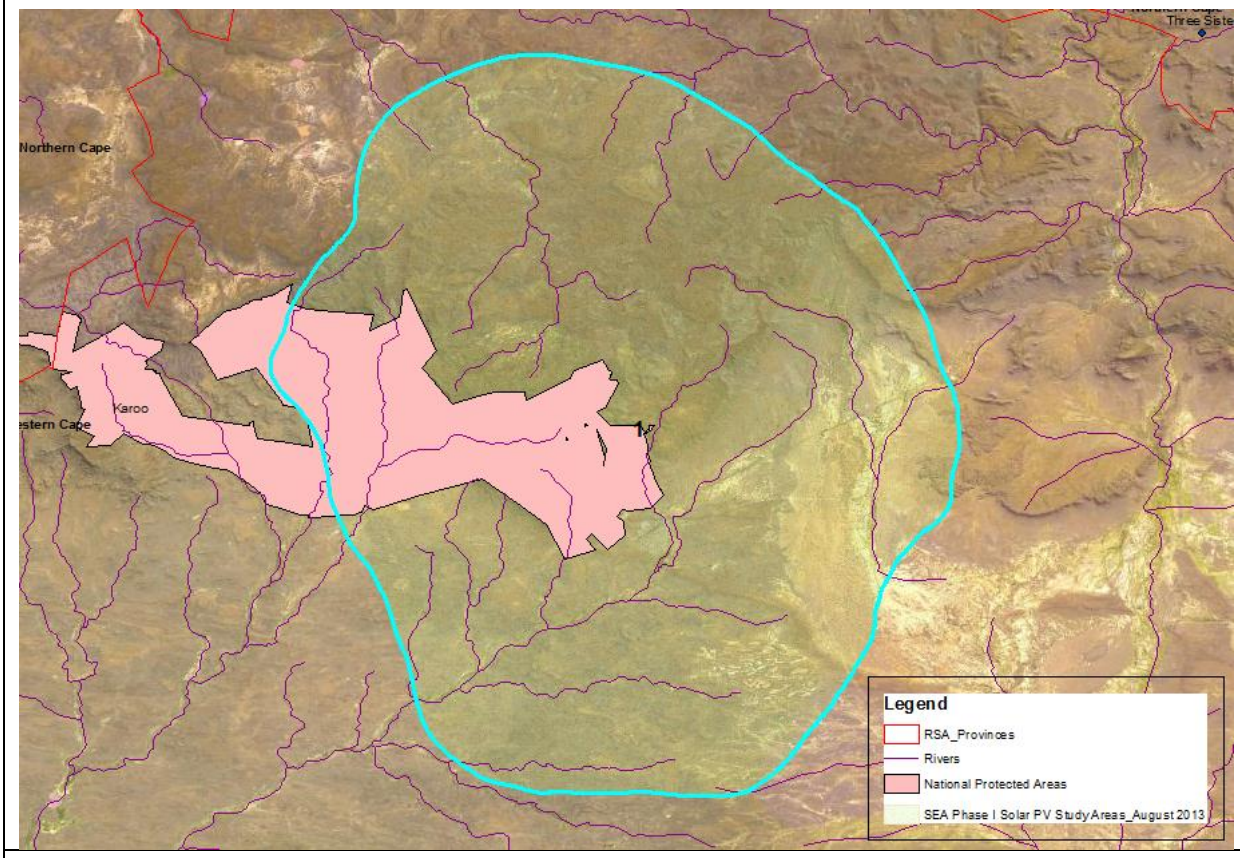
Agricultural Land use



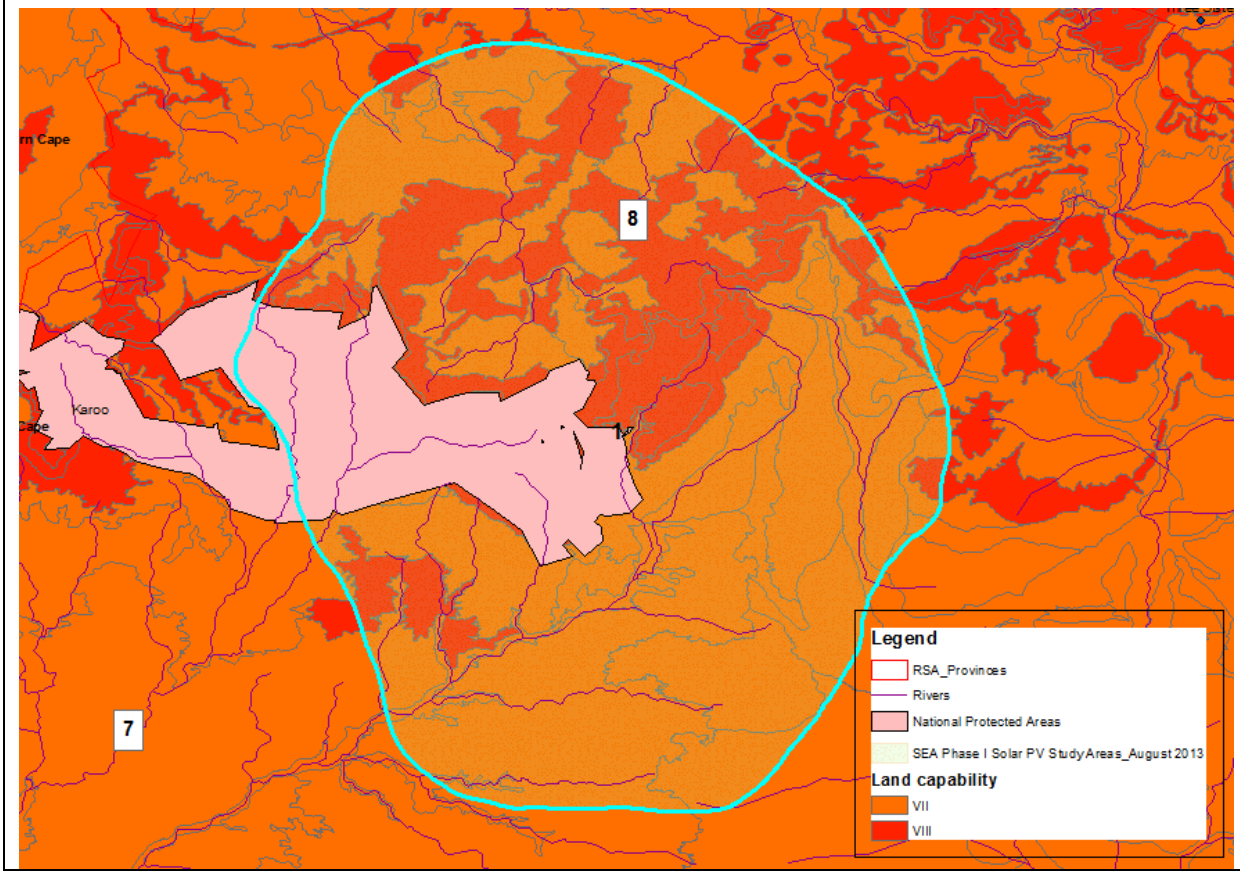
Site 1

Evaluation criteria	Comment
Site number	1
Province	Western Cape
Area (ha)	3471
Land capability	VII - VIII
Grazing capacity	28 – 36 ha/lsu
Agricultural land use	Mostly rangeland. There are very limited cultivated areas within this site and it is highly possible that the cultivated areas are under irrigation due to the presence of perennial and non-perennial rivers and the limited agricultural potential as a result of restrictive climatic conditions.
Other comments	Part of this site is located within the Karoo National Park.
Recommendation	This identified site will have a limited impact on agriculture, provided that existing agricultural production practices are not affective negatively and that it adheres to requirements as are specified under the Sub-division of Agricultural Land Act, 70 of 1970 and the Conservation of Agricultural Resources Act, 43 of 1983. This site can therefore be retained as a possible area for solar projects, but with the exclusion of the area located within the National Protected Area.
Images	

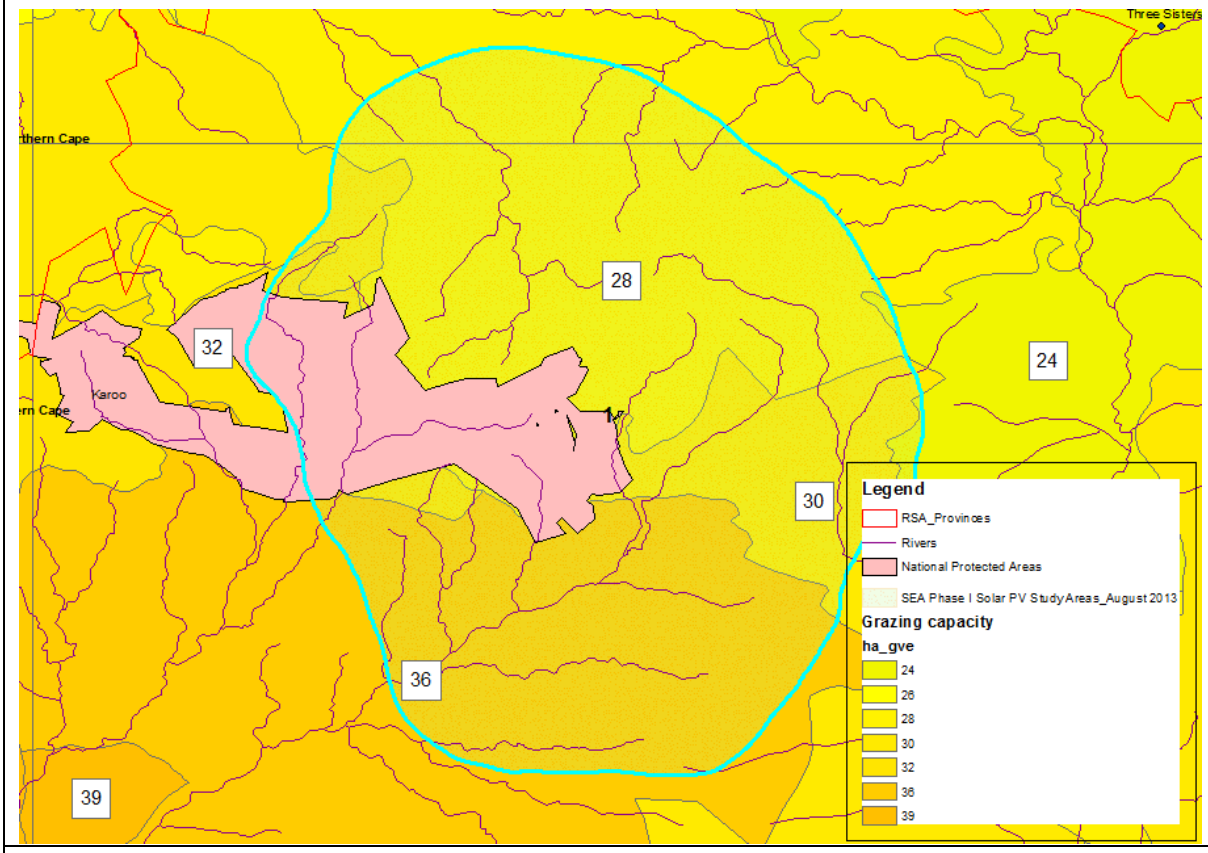
SPOT 2010



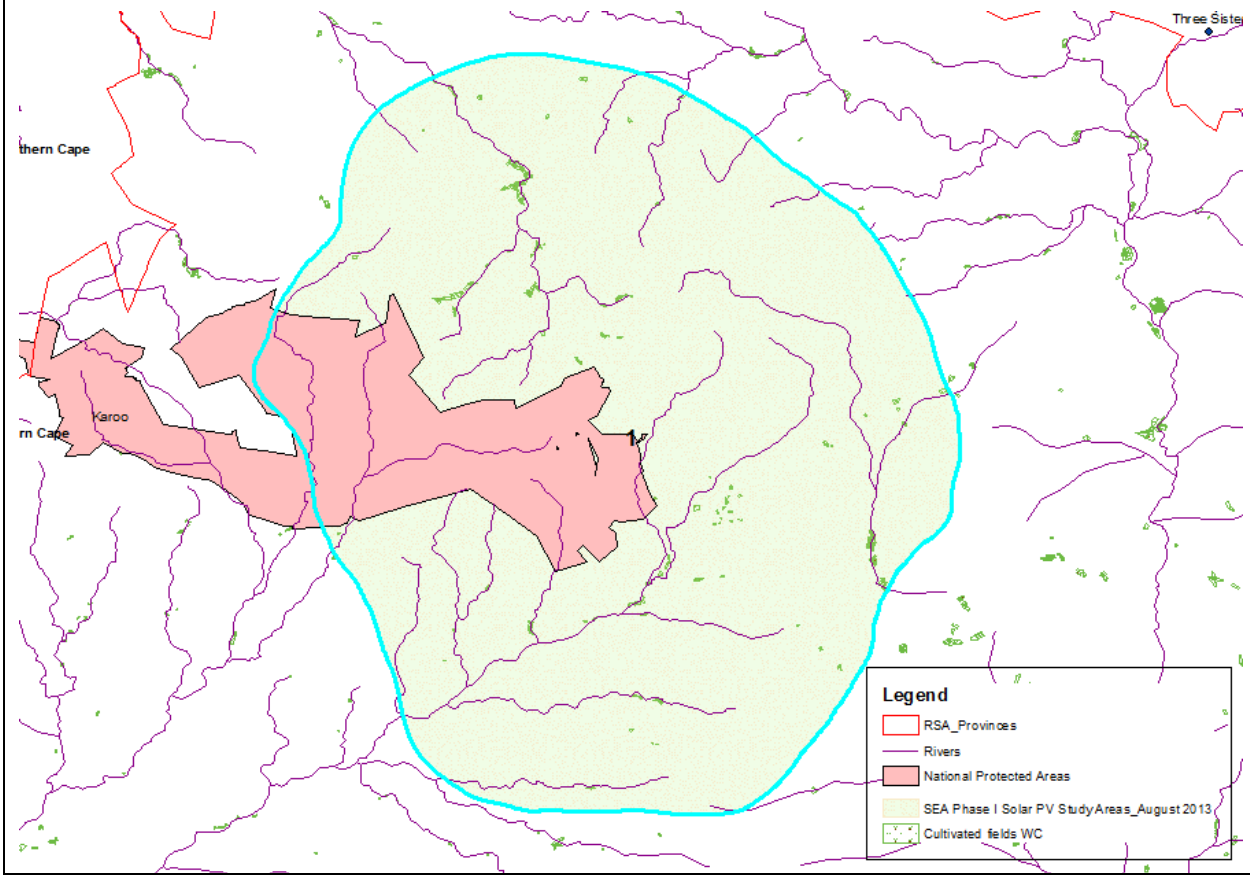
Land capability



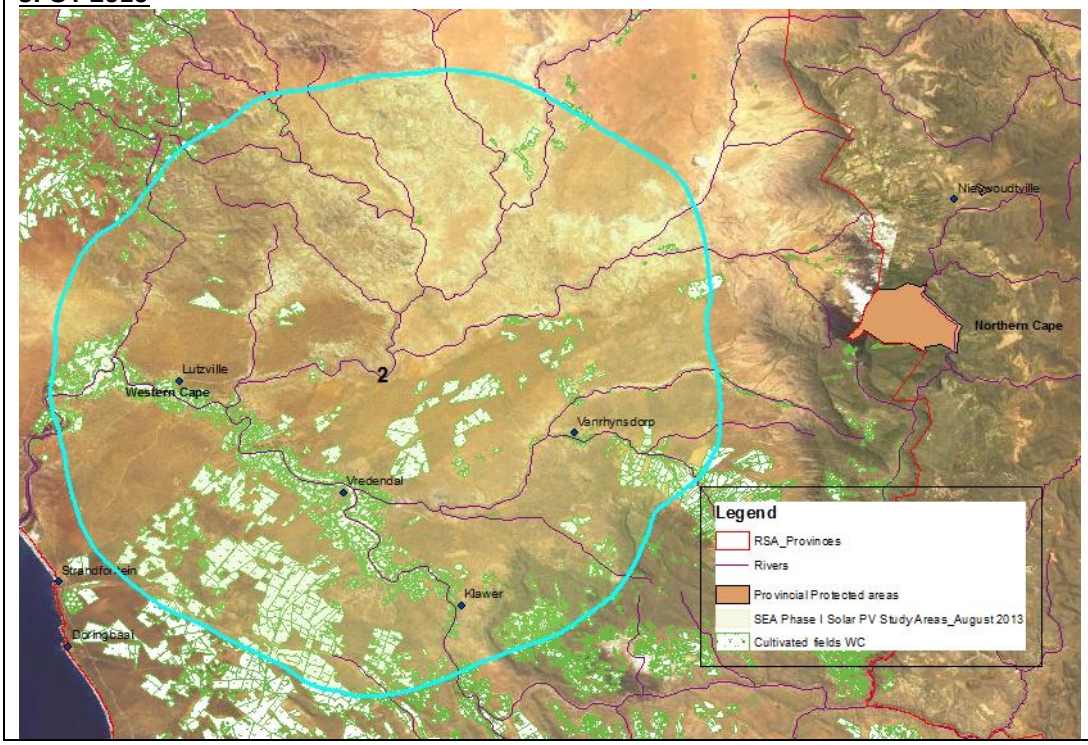
Grazing capacity



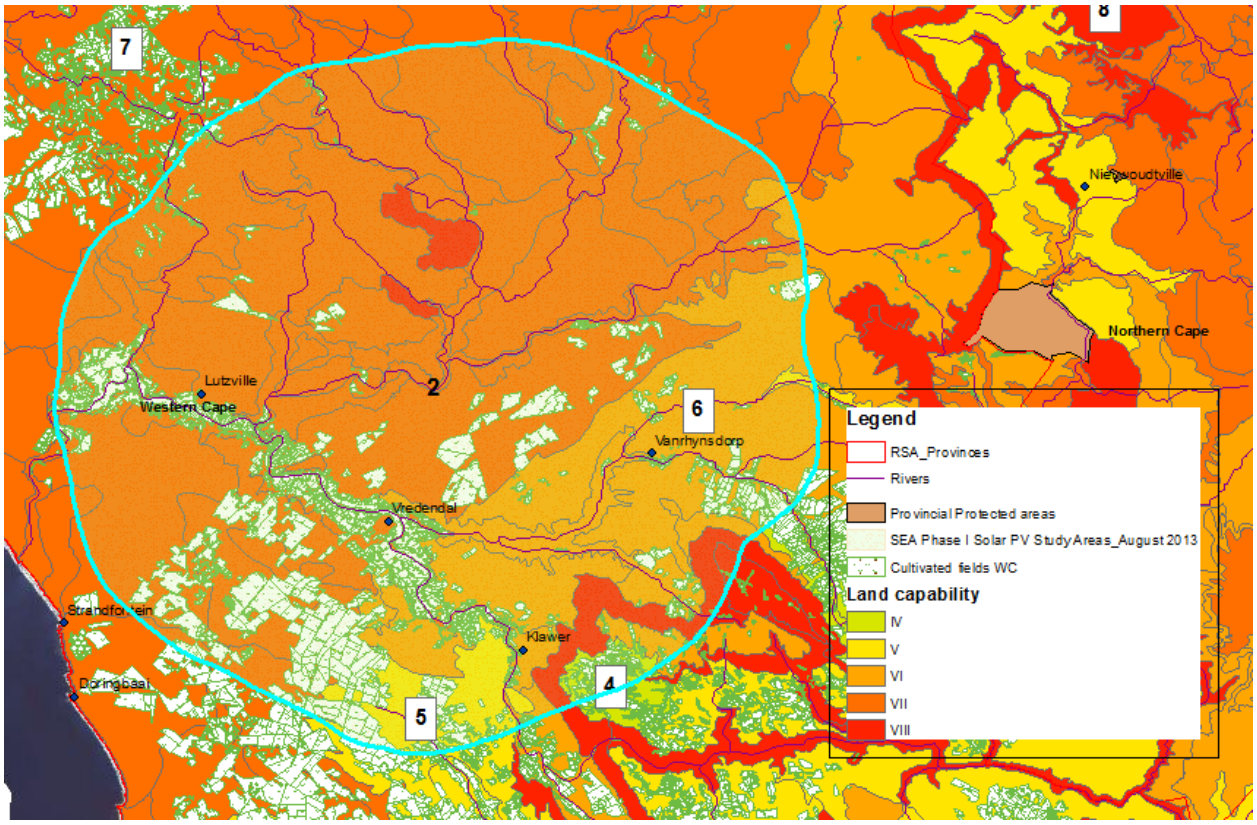
Agricultural Land use



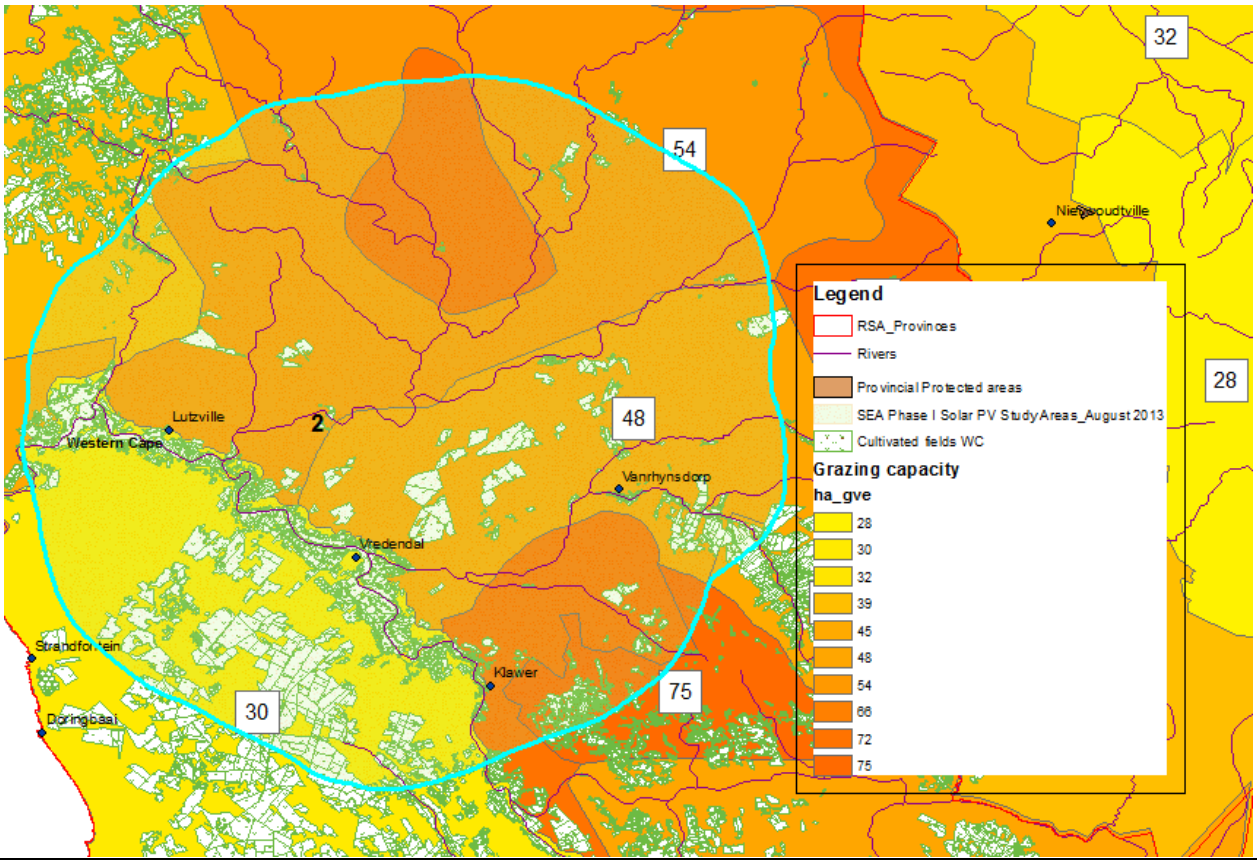
Site 2

Evaluation criteria	Comment
Site number	2
Province	Western Cape
Area (ha)	3314
Land capability	Varied from IV – VI. However this area is typically regarded as unique agricultural land due to the suitability of this area for wheat and vine production and should therefore be treated in the same manner as high potential agricultural land.
Grazing capacity	30 – 48 ha/lsu
Agricultural land use	The site is mostly used for rangeland purposes, especially towards the north. However intensive agricultural production practices are occurring towards the south of the proposed site, along the river as well as towards the west. This area is known for its vine and wheat production and should be retained for agricultural production as it forms the backbone of the rural economy. There is also growth potential as far as irrigation is concerned.
Other	None
Recommendation	**This site should be re-visited and amended.** The southern part of the site is intensively used for agricultural production and this agricultural use should be retained. The specified areas should be made smaller and it is recommended that the only the northern part of the site be retained and investigated further for possible use as a preferred site for renewable energy structures. Adherence to the requirements as are specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is also emphasized.
Images	
SPOT 2010 	

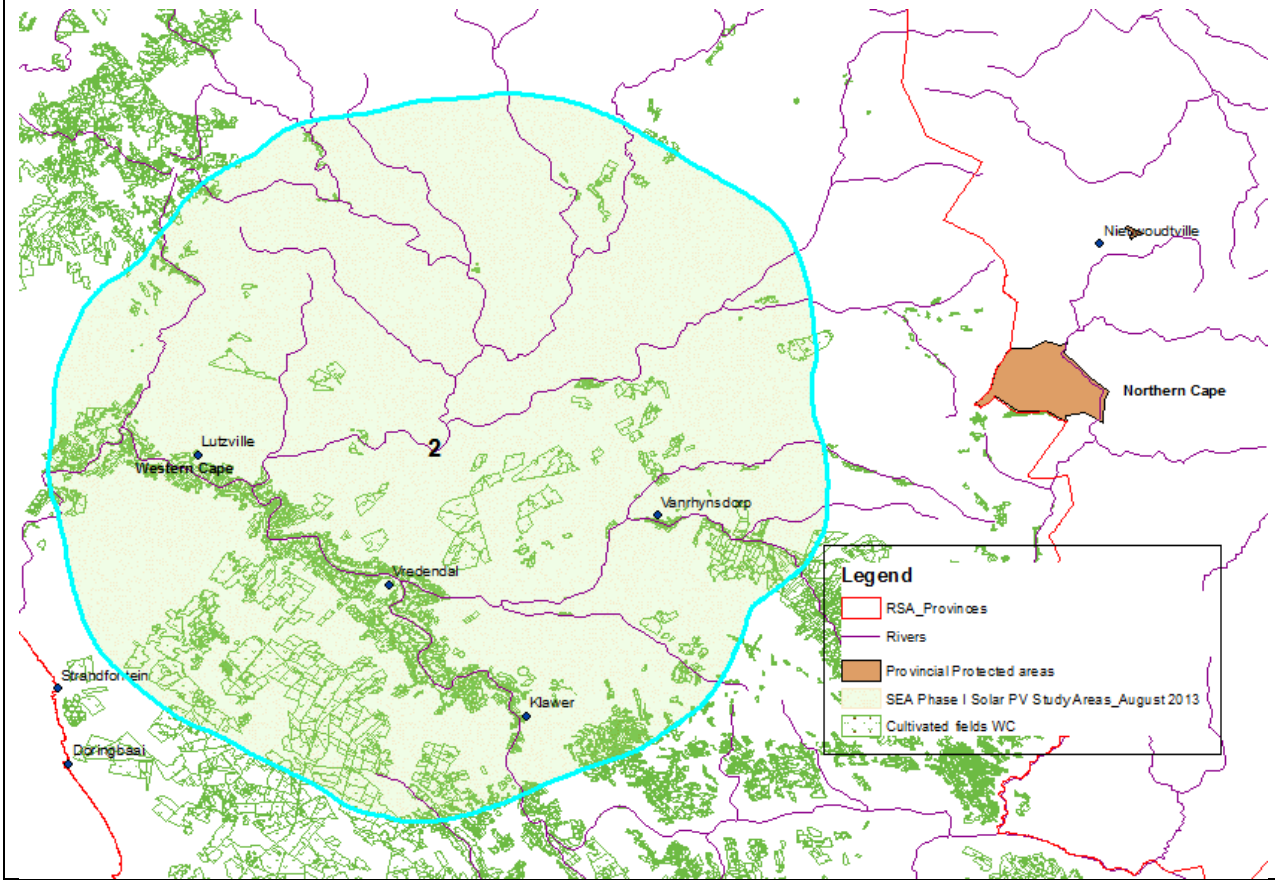
Land capability



Grazing capacity



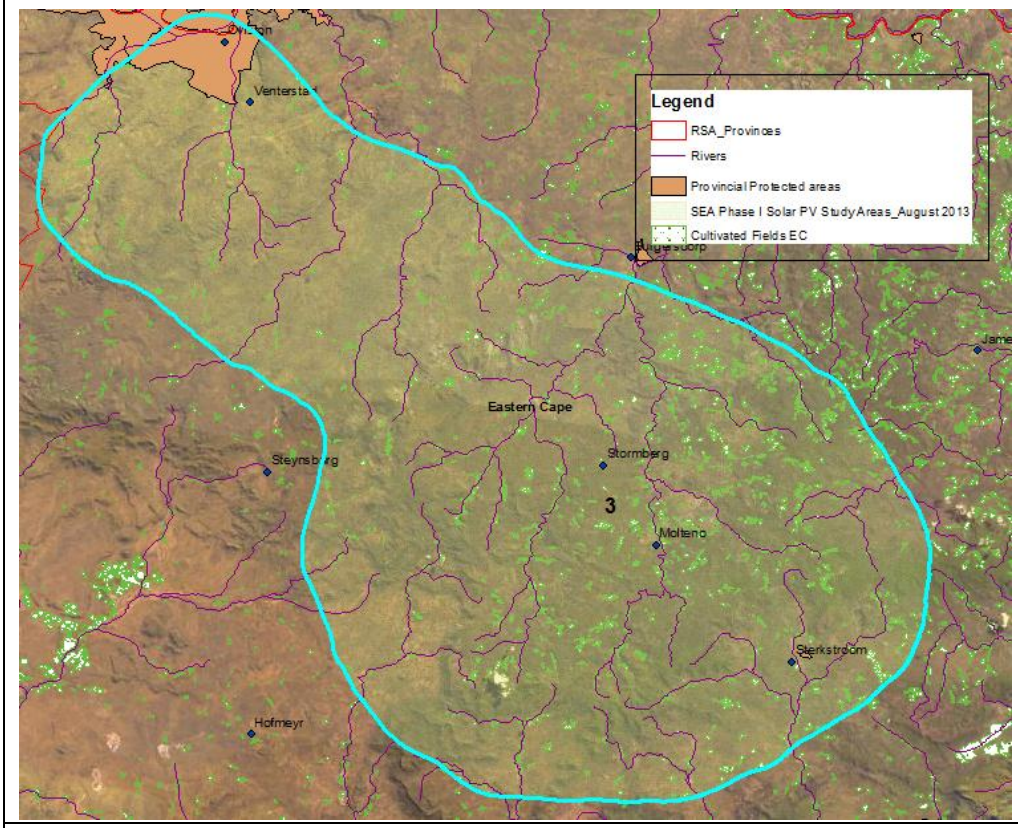
Agricultural Land use



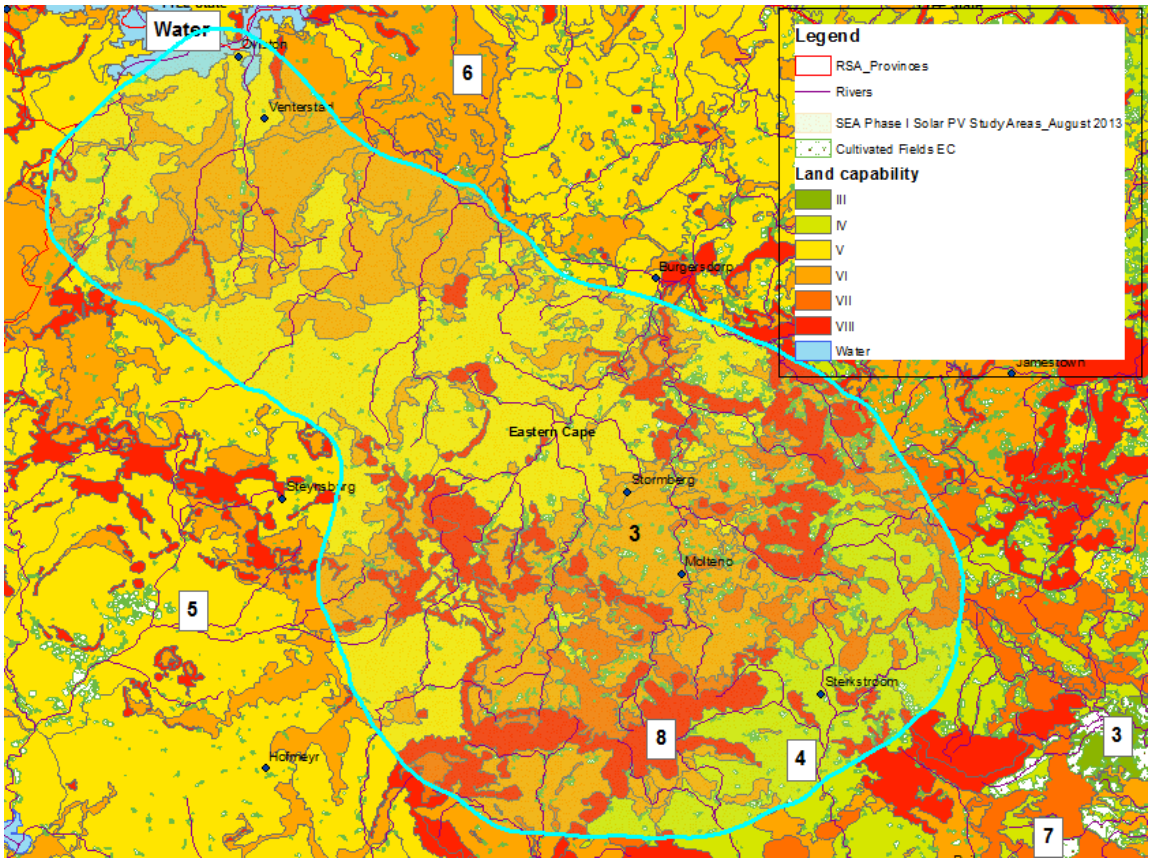
Site 3

Evaluation criteria	Comment
Site number	3
Province	Eastern Cape
Area (ha)	7348
Land capability	Mostly IV – V with smaller areas of VIII. Limiting factors include climate and terrain.
Grazing capacity	5.5 – 6.5 ha/lsu. This area is known for small stock grazing
Agricultural land use	Mostly rangeland but with smaller areas under dryland or irrigation that is scattered throughout the proposed site.
Other	The Gariep Dam (including the provincial nature reserves associated with this dam) is included within the northern boundaries of the proposed site.
Recommendation	This site can be considered for proposed use as a renewable energy area. However the placement of the solar panels should not negatively impact on existing agricultural activities (cultivation / grazing) and agriculture should still be regarded as the primary land use option. Adherence to all requirements as are specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however emphasized.
Images	

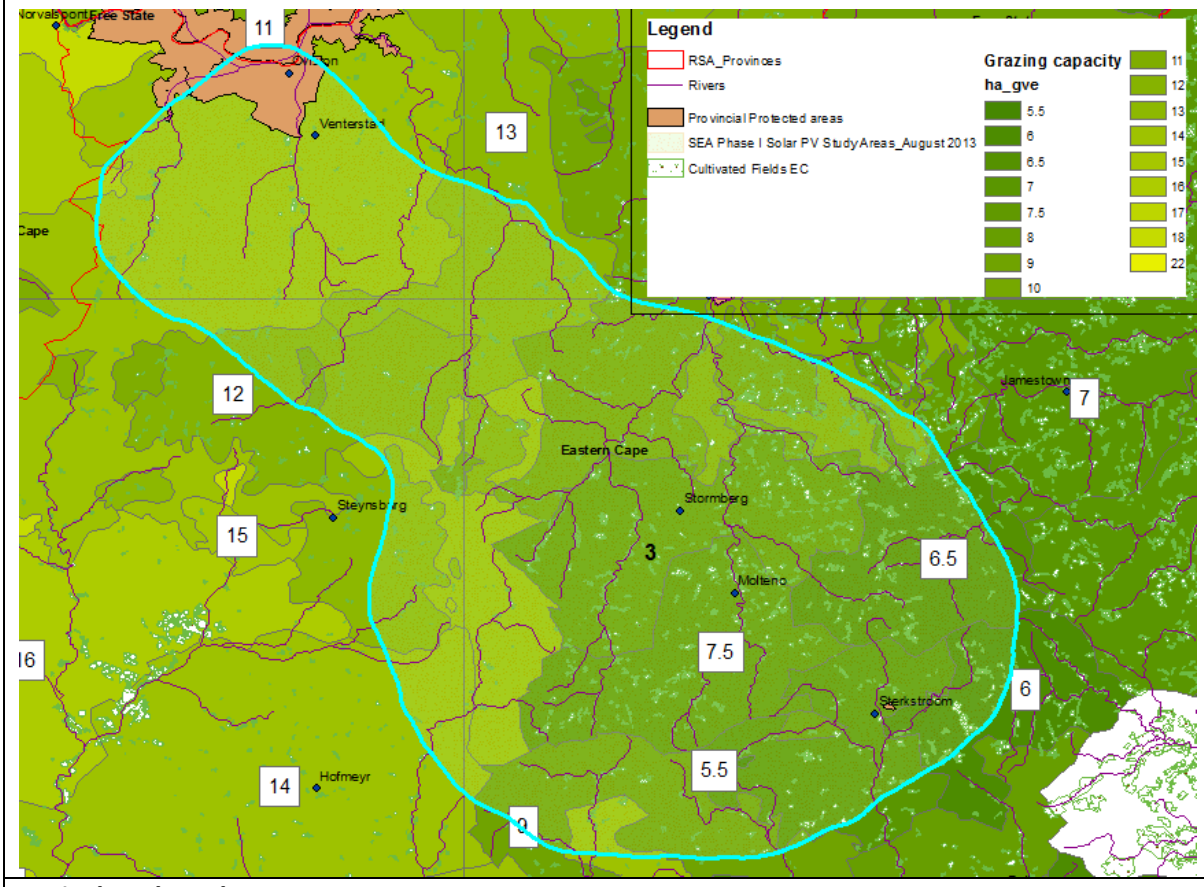
SPOT 2010



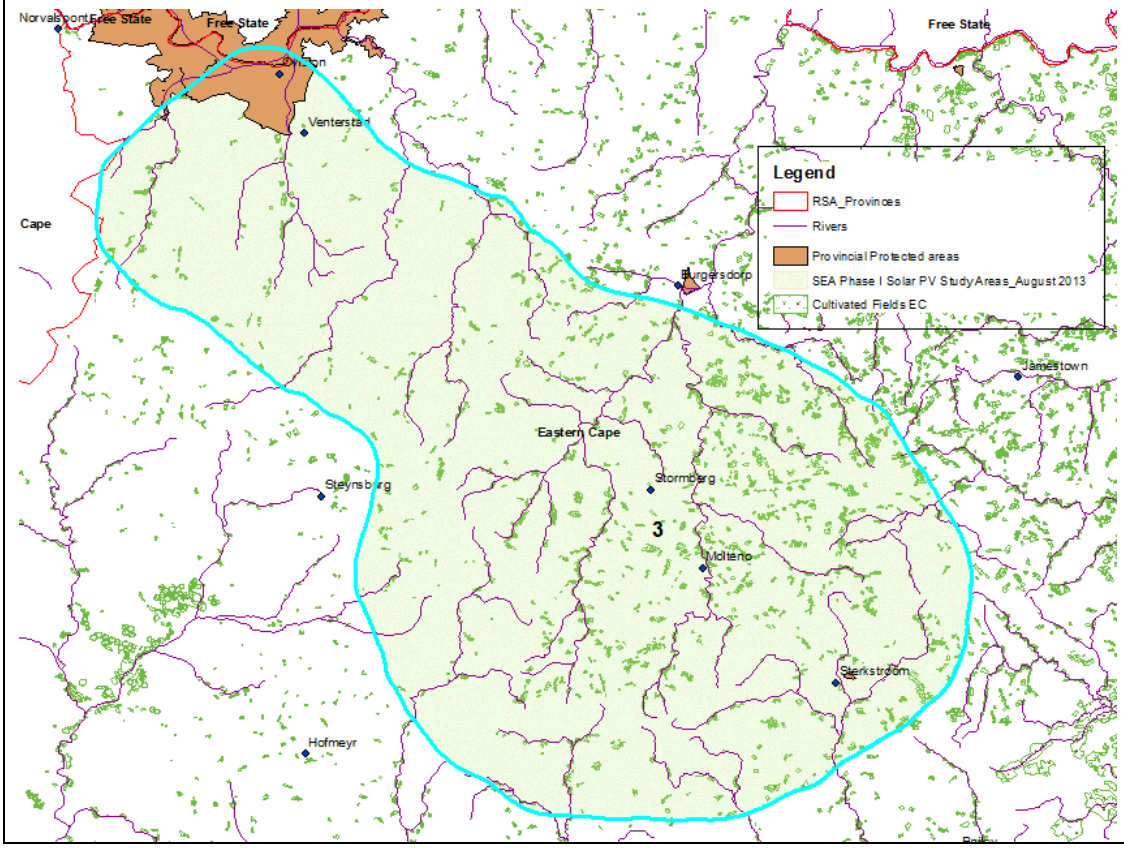
Land capability



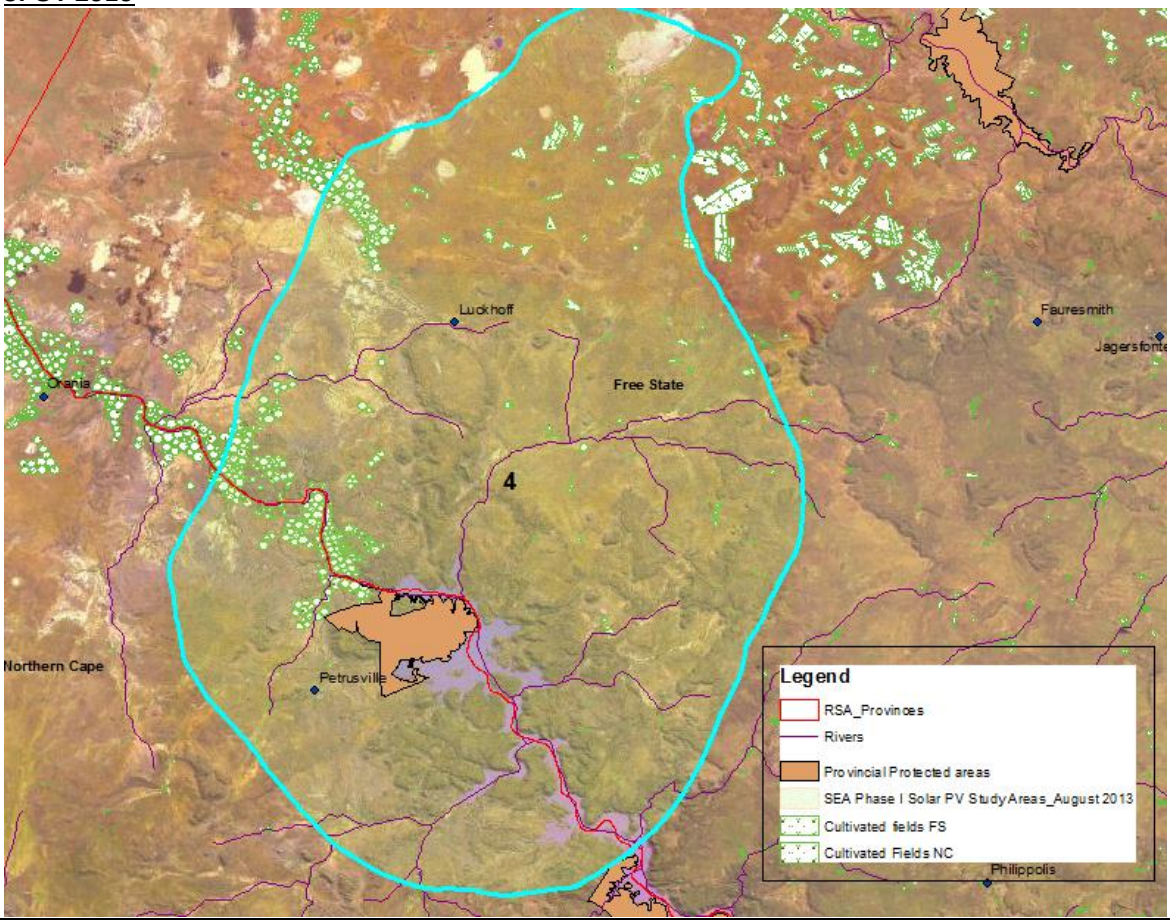
Grazing capacity



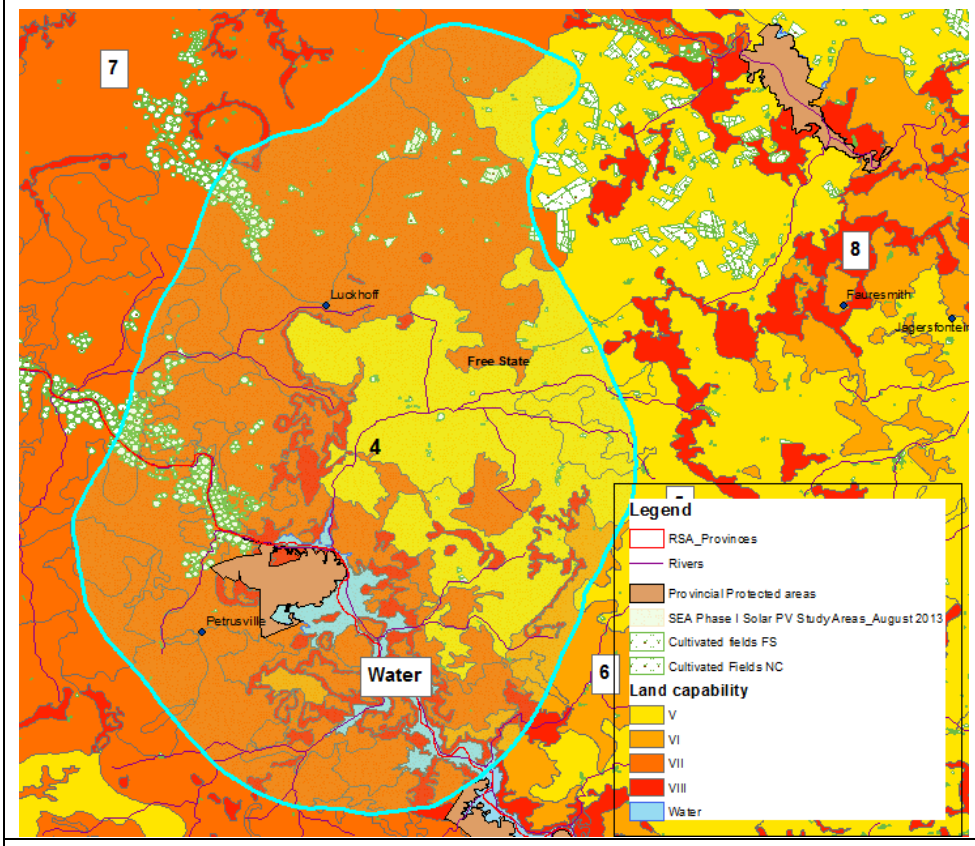
Agricultural Land use



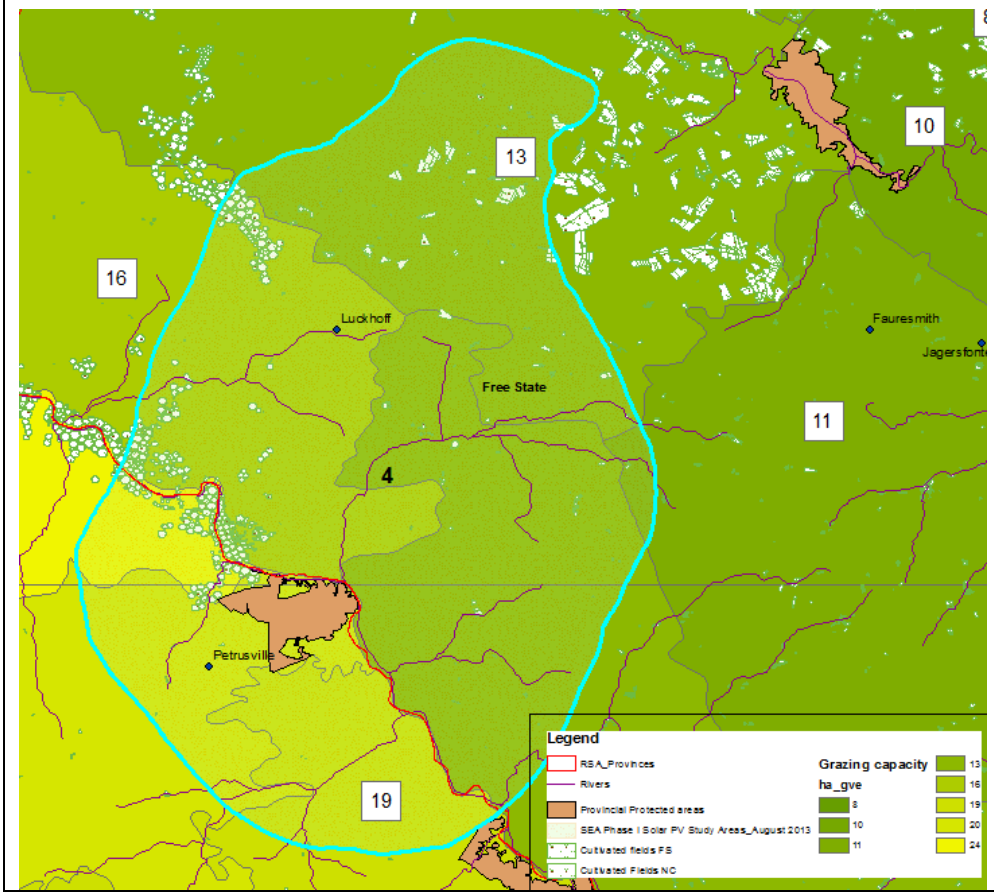
Site 4

Evaluation criteria	Comment
Site number	4
Province	Northern Cape / Free State
Area (ha)	3402
Land capability	Mostly V & VII. However the presence of intensive irrigation along the Orange river demarcates those areas as high potential agricultural land.
Grazing capacity	13 – 19 ha /lsu
Agricultural land use	The area is mostly used for rangeland purposes. However intensive irrigation practices are occurring along the Orange river on the western parts of the proposed site. These irrigation practices should be protected and retained as is with due consideration of possible future expansion.
Other	The Rolfontein Provincial Reserve is located towards the south west of the site.
Recommendation	The site can be retained for further investigation. **It is however recommended that the current irrigated areas, with due consideration of possible future expansion, located within the proposed site be excluded and allowed to continue uninterrupted from any proposed renewable energy structure**. **The boundaries of this proposed area should therefore be amended.**
Images	
SPOT 2010	

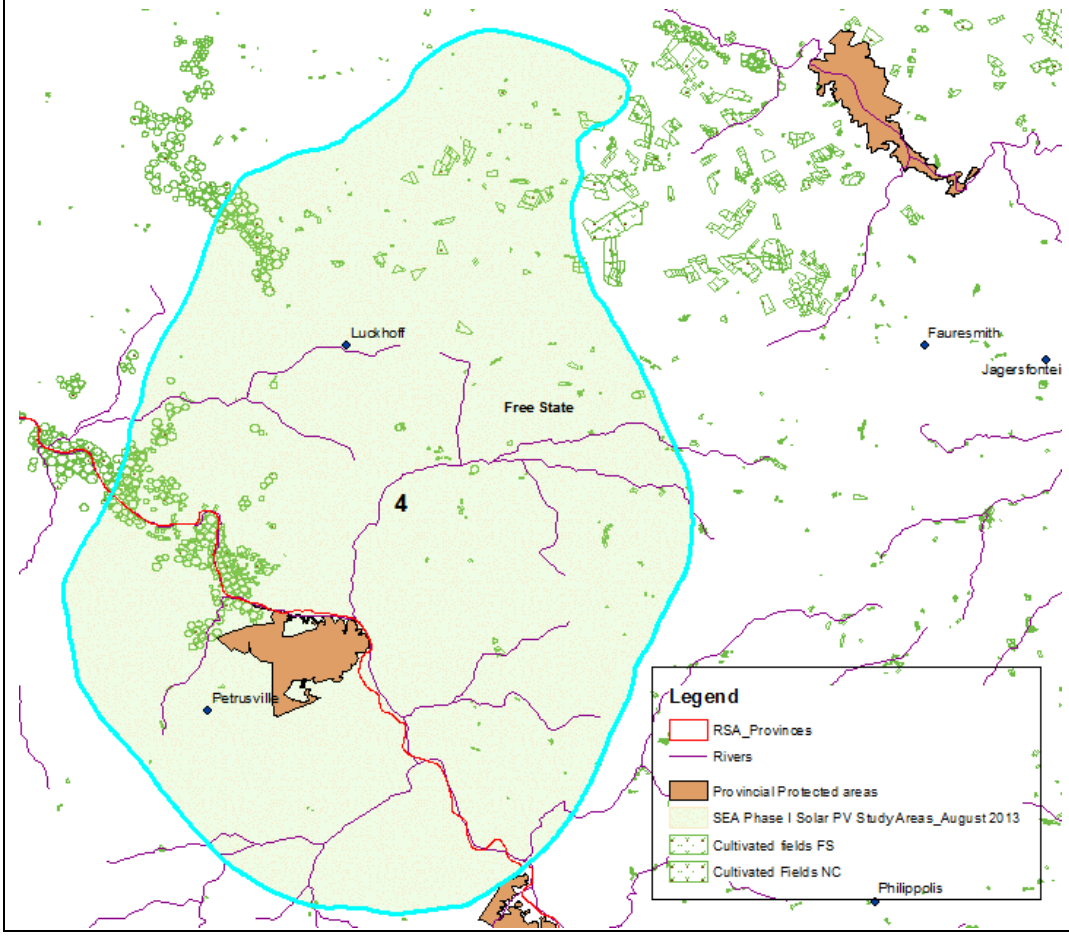
Land capability



Grazing capacity



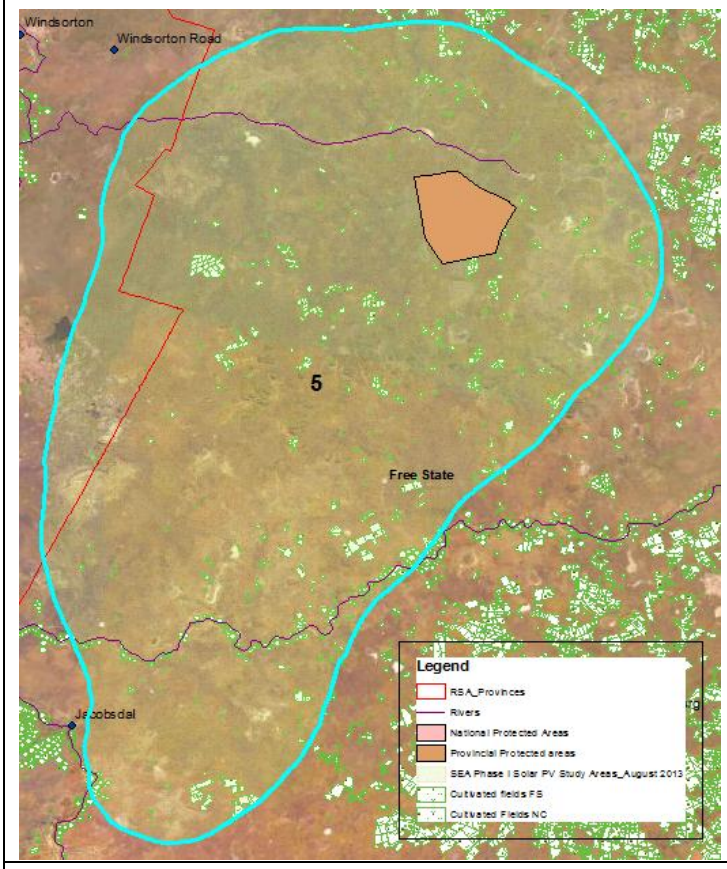
Agricultural Land use



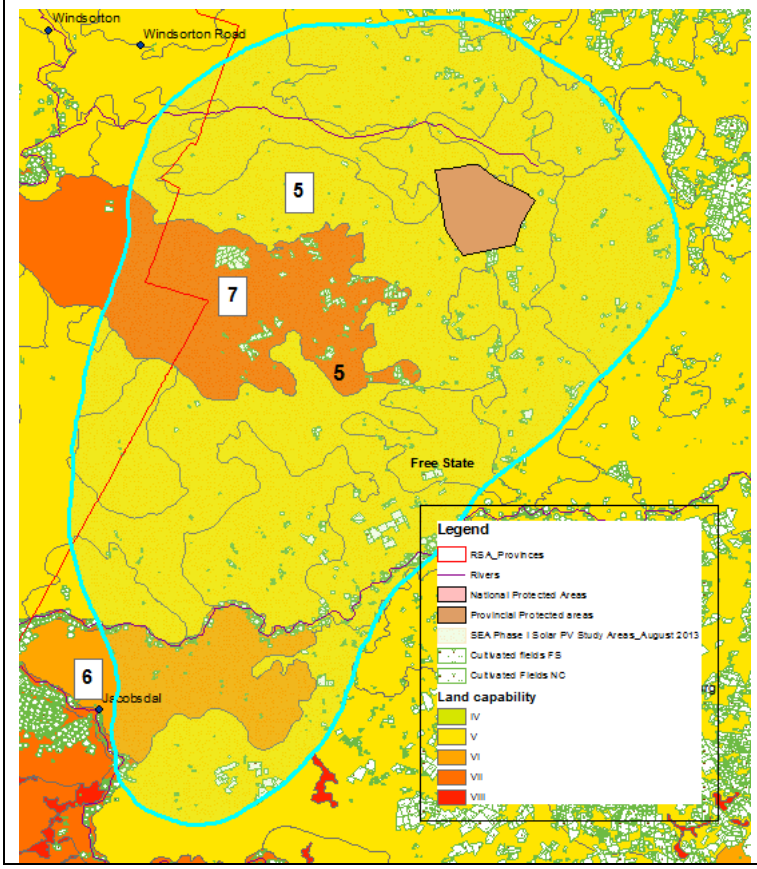
Site 5

Evaluation criteria	Comment
Site number	5
Province	Free State / Northern Cape
Area (ha)	4681
Land capability	Mostly V with some areas having a VI and VII classification
Grazing capacity	10 – 12 ha/lsu
Agricultural land use	The area is mostly used for rangeland purposes. However there are some cultivated areas scattered throughout the proposed site and then also intensive irrigation along the Modderriver that forms part of the Orange Riet Irrigation Scheme. These areas are regarded as high potential agricultural land and should be protected.
Other	None
Recommendation	**It is recommended that this area be re-investigated and that the areas along the Modder river be excluded from the boundaries of this proposed site.** Existing cultivation remaining within this area should also be allowed to continue and agriculture still regarded as the primary land use.
Images	

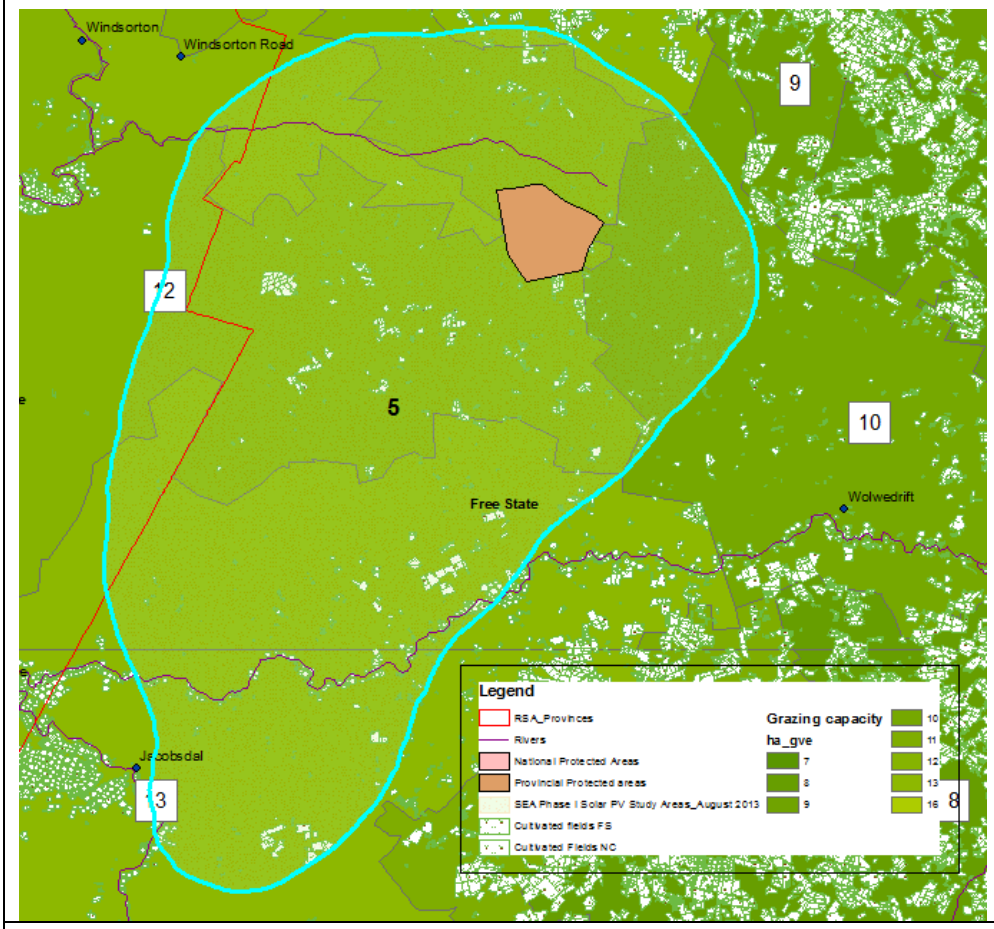
SPOT 2010



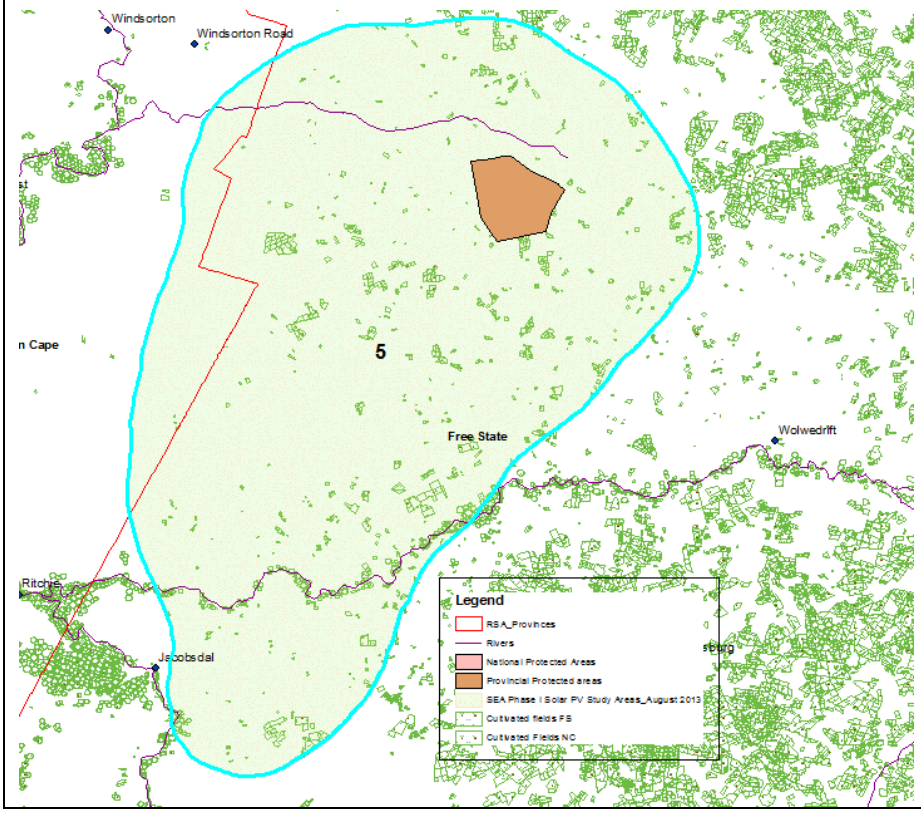
Land capability



Grazing capacity

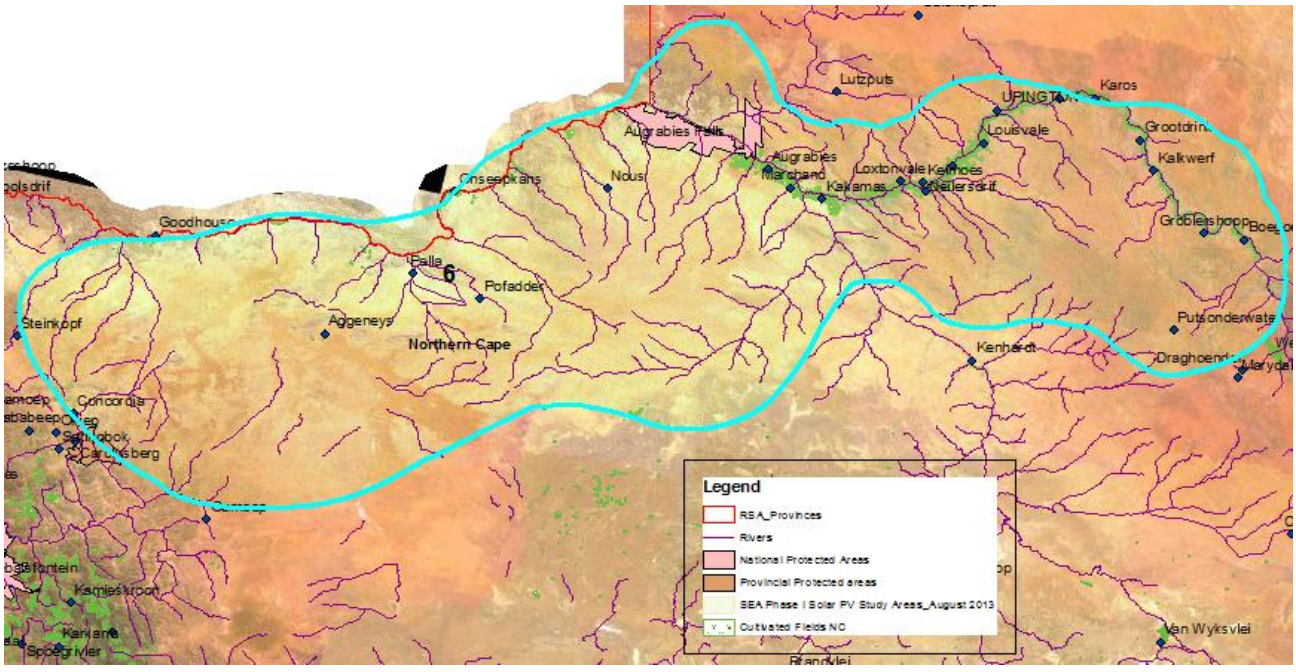


Agricultural Land use

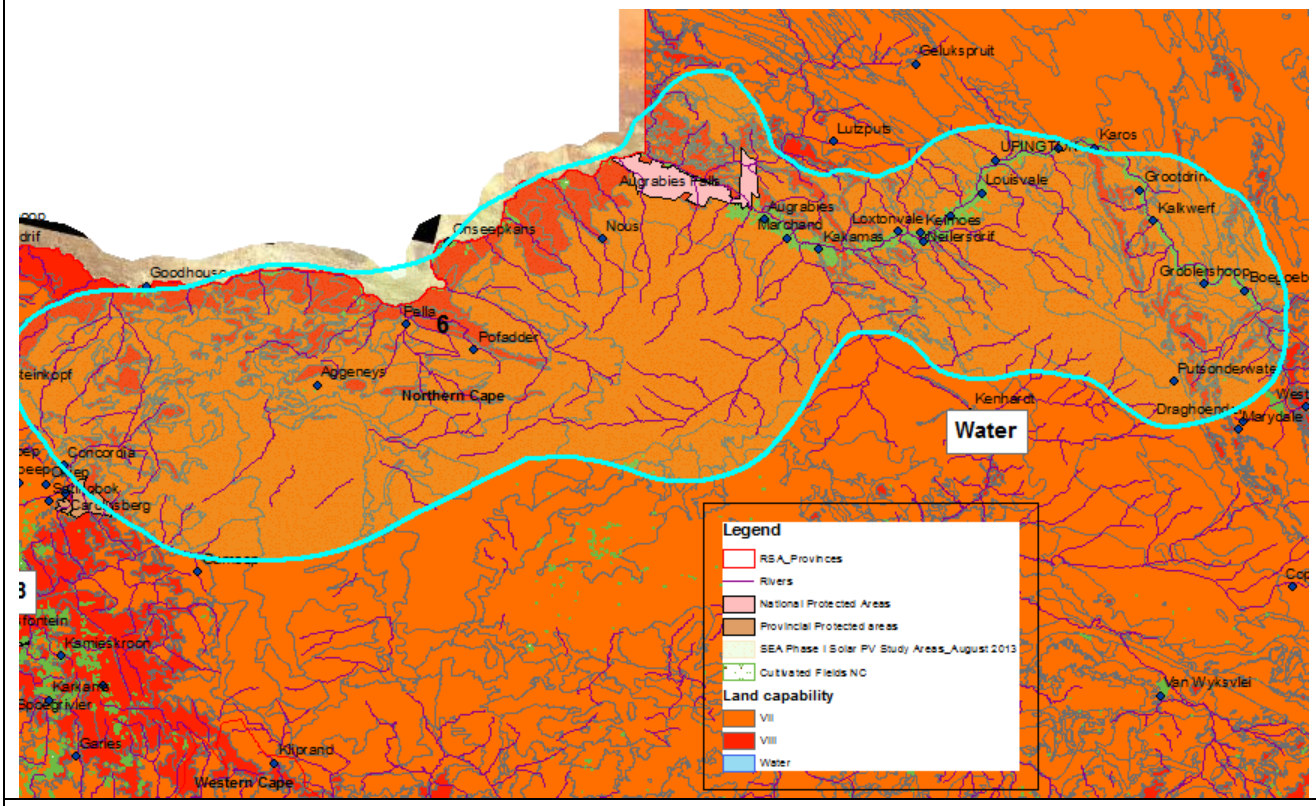


Site 6

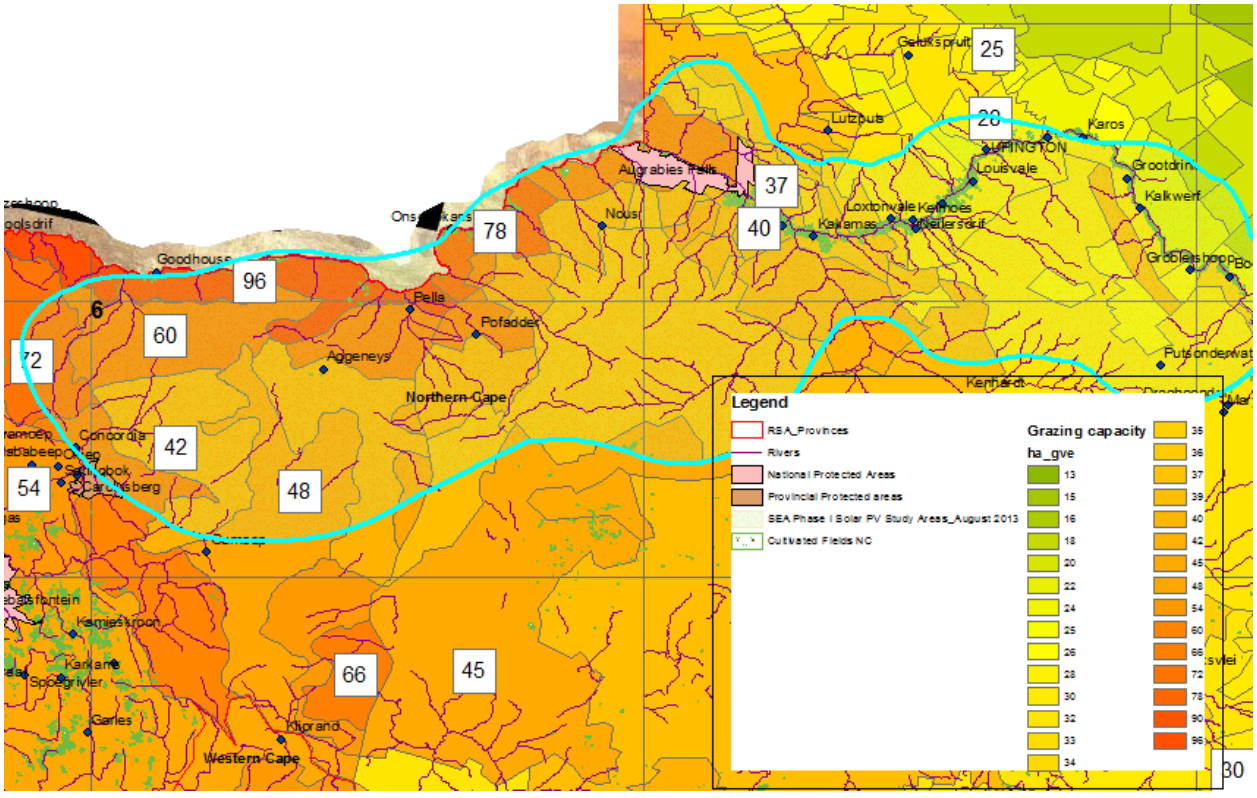
Evaluation criteria	Comment
Site number	6
Province	Northern Cape
Area (ha)	44 175
Land capability	VII - VIII. However any area under irrigation is regarded as high potential agricultural land and should be retained.
Grazing capacity	Varied 37 – 96 ha/lsu
Agricultural land use	Mostly rangeland use with the exception of the intensive irrigation occurring along the Orange River close to Upington. These areas should be retained as is with agricultural production regarded as the primary land use as it forms the backbone of the rural economy as well as for its contribution to employment opportunities.
Other	The Augrabies National Park is located within the proposed site
Recommendation	**The site can be retained as is with the provision that the intensive irrigated areas along the Orange river be retained with due consideration for future expansion.** Water allocated for agricultural purposes should be retained for that propose and not be reallocated to renewable energy related projects. Also the area located within the Augrabies national Park should be excluded. A possibility is to amend the northern boundary of the proposed site to exclude the National Park and the irrigated areas along the Orange river.
Images	
SPOT 2010	



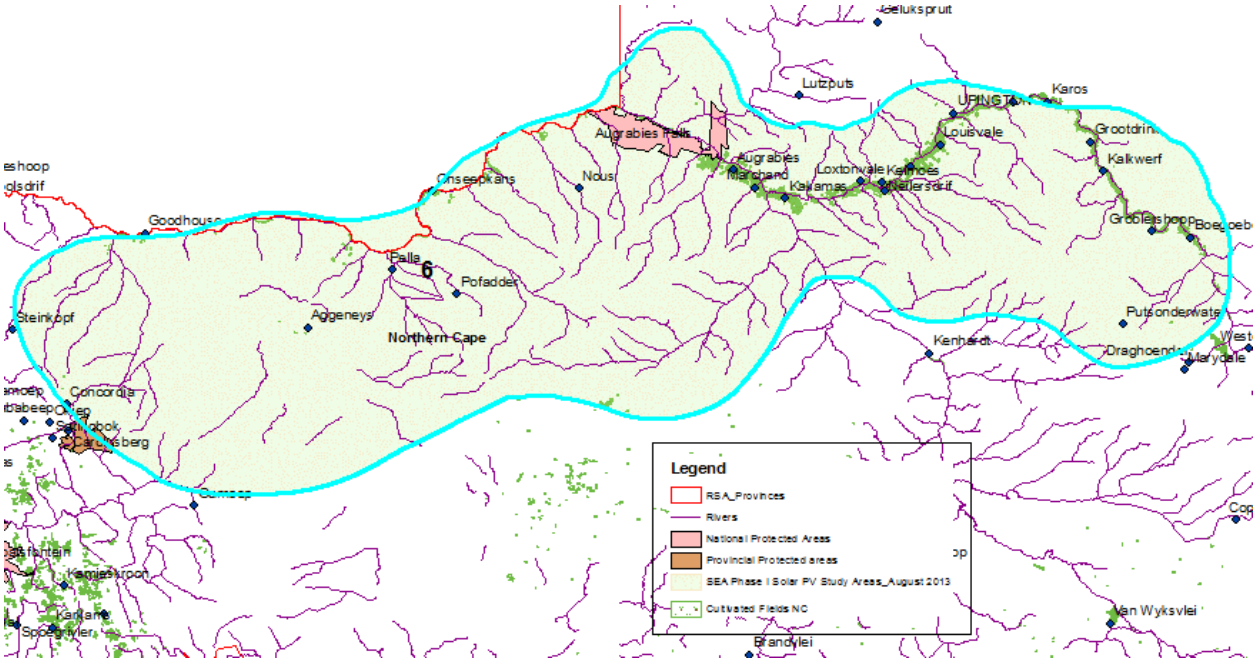
Land capability



Grazing capacity



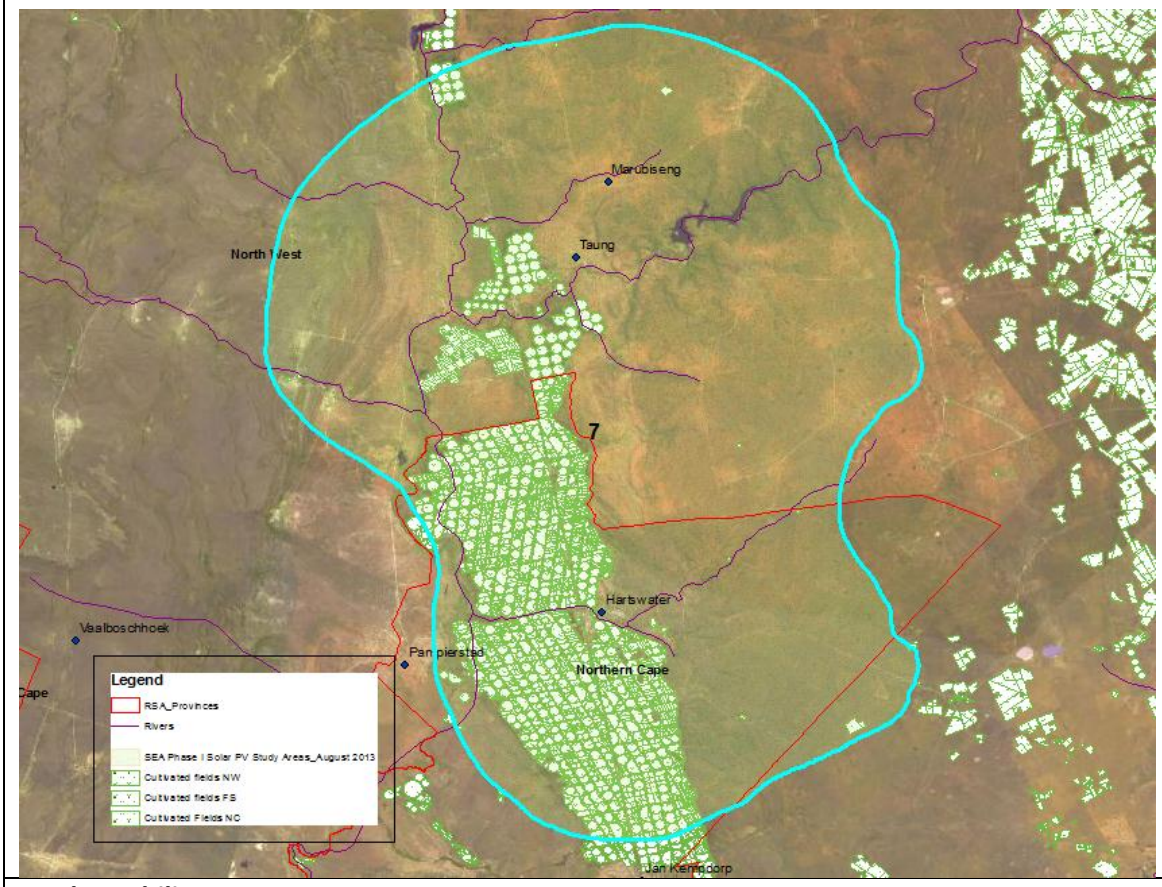
Agricultural Land use



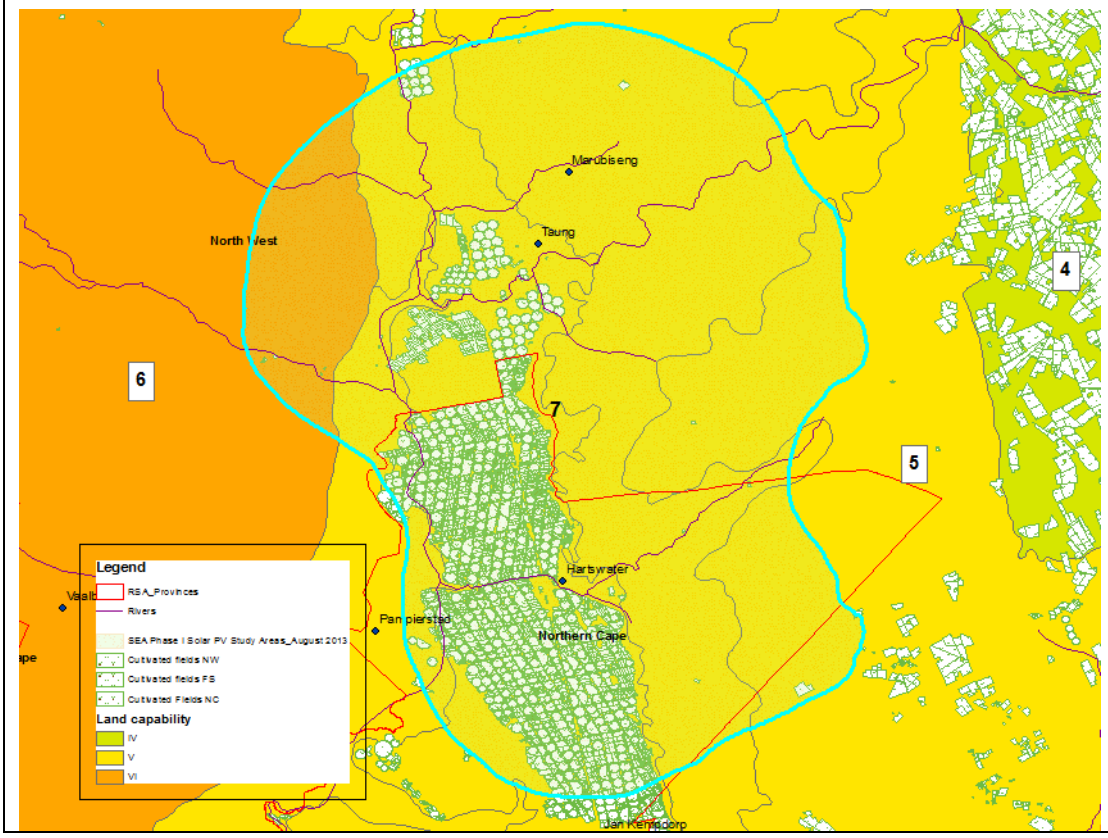
Site 7

Evaluation criteria	Comment
Site number	7
Province	Free State / North West province
Area (ha)	1594
Land capability	VII. However any area under irrigation is regarded as high potential agricultural land and should be protected.
Grazing capacity	9 ha/lsu (exclude the areas under irrigation)
Agricultural land use	The Vaalharts Irrigation Scheme takes up the largest part of the proposed site. This area is not available for any renewable energy related project and should be kept as is.
Other	None
Recommendation	**The majority of this site should be excluded. This site includes the Vaalharts irrigation Scheme and contributes significantly towards agricultural production, the rural economy and employment opportunities. Any change of land use is not supported.**
Images	

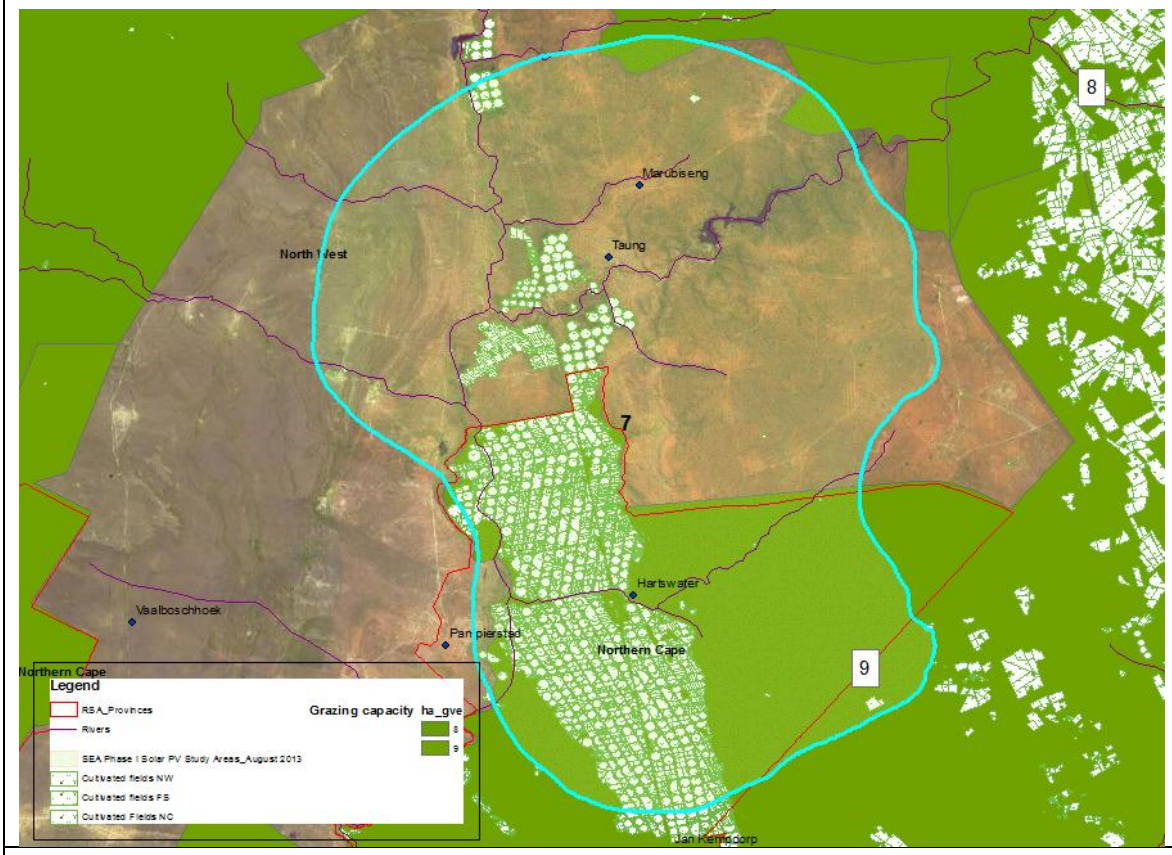
SPOT 2010



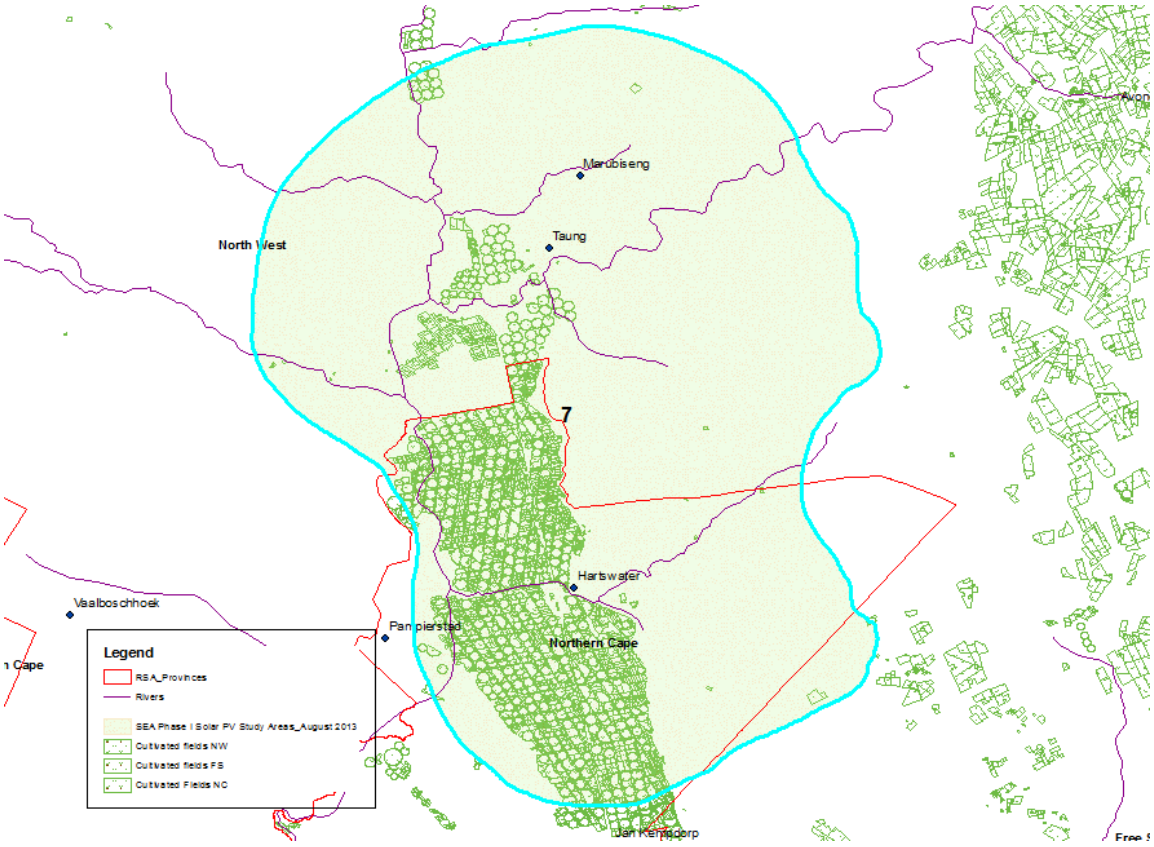
Land capability



Grazing capacity



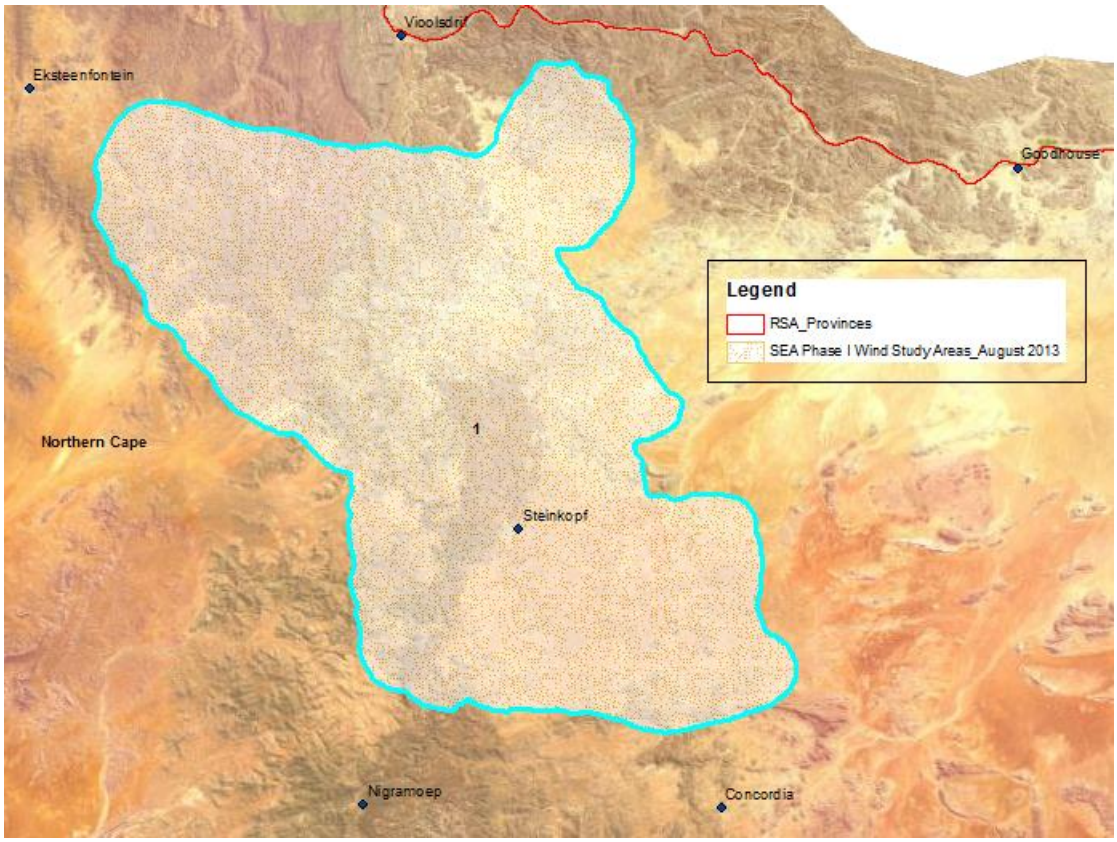
Agricultural Land use



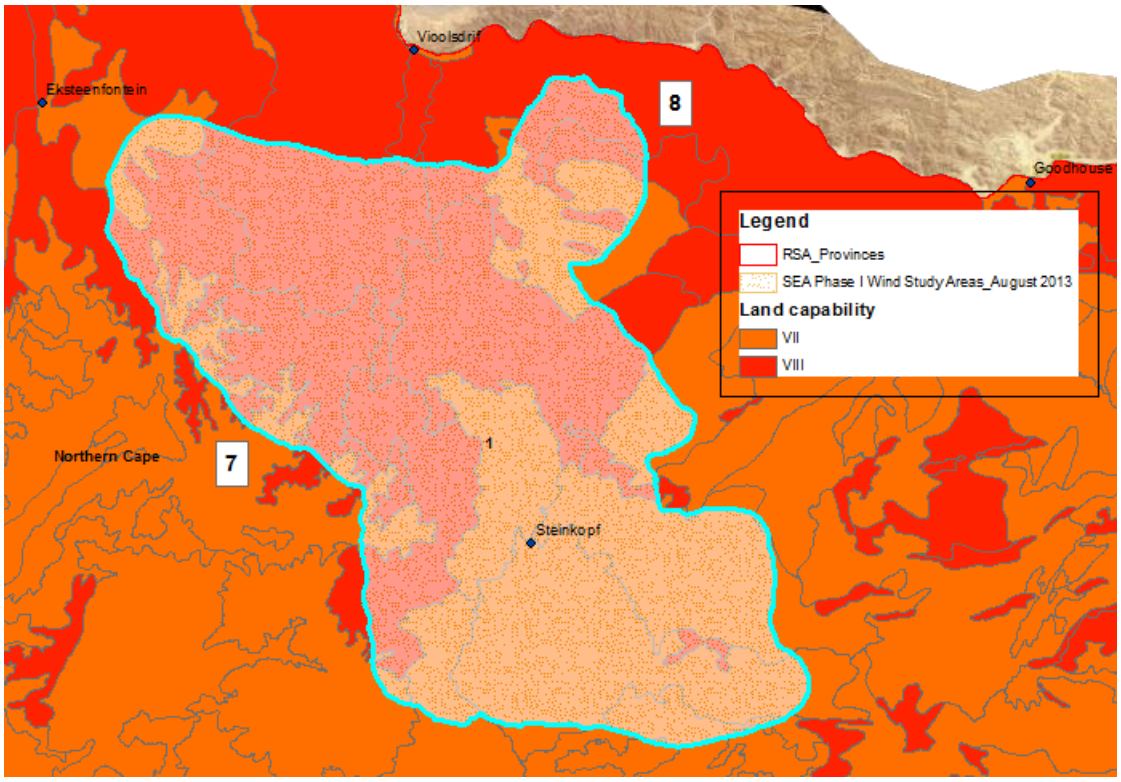
WIND SITES

Study Area Site 1

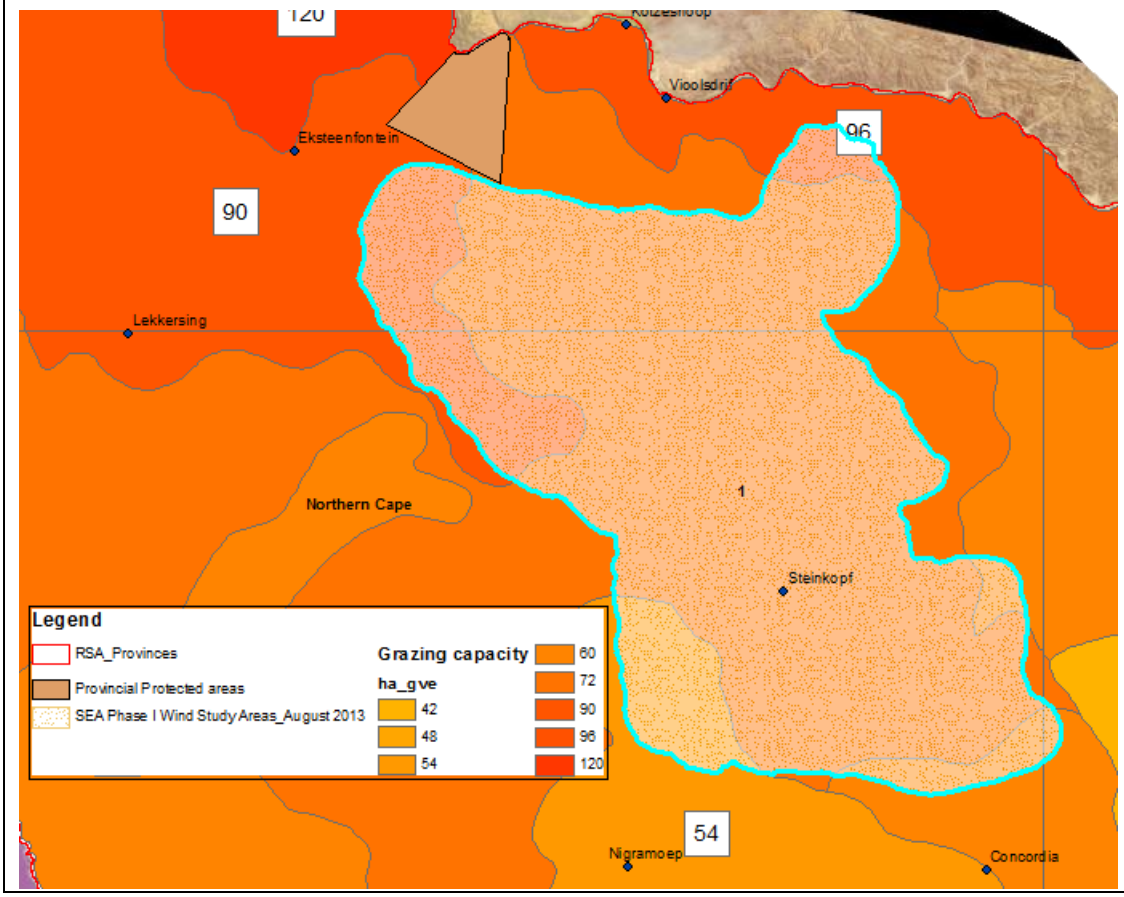
Evaluation criteria	Comment
Site number	1
Province	Northern Cape
Area (ha)	2731
Land capability	VII - VIII
Grazing capacity	72 ha/lsu
Agricultural land use	Mostly used for rangeland purposes. There are a few cultivated fields (irrigation) but it is very limited.
Other	None
Recommendation	This site can be retained for further investigation. It has limited to no agricultural potential due to sever climatic constraints. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	
SPOT 2010	



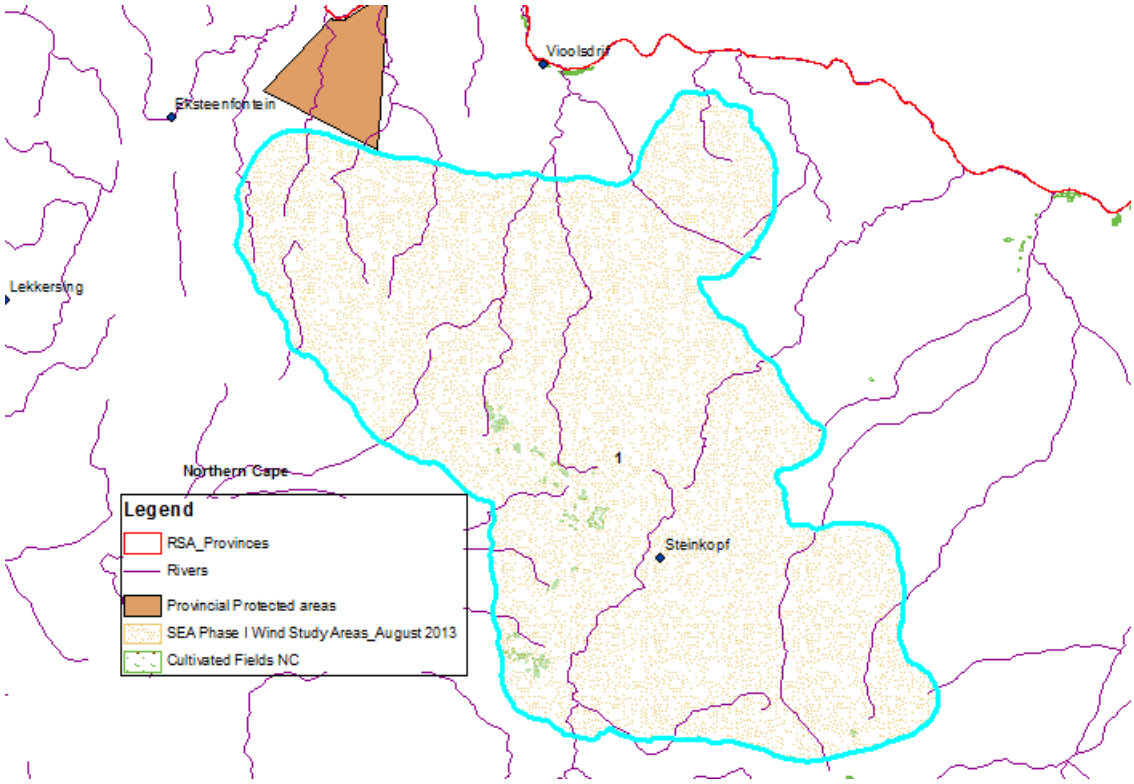
Land capability



Grazing capacity



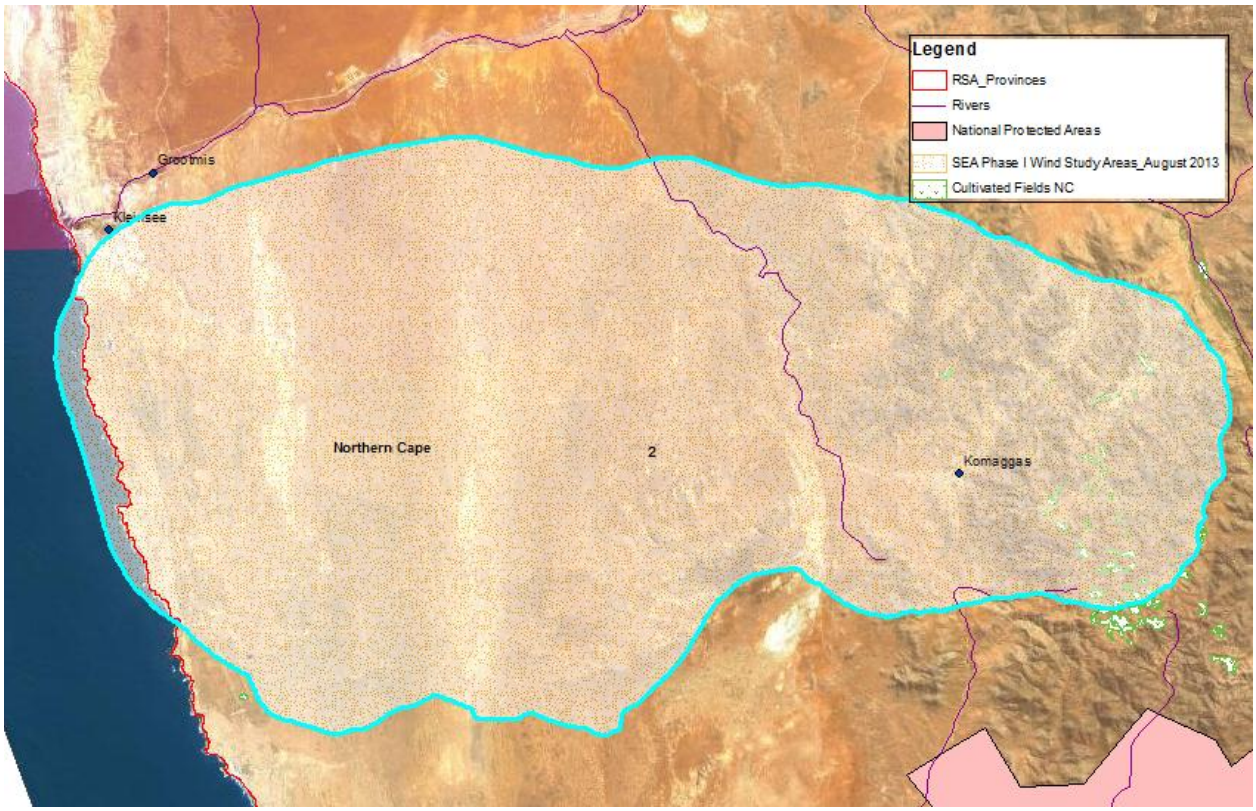
Agricultural Land use



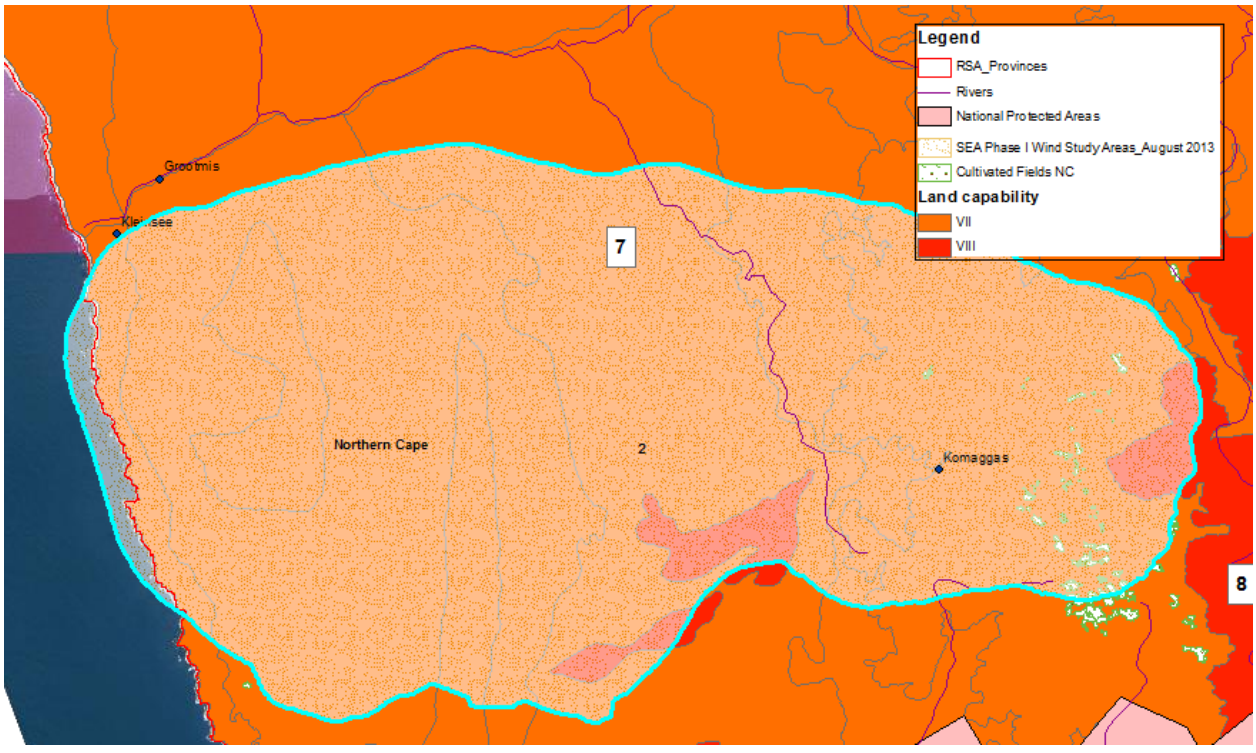
Study Area Site 2

Evaluation criteria	Comment
Site number	2
Province	Northern Cape
Area (ha)	1315
Land capability	VII. Agricultural production potential is severely limited
Grazing capacity	Varied – between 45 – 60 ha/lsu
Agricultural land use	Mostly used for rangeland purposes. There are a few cultivated fields (irrigation) but it is limited. The site is located close to the coast and the possibility of wind erosion within this area is very high.
Other	None
Recommendation	This site can be retained for further investigation. It has limited agricultural potential due to sever climatic constraints. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	

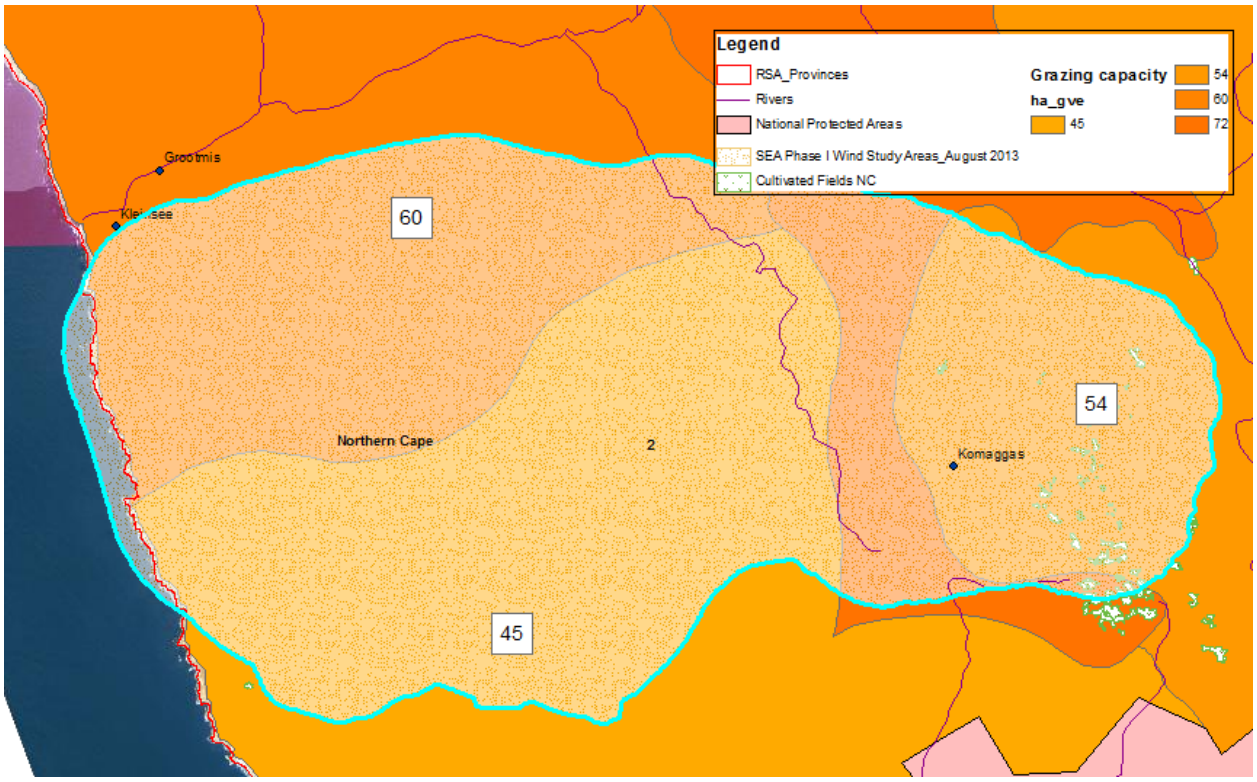
SPOT 2010



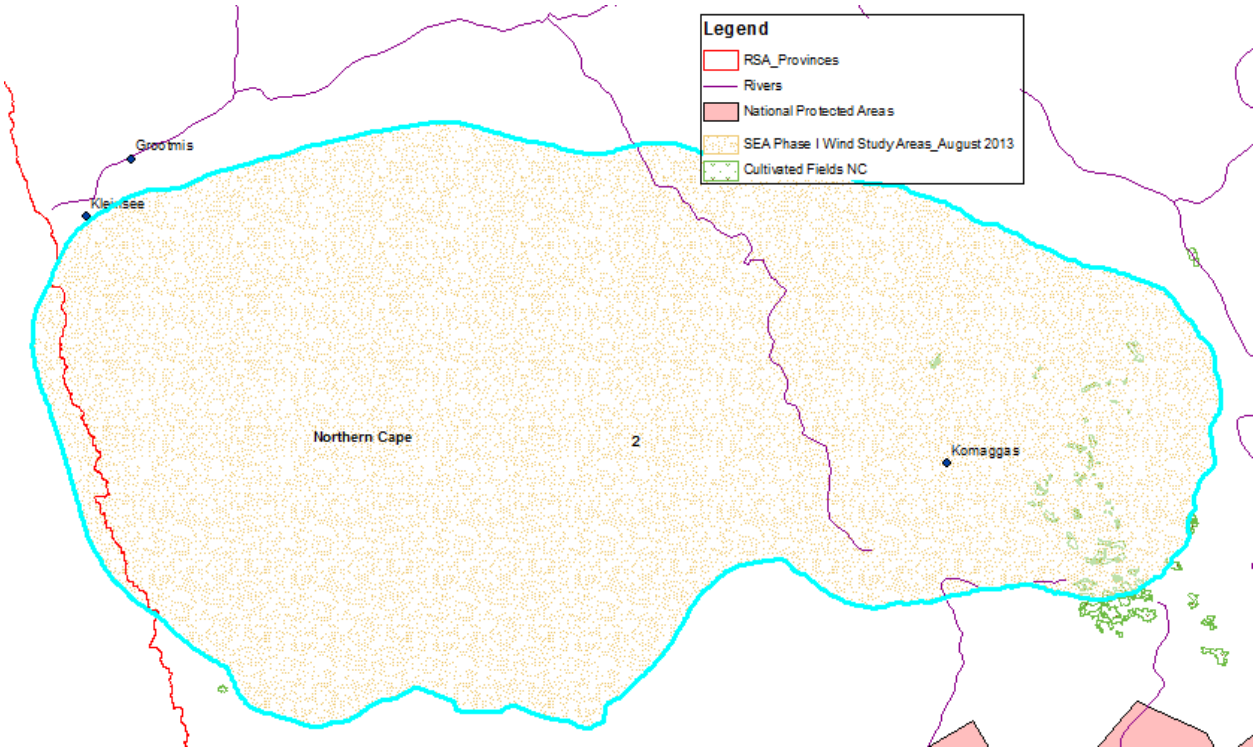
Land capability



Grazing capacity



Agricultural Land use

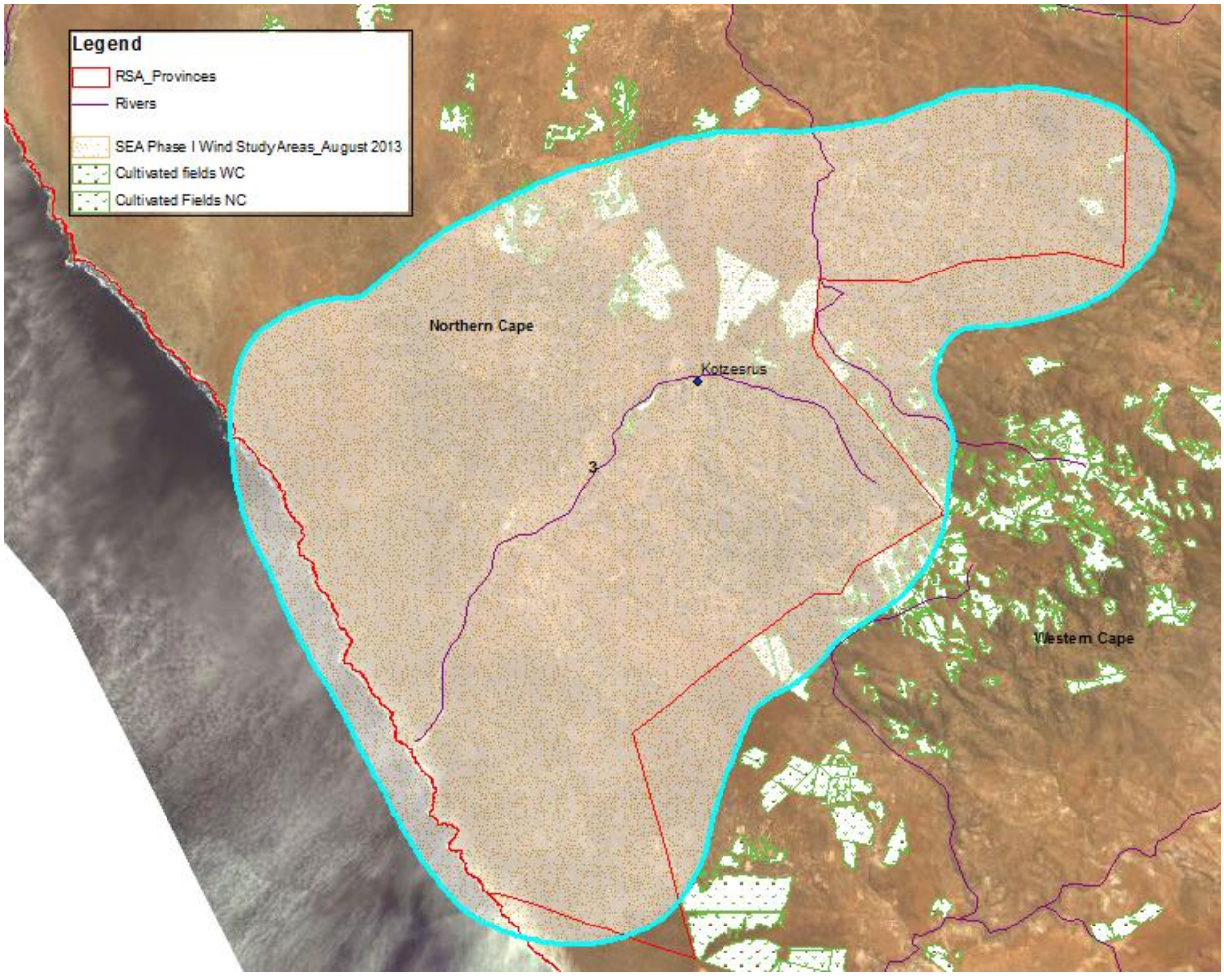


Study Area Site 3

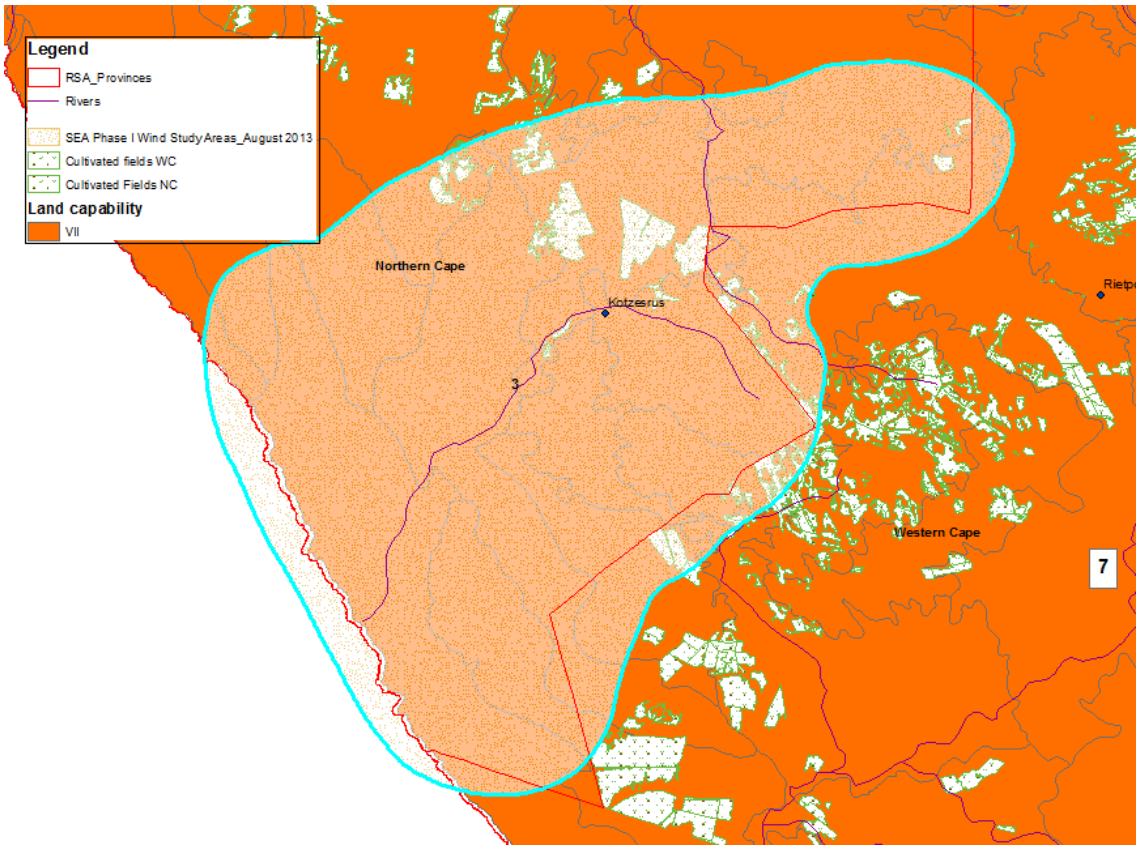
Evaluation criteria	Comment
Site number	3
Province	Northern Cape / Western Cape
Area (ha)	668
Land capability	VII – agricultural production is severely limited due to severe climatic conditions but also very sandy soils
Grazing capacity	45 ha/lsu
Agricultural land use	Mostly rangeland. However there are a few areas under cultivation within the proposed site.
Other	None
Recommendation	This site can be retained for further investigation, excluding the areas currently under cultivation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

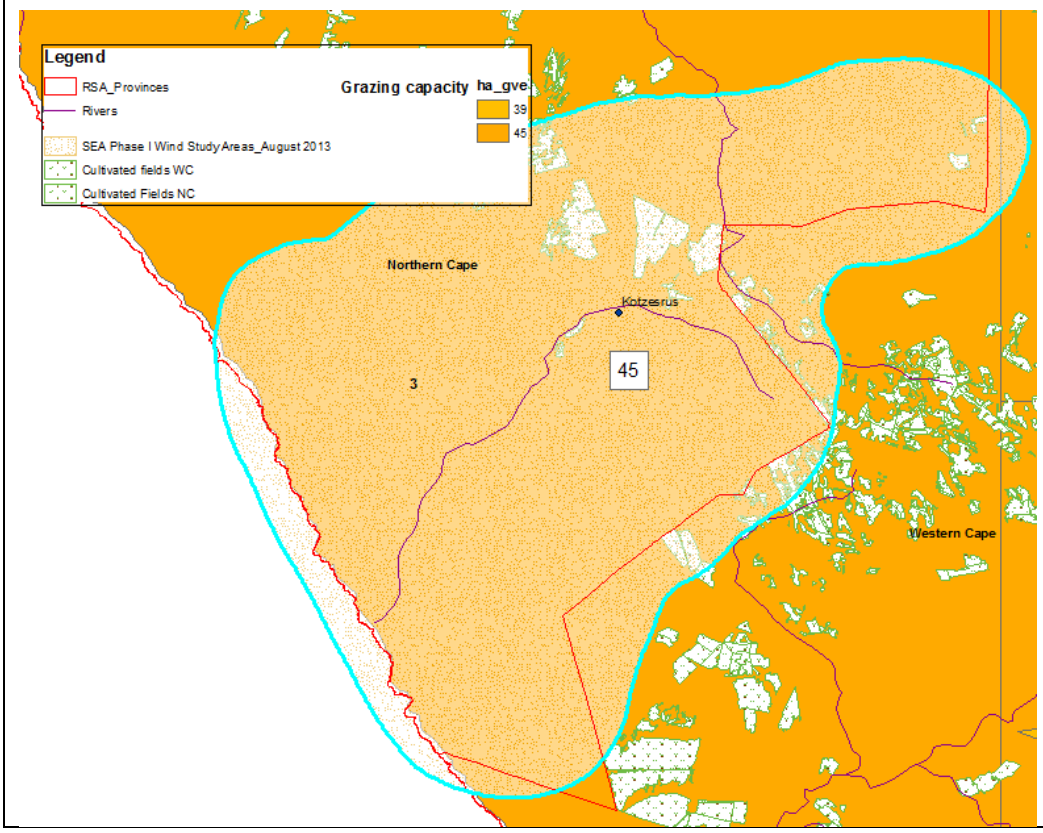
SPOT 2010



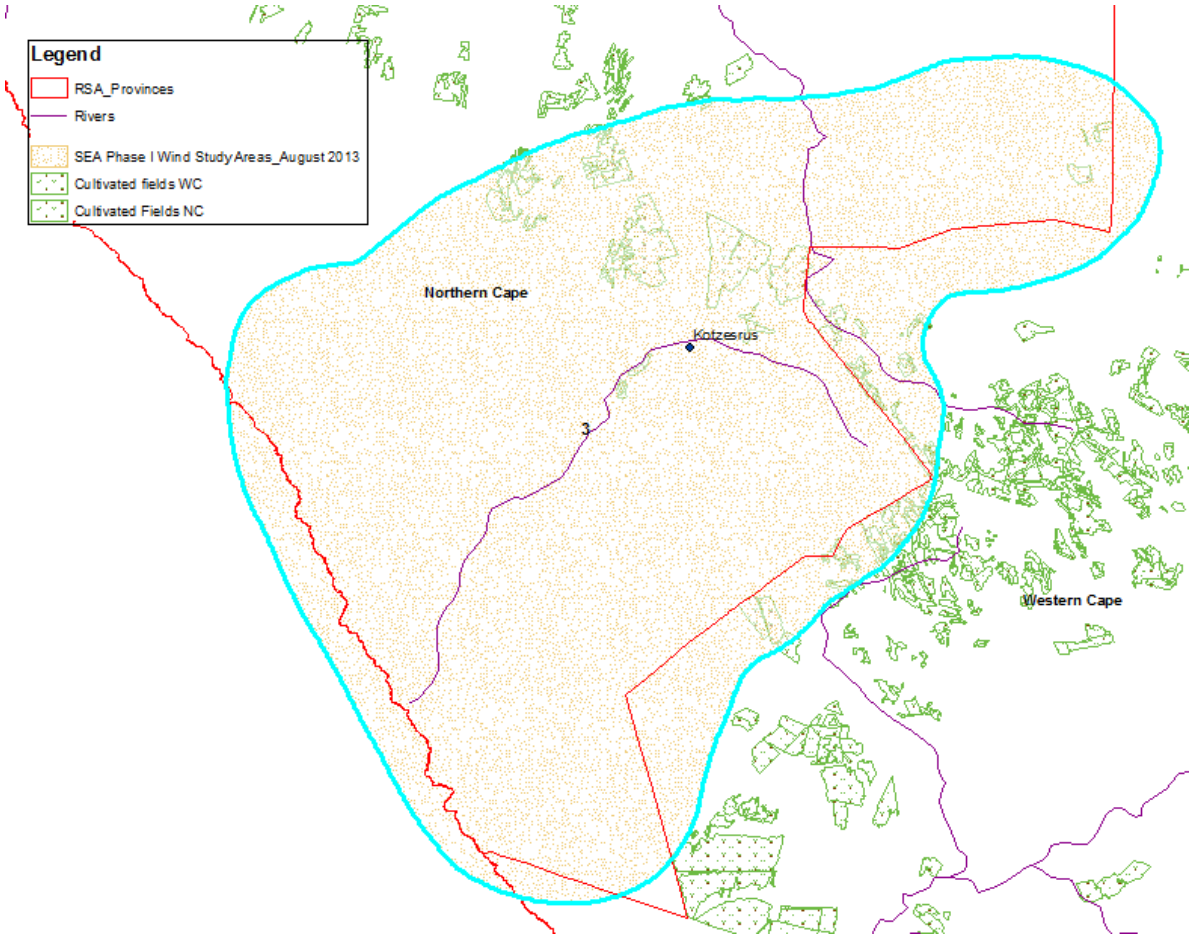
Land capability



Grazing capacity



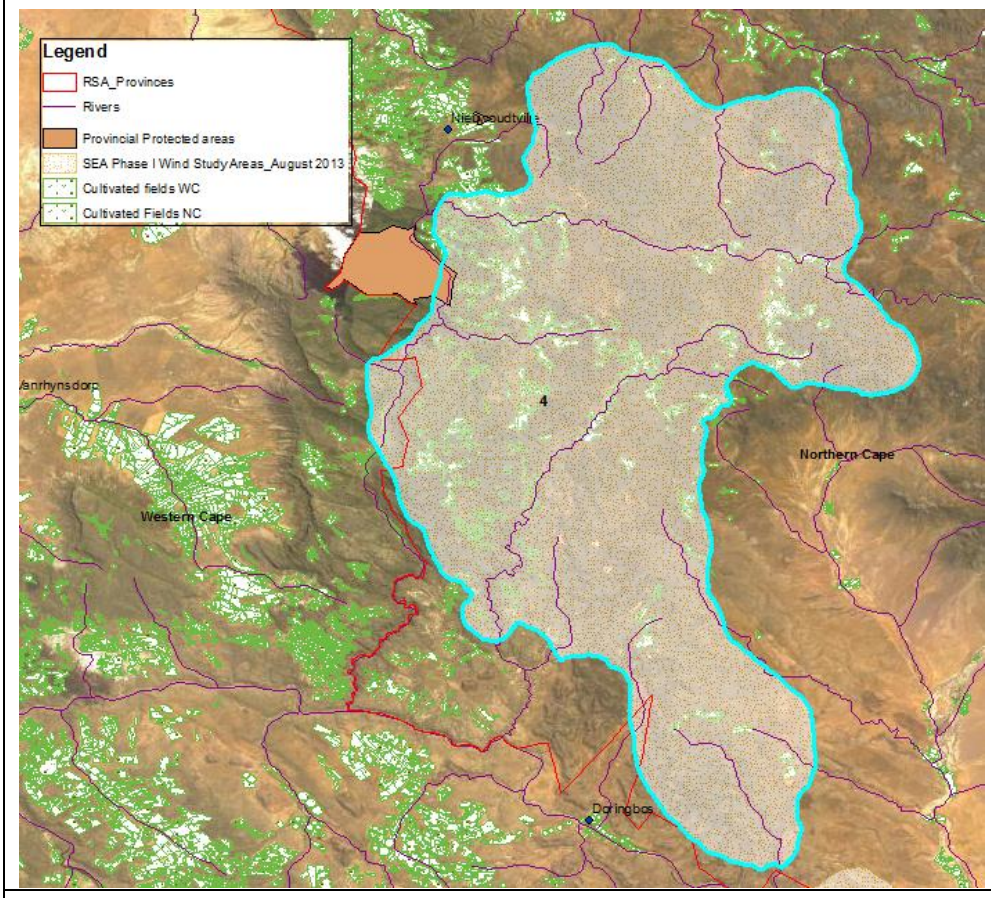
Agricultural Land use



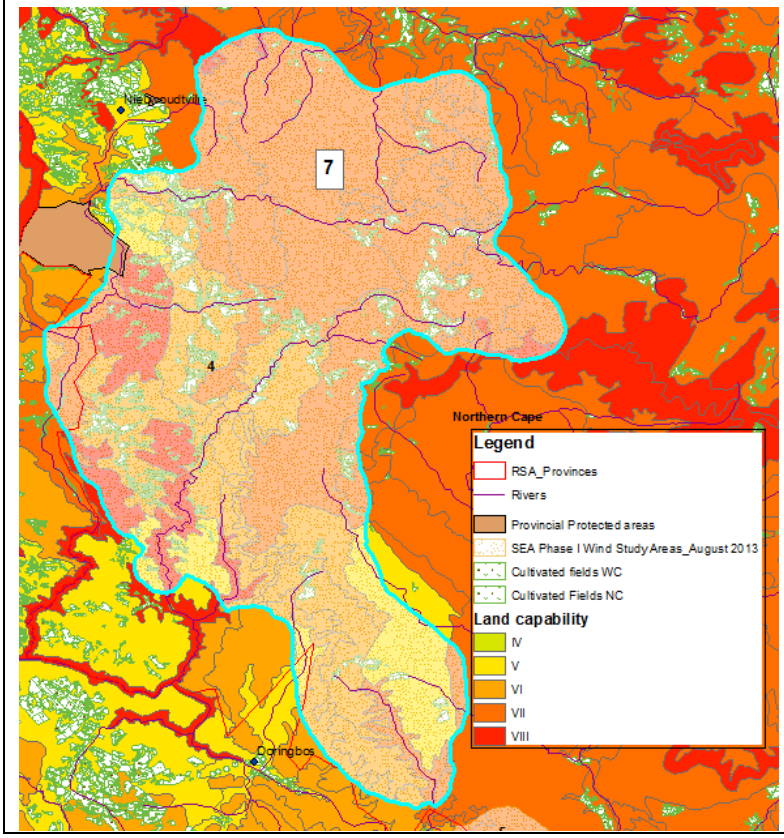
Study Area Site 4

Evaluation criteria	Comment
Site number	4
Province	Northern Cape
Area (ha)	1826
Land capability	Varied between V – VII with small patches of VIII
Grazing capacity	28 – 39 ha/lsu
Agricultural land use	Mostly rangeland. However in the lower lying areas cultivation is occurring and should be allowed to continue.
Other	None
Recommendation	**This site can be retained for further investigation. However the existing agricultural production practices, with specific reference to the areas under cultivation, should be allowed to continue and agriculture should still be regarded as the primary land use**. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is emphasized.
Images	

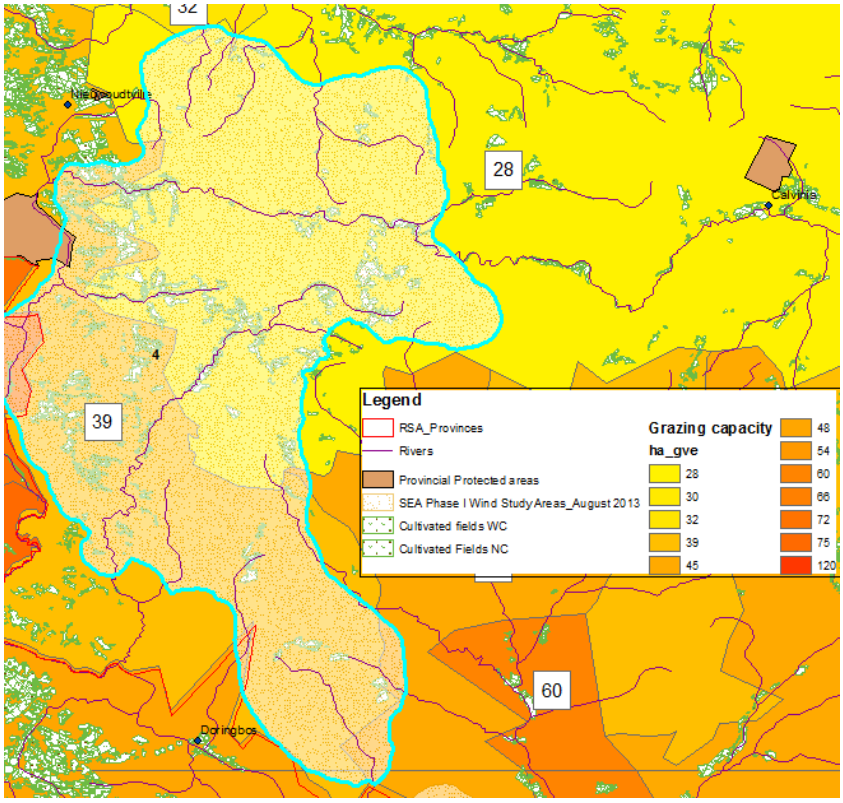
SPOT 2010



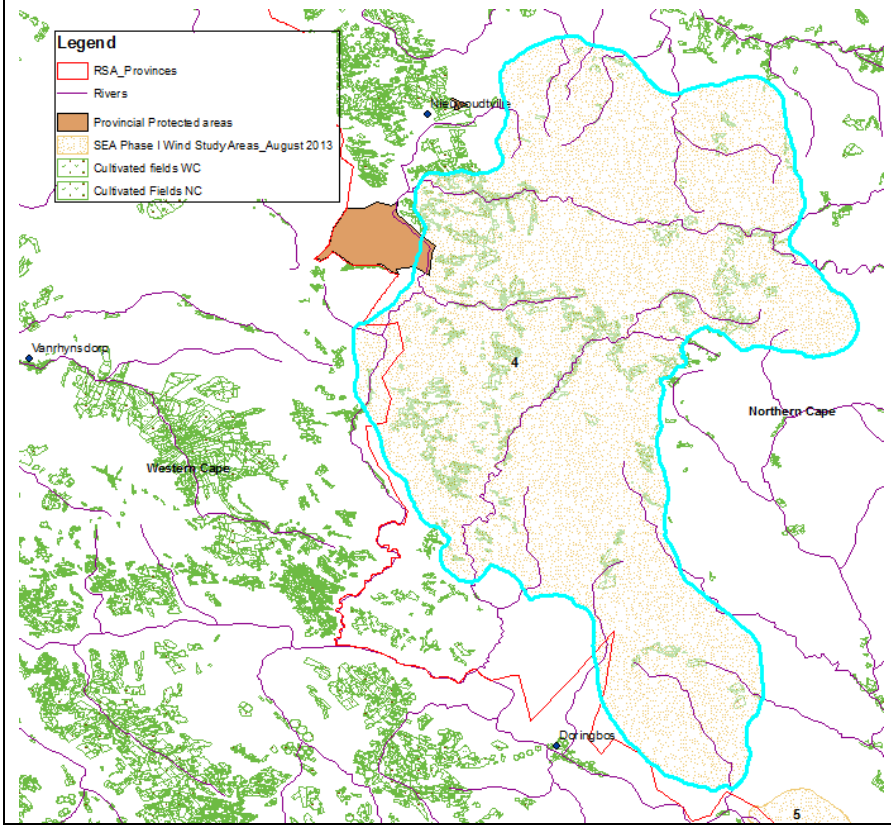
Land capability



Grazing capacity



Agricultural Land use

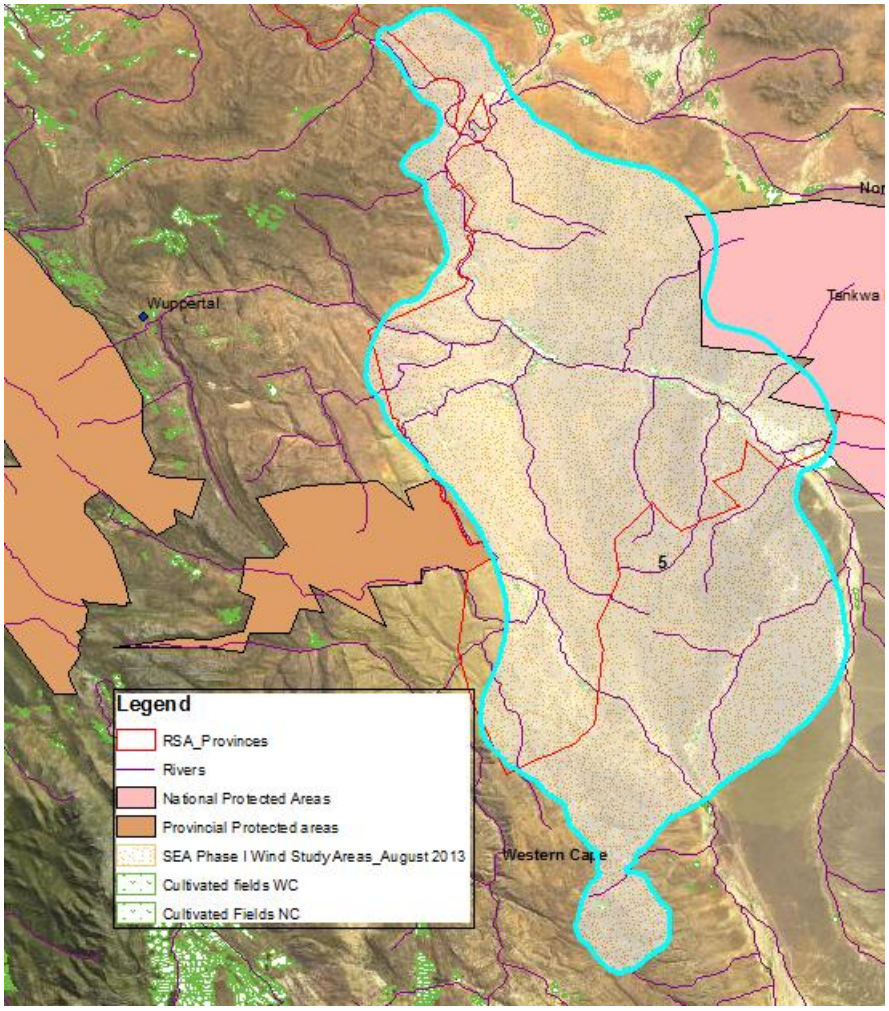


Study Area Site 5

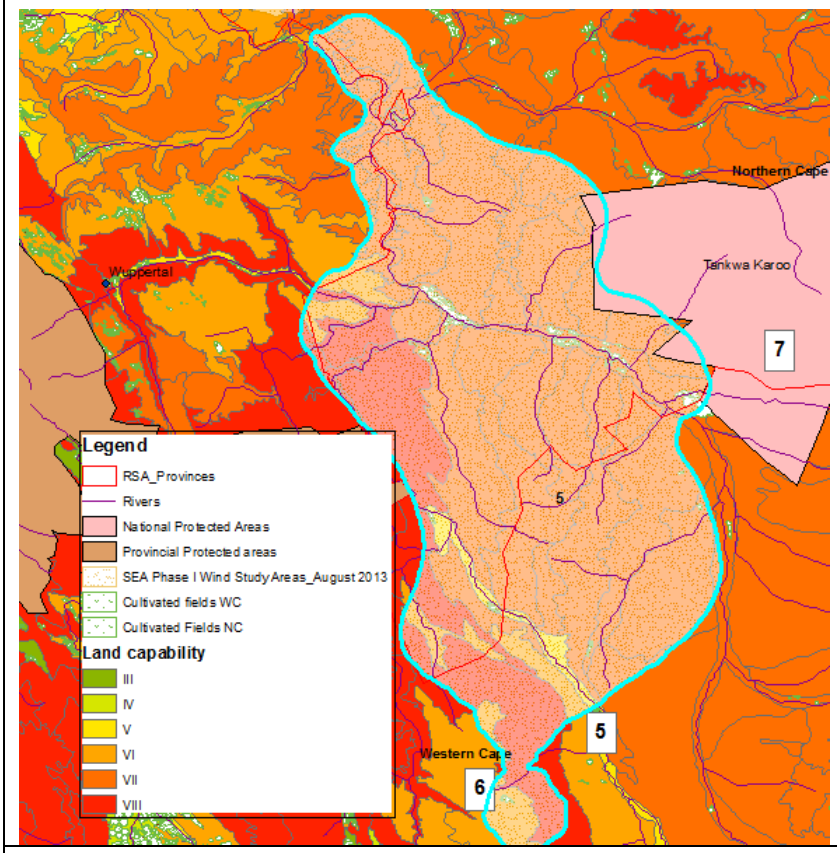
Evaluation criteria	Comment
Site number	5
Province	Northern Cape
Area (ha)	1872
Land capability	VII
Grazing capacity	Varied between 70 – 11 ha/lsu
Agricultural land use	Mostly rangeland. There are limited cultivated areas along the Tankwa and Doring rivers.
Other	This proposed site is located between the Tankwa Karoo National Park as well as the Sederberg Wilderness and Matjesfontein Provincial Protected areas.
Recommendation	This site can be retained for further investigation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

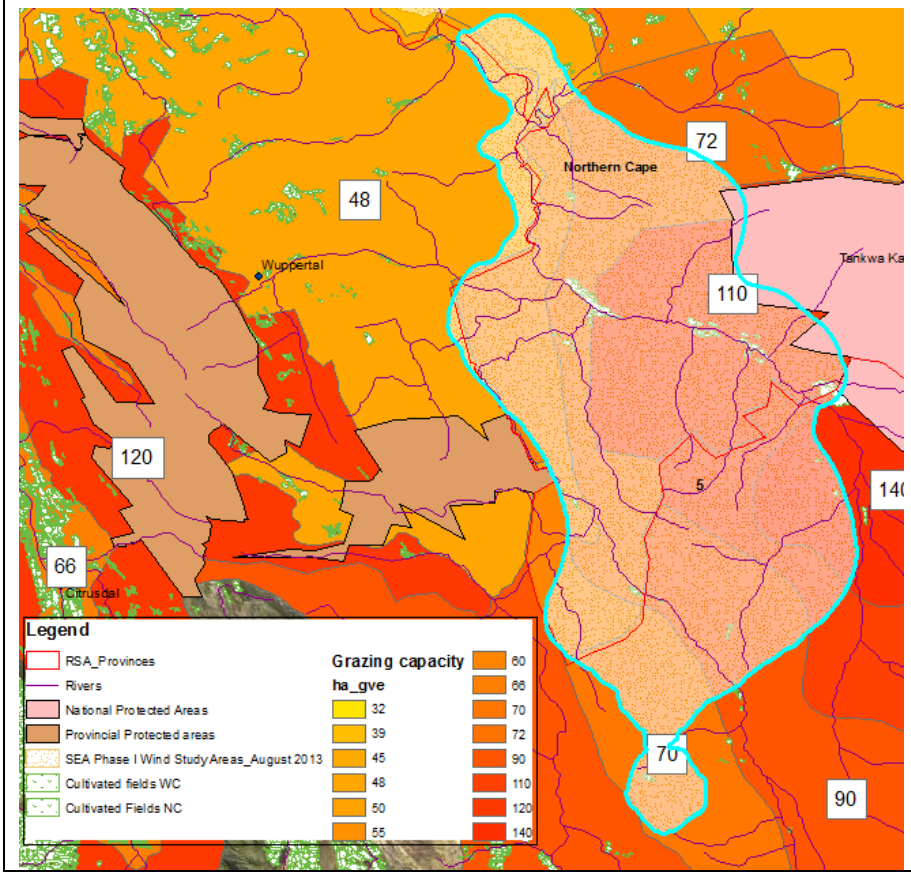
SPOT 2010



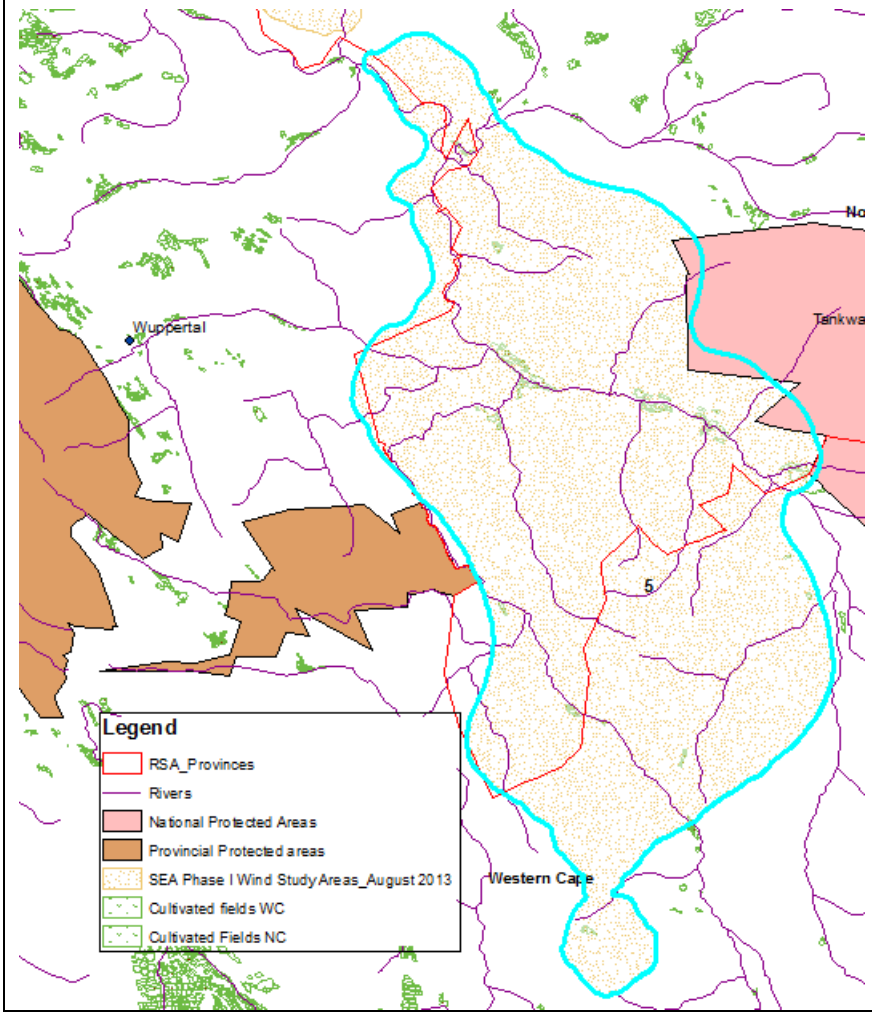
Land capability



Grazing capacity



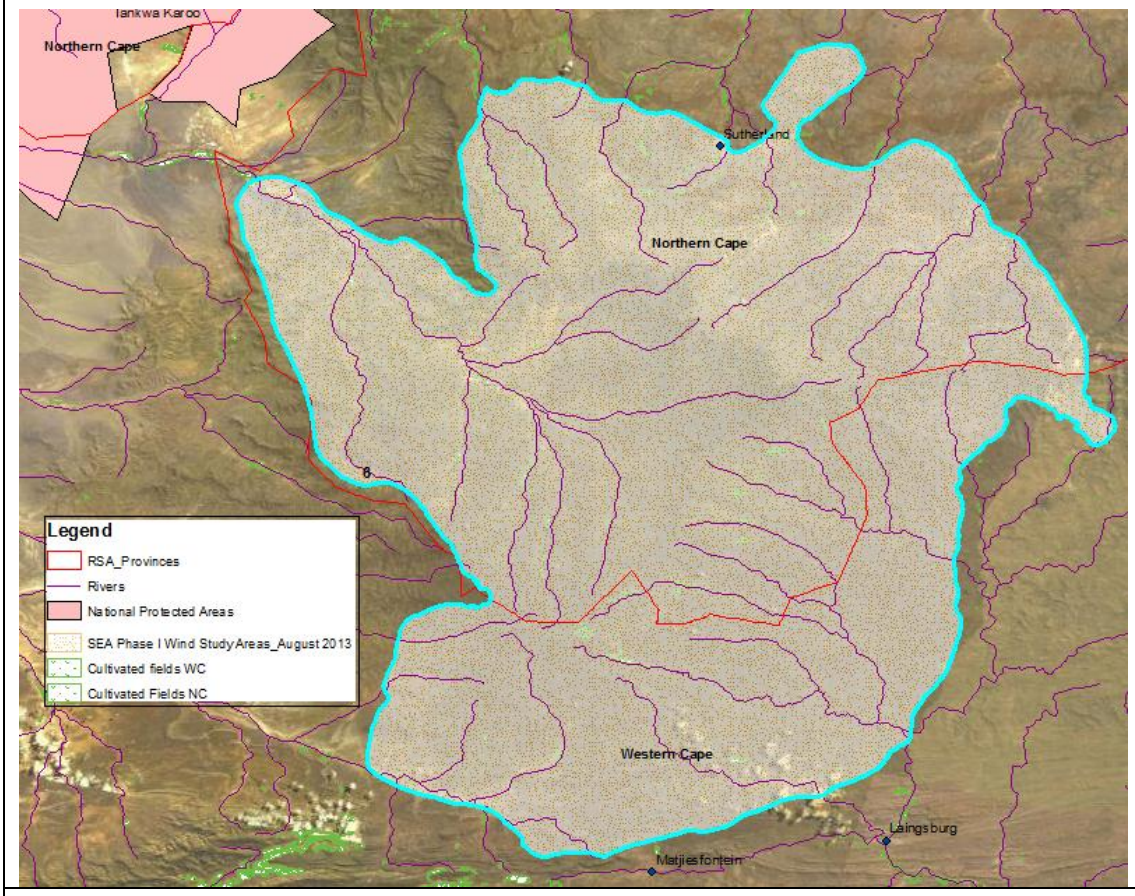
Agricultural Land use



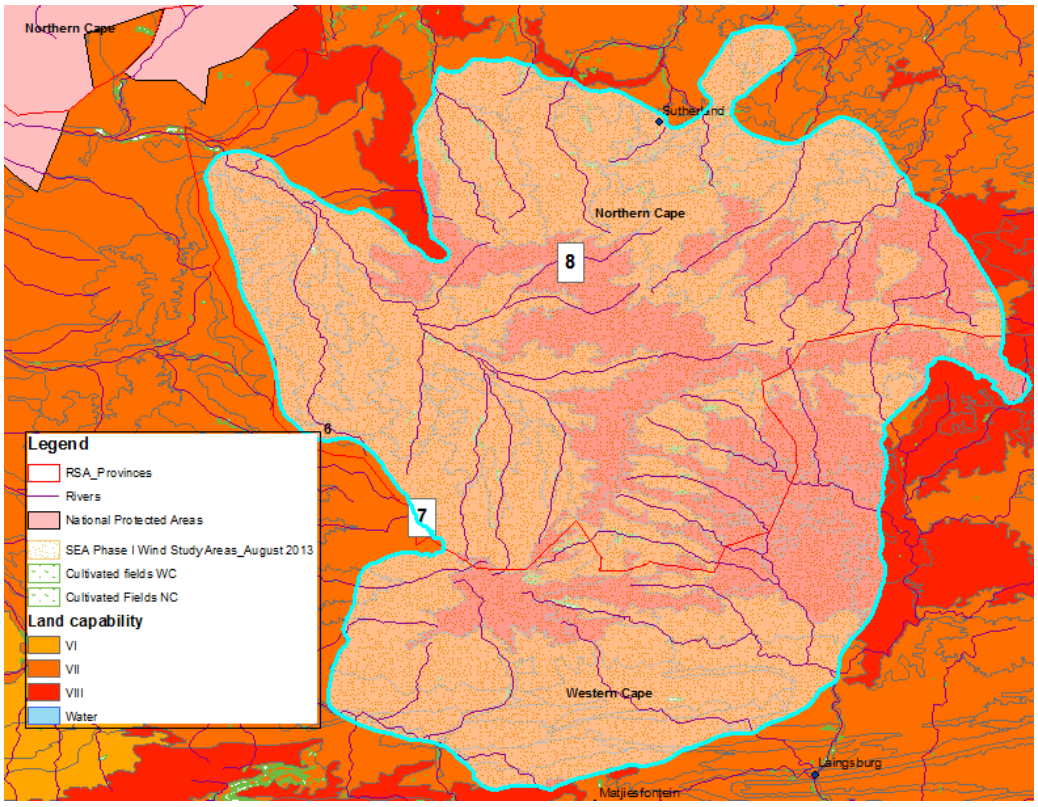
Study Area Site 6

Evaluation criteria	Comment
Site number	6
Province	Northern Cape / Western Cape
Area (ha)	5903
Land capability	VII - VIII
Grazing capacity	45 – 55 ha/lsu
Agricultural land use	Mostly rangeland
Other	None
Recommendation	This site can be retained for further investigation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	

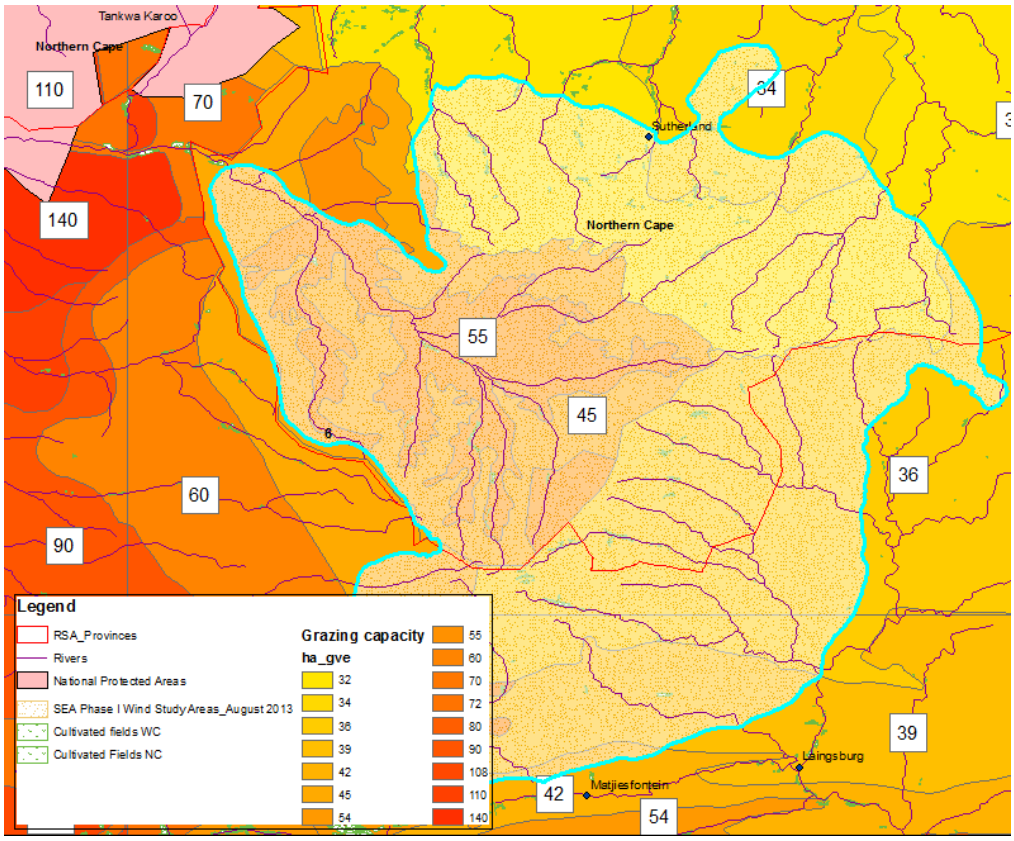
SPOT 2010



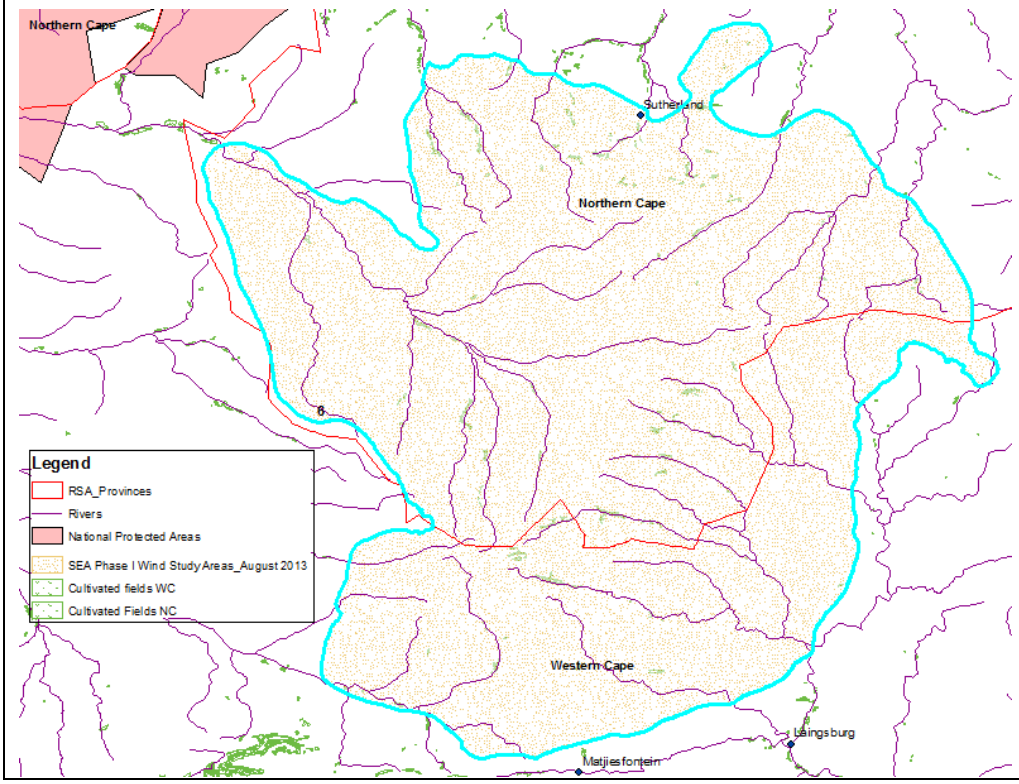
Land capability



Grazing capacity



Agricultural Land use

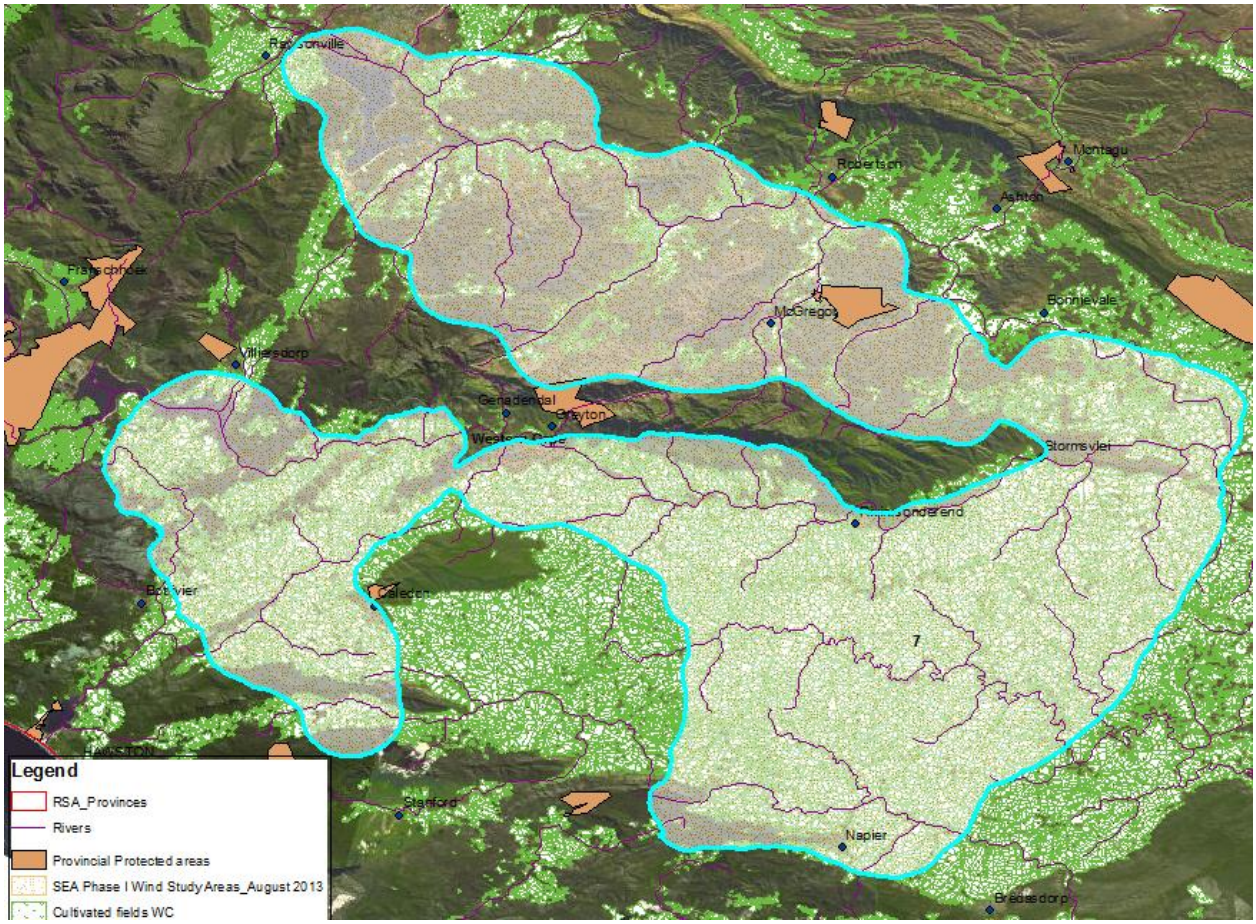


Study Area Site 7

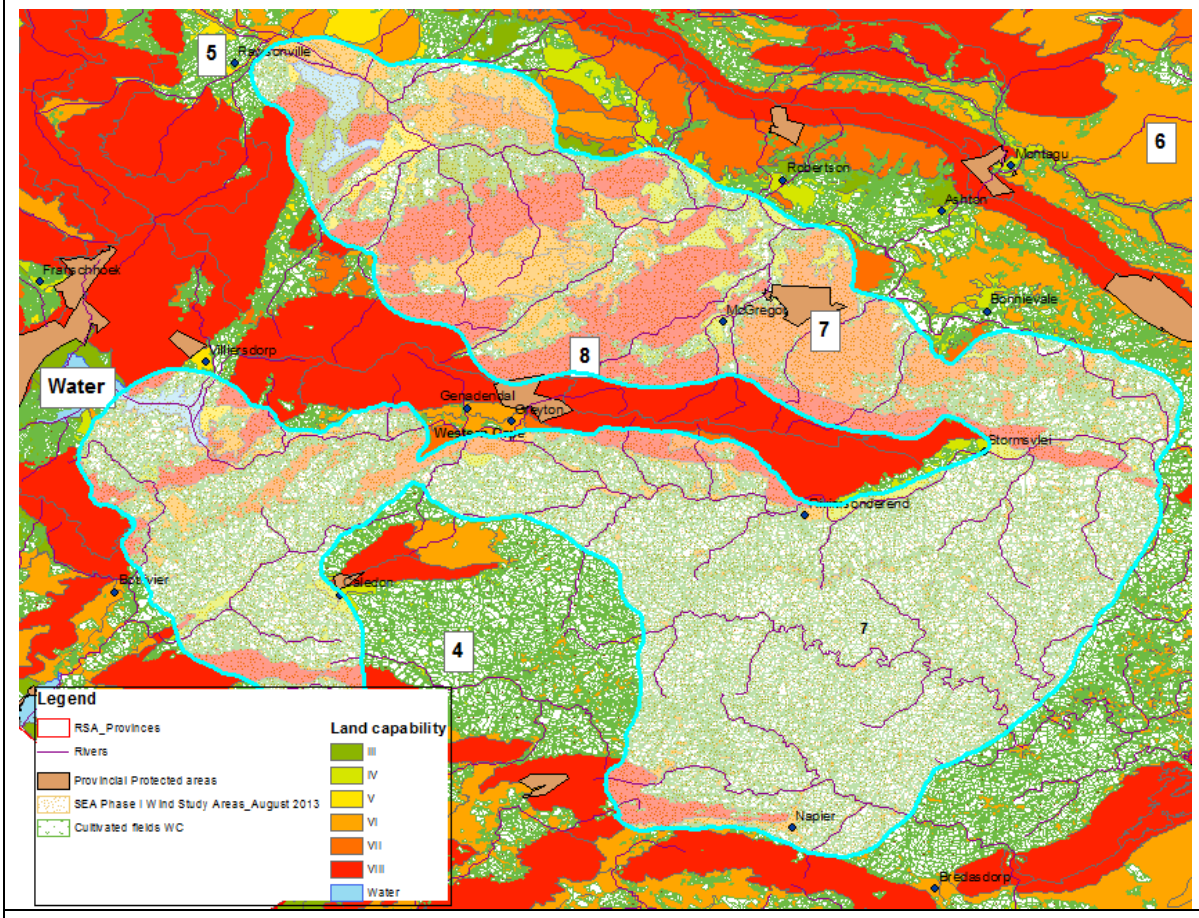
Evaluation criteria	Comment
Site number	7
Province	Western Cape
Area (ha)	4604
Land capability	Mostly VI – however this area is regarded as unique agricultural land due to the unique combination of soil, terrain and climate for the production of a specific crop which is also evident from the intensive agricultural cultivation practices occurring within the site.
Grazing capacity	There is no to limited vegetation for grazing purposes available due to the intensive agricultural production
Agricultural land use	The largest part of this site is under intensive cultivation and contributes significantly to the economy in the province
Other	None
Recommendation	**This site should be excluded**. The largest part of this site is under intensive cultivation providing the backbone for the rural economy and employment.

Images

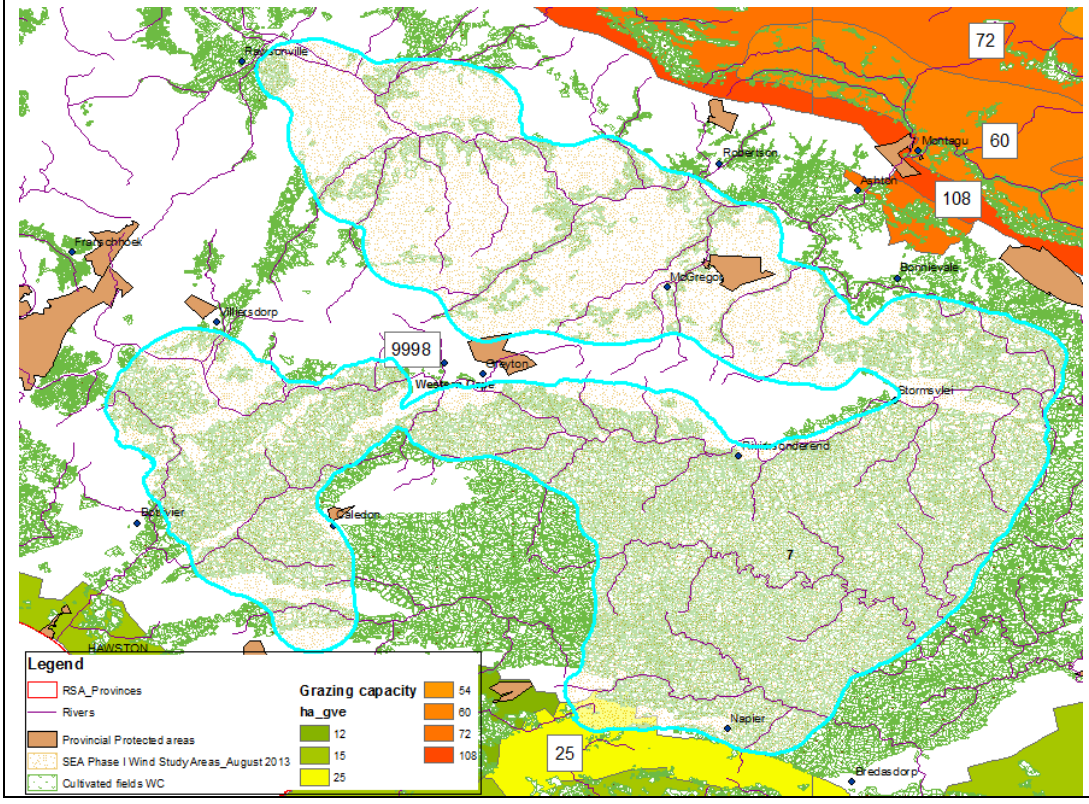
SPOT 2010



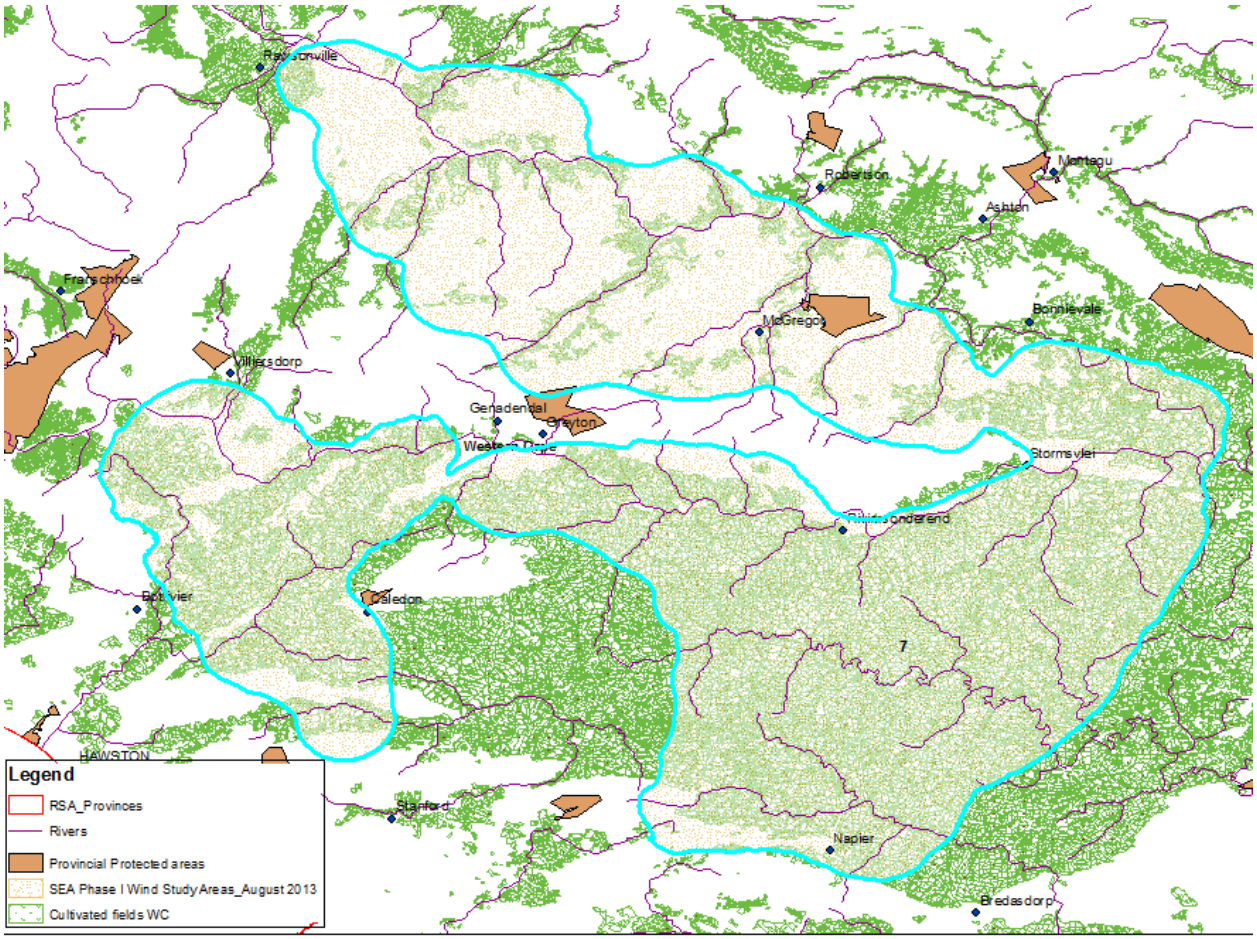
Land capability



Grazing capacity



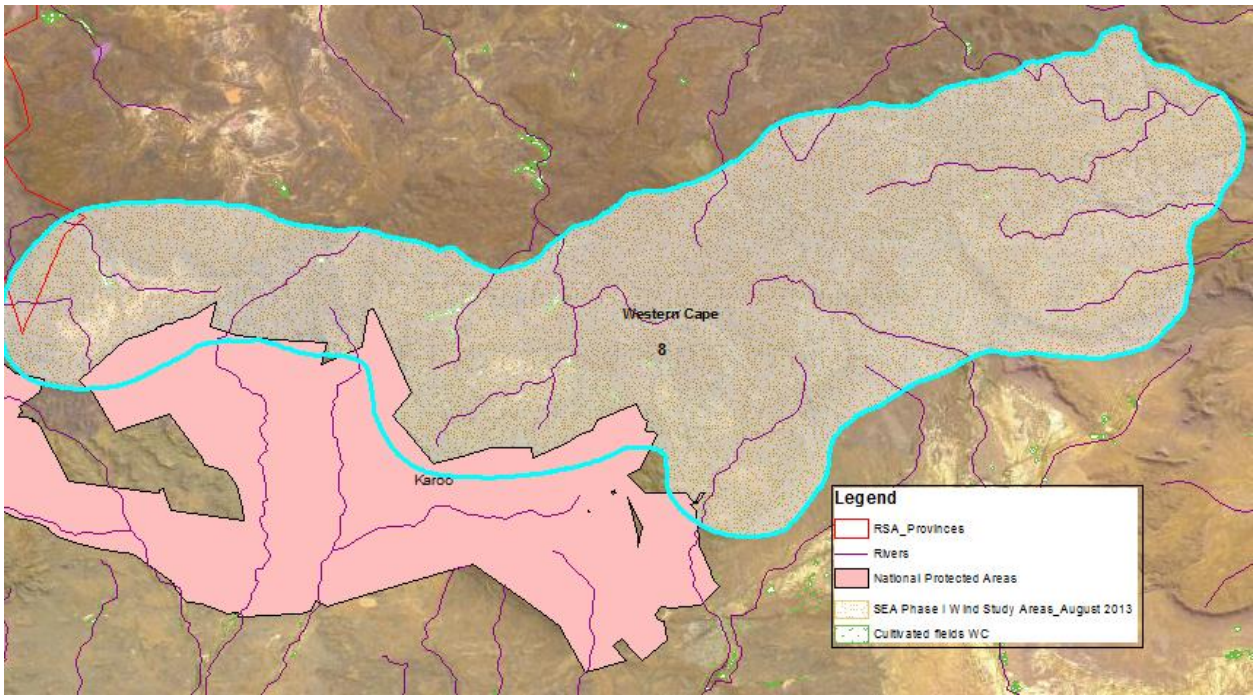
Agricultural Land use



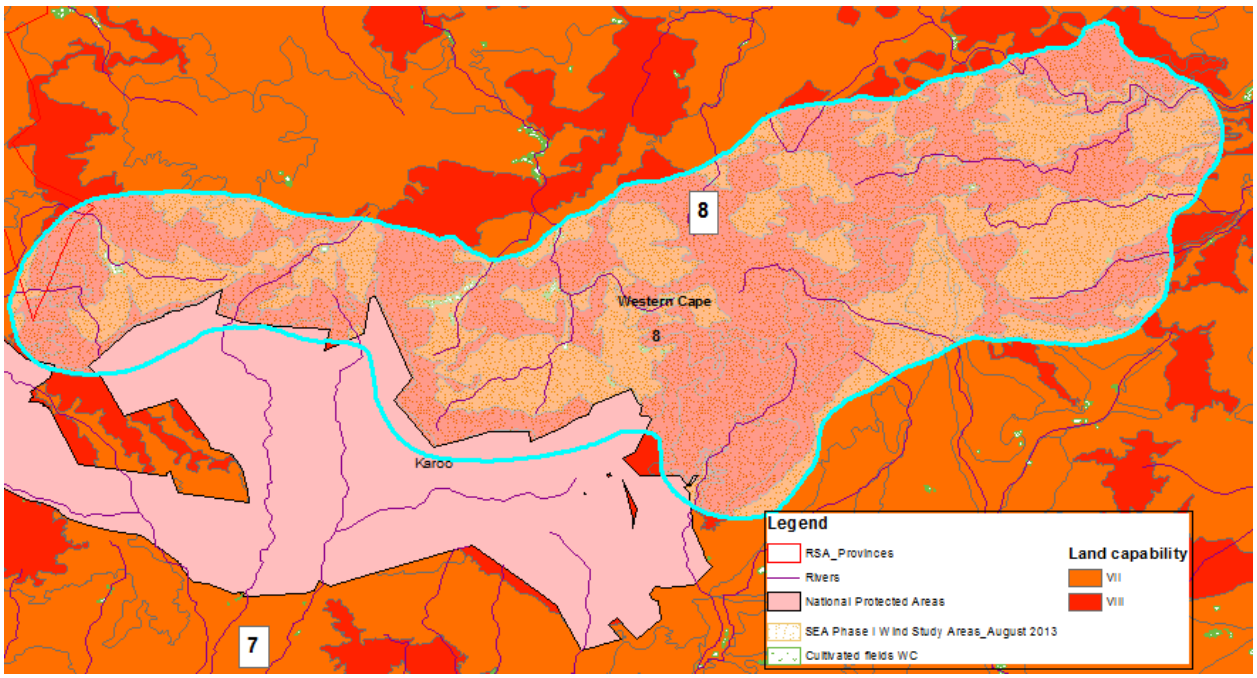
Study Area Site 8

Evaluation criteria	Comment
Site number	8
Province	Western Cape
Area (ha)	1516
Land capability	VII - VIII
Grazing capacity	28 ha/lsu
Agricultural land use	Mostly rangeland
Other	Parts of this proposed site is located within the Karoo National Park
Recommendation	The site can be retained; however the boundaries should be amended to exclude the Karoo National Park area. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	

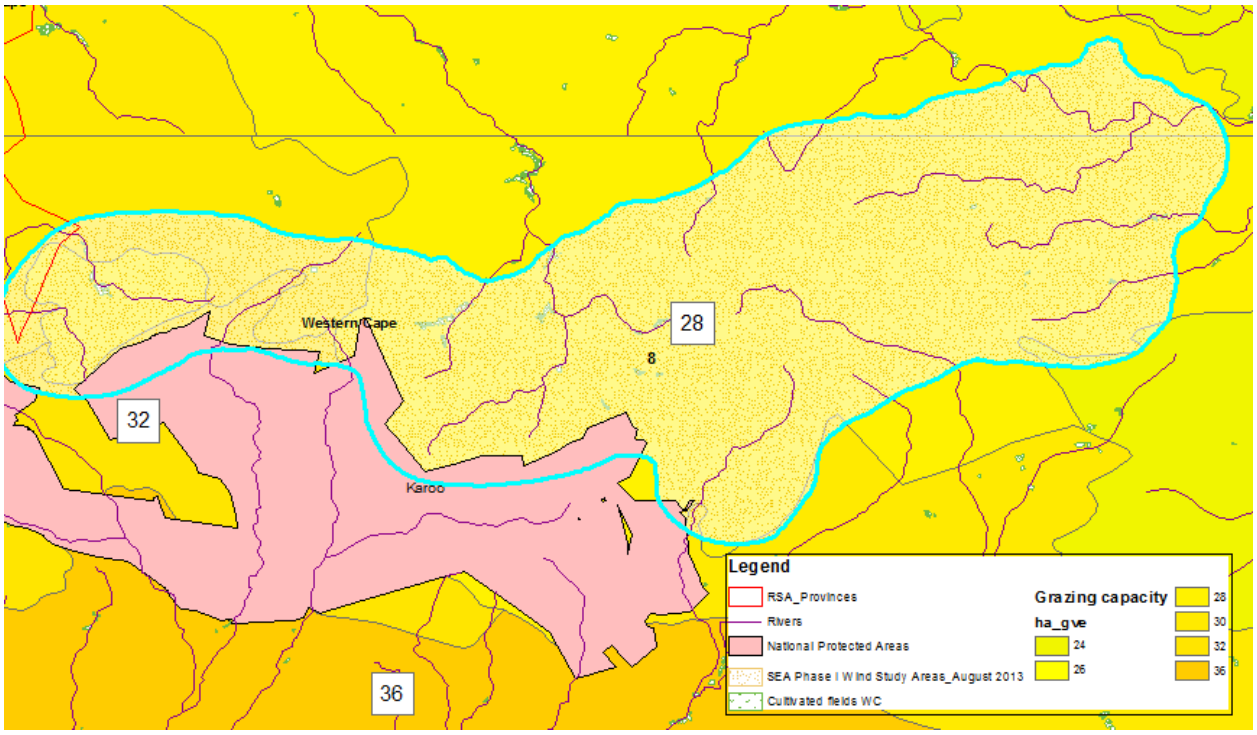
SPOT 2010



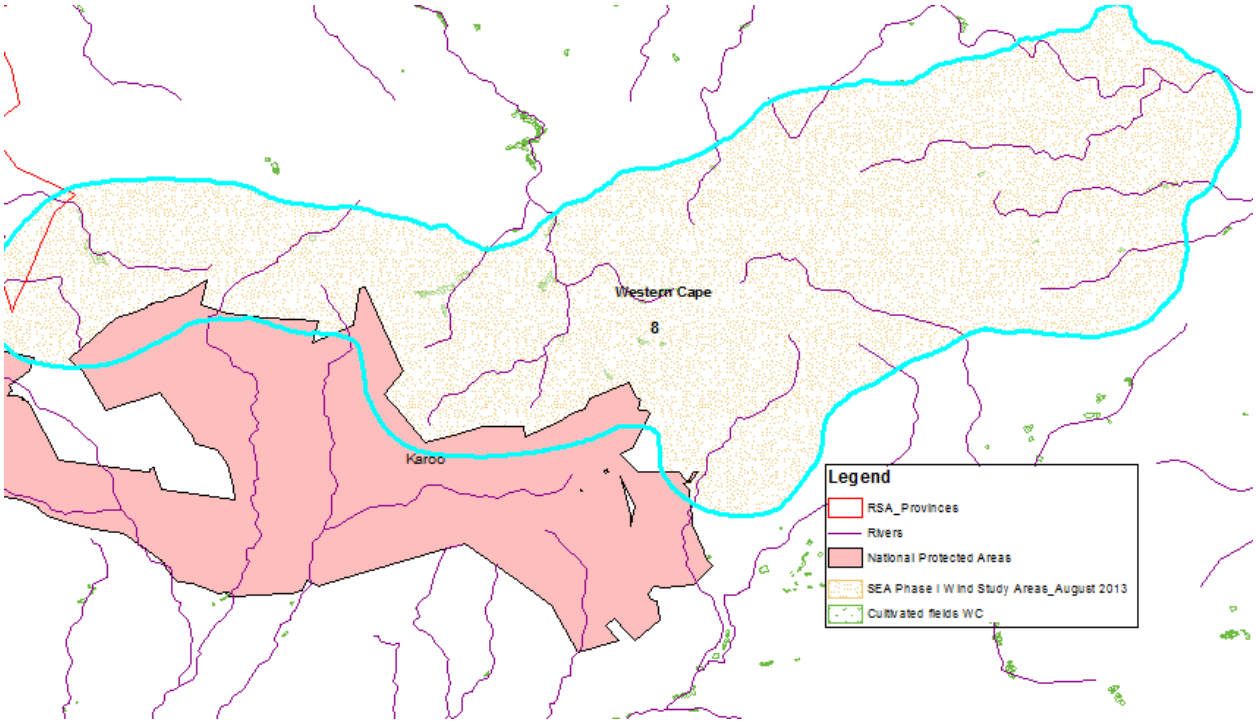
Land capability



Grazing capacity



Agricultural Land use

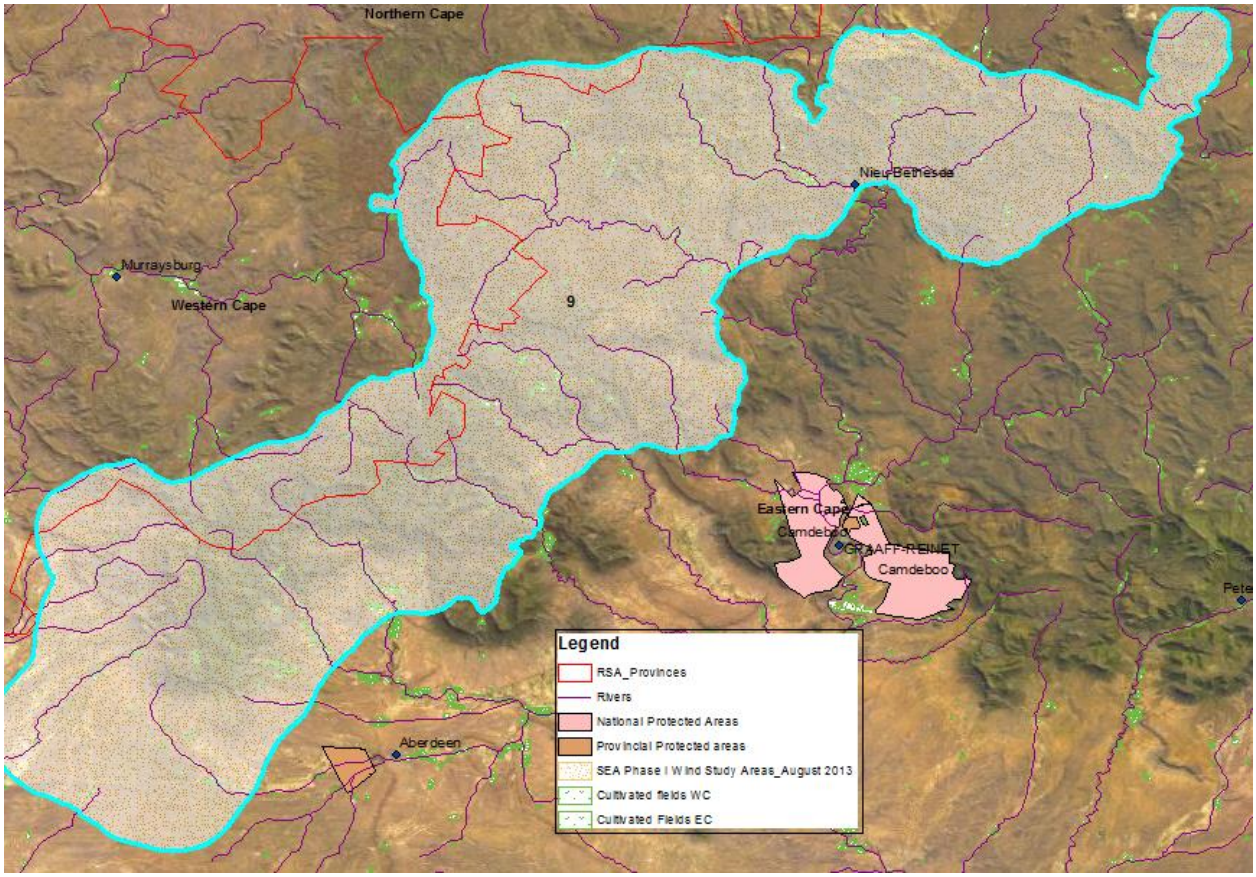


Study Area Site 9

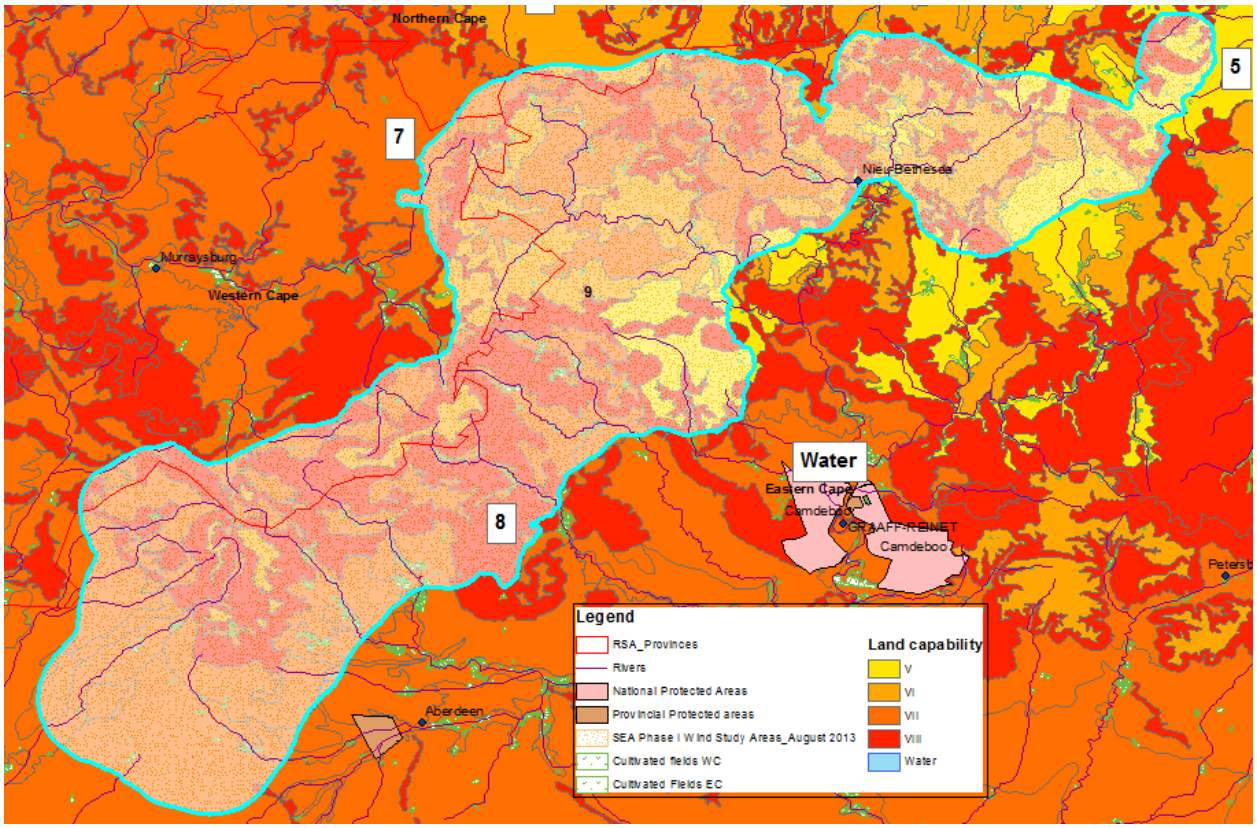
Evaluation criteria	Comment
Site number	9
Province	Western Cape / Eastern Cape
Area (ha)	4095
Land capability	Mostly VII with patches of V and VIII classifications
Grazing capacity	Varied - 7 – 24 ha/lsu
Agricultural land use	Mostly rangeland
Other	None
Recommendation	The site can be retained for further investigation; **however the existing agricultural production should be allowed to continue without a negative impact from the renewable energy structures.** Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

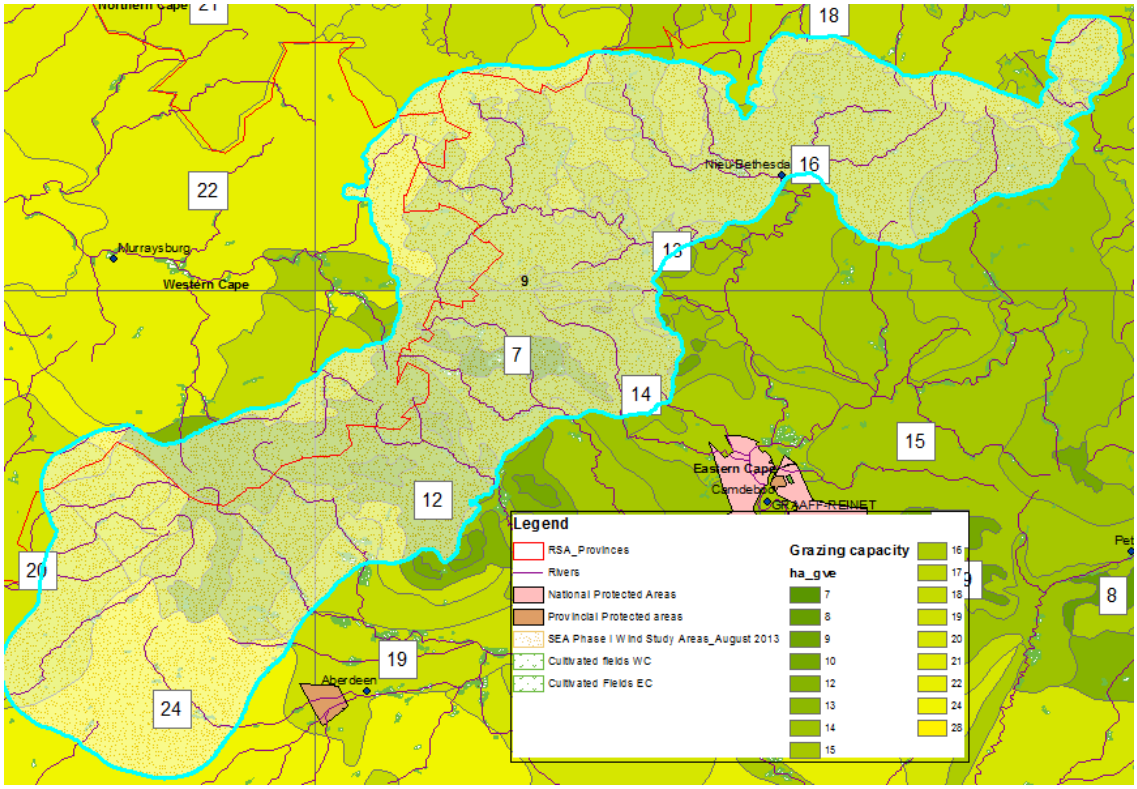
SPOT 2010



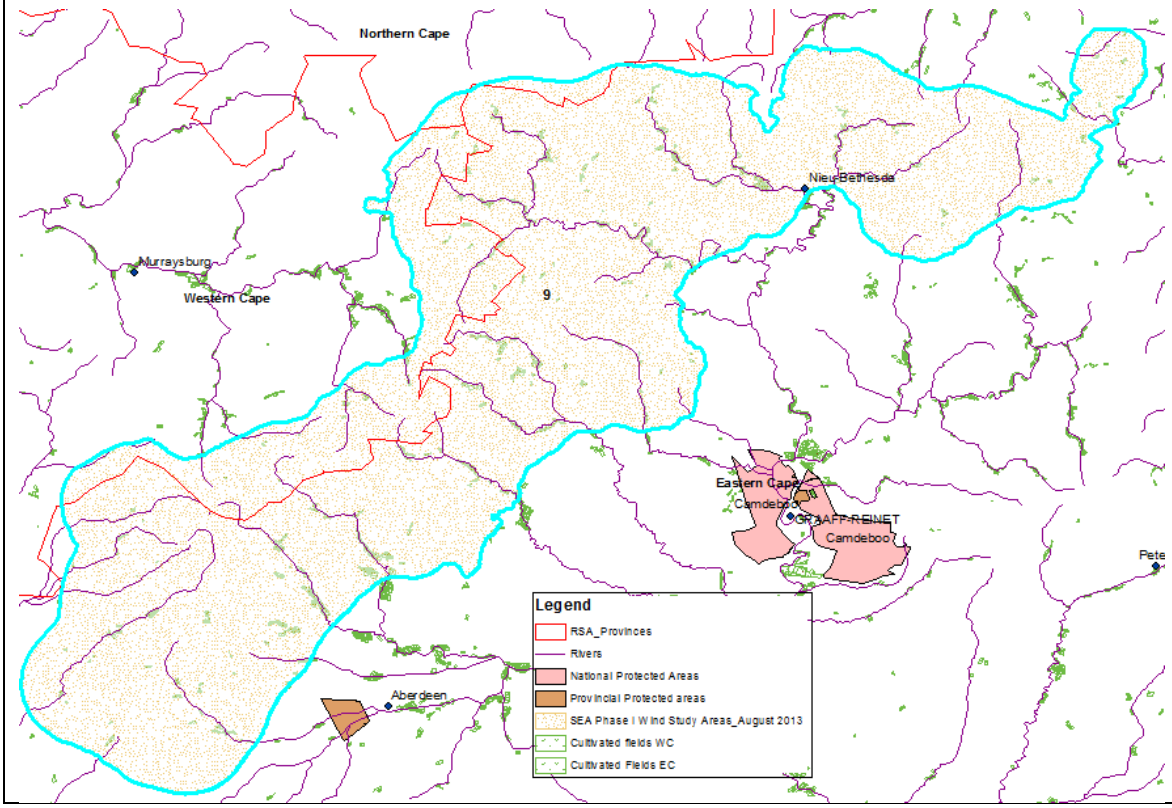
Land capability



Grazing capacity



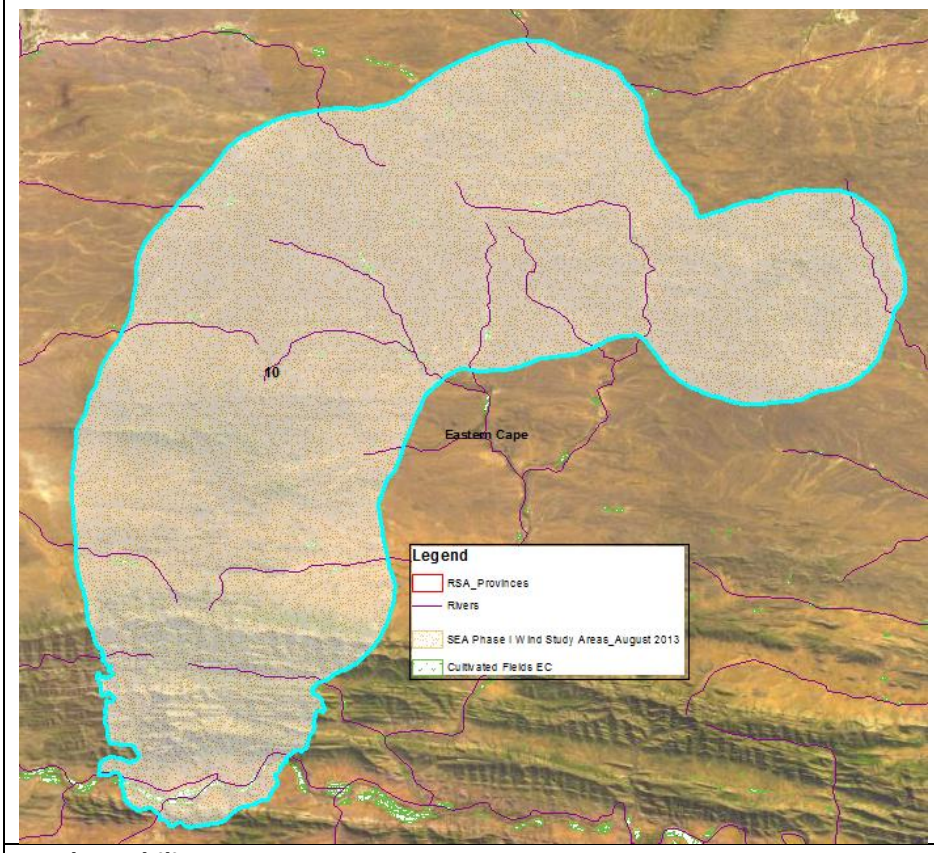
Agricultural Land use



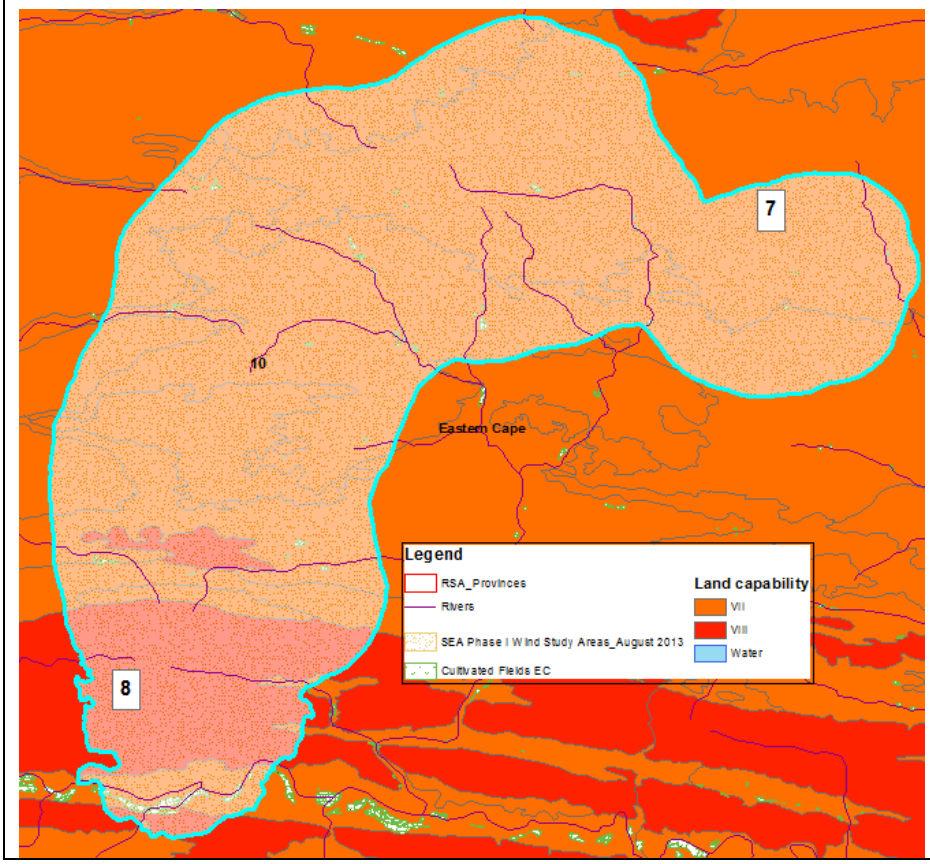
Study Area Site 10

Evaluation criteria	Comment
Site number	10
Province	Eastern Cape
Area (ha)	1342
Land capability	VII - VIII
Grazing capacity	16 – 30 ha/lsu
Agricultural land use	Mostly rangeland with limited cultivation along the river and lower lying areas on the southern parts of the proposed site.
Other	None
Recommendation	The site can be retained for further investigation, excluding the areas under cultivation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	

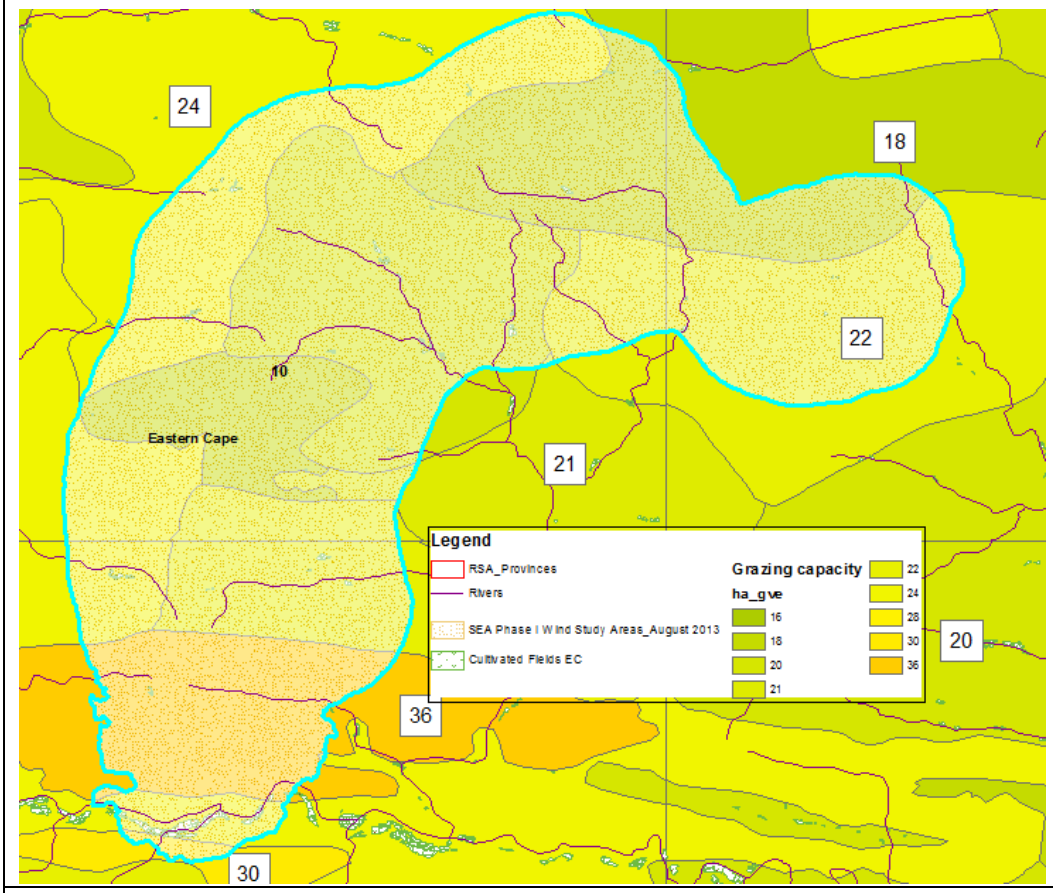
SPOT 2010



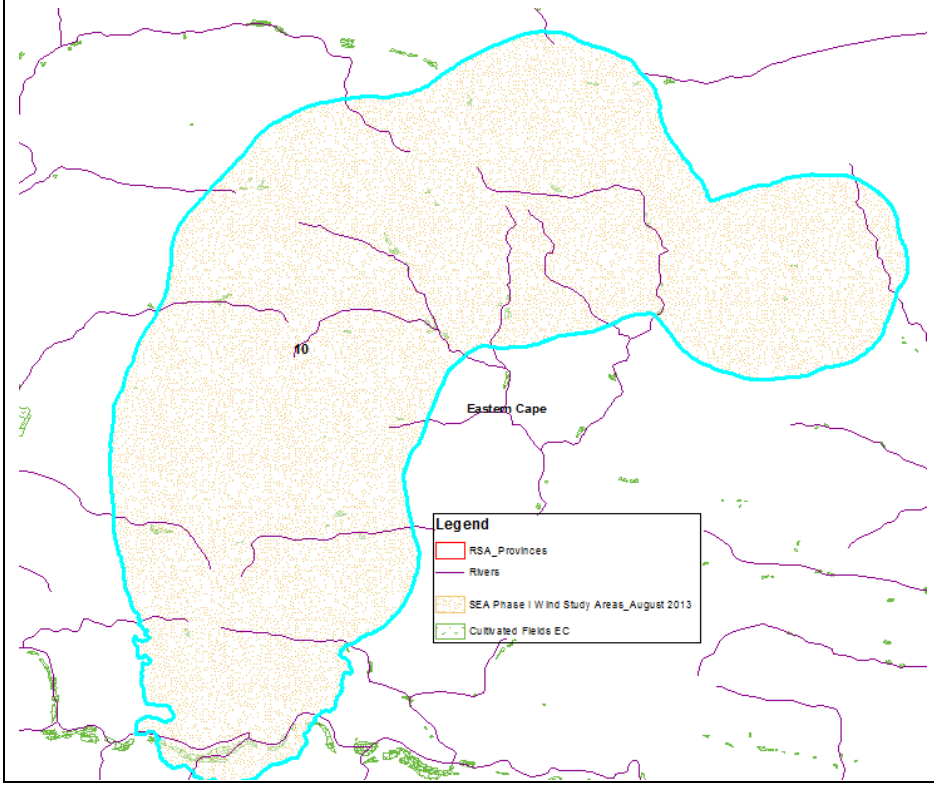
Land capability



Grazing capacity



Agricultural Land use

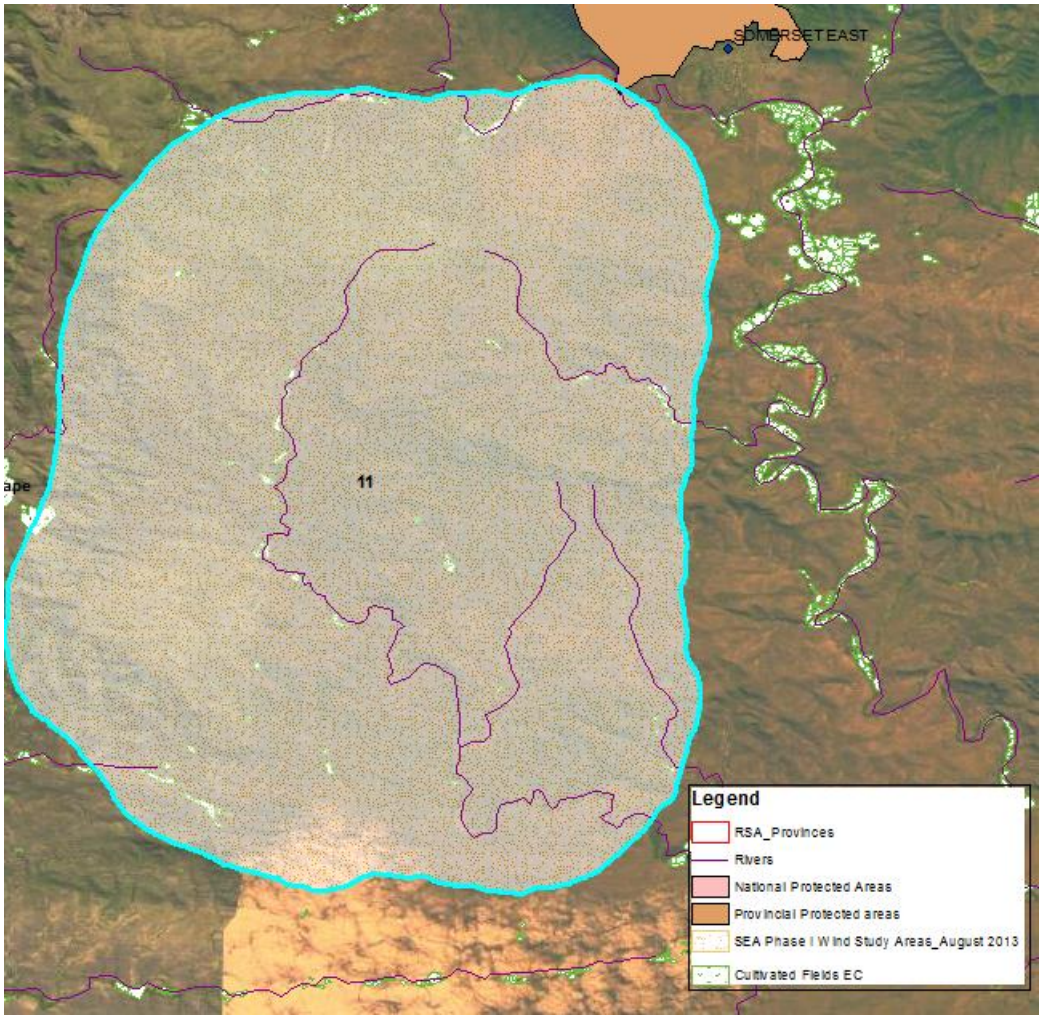


Study Area Site 11

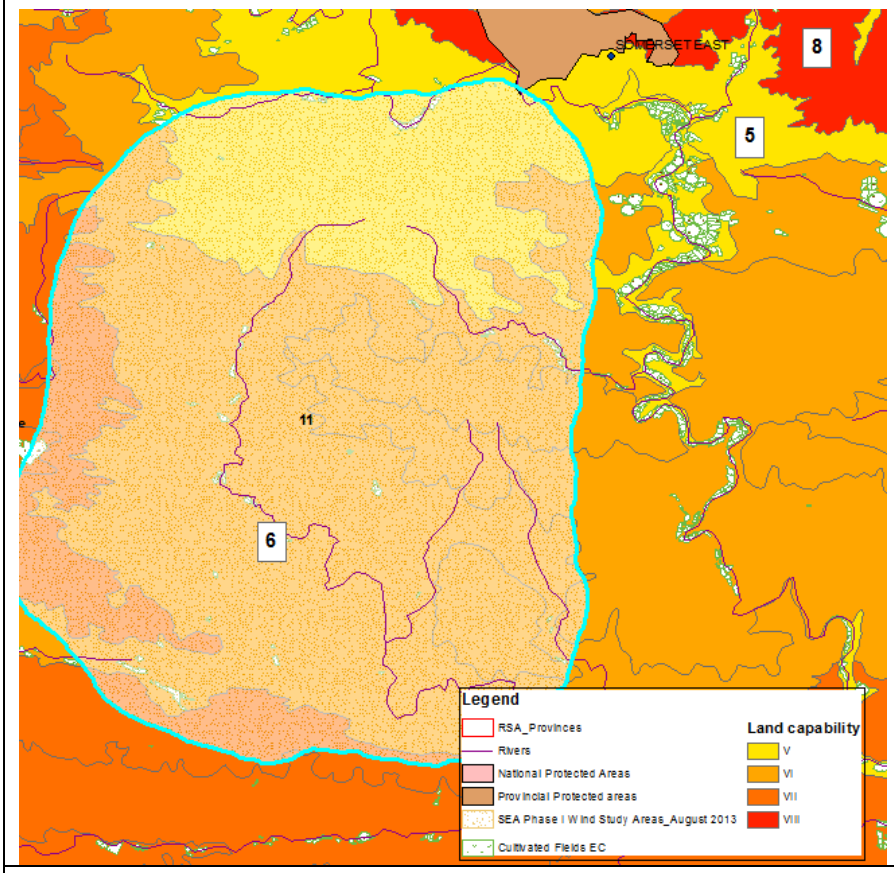
Evaluation criteria	Comment
Site number	11
Province	Eastern Cape
Area (ha)	777
Land capability	V - VI
Grazing capacity	9 – 16 ha/ lsu
Agricultural land use	Mostly rangeland
Other	None
Recommendation	The site can be retained for further investigation, excluding the areas under cultivation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

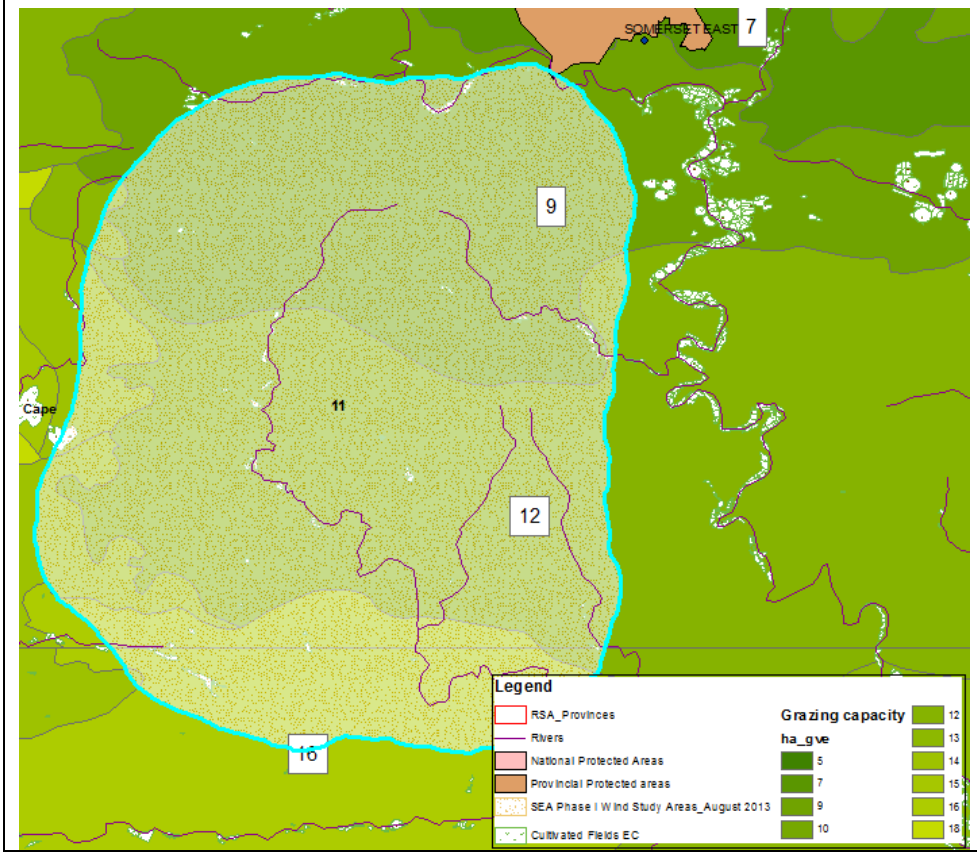
SPOT 2010



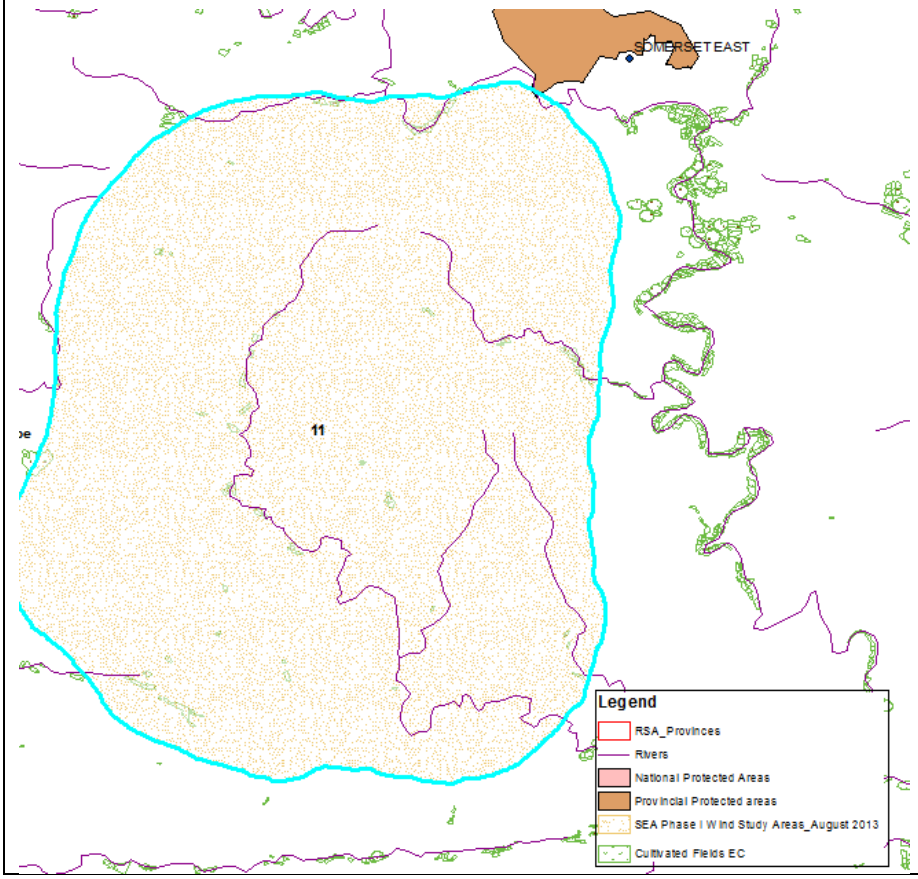
Land capability



Grazing capacity



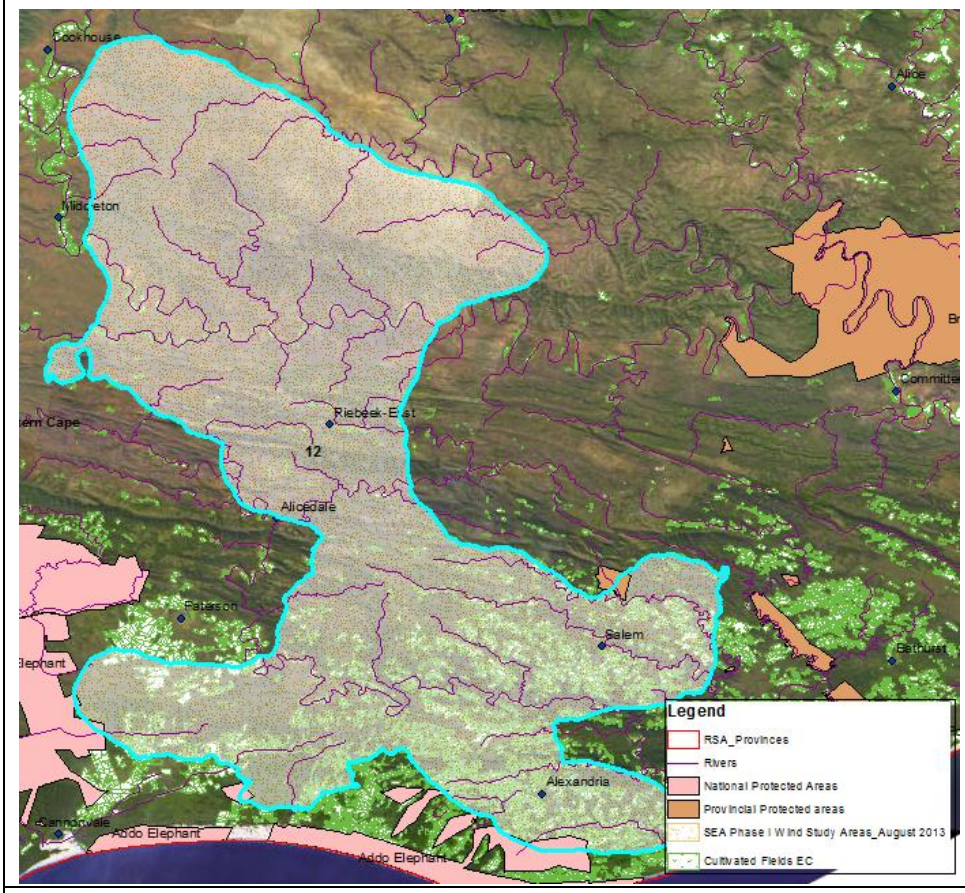
Agricultural Land use



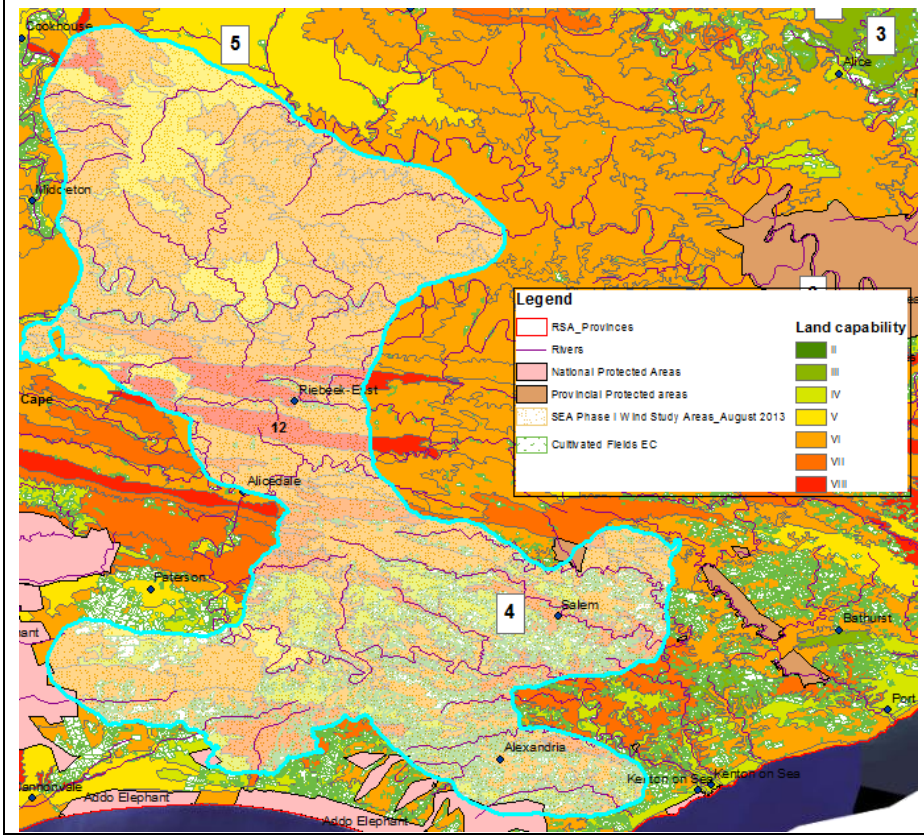
Study Area Site 12

Evaluation criteria	Comment
Site number	12
Province	Eastern Cape
Area (ha)	4007
Land capability	IV for the southern parts with V – VI for the northern parts. The southern parts are under intensive irrigated cultivation that is regarded as high potential agricultural land that should be retained for agricultural land use.
Grazing capacity	3.5 – 8 ha/lsu
Agricultural land use	The southern parts of the site are under intensive agricultural production (cultivation). These areas are mostly used for planted pastures that substitute feeding requirements for the intensive diary industry in this area.
Other	None
Recommendation	**The boundaries of this proposed site need to be amended**. **It is recommended that the southern parts of the site be excluded from the proposed site area and that only the area north of Alicedale be retained.** The impact of any renewable energy structures will be negative on the agricultural production on the southern parts of the site.
Images	

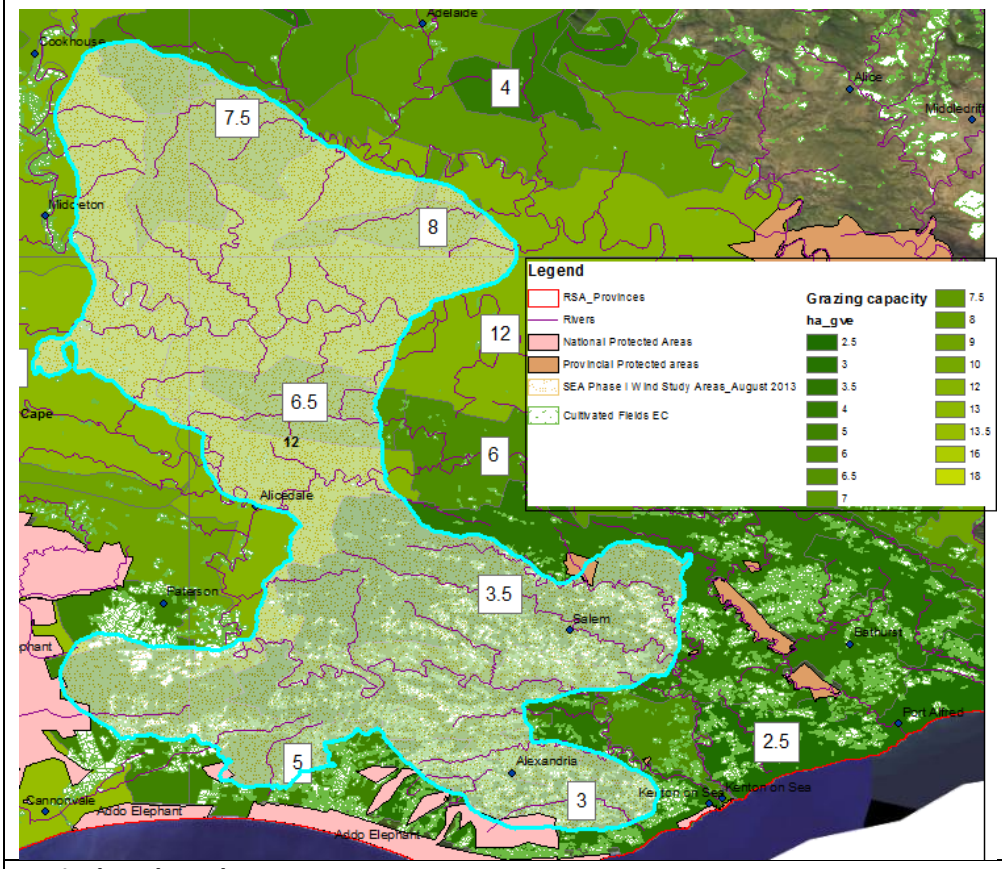
SPOT 2010



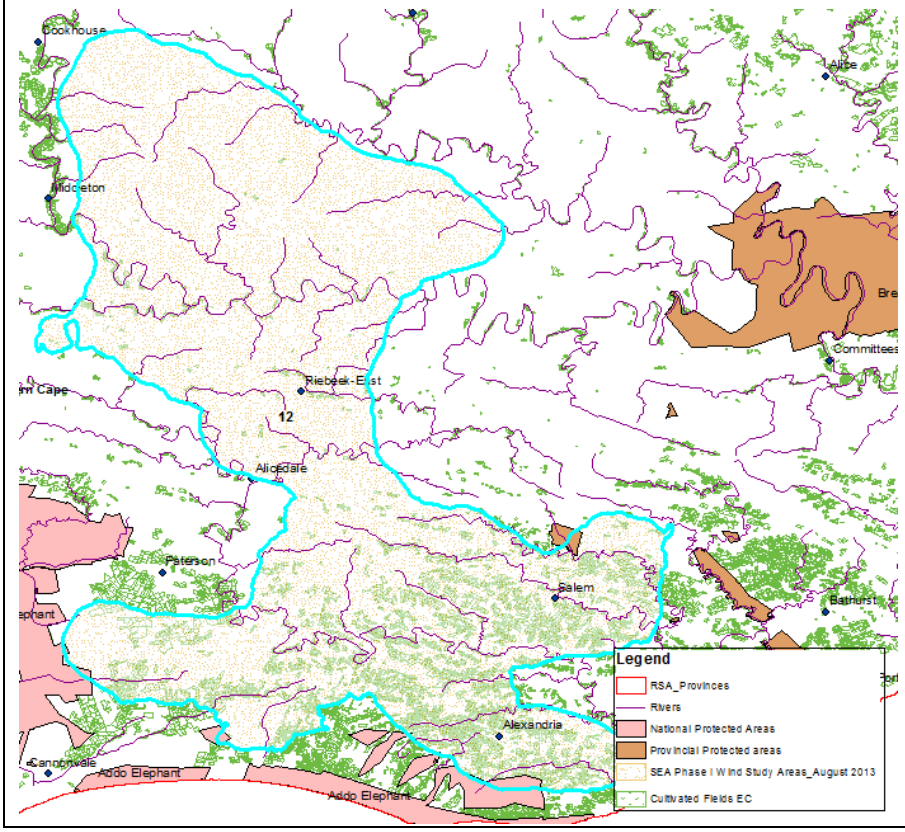
Land capability



Grazing capacity



Agricultural Land use

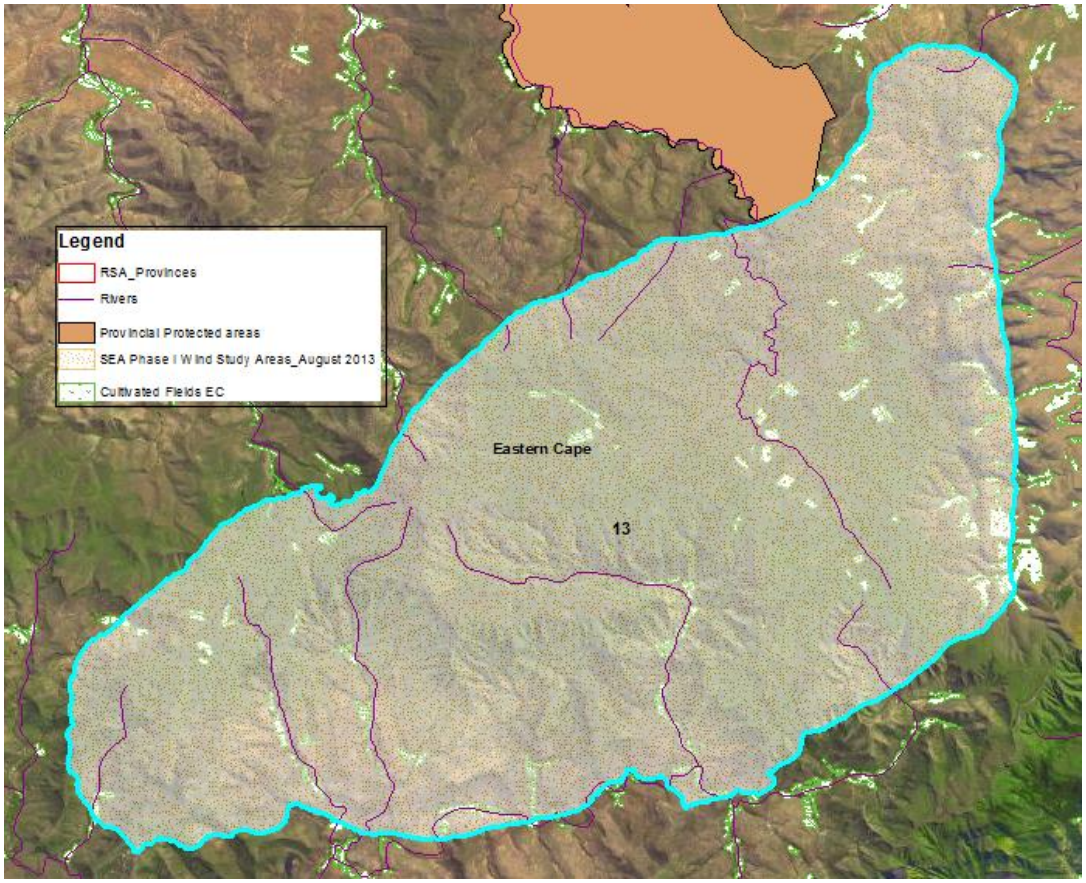


Study Area Site 13

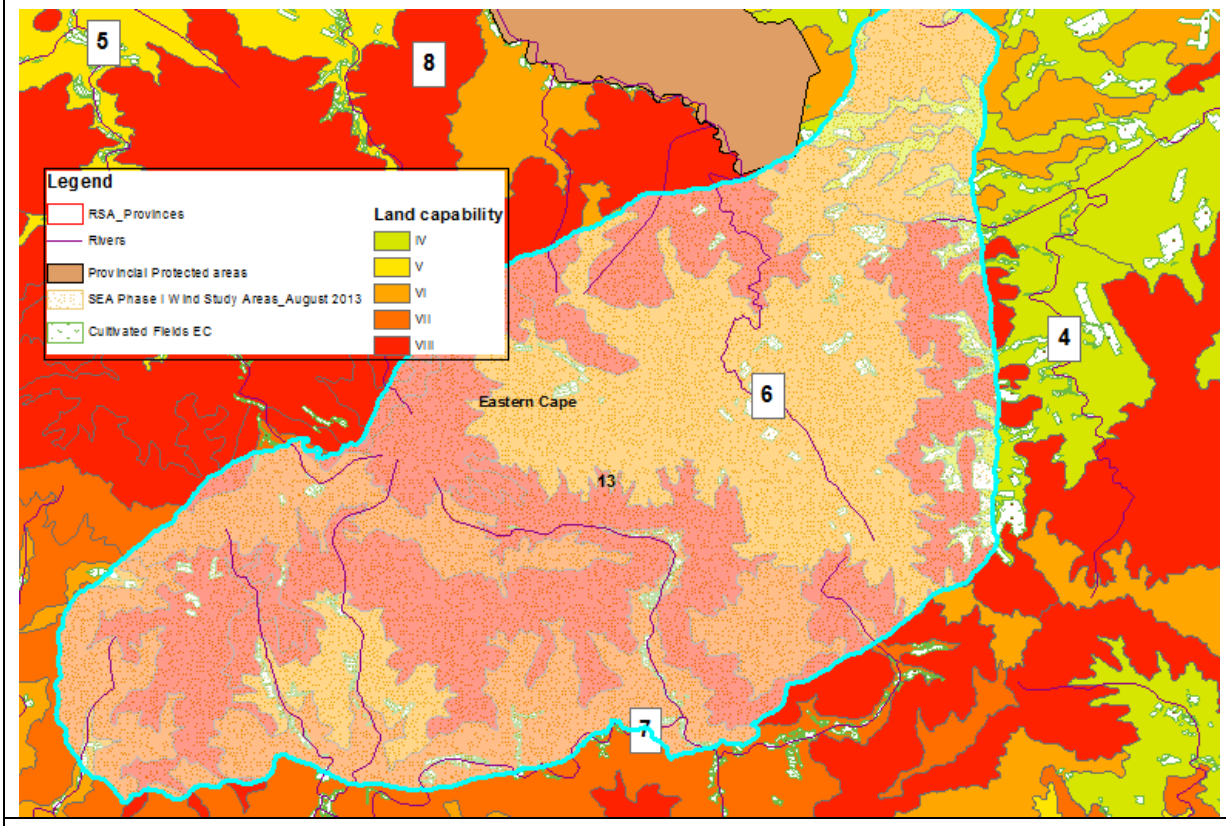
Evaluation criteria	Comment
Site number	13
Province	Eastern Cape
Area (ha)	737
Land capability	VI - VII
Grazing capacity	3.5 – 6 ha/lsu. Grazing potential values is not available for the section located within the former homelands area.
Agricultural land use	Mostly rangeland with limited cultivation along the lower areas and rivers
Other	None
Recommendation	The site can be retained for further investigation, excluding the areas currently under cultivation. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

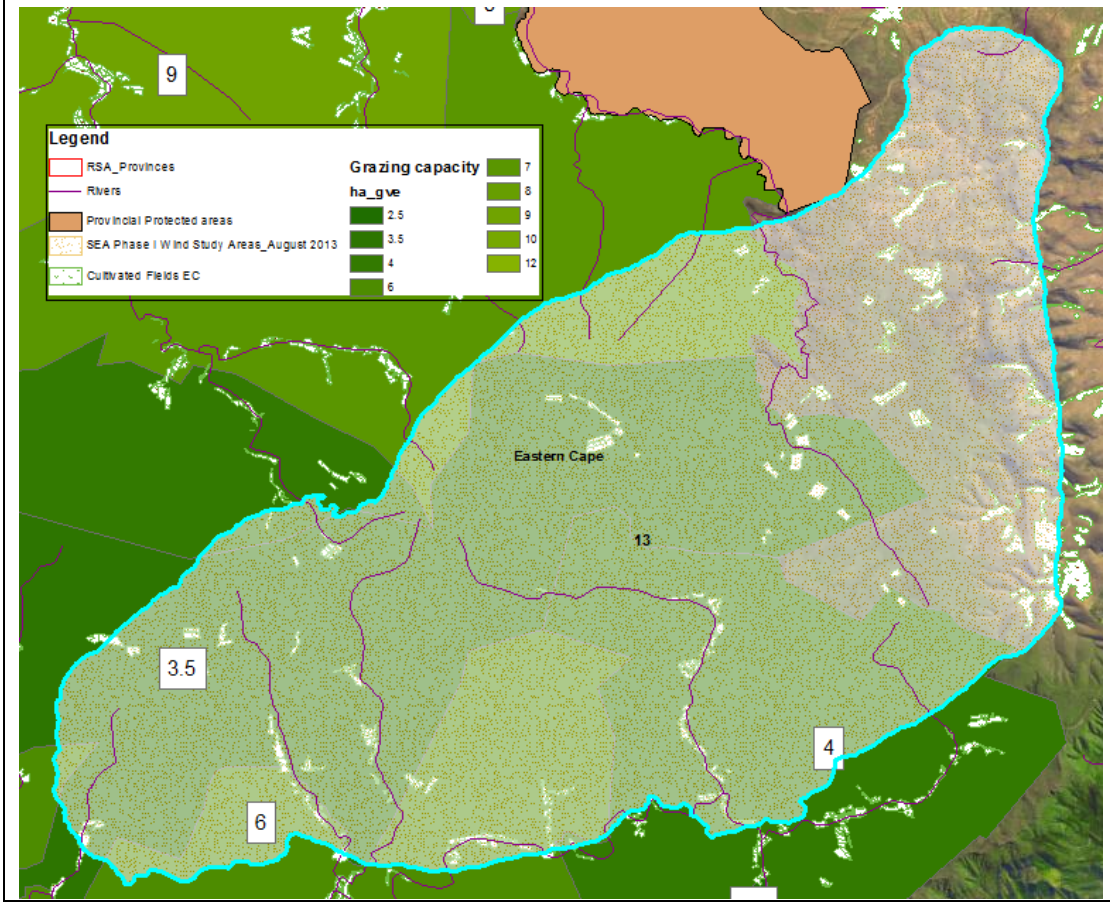
SPOT 2010



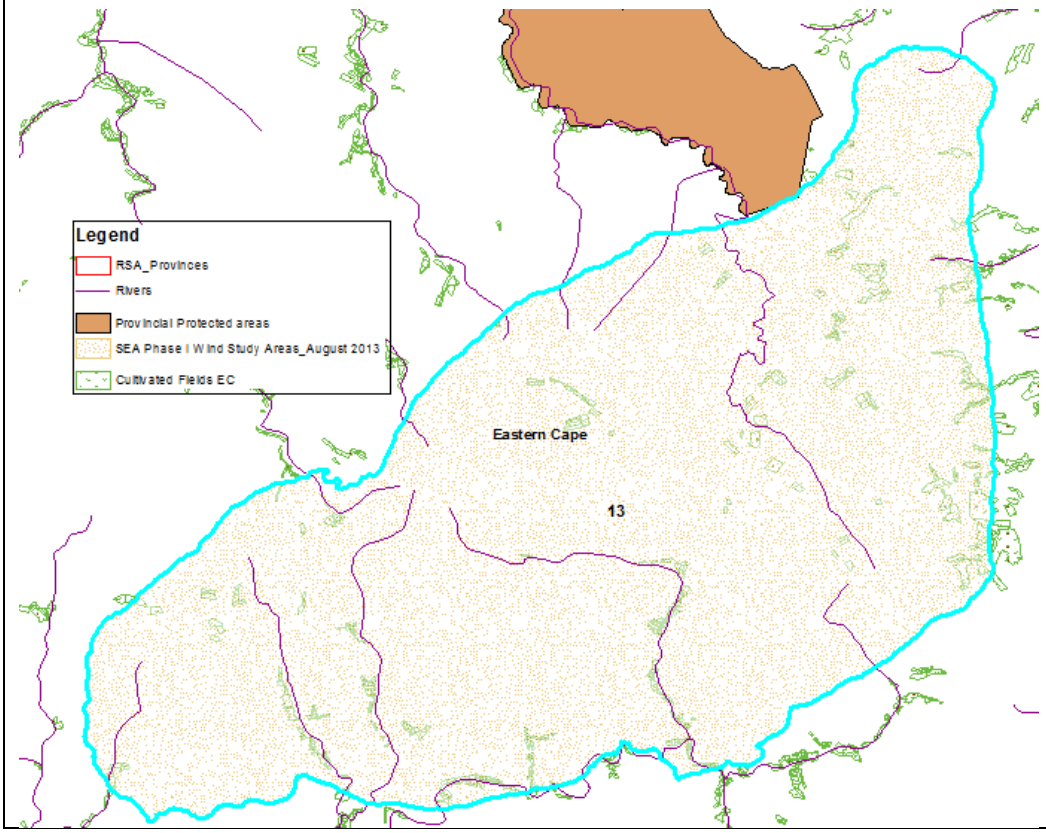
Land capability



Grazing capacity



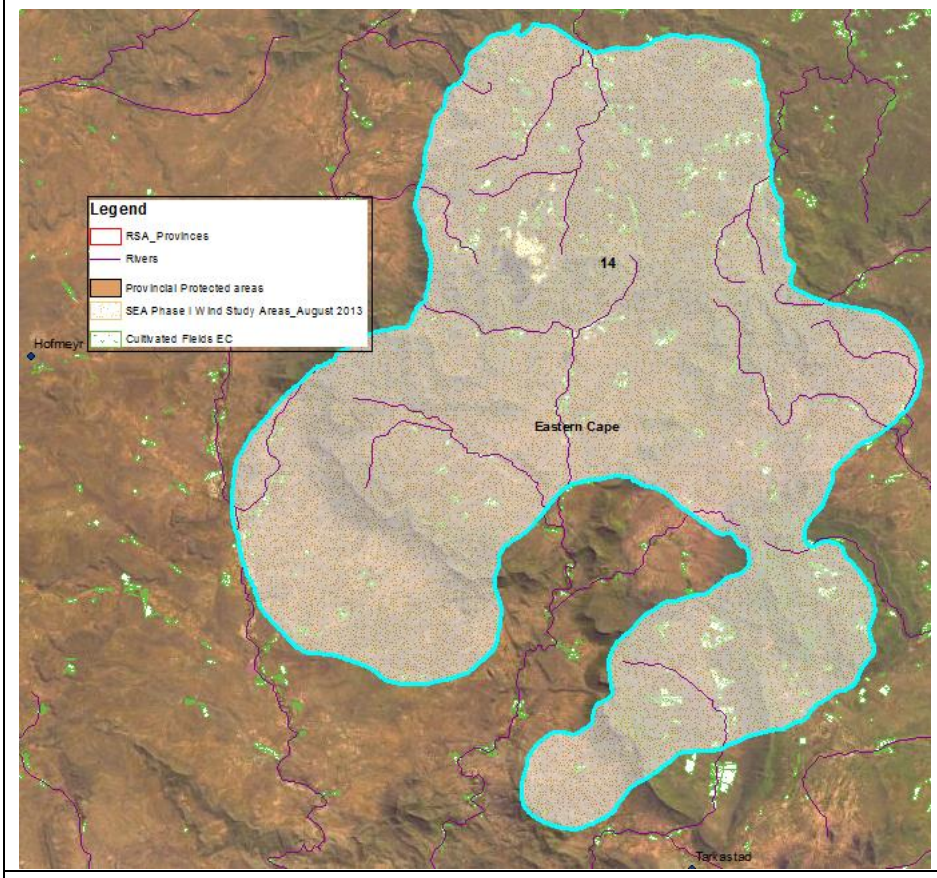
Agricultural Land use



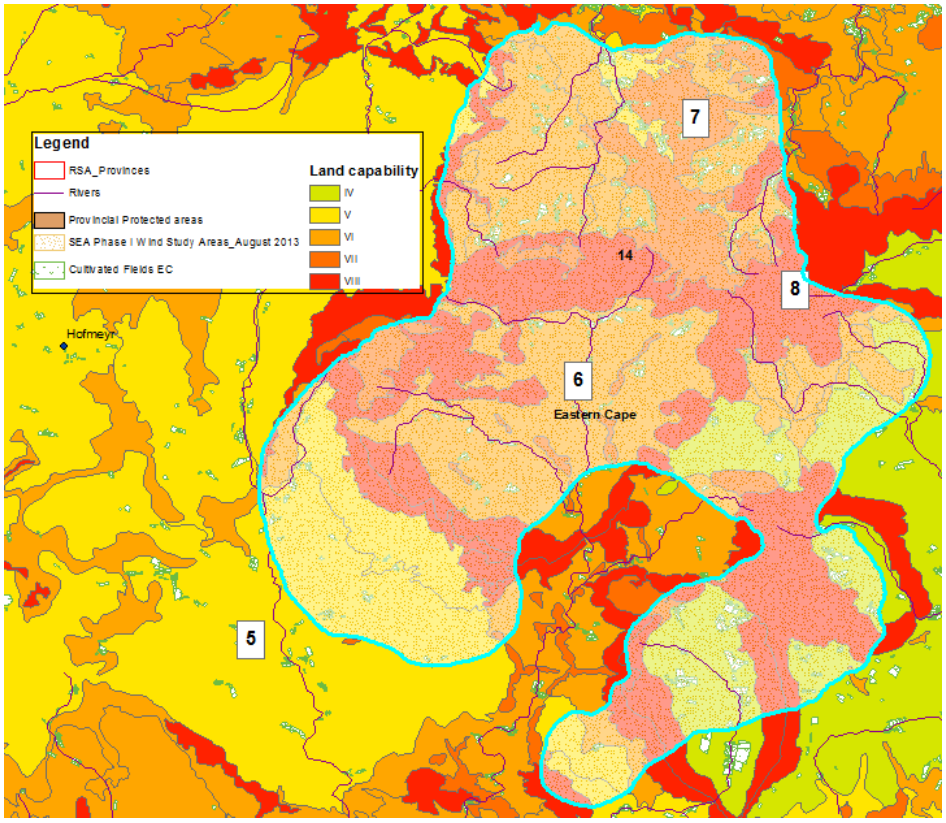
Study Area Site 14

Evaluation criteria	Comment
Site number	14
Province	Eastern Cape
Area (ha)	1521
Land capability	IV on the south-eastern parts of the site but with the larger area having a land capability of V – VIII. The terrain landscape is a major constraint as well as the low rainfall in this area for viable agricultural production.
Grazing capacity	5.5 – 7.5 ha/lsu
Agricultural land use	Mostly rangeland with limited cultivation along the lower areas and rivers
Other	None
Recommendation	The site can be retained for further investigation. However it has a high potential for grazing and agriculture (grazing) should remain the primary land use. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.
Images	

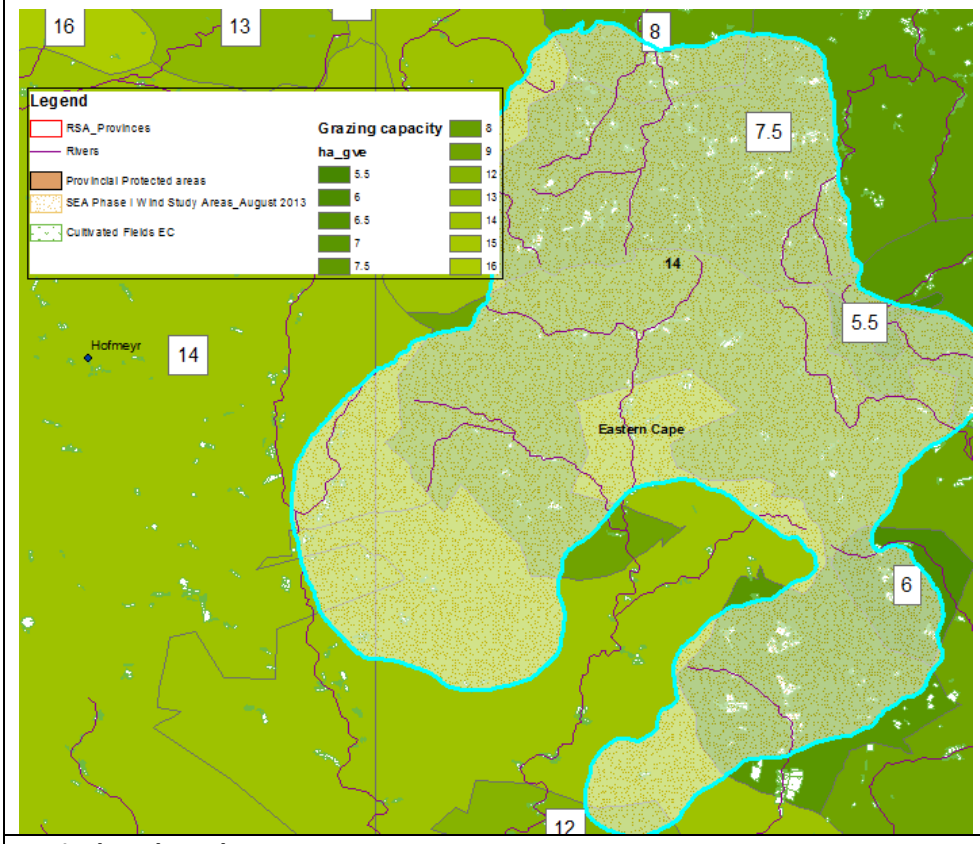
SPOT 2010



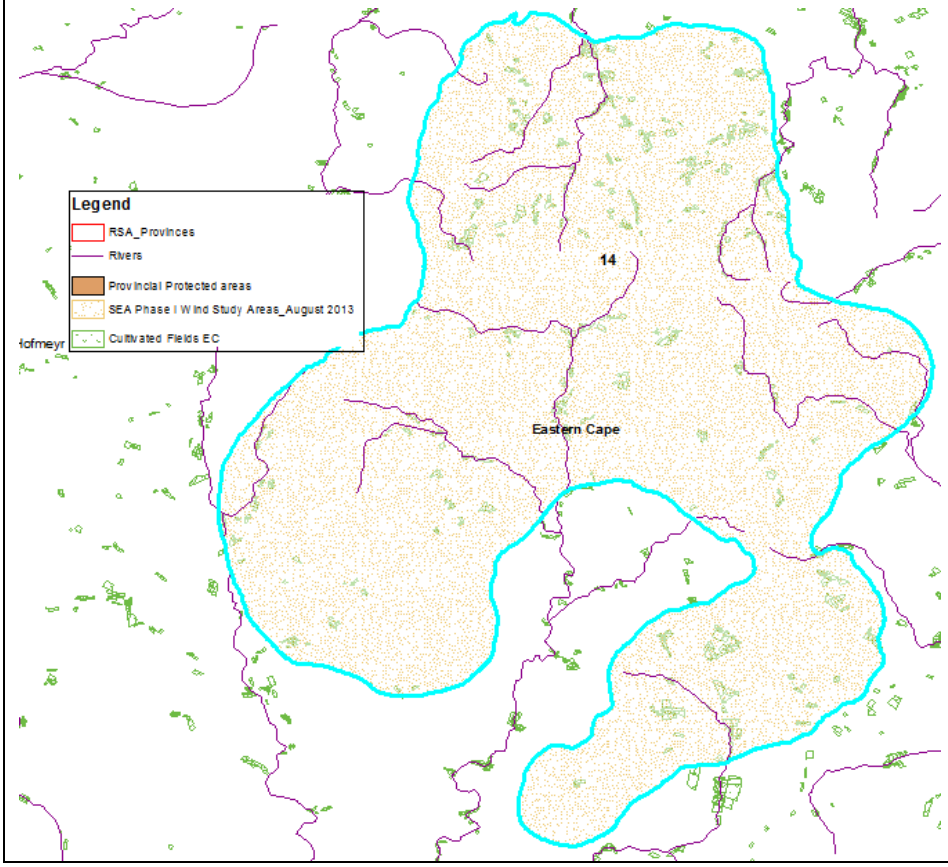
Land capability



Grazing capacity



Agricultural Land use

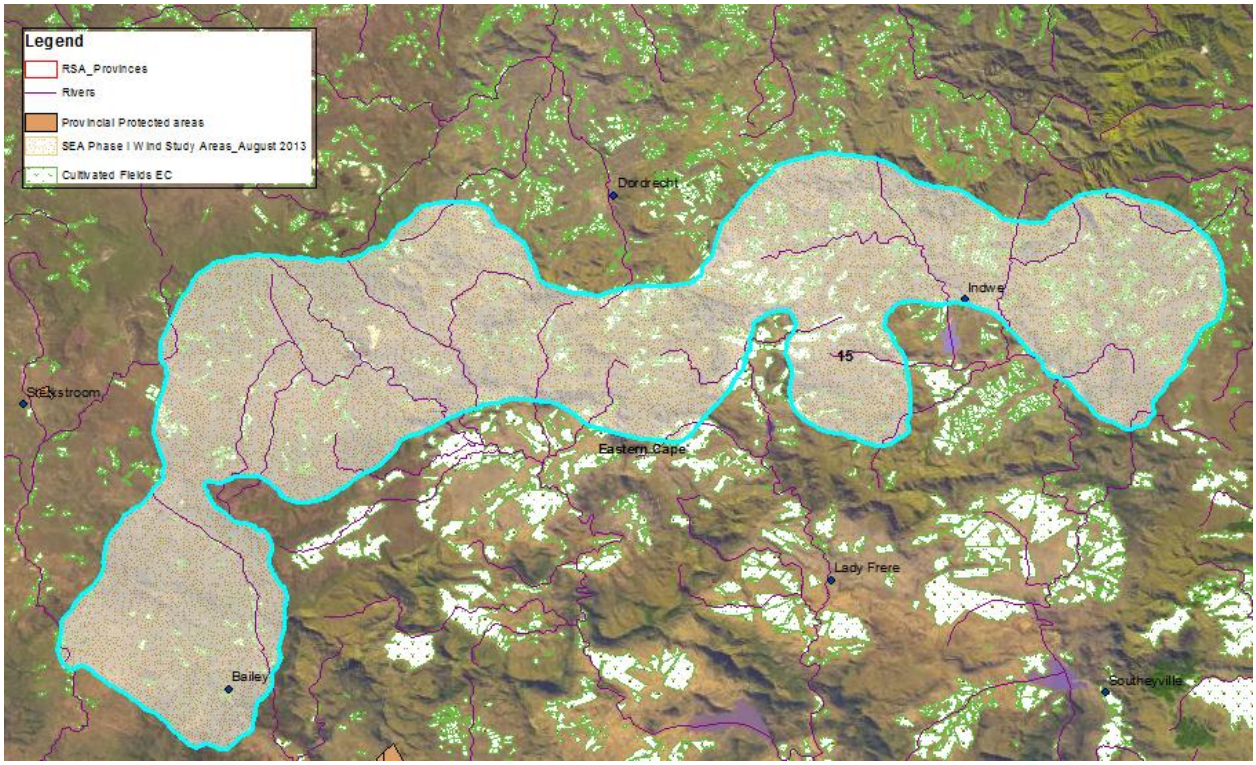


Study Area Site 15

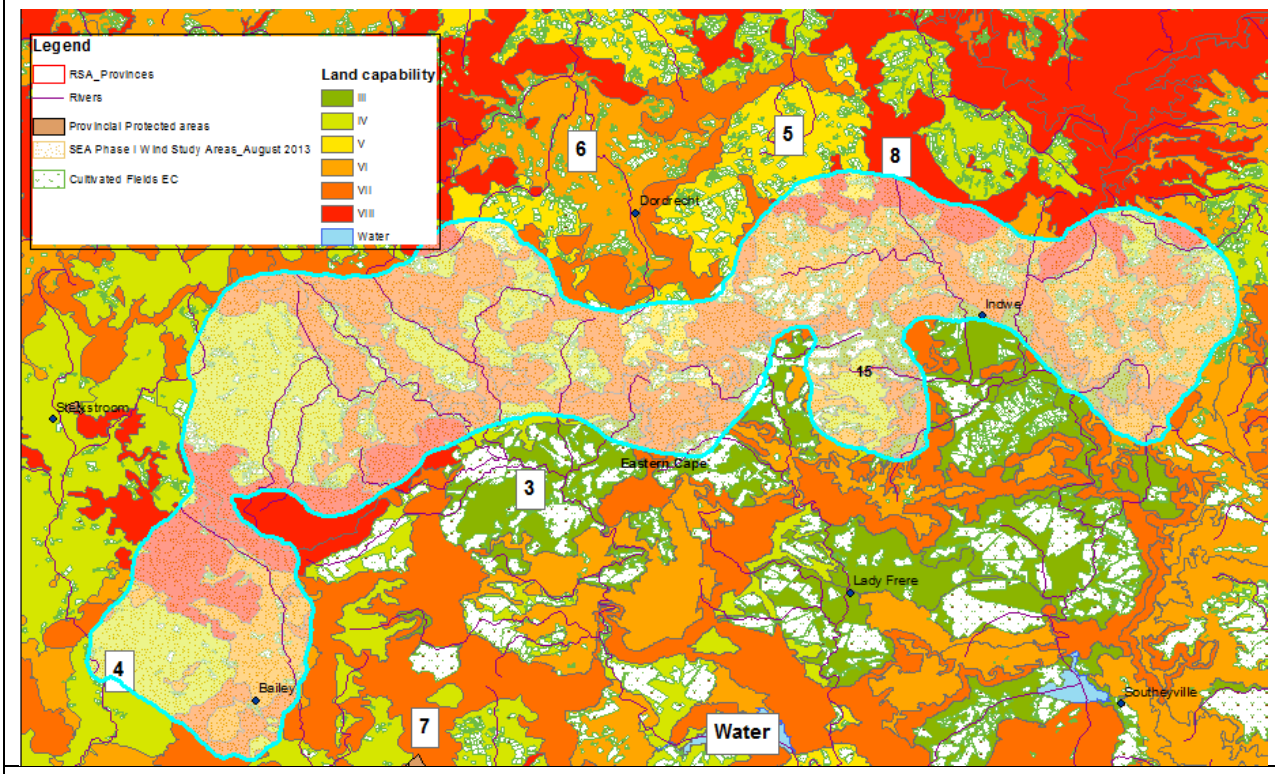
Evaluation criteria	Comment
Site number	15
Province	Eastern Cape
Area (ha)	1753
Land capability	Small patches of III and IV with the largest parts having a land capability of V
Grazing capacity	6 – 8 ha/lsu. The grazing potential values are not available for the area located in the former homeland areas
Agricultural land use	Mostly rangeland
Other	None
Recommendation	The site can be retained for further investigation, excluding the areas currently cultivated. Further the site has a high potential for grazing and agriculture should remain the primary land use. Adherence to all requirements as is specified under the Sub-division of Agricultural Land Act 70 of 1970 and the Conservation of Agricultural Resources Act 43 of 1983 is however still emphasized.

Images

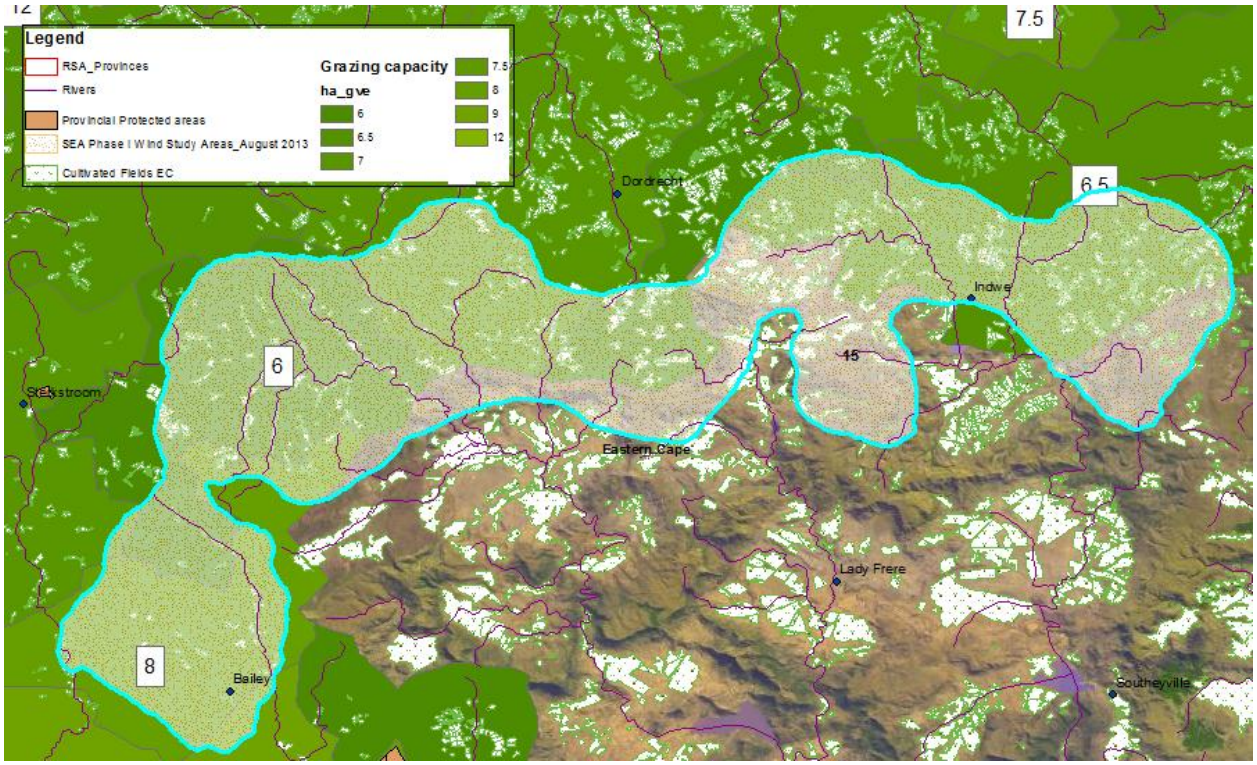
SPOT 2010



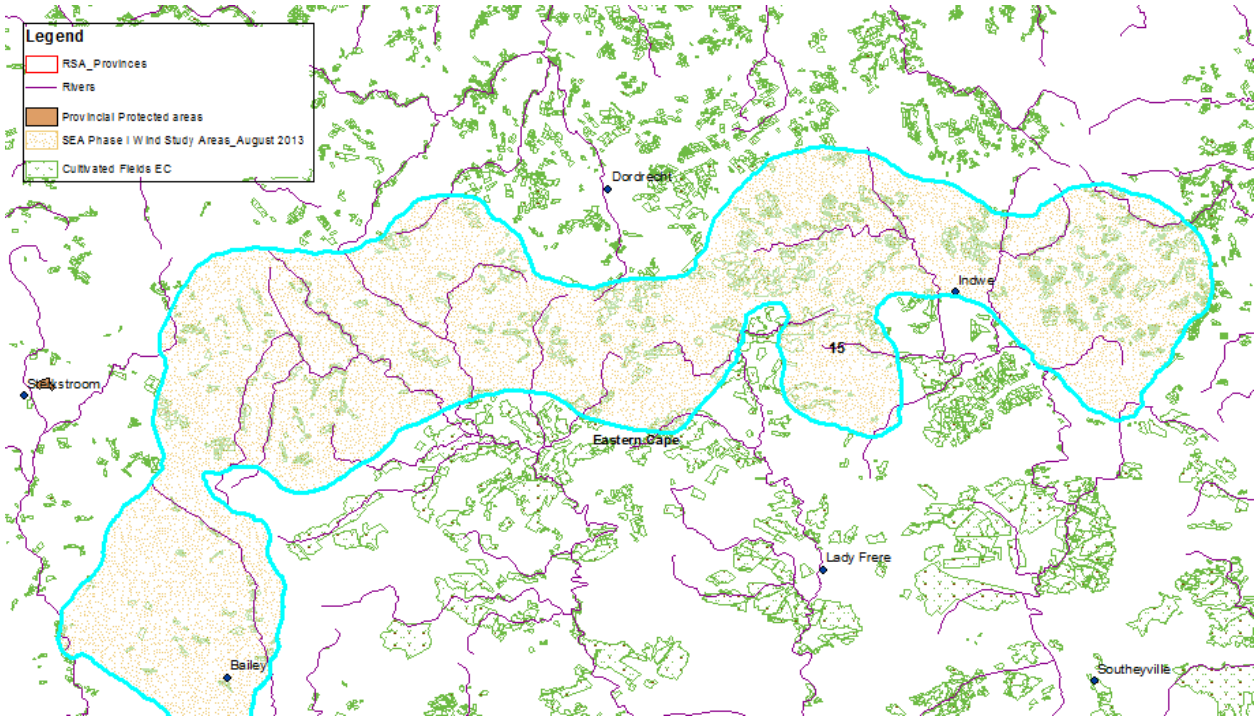
Land capability



Grazing capacity



Agricultural Land use



Summary

A summary of the sites reviewed:

SOLAR SITES	
Site 0	Site can be retained as demarcated.
Site 1	Site can be retained as demarcated on the condition that the National Protected area located within the demarcated proposed site be excluded.
Site 2	The boundaries of the proposed site should be amended to exclude the unique agricultural land areas under irrigated cultivation.
Site 3	Site can be retained as demarcated. Agriculture should however be retained as primary land use, especially with regard to the current cultivated areas and the grazing potential.
Site 4	The site boundaries should be amended to exclude the areas under current irrigation with due consideration for possible expansion especially towards the western parts of the site. Grazing should also be allowed to continue without a negative impact from the proposed renewable energy structures.
Site 5	Boundaries of the site should be amended to exclude the irrigated areas along the Modder River that forms part of the Orange Riet Irrigation Scheme. Grazing should also be allowed to continue without a negative impact from the proposed renewable energy structures.
Site 6	The site can be retained as is with the provision that the intensive irrigated areas along the Orange river be retained with due consideration for possible expansion. A possibility is to amend the northern boundary of the proposed site to exclude the National Park and the irrigated areas along the Orange river.
Site 7	This site or the majority thereof should be completed excluded as it is located around the Vaalharts Irrigation Scheme and any renewable energy project may impact negatively on agricultural production.

WIND SITES	
Site 1	Site can be retained as demarcated.
Site 2	Site can be retained as demarcated.
Site 3	Site can be retained as demarcated, but excluding the cultivated areas.
Site 4	Site can be retained as demarcated. Agriculture should however be retained as primary land use, especially with regard to the current cultivated areas within the proposed demarcated boundaries.
Site 5	Site can be retained as demarcated.
Site 6	Site can be retained as demarcated.
Site 7	This site should be completely excluded due to the intensive cultivation that is occurring within the demarcated boundaries. Any renewable energy project will impact negatively on agricultural production.
Site 8	The site can be retained; however the boundaries should be amended to exclude the Karoo National Park area.
Site 9	The site can be retained for further investigation; however the existing agricultural production, including grazing should be allowed to continue without a negative impact from the renewable energy structures.
Site 10	The site can be retained for further investigation but excluding the cultivated areas; the existing agricultural production, including grazing should be allowed to continue without a negative impact from the renewable energy structures.
Site 11	Site can be retained as demarcated but excluding the cultivated areas. Agriculture should however be retained as primary land use, especially with regard to the grazing potential.
Site 12	The boundaries of this proposed site need to be amended. It is recommended that the southern parts of the site be excluded from the proposed site area and that only the area north of Alicedale be retained. Grazing should also be allowed to continue without a negative impact from the renewable energy structures.
Site 13	Site can be retained as demarcated but excluding the cultivated areas. Agriculture should however be retained as primary land use, especially with regard to the grazing potential.
Site 14	Site can be retained as demarcated. Agriculture should however be retained as primary land use, especially with regard to the grazing potential.
Site 15	The site can be retained for further investigation but excluding the cultivated areas. It is recommended that the boundary on the southern parts of the site impacting on the land capability III area be slightly amended as well as the boundary on the western parts to exclude the land capability IV areas. Furthermore the site has a high potential for grazing and agriculture should remain the primary land use.

Review conducted by A. Collett

Production Scientist – Natural Resource Inventories and Assessment

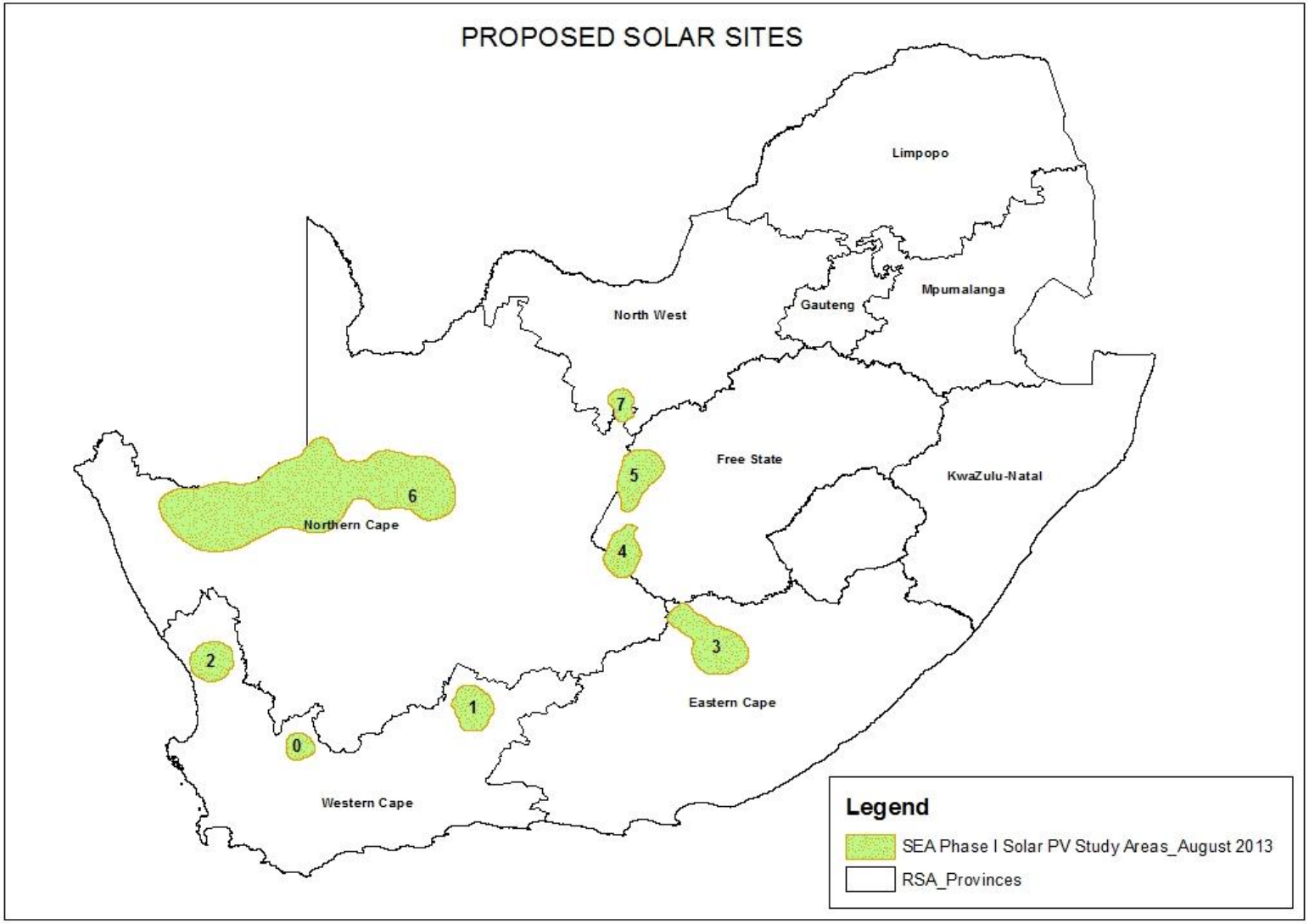
Directorate Land Use and Soil management

Department of Agriculture, Forestry and Fisheries

Date: 19 August 2013

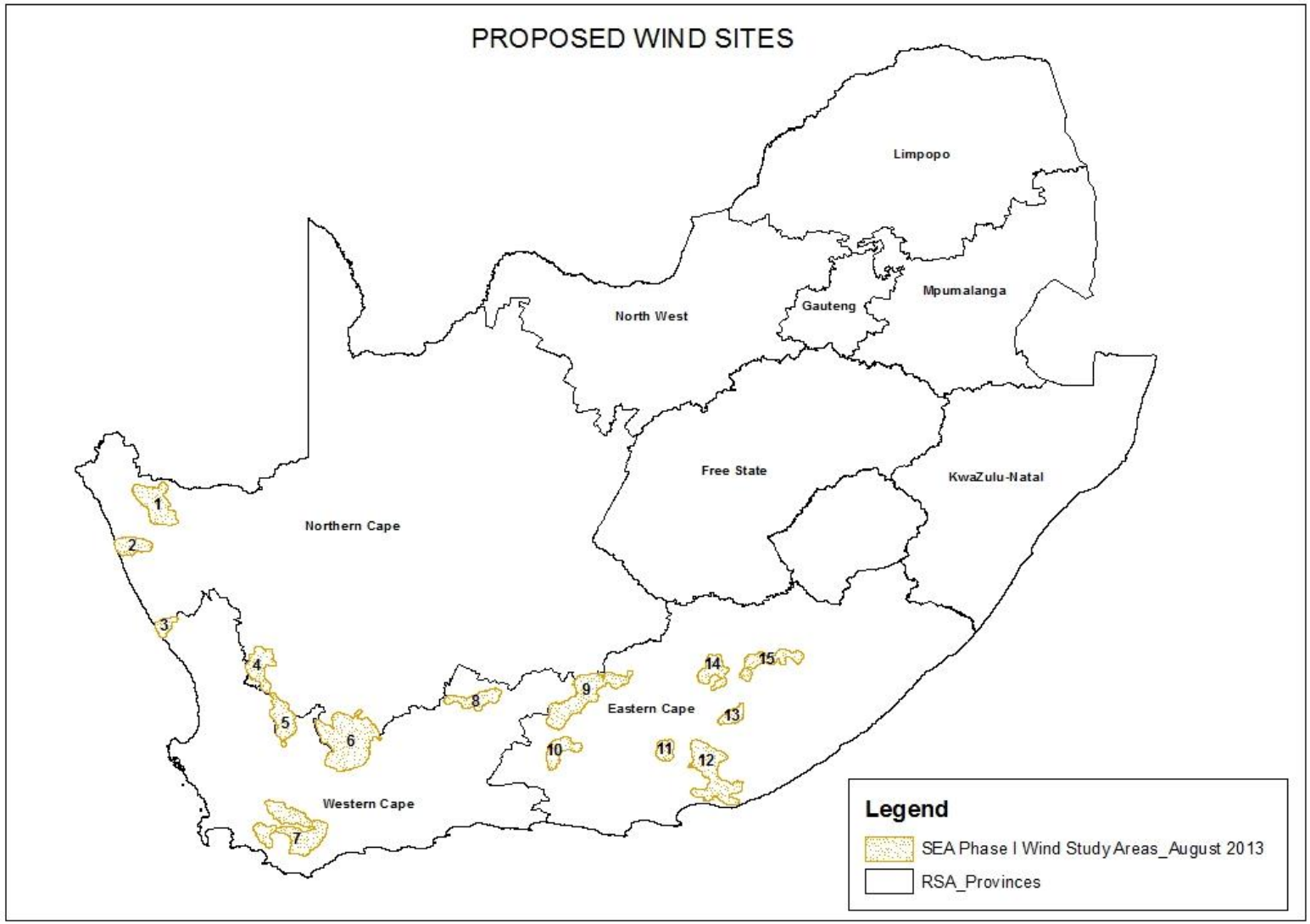
Annexure 1

Site numbers as per allocation for proposed Solar areas discussed within this document



Annexure 2

Site numbers as per allocation for proposed Wind areas discussed within this document



Response from the SEA team:

The review of the study areas has provided valuable information which was taken into consideration when refining the study area boundaries as well as during the agricultural scoping study. A specialist agricultural scoping assessment was undertaken to determine the allowable development footprints in the final proposed REDZs. See Part 3 Section 1 of the SEA report.

DEDEAT, 02/09/2013

Province of the
EASTERN CAPE
DEPARTMENT OF ECONOMIC DEVELOPMENT
ENVIRONMENTAL AFFAIRS & TOURISM

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2nd of September 2013

Ms Nosipho Ngcaba
Director General
The Department of Environmental Affairs
Private Bag X447,
Pretoria, 0001.
Tel: +27 12 310 3911
Fax: +27 12 322 2682

CC: Ms Dee Fischer. Chief Director: Integrated Environmental Management Support

Dear Ma'am

NATIONAL WIND AND SOLAR PV STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PV ENERGY IN SA: REQUEST FOR EXTENSION OF STUDY AREAS FOR RENEWABLE ENERGY DEVELOPMENT ZONES TO INCLUDE PORTIONS OF THE FORMER HOMELANDS IN THE EASTERN CAPE.

I would like to thank the Department of Environmental Affairs for including the Eastern Cape Provincial Department of Economic Development, Environmental Affairs and Tourism (DEDEAT) in the consultative process for the National Strategic Environmental Assessment (SEA) for Wind and Solar PV.

DEDEAT has been informed that the boundaries of the Phase 1 study areas for the proposed Renewable Energy Development Zones have been released for comment. It is understood that further investigation during Phase II will result in the refinement of these study areas. Refinement of the areas includes the possible enlargement, reduction or elimination of the identified study areas.

DEDEAT has reviewed the phase 1 study areas in the Eastern Cape, and notes that only a small portion of the former Transkei and a small portion of the former Ciskei is included in these study areas; the vast majority of the study areas occur outside of the former homelands. This is of concern to DEDEAT.

This concern relates to the fact that opportunities for renewable energy to reduce current socio-economic spatial disparities within the province will be lost if renewable energy facilities are not enabled in poorer areas. This is exacerbated by the fact that, to date, most successful renewable energy facilities occur on privately owned land outside of communal areas. Although the technical limitations of the wind and solar resource are fully appreciated within DEDEAT, there is nevertheless a real danger that a negative public perception regarding the distribution of wind energy facilities across the province could be created.

Wind study areas 13 and 15 are generally adjacent to the former Ciskei and Transkei (see attached). DEDEAT would request that every effort be made within the bounds of the methodology of the

study, and without compromising its rigour, to extend wind study areas 13 and 15 eastwards and southwards respectively, into the former Ciskei and Transkei respectively.

To this end, it is requested that attention should be paid to improving the quality/resolution of information related to exclusion layers in the relevant areas adjacent to Zone 13 and 15. Particular reference is made to the need for improved information on vulture flight paths in order to refine and/or improve the confidence regarding 20 and 40km exclusion buffers in the former Transkei.

DEDEAT holds, among others, the following Eastern Cape Provincial Mandates relevant to the above request:

- Sustainable Energy Support;
- Climate Change Response;
- Environmental Quality Management;
- Protected Areas and Biodiversity Management;
- Environmental Policy and Planning;
- Economic Planning;
- Local and Regional Economic Development;
- Local Economic Participation and Empowerment;
- Tourism.

DEDEAT is aligned to the following National Outcomes among others:

- Outcomes 4: Decent employment through inclusive economic growth;
- Outcomes 6: An efficient, competitive and responsive economic infrastructure network;
- Outcomes 10: Environmental assets and natural resources that are well protected and continually enhanced;

Given the fact that the request for extension into the former homelands may require significant changes to study areas 13 and 15, the SEA study team has asked DEDEAT to submit this specific request as soon as possible so as not to compromise the project timeline. However, DEDEAT will be submitting other general comment by the due date, namely the 15th of September 2013.

Your consideration of this request is most appreciated.

Yours faithfully

Mr Bongani Gxilishe

Head of Department
Department of Economic Development Environmental Affairs & Tourism

REQUEST FOR INCLUSION OF FORMER HOMELANDS IN STUDY AREAS FOR RENEWABLE ENERGY DEVELOPMENT ZONES – NATIONAL WIND AND SOLAR STRATEGIC ENVIRONMENTAL ASSESSMENT.

Response from the SEA team:

The former homelands and spatial injustices of the past came to fore during the process and it was requested that the former Transkei homelands be included in the Stormberg Focus Area even though the area has been flagged as a vulture sensitive area. The Eastern Cape Province consequently commissioned a vulture tracking study in this area to determine whether the area is sensitive to vultures or not. Until the results from this tracking study becomes available, precautionary sensitivity buffers have been applied to vulture colonies in this areas. See Part 3: Section 5 of the SEA report.

DEDEAT, 16/09/2013

Province of the
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Ref: 13/09/16/5-07

16th September 2013

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CC: Ms Dee Fischer. Chief Director: Integrated Environmental Management Support

Dear Ma'am

NATIONAL WIND AND SOLAR PV STRATEGIC ENVIRONMENTAL ASSESSMENT TO FACILITATE THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PV ENERGY IN SA: COMMENT ON PHASE I WIND AND SOLAR PV STUDY AREAS.

The Department of Environmental Affairs has invited comment on the boundaries of the Phase 1 study areas for the national wind and solar PV strategic environmental assessment.

DEDEAT embraces integrated spatial planning processes, as they facilitate coherent and efficient achievement of national, provincial and local priorities while at the same time working to balance social, economic and environmental considerations. However, DEDEAT also notes that once spatial plans are adopted, they can have a powerful effect on the way in which development is manifested: investors are most interested in working in areas where there is most policy certainty. The clear example in the Eastern Cape is the forestry strategic environmental assessment that was undertaken in Water Management Area 12.

Given that the SEA, once gazetted, *will* influence the way things happen, it is critical that the implications of the proposed Renewable Energy Development Zones are fully understood. DEDEAT has a responsibility to ensure that, while the advantages of the proposed zones are optimised, any inadvertent negative socio-economic and environmental consequences for the province are averted.

Eastern Cape consultations for this submission, and the relevant DEDEAT mandate.

DEDEAT holds, among others, the following Eastern Cape Provincial mandates relevant to the above request:

- Sustainable Energy Support;
- Climate Change Response;
- Environmental Quality Management;
- Protected Areas and Biodiversity Management;
- Environmental Policy and Planning;

- Economic Planning;
- Local and Regional Economic Development;
- Local Economic Participation and Empowerment;
- Tourism.

DEDEAT is aligned to the following National Outcomes among others:

- Outcomes 4: Decent employment through inclusive economic growth;
- Outcomes 6: An efficient, competitive and responsive economic infrastructure network;
- Outcomes 10: Environmental assets and natural resources that are well protected and continually enhanced;

In addition to internal consultations, DEDEAT has consulted with, among others, the Eastern Cape Parks and Tourism Agency, The Eastern Cape Development Corporation, the East London Industrial Development Zone and the Coega Industrial Development Zone in drafting comment.

The comment submitted below builds on earlier comment submitted to the Department of Environmental Affairs on the 2nd of September 2013

Disadvantaging the development of energy facilities outside the proposed renewable energy development zones in the former homelands of the Eastern Cape.

Under the national Renewable Energy Independent Power Producers Procurement Programme (REI4P), the Eastern Cape had welcomed the associated opportunity for socio-economic development in rural areas, particularly in the former homelands. As can be deduced from Figure 1, the province experiences significant spatial inequality with respect to poverty. Communities within the former homelands are among the poorest in South Africa. Given the emphasis on socio-economic development under the REI4P it had been anticipated that the Procurement Programme would assist in mitigating against such spatial distortions.

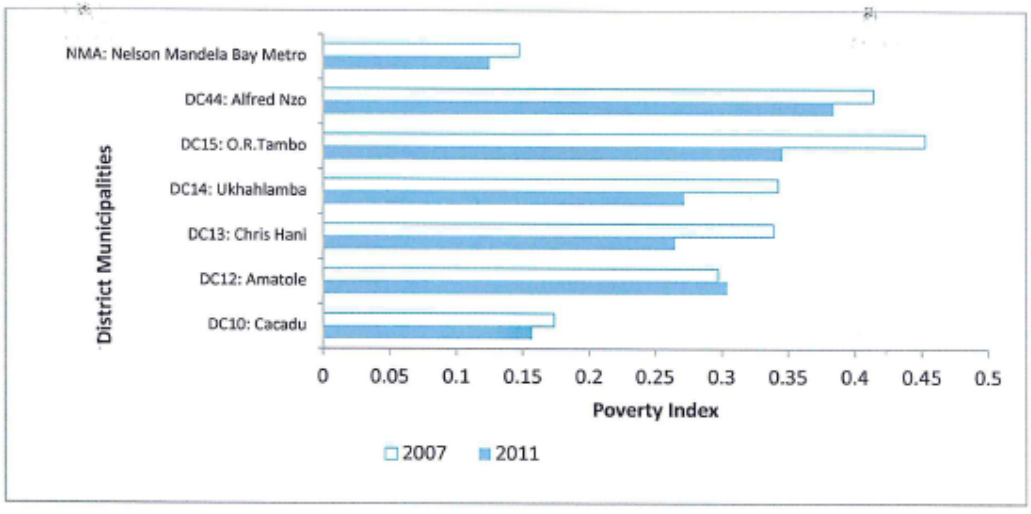

Figure 1: Percentage of households in poverty (holistic poverty index) in the Eastern Cape. Source: Community Survey 2007 and Census 2011.

To date 870 MW of wind and solar energy, estimated at R18 Billion Rands in investment, have been awarded to the Eastern Cape. This is considered to be a coup for the Province. However, it is noted that none of these facilities are located in the former homelands. What is more concerning is that although there are a number of proposed projects in the former homelands, none of these had been able to reach bid readiness by bidding round 2. By 2013, 89 wind and solar facilities had made applications to Eskom for grid connection. It is not known how many of these submitted bids for round three, but it is known that 3 were submitted for the former Transkei and Ciskei.

It has become clear that Wind and Solar farms in the former homelands are currently at a competitive disadvantage as compared to other areas in the province. The reasons for this are many, but factors include:

- **Land lease processes** leading to title deed on unregistered state-owned land are complex. To date these processes have taken three years, causing significant delays and financial costs. The direct and indirect costs of such complex land-lease processes must be built into the financial cost of the competitive bid.
- The **transmission grids** for evacuation of power in the former homelands do not allow for large wind farms. In other words, technical limitations mean that wind farms in the former homelands must be smaller. This in turn means that these wind farms cannot achieve large economies of scale, which puts them at a disadvantage against the larger than 130 MW winds farms elsewhere in the country.
- The former Transkei is **distant from suitable ports** and other infrastructure. Compensating for such distance from infrastructure must be priced into the financial bid.

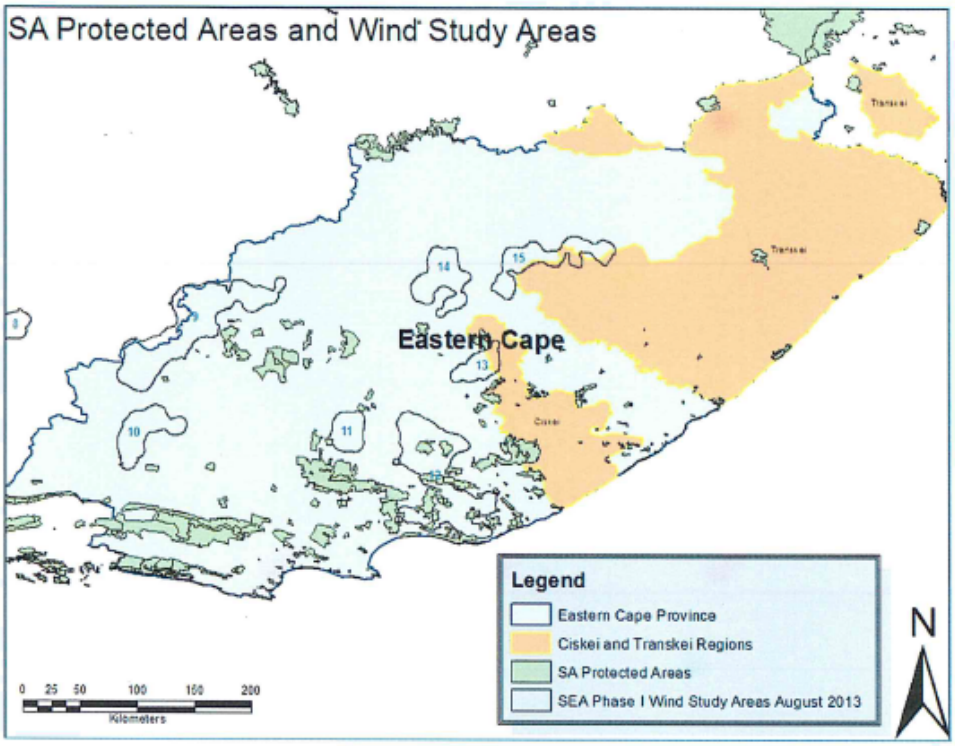

Figure 2: Portion of former homelands and protected areas (including private game reserves) intersecting proposed SEA study areas.

The above points are relevant to the SEA process in that, **should the boundaries of the renewable energy development zones not include a reasonable portion of the former Transkei and Ciskei, the zones will by default put the former homelands at a *further* competitive disadvantage as compared to the current status** (see Figure 3 for illustration of the point). It is therefore important that the current proposed study areas be extended into the former homelands, or even that a special zone be developed for the former homelands.

DEDEAT would like to submit two recommendations in the above regard for consideration.

1. Extend wind study areas 13 and 15 eastwards and southwards respectively, into the former Ciskei and Transkei respectively.
    a. DEDEAT has come to the conclusion that it is necessary to improve the quality/resolution of information related to exclusion layers in the relevant areas adjacent to Zone 13 and 15.
    b. Particular reference is made to the need for improved information on vulture flight paths in order to refine and/or improve the confidence regarding 20 and 40km exclusion buffers in the former Transkei and Ciskei.
    c. As it is understood that the DEA SEA phase 2 study will rely only on available desktop data, and only within the study areas, DEDEAT has agreed to work towards undertaking a vulture tracking field study and collision risk analysis for not only the

study area, but also high wind resource areas outside the study areas as soon as possible.

d. DEDEAT will submit the results of the study to DEA for inclusion in the SEA, in order to allow where feasible the extension of study areas into the former homelands.

2. Secondly, DEDEAT submits that a special study area be considered in the former Ciskei to the East of the Fish River including Peddie and King Williamstown. It is understood that this will require a special departure from elements of the study methodology.

COMMENT ON PHASE I WIND AND SOLAR PV STUDY AREAS.

Current competitive status of the wind and solar sector in the EC

Zone	Competitive advantage	Reason
Privately owned land.	Advantaged	Existing infrastructure, time/cost of securing land tenure does not have to be priced in.
Communal land/former homelands	Disadvantaged	Poor infrastructure, complex land lease.

Future status of the wind and solar sector in the EC with REDZ

Zone	Competitive advantage	Reason
Renewable Energy Development zones	More advantaged	Crowding in infrastructure, reduced institutional and permitting barriers, expectation that bidders in these zones will be favoured in the IPP procurements process.
Privately owned land outside the Renewable Energy Development Zones	Neutral	Existing infrastructure, time/cost of securing land tenure does not have to be priced in.
Communal land/former homelands outside Renewable Energy Development Zones	Further Disadvantaged	Poor infrastructure, complex land lease.

Figure 3: Implications for wind and solar farms outside renewable energy development zones: wind and solar farms in former homelands outside the zones will become further disadvantaged.

COMMENT ON PHASE I WIND AND SOLAR PV STUDY AREAS.

Competition with the Private Game Reserve Industry - Study Area 12

DEDEAT has the mandate to develop and sustain the provincial tourism industry. The Private Game Reserve Industry in the Eastern Cape has made it clear that wind farms in close proximity to reserves will have a detrimental effect on their industry (letters signed by international tourism agencies to this effect have been noted). The detrimental effect relates to:

- Visual impact (second to seeing game, tourists and international hunters come to the Game Reserves for the scenery and landscapes);
- The possibility of associated infrastructure such as high voltage power lines running through game reserves is not conducive to the wilderness experience.

The Terrestrial Ecology Research Unit at the Nelson Mandela Metropolitan University has undertaken studies that have found that:

- The Private Game Reserve Industry targets the foreign market and upper income groups.
- Private Game Reserves resulted in increased on-site employment opportunities by 3.5 times, and the average wage bill increased by 20 times and average wages by 5.7 times. No farm workers were laid off as a consequence of the switch from farming to game based ecotourism. Staff received additional employment benefits not typically available to farm labourers, including extensive skills training.
- However, Private Game Reserves are battling to retain their market share and compete in an economically stressed industry associated with the downturn in international tourism (as at 2011).

DEDEAT therefore submits that although Renewable Energy Development in the province is necessary and generally beneficial, these developments should rather be located in areas that are in greater need of the REIPPPP socio-economic benefits such as the former Ciskei and Transkei. The renewable energy industry should not be developed in a way that would threaten the existing Private Game Reserve Industry which has a high job-creation ratio in the province.

It follows that Study Area 12 is generally incompatible with provincial circumstances, and apart from the northernmost section adjacent to Cookhouse, should be removed. Rather, the northern portion of zone 12 should be merged with zone 11 (see Figure 4).

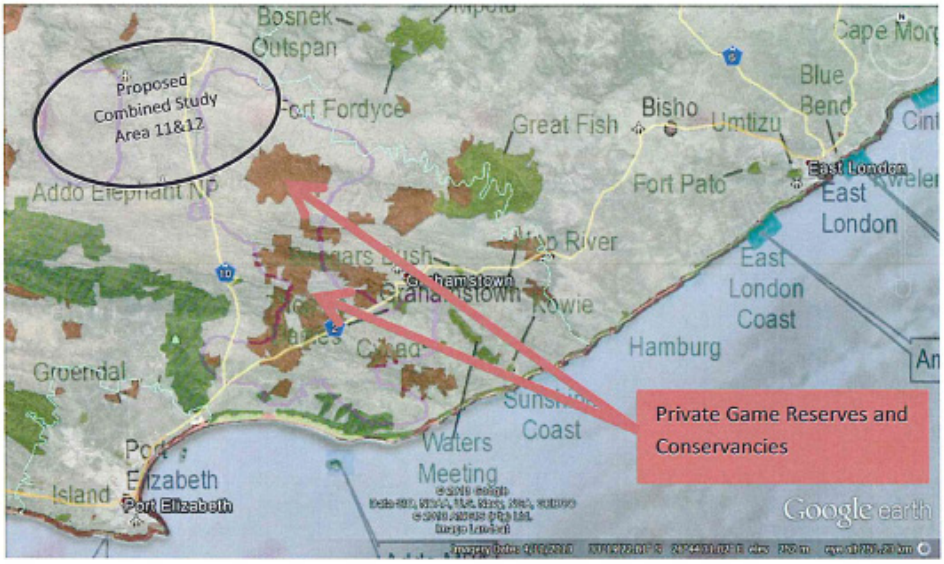

Figure 4: The intersection between zone 12 and private game reserves.

Study Area 9 and the Compassberg Protected Natural Environment

The northern portion of study area 9 intersects with the Compassberg Protected Natural Environment which was proclaimed in 2012 in terms of the NEM:PAA 2003 (see Figure 5). Phase two of the Wind and Solar SEA should pay attention to the treatment of this area in terms of the Eastern Cape Protected Area Expansion Strategy 2012 (this document has been supplied to the CSIR).

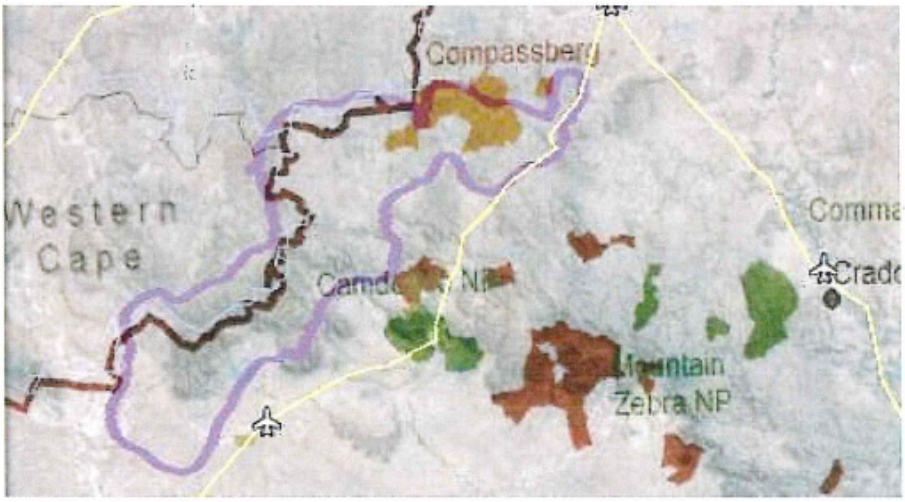

Figure 5: Study Area 9 as it relates to the Compassberg Protected Area.

Supporting small areas that may have excellent wind resources.

A characteristic of the Wind and Solar Strategic Environmental Assessment Process is that the study areas only consider clusters of suitable parcels which combine to form an area greater than 500km^2. This is understandable as economies of scale come into play. However, there may be smaller suitable areas with excellent wind resources. It is important that these areas should not be disadvantaged by virtue of their size. The provincial sustainable energy strategy (2012) favours distributed, embedded generation especially for smaller projects that may create the opportunity for local economic development. The opportunities for renewable energy to reduce current socio-economic spatial disparities within the province will be lost if renewable energy facilities are not enabled in poorer rural areas.

DEDEAT therefore submits that while the proposed renewable energy development zones are encouraged, as they will streamline the permitting process and ensure the provision of suitable infrastructure, the development of renewable energy facilities outside of these zones should not be dis-incentivised or burdened with obstacles over-and-above the status quo.

Summary

In summary, the key points of DEDEAT comment in regard to the National Wind and Solar SEA study areas are that:

- Study areas 13 and 15 should where possible be extended East and South into the former homelands by among others refining or changing the treatment of avifaunal exclusion information;
- A special study area should be considered in the former Ciskei to the East of the Fish River including Peddie;
- Study Area 12 is generally incompatible with provincial circumstances, and apart from the northernmost section adjacent to Cookhouse, should be removed. Rather, the northern portion of zone 12 should be merged with zone 11
- The northern portion of study area 9 intersects with the Compassberg Protected Natural Environment which was proclaimed in 2012 in terms of the NEM:PAA 2003
- The development of renewable energy facilities outside of proposed renewable energy development zones should not be dis-incentivised or burdened with obstacles over-and-above the status quo.

Your consideration of this submission is most appreciated.

Yours faithfully

Mr Bongani Gxilishe

Head of Department
Department of Economic Development Environmental Affairs & Tourism

COMMENT ON PHASE I WIND AND SOLAR PV STUDY AREAS.

Response from the SEA team:

The provided information was taken into consideration when refining the study areas and identifying the currently proposed REDZs. As mentioned above the former homelands were also taken into consideration and a part of the former Transkei homeland included in the Stormberg focus area 4. The existence of game farms in the area has also been noted and addressed through either avoidance or sensitivity mapping. Please see Part 3: Section 2 for further details.

DENC, 05/08/2013

the denc
Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

Private Bag X6102, Kimberley, 8300, SASKO Building, Tel: 053-807 7430, Fax: 053-831 3530

Enquiries : Mr JJ Mutyorauta
Date : 05 August 2013

Reference : L1.3

Ms Dee Fisher
Chief Director: Integrated Environmental Management Support
Department of Environmental Affairs
Private Bag X447
PRETORIA
0001

Dear Madam

RE: ADDITIONAL INFORMATION ON THE STRATEGIC ENVIRONMENTAL ASSESSMENT ON RENEWABLE ENERGY PROJECTS IN THE NORTHERN CAPE

I have attended the past two Project Steering Committee meetings on the "**Strategic Environmental Assessment (SEA)**" on Renewable Energy (RE) Projects on behalf of the Northern Cape Department of Environment and Nature Conservation (DENC). I am the Director: Environmental Quality Management (EQM) in DENC. EQM works with and supports the National Department of Environmental Affairs (DEA) in processing the EIA applications which DEA receives for the implementation of RE Projects in the Northern Cape.

Your Chief Directorate is carrying out admirable, commendable and sterling work with the CSIR on the SEA on the implementation of RE Projects. Here is additional information on the SEA which we would like to draw your attention to.

1. **Secondary and Primary Asbestos Pollution Areas**

1.1 The Northern Cape, the North West, Limpopo and Mpumalanga Provinces are regarded as the "**Asbestos Polluted Provinces**" in South Africa. The pollution is a result of mining of asbestos in these four provinces from the 40's to the 60's.

1.2 In the Northern Cape, there is an area called the "**Asbestos Belt**". The Belt stretches from the town of Prieska in the Siyathemba Local Municipality to the town of Tosca in the Joe Morolong Local Municipality. The local towns of Marydale, Niekerkshoop, Lime Acres, Danielskuil, Kuruman, Batlharos, Hotazel and Heuning Vlei are located in the Belt.

1.3 Primary and secondary asbestos pollution is rife in these areas in the Asbestos Belt. Asbestos pollution is an extremely dangerous and deadly health hazard. It is common knowledge and medically acknowledged that a lot of people in the Belt are dying of various cancers of lungs and of mesothelioma as a result of breathing the fine and minute fibre from the asbestos pollution.

1.4 Implementation of RE Projects in the Asbestos Belt in the Northern Cape should therefore be avoided. No EIA applications for RE Projects from the Asbestos Belt should therefore be approved without prior and more rigorous consultations with the Northern Cape officials.

2. The politicians, the municipalities, the Provincial Cabinet and the Northern Cape Provincial Administration are very much appreciative of and supportive of the work which is being conducted by DEA on the RE Projects in the Province. They would like to pass on and publicize this work on the RE Projects to the public in their constituencies in the Province.

   Please will DEA or your consultants at the CSIR send basic information on the approved EIA applications for RE Projects in the Northern Cape as per **TEMPLATE** which is attached.

   We will pass on the information which you will send us to the Office of the Premier. They have requested for the information to be supplied before the end of August 2013.

3. Environmental Management Framework (EMF) Reports

3.1 The Northern Cape has five (x5) District Municipalities. These are:

- Pixley ka Seme District Municipality
- Frances Baard District Municipality
- John Taolo Gaetsewe District Municipality
- Siyanda District Municipality and
- Namakwa District Municipality

3.2 As one of our Annual Performance Plan targets, EQM has so far conducted studies and compiled Environmental Management Framework (EMF) Reports in four (x4) District Municipalities. These are: Namakwa, Siyanda, John Taolo Gaetsewe and Frances Baard District Municipalities. The EMF studies in the fifth District Municipality: Pixley ka Seme District Municipality will be conducted this year in 2013/2014.

3.3 DEA has copies of the EMF Reports from the DENC.

3.4 Please make use of the recommendations in the EMF Reports when you process the EIA applications for the RE Projects for the Northern Cape.

4. Invitation to DEA to give Presentations on the RE Projects

4.1 The work that DEA is conducting on the SEA of the RE Projects should be publicized to and shared with several key stakeholders as much as possible.

4.2 DENC will officially invite DEA and the CSIR to come to the Northern Cape and give presentations on the RE Projects.

We plan to have your presentations given to the following audiences:

- The Provincial Cabinet
- The Heads of Departments Forum
- Provincial Inter-Governmental Relations Forum (meeting of the Premier with the District Executive Mayors)

4.3 We hope and trust that DEA and the CSIR will take the opportunity and challenge to come to the Northern Cape and address us on these RE developments.

Yours sincerely

JJ MUTYORAUTA
DIRECTOR: ENVIRONMENTAL QUALITY MANAGEMENT

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Response from the SEA team:

The inputs from DENC have provided additional information that was considered as part of the SEA analysis. All available information that is relevant at the level at which the SEA was conducted was utilised. Site specific issues that needs to be assessed at a site by site basis still needs to be addressed through an on the ground Basic Assessment process.

DENC, 17/09/13

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

CSIR
our future through science

DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY
Phase I Study Areas Comment Form

August 2013
Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Elsabe Swart
Company	Department of Environment and Nature Conservation, Northern Cape
Email	Elsabe.dtec@gmail.com
Phone	053-807-7430

Please insert comment under the relevant heading:

1 POSSITIVE MAPPING

2 NEGATIVE MAPPING

Due to the fact that the Northern Cape is extremely limited in capacity and limited biodiversity & ecosystem information that are available for the province, we would like to request that the following information be considered when doing the mapping exercise:

With reference to the National Biodiversity Assessment 2011 (published 2012), to be included:
Climate change mitigation and vulnerability areas of importance - p. 131 fig 62 (map)
National Protected Area Expansion Strategy as the Province will use this to guide our plans & actions p 179 fig 82
Priority areas p fig
Ghaap Platau is regarded a conservation priority area not only by the NBA, but has already been identified as such by the DENC in the 1990s.
Game farms within the Northern Cape as sensitive sites as these will be used together with the National Protected Area Expansion Strategy to plan conservation areas and biodiversity offset areas. These layers can be provided by Samantha de la Fontaine at the DENC (sdelafontaine@gmail.com),
The Gariep red zone also seem to overlay areas planned for our Goegap Nature Reserve expansion plans (via Conrad Geldenhuys, c.geldenhuys@hotmail.com, we can get more info from Ralph at the DENC in this regard).

To be included/considered in SEA map:
Gariep centre of endemism (Van Wyk & Smit 2001),
Lower gariep alluvial vegetation has been assessed and listed as EN (refer to Mucina et al. 2006) – no further destruction of this vegetation unit can be allowed otherwise we will have less natural vegetation left than the national conservation target is of the unit,

The area just south of the Gariep red zone is regarded less sensitive than the area highlighted by the red zone – this is exactly the area of high importance to Conservation and specialised niche habitats. There might be a PhD student who will study this area (specifically the inselbergs) from next year (Natalie Uys, nuys.denc@gmail.com, can give you more information in this regard).

There are Biodiversity Offset Areas and certain areas in the process of being declared formal Protected Areas under NEMPA (more info available from Christine Pienaar, chrstine.dtec@gmail.com) :
In this regard I do not have a map, but these areas include areas around Gamsberg (ref. Dr Phil Desmet inputs in this regard),

Kathu forest and immediate surrounds,
Tswalu Game Reserve,
Glen Llyon Game Reserve,
Olifants river region (possibly Stewardship programme if not accepted for formal Protected Area).

Just to double check:
Important Bird Areas identified by BirdLife SA is included (?)

Information to be obtained and included (preferably before 2nd draft is being compiled):
CBA map for NC (expected completion date is beginning 2014 by Enrico Oosthuizen),
It is suggested that Mandy Schuman is consulted for information on the Bokkeveld region,
Provincial Protected Area expansion plans (more information can be obtained from Ralph at the DENC in this regard via Conrad Geldenhuys, c.geldenhuys@hotmail.com).
The botanical garden at Nieuwoudtville should not be negatively impacted (buffer zone) – SANBI might have a GIS layer for this site as it is a farm that is 'used' as a botanical garden by them.

Along the coast and some other areas have been highlighted as habitats of concern by Provincial Scientists, relating to specific threatened species – what is the possibility to consider these in the mapping? Habitat destruction is rated the primary threat to species conservation status, thus it should be a priority to consider their habitats (e.g. vultures, pangolins, rare moles, etc.)
The grey camelthorn area around Hopetown was acknowledged an important woodland area and a development was halted due to this reason – it would be appreciated if this area be considered as such (we do not have a map, but Christine Kraft can give more info in this regard at the DENC).

What about landcover data? Apparently the Northern Cape might receive new landcover data soon.

3 IDENTIFICATION OF STUDY AREAS

4 STUDY AREAS

I would urge at least some level of ground truething be done in the areas within the Northern Cape – specifically because there is such a shortage of information and capacity in the province. In my view we should at least have some level of assurance that we might not be missing something of huge concern. The certainty that we have considered all biodiversity and environmental issues should just be more towards >60% at least and at this stage I am not convinced that it is the case. If you look e.g. at SANBI's PRECIS data grids representing collections, the Northern Cape is nearly empty in comparison to all other provinces.

5 GENERAL

Due to the absence of more local (provincial level) data, the DENC need to make use of national maps to a large extent (with higher importance) as these are in some cases all we have.
Secondly, there is specialist knowledge and information which is not necessarily been published or not yet been supported/confirmed by scientific surveys, reports / publications. Still these have proofed in the past to be valuable and the expert knowledge is representative of what is out in the field.

Response from the SEA team:

While a team of terrestrial and freshwater biodiversity specialists have made use of all available and appropriate published and unpublished data to assess the areas currently proposed as REDZs, the project level Basic Assessment process will further address many of the issues raised.

Council for Geosciences, 26/08/14

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Private Bag X112, Pretoria 0001, South Africa
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Fax: +27 (0)12 841 1221
email: info@geoscience.org.za
website: www.geoscience.org.za

Council for Geoscience
Leaders in Applied Geoscience Solutions

Reference: Mineral potential on prioritised study areas (Wind and Solar)

Enquiries: **S. Foya**
Tel: 012 841 1101
Fax: 086 6798334
E-mail: sfoya@geoscience.org.za
Date: 26 August 2014

Lydia Cape-Ducluzeau: Project Manager
Environmental Scientist
CSIR Environmental Management Services
Tel: 021 888 2429
E-mail: LCapeDucluzeau@csir.co.za

Dear Madam,

RE: MINERAL POTENTIAL ON PRIORITISED STUDY AREAS FOR WIND AND SOLAR INFRASTRUCTURE

In response to your request for CGS to comment on the potential sterilisation of potential mineral resources on selected wind and solar sites underlying Springbok Solar, Upington Solar, Vryburg Solar, Kimberly Solar, Overberg Wind, Komsberg Wind, Cookhouse Wind and Stormberg Wind, Please find the following:

Springbok, Upington, Vryburg and Kimberly Solar Sites: These areas are known to be well endowed with major diamonds pipes, alluvial diamonds, gold, base metals and industrial minerals and there are several operating mines. Therefore these solar grids have a potential to sterilise the above mentioned minerals (see attached map).

Overberg, Cookhouse and Komsberg Wind Sites: The Overberg, Cookhouse and Komsberg wind grids have a potential to sterilise resources such as uranium, shale gas and clay deposits which are resources of strategic importance (see attached map).

Stormberg Wind Site: The Stormberg wind grid has a potential to sterilise both existing coal deposits as well as potential shale gas sites.

Yours Sincerely,

Dr. Stewart Foya
Manager: Mineral Resources
Council for Geoscience

Response from the SEA team:

The inputs from CGS were taken into consideration and informed Part 3: Section 12 of the SEA report. The mineral resource potential of the focus areas is illustrated in Map 1 of that section. The dataset on existing prospecting and mining rights for South Africa was also used as a sensitivity layer.

SANDF, 11/04/14

RESTRICTED

the sandf
Department:
Defence
REPUBLIC OF SOUTH AFRICA

C LOG/D FAC/R/401/1

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Enquiries: Col S.C. Williams

Department of Defence
Logistics Division
Private X319
Pretoria
0001
11 April 2014

Ms D. Fischer
Department of Environmental Affairs
Private Bag X447
Pretoria
0001

Mr C. van der Westhuizen
Council for Scientific and Industrial Research
PO Box 320
Stellenbosch
7599

Dear Madam/Sir

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE STRATEGIC INTEGRATED PROJECTS

1. Letter EDMS 131713 dated 03 February 2014 and the Project Steering Committee meeting held on 19 February 2014, refer.

2. Herewith the responses received from the SA Army and SA Air Force regarding the possible impact of the Strategic Integrated Projects (SIP 8 and 10) on their activities in the eight identified focus areas.

3. Feedback from the other Services and Divisions in the Department of Defence is still awaited and will be forwarded to your office once received.

4. It is kindly requested that any enquiries on the content of the enclosed responses be directed to the persons mentioned for enquiries.

5. The late submission of this information is regretted.

RESTRICTED 2

6. Trusting this meets with your satisfaction.

Yours sincerely

(COLONEL S.C. WILLIAMS)
CHIEF OF LOGISTICS: LIEUTENANT GENERAL

Enclosure 1: Letter SA ARMY/C DIR ARMY FORC STRUC/D ARMY LOG/R/505/5/2/1 dated 17 March 2014
2: Letter AIR COMD/DBSS/R/504/3/1 dated 14 March 2014

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Response from the SEA team:

The inputs from SANDF were taken into consideration and informed Part 3: Section 8 of the SEA report.

SA Army, 17/03/14

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sa army
Department:
Defence
REPUBLIC OF SOUTH AFRICA

SA ARMY/C DIR ARMY FORC STRUC/D
ARMY LOG /R/505/5/2/1

Telephone: 012 355 2032
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Enquiries: Brig Gen E. Mathaba

SA Army
(Chief Directorate Army Force Structure)
Private Bag X981
Pretoria
0001
14 March 2014

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE STRATEGIC INTEGRATED PROJECTS

1. Letter C LOG/D FAC/R/505/5/2/1 dated 11 March 2014 refers.

2. The eight focus areas as identified have been analysed to determine if any impact would be made on SA Army facilities. It is difficult to determine the exact environmental impact of the proposed projects in this area as the detail regarding the impact of such installations is unknown. Consultation between the SA Army and the Department of Environmental Affairs (DEA) to determine the exact impact in the areas where the SA Army is active will be necessary.

3. The SA Army will be affected by the focus areas as follows:

   a. Focus Area 1: Overberg (Bredasdorp). There is no SA Army activity in this area.

   b. Focus Area 2: Central Karoo (Laingsberg). There is no SA Army activity in this area.

   c. Focus Area 3: Cacadu (Grahamstown). The area has the following activities which may have an influence on the project:

      i. 6 SAI Bn conducts various landward training in this area.

      ii. Piet Retief training area within this focus area is used by various SA Army units for landward training activities.

   d. Focus Area 4: Chris Hani (Queenstown). The SA Army has a shooting range in the area. Future plans are afoot to establish a fuel point and some SA Army presence in the area. The SA Army plans to use the area as a refueling point for Ops CORONA Maluti supply activities.

Lefapha la Bosireletso . Umnyango wezokuVikela . Kgoro ya Tshireletso . iSebe lezoKhuselo . Department of Defence . Muhasho wa Tsireledzo
UmNyango WezokuVikela . Ndzawulo ya swa Vusirheleri . Lefapha la Tshireletso . Departement van Verdediging . LiTiko leTekuvikela

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e. Focus Area 5: Lejweleputswa (Kimberley). The following units and activities may have an influence on the project:

i. Vooruitzicht shooting range is in the area.

ii. 3 SAI Bn conducts training of MSDS and Youth Service members. Various landward training activities are carried out in the area.

iii. ASB Kimberly conducts some military activities in the area.

iv. Air Defence Artillery conducts air defence activities in this area in terms of basic and combat readiness training.

f. Focus Area 6: Dr Ruth (Vryburg). There is no SA Army activity in this area.

g. Focus Area 7: Siyanda (Upington). 8 SAI is resident in the area and should be consulted before the project is implemented.

h. Focus Area 8: Namakwa (Springbok). The SA Army has a signal station in Alexander Bay and the Signal Fmn should be consulted before this project is implemented.

4. Brig Gen E. Mathaba, D Army Log, will act as nodal point within the SA Army for any further correspondence regarding this project.

(V.R. MASONDO)
CHIEF OF THE SA ARMY: LT GEN

DISTR

For Action

C Log (Attn: D Fac)

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Response from the SEA team:

The inputs from SA Army were taken into consideration and informed Part 3: Section 8 of the SEA report.

Air Command, 14/03/14

RESTRICTED

AIR COMD/DBSS/R/504/3/1

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Air Command
Directorate Base Support Systems
Private Bag X199
Pretoria
0001
14 March 2014

FEEDBACK WRT SIP 8 AND IT'S IMPACT ON THE SAAF BASES AND BOMBING RANGES

Appendix A: Graphical depiction of the overlap between the SAAF flight-safety zones and the SIP 8 project.
Appendix B: Development of strategic environmental assessments for the strategic integrated projects document dated 11 March 2014.

1. Conversation between Maj Gen M.J. Ledwaba, Brig Gen A.P. Staunton and Col S.C. Williams during the IFACM meeting held on 13 March 2014 at Kasteelpark has reference.

2. The following bases and bombing ranges will be affected by the introduction of solar and wind energy projects (See Appendix A):

a. Western Cape: All bases (AFB Langebaanweg, Ysterplaat and Overberg) will be affected in this province. It should be taken into cognisance that the wind turbines (minimum height of 250m) offer a significant barrier for low flying aircraft, that would have to be avoided in an area that is considered a flat homogeneous environment which is considered ideal for pupil-pilot low-level tactical training and test flights.

b. Eastern Cape: AFS Port Elizabeth.

c. Northern Cape: Vastrap Bombing Range.

d. Free State: AFB Bloemspruit.

3. It is therefore requested that the inclusion of the focus areas numbered 1, 2, 3, 5 and 7 as indicated on the "National wind and solar PV SEA focus areas" map (Appendix B) be reconsidered due to their impact on flight safety and other air related considerations.

4. For your further action.

(BRIG GEN A.P. STAUNTON)
GENERAL OFFICER COMMANDING AIR COMMAND: MAJ GEN

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DISTR

For Action

C LOG Attention: Col Williams)

For Info

CAF
CDFP

Internal

File: AIR COMD/DBSS/R/504/3/1

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Response from the SEA team:

The inputs from Air Command were taken into consideration and informed Part 3: Section 8 of the SEA report.

Logistic Division, 2/05/14

RESTRICTED

logistics division
Department
Defence
REPUBLIC OF SOUTH AFRICA

C LOG/D FAC/R/505/5/2/1

Telephone: 012 339-5161
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Department of Defence
Logistics Division
(Directorate Facilities)
Private Bag X319
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02 May 2014

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

1. This HQs evenly referenced letter dated 11 March 2014 and the responses thereto have reference.

2. This HQ has further analysed the eight focus areas that have been identified as potentially being of national strategic importance for wind and solar photovoltaic (PV) development (Strategic Integrated Project No 8) and identified the facilities located in each of the areas from the DOD Immovable Asset Register. Enclosed please find a list of these facilities per focus area that could be impacted upon by the roll out of the large scale solar and wind energy projects.

3. In order for the CSIR to incorporate the DODs inputs into its strategic spatial planning, the inputs need to be translated into spatial sensitivity maps. The following sensitivities, with associated safety buffers for both wind and solar PV development are required for developers to take into consideration before starting the development of a project:

a. Military training areas.

b. Military airspace.

c. All military bases.

d. Airfields used by the military for exercises and operations.

e. Radar installations.

f. Military communication installations.

g. National borders.

Lefapha la Bolphomolo . Umnyango wezoKuVikela . Kgoro ya Tshireletso . lSebe lezoKhuselo . Department of Defence . Muhasho wa Tshiledzo
UmNyango Wezoku/Vikela . Ndzawulo ya swa Vusirheleri . Lefapha la Tshireletso . Departement van Verdediging . LITiko leTekuvike

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h. Protected coastlines and coastal areas.

4. It is therefore kindly requested that the safety buffers applicable to each category of facilities listed in the attached enclosure be determined and provided to this HQ by 13 May 2014 for submission to the Department of Environmental Affairs and the CSIR. An example of such a safety buffer is the internationally recognised norm of 28km around airfields.

5. Mr C. van der Westhuizen from the CSIR can be contacted at 021 888-2408 or 083 611-7073 for further enquiries on this matter.

6. Your co-operation in this respect will be much appreciated.

(MAJ GEN M.M. MOADIRA)
CHIEF OF LOGISTICS: LT GEN

Enclosure: List of Facilities per Focus Area

DISTR

For Action

CJ Ops	(Attention: Maj Gen D.D. Mdutyana)
C Army	(Attention: Brig Gen E. Mathaba)
	(Attention: Brig Gen L. Eggers)
CAF	(Attention: Brig Gen A.P. Staunton)
C Navy	(Attention: R Adm (JG) D.J. Christian)
SG	(Attention: Brig Gen S.S. Fortuin)

Internal

A/D Fac
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DD FLCM
File C LOG/D FAC/R/505/5/2/1
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Response from the SEA team:

The inputs from the Logistic Division were taken into consideration and informed Part 3: Section 8 of the SEA report.

SA Military Health Service, 14/05/14

14/05/2014 12:12 0126715130 GSB TT PAGE 01/01

RESTRICTED

the sa military health service
Department:
Defence
REPUBLIC OF SOUTH AFRICA

SG/R/401/1/5/1

Telephone: (012) 671 5131
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Enquiries: Brig Gen S.S. Fortuin

SAMHS Headquarters
Private Bag X102
Hennopsmeer
0046
14 May 2014

SAMHS: DEVELOPMENT OF STRATEGIG ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

1. Your letter C LOG/R/D FAC/R/505/5/2/1 dated 02 May 2014 and telephonic conversation between Brig Gen Fortuin and Col Williams on 14 May 2014 have reference.

2. The SAMHS as a user is in all of the indicated areas of the map as per your correspondence a mere co-user of the estate. It is the opinion of the SAMHS that the zones identified will not directly impact on the SAMHS' utilisation directly and is the impact on the main occupant/user of the area.

3. The SAMHS is committed to the project and will be fully cooperative in the process under the auspices of the main occupant/user whenever required.

4. Your urgent response in this regard is highly appreciated.

(BRIG GEN S.S. FORTUIN)
SURGEON GENERAL: LIEUTENANT GENERAL

DISTR

For Action

D FAC (Attention: Col S. Williams)

Internal

SG/R/505/5/2/1

Lefapha la Bophemelo . Umnyango wezokuVikela . Kgoro ya Tshireletso . ISebe lezoKhuselo . Department of Defence . Muhasho wa Tsireledzo
UmNyango WezokuVikela . Ndzawulo ya swa Vusirhelori . Lefapha la Tshireletso . Departement van Verdediging . UTIhe leTsivikelo

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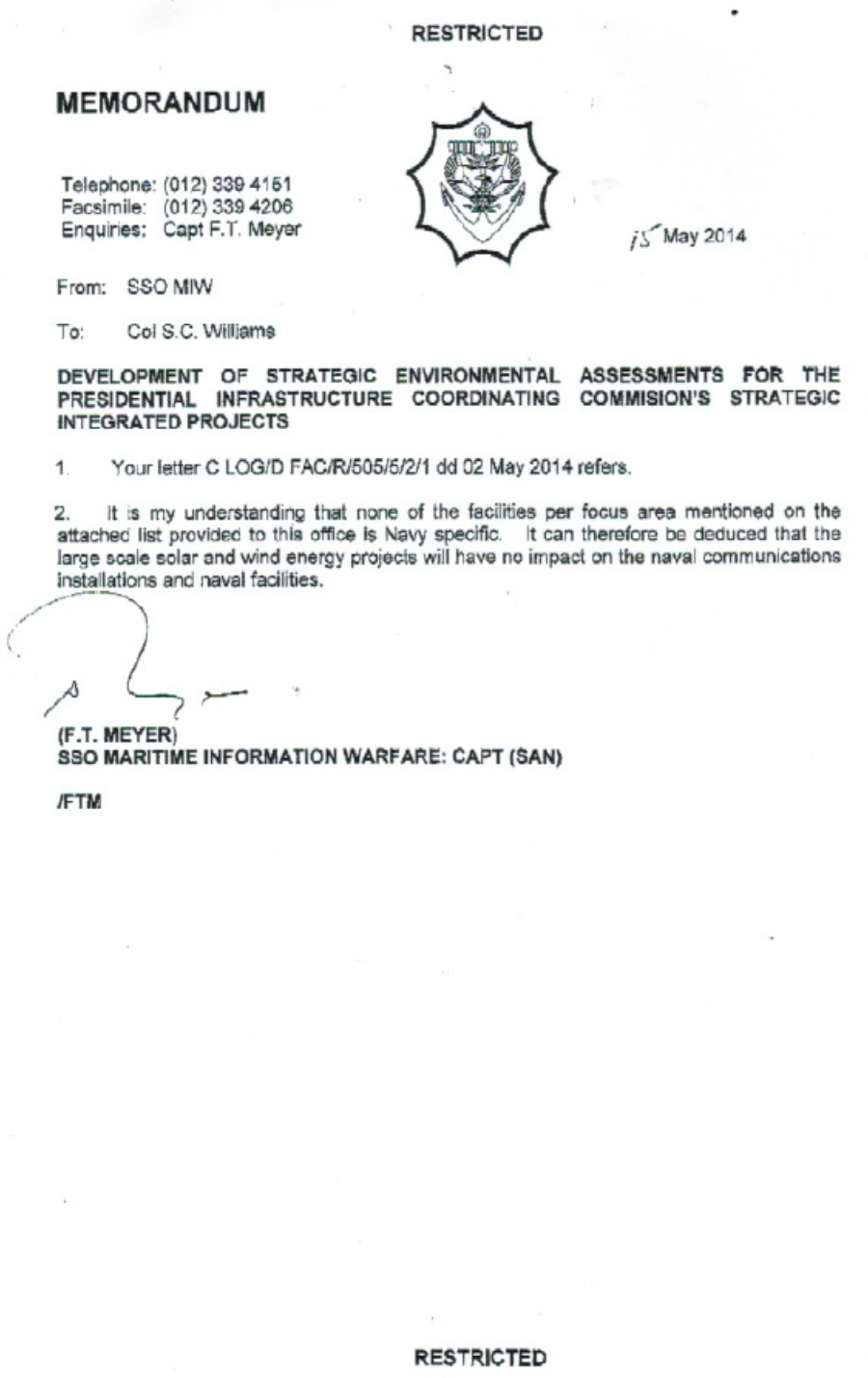

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MEMORANDUM

Telephone: (012) 339 4151
Facsimile: (012) 339 4206
Enquiries: Capt F.T. Meyer

15 May 2014

From: SSO MIW

To: Col S.C. Williams

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISION'S STRATEGIC INTEGRATED PROJECTS

1. Your letter C LOG/D FAC/R/505/5/2/1 dd 02 May 2014 refers.

2. It is my understanding that none of the facilities per focus area mentioned on the attached list provided to this office is Navy specific. It can therefore be deduced that the large scale solar and wind energy projects will have no impact on the naval communications installations and naval facilities.

(F.T. MEYER)
SSO MARITIME INFORMATION WARFARE: CAPT (SAN)

/FTM

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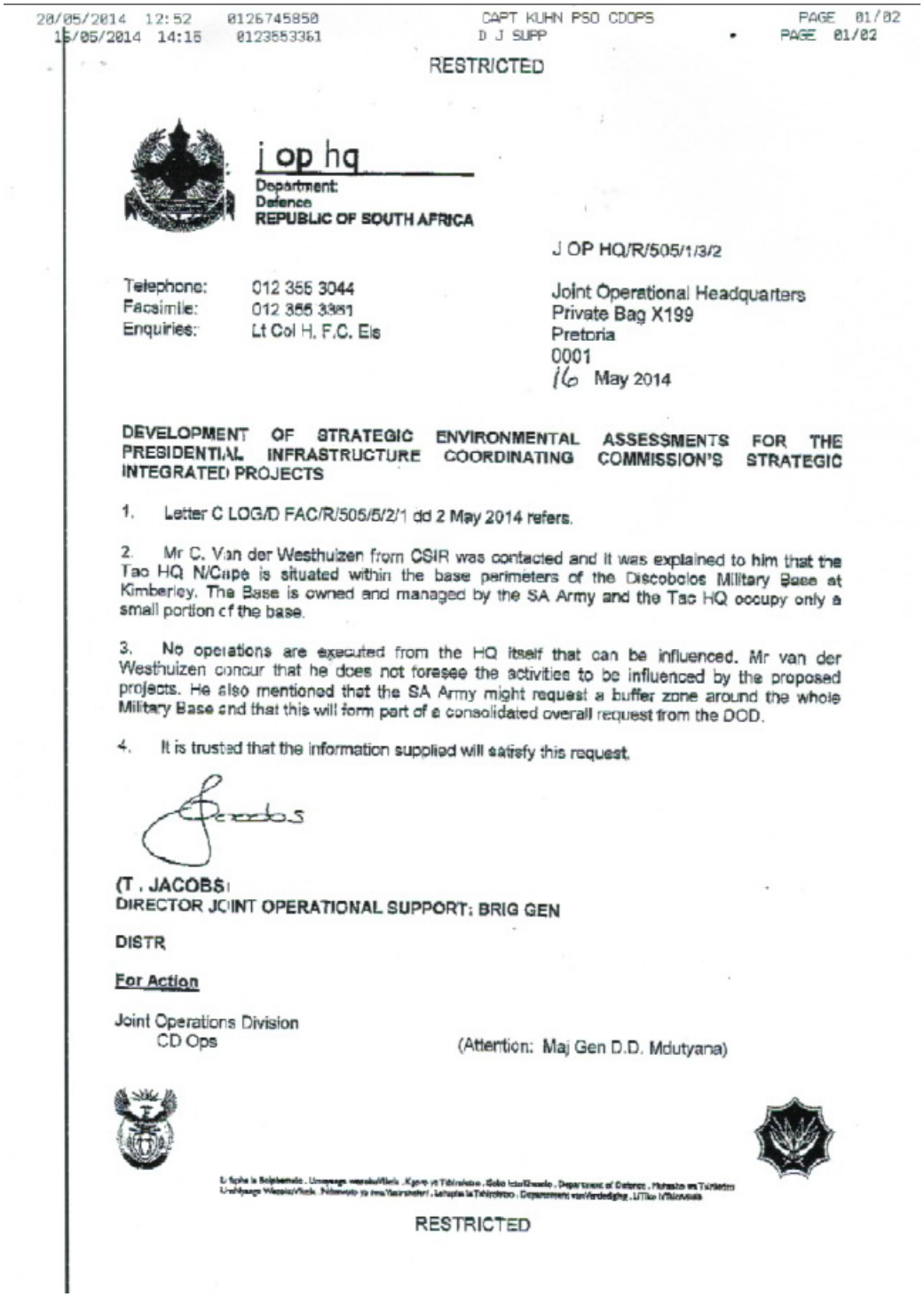
Response from the SEA team:

The inputs from the SA military health services were taken into consideration and informed Part 3: Section 8 of the SEA report.

J OP HQ, 16/05/14



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15/05/2014 14:15 0123553361 D J SUPP PAGE 01/02

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j op hq
Department:
Defence
REPUBLIC OF SOUTH AFRICA

J OP HQ/R/505/1/3/2

Telephone: 012 355 3044
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Joint Operational Headquarters
Private Bag X199
Pretoria
0001
16 May 2014

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

1. Letter C LOG/D FAC/R/505/5/2/1 dd 2 May 2014 refers.

2. Mr C. Van der Westhuizen from CSIR was contacted and it was explained to him that the Tac HQ N/Cape is situated within the base perimeters of the Discobolos Military Base at Kimberley. The Base is owned and managed by the SA Army and the Tac HQ occupy only a small portion of the base.

3. No operations are executed from the HQ itself that can be influenced. Mr van der Westhuizen concur that he does not foresee the activities to be influenced by the proposed projects. He also mentioned that the SA Army might request a buffer zone around the whole Military Base and that this will form part of a consolidated overall request from the DOD.

4. It is trusted that the information supplied will satisfy this request.

(T. JACOBS)
DIRECTOR JOINT OPERATIONAL SUPPORT: BRIG GEN

DISTR

For Action

Joint Operations Division
CD Ops

(Attention: Maj Gen D.D. Mdutyana)

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Response from the SEA team:

The inputs from J OP HQ were taken into consideration and informed Part 3: Section 8 of the SEA report.

SA Air Force, 20/05/14

20/05/2014 14:18 0123121252 D LOG PAGE 01/03

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sa air force
Department:
Defence
REPUBLIC OF SOUTH AFRICA

FACSIMILE (3 Pages, including this page)

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E-mail: etiennef.vanblerk@gmail.com
Enquiries: Lt Col E.F. van Blerk

20 May 2014

From: D Log (AF Office)

To: D Fac (Log Div) (Brig Gen G. Mngadi) (Col S.C. Williams) (012) 339-5159

SAAF: DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE CO-ORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

1. Enclosed for your attention, please find response to the letter from Log Div (D Fac) concerning the matter at hand.

2. The overdue dispatch of this response is regretted.

Best wishes & kind regards

(LT COL E.F. VAN BLERK)
CHIEF OF THE AIR FORCE: LT GEN

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20/05/2014 14:18 0123121252 D LOG PAGE 02/03

RESTRICTED

sa air force
Department:
Defence
REPUBLIC OF SOUTH AFRICA

CAF/D LOG/R/401/1/3/12/6/3
CAF/D LOG/R/505/5/2/1

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South African Air Force
Directorate Logistics
Private Bag X199
Pretoria
0001
20 May 2014

Logistics Division
Directorate Facilities

(Attention: Col S.C. Williams)

SAAF: DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE CO-ORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

1. The letter C LOG/D FAC/R/505/5/2 dated 02 May 2014 refers.

2. The Logistics Division calls for contributions by the services and divisions for consolidation of a position by Defence on the strategic environmental assessment (SEA) preceding Strategic Integrated Project No 8 concerning the eight (8) demarcated regions in the RSA identified by the CSIR for their ideal potential for wind and photovoltaic plant development.

3. The Air Force (SAAF) is aware of this initiative and was involved in discussions with the Dept of Environmental Affairs and Eskom at the National SEAs for the Rollout of Electricity Grid Infrastructure in the RSA meeting held at the CSIR Campus over 19-20 February 2014. It was understood from reports following the workshop that participation on the part of the SAAF was well received following some key contributions mainly in terms of the ideal positioning of such renewable energy plants or developments where these would not disrupt the continued use of the airspace for either military or civil aviation. Exchanges between the SAAF and the CSIR have since continued on this count, particularly as input to the SEA aimed at pre-emptively designating the most favourable regions for establishment of such developments.

4. The SAAF further presides over a standing Obstacle Evaluation Committee (OEC), a body consisting of representation from both the SAAF and the Civil Aviation Authority (CAA), where *in situ* decisions are made regarding the appropriate siting of renewable energy or other civil developments that pose a potential impact on military or civilian aviation and the use of airspace. Prospective developers of renewable energy plants are inevitably compelled to submit applications for authorisation to proceed with processes

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regulated under the National Environmental Management Act, Act No 107 of 1998 (NEMA) and the Environmental Impact Assessment Regulations issued under this Act in June 2010. As such, applications for renewable energy developments are routed also *via* the DEC where developers are furnished with a decision based on norms specified for the general aviation sector as part of their overall process of environmental impact assessment (EIA) toward soliciting final authorisation from the relevant government environmental agencies.

5. The SAAF has already furnished the CSIR with the comprehensive information in accordance with the request by the Logistics Division. The SAAF will be in attendance furthermore of a follow-up expert reference group meeting at the CSIR Campus on the same topic over 11-12 June 2014.

(BRIG GEN E. PHALE)
CHIEF OF THE AIR FORCE: LT GEN

DISTR

For Action

C Log
D Fac (Attention: Col S.C. Williams)

For Info

Air Comd
DBSS (Attention: Col A.P. Letlape)
(Attention: Lt Col W.G. Gouws)
(Attention: Lt Col T.J. Arpin)
(Attention: Maj T. Turnbull)

Internal

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D LOG/R/505/5/2/1

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Response from the SEA team:

The inputs from SA Air Force were taken into consideration and informed Part 3: Section 8 of the SEA report.

SA Army, 9/06/14

RESTRICTED

sa army
Department:
Defence
REPUBLIC OF SOUTH AFRICA

SA ARMY/C DIR ARMY F STRUC/DIR ARMY
LOG/R/505/5/2/1

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Army Headquarters
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Private Bag x 961
Pretoria
0001

9 June 2014

DEVELOPMENT OF STRATEGIC ENVIRONMENTAL ASSESSMENTS FOR THE PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISSION'S STRATEGIC INTEGRATED PROJECTS

Appendix A: All SA Army Fse's residing under the various ASB's within the applicable focus areas.

1. Refer to C LOG/D FAC/R/505/5/21 dated 02 May 2014.

2. This Directorate is only in a position to respond to your request regarding Military Training areas, and all military bases per focus area as listed from the CSIR document. The following information is of value;

a. Military Training Areas.

i. Western Cape

(1) Touwsrivier Training Area

ii. Northern Cape

(1) Vastrap Training Area

(2) Vooruitzicht Shooting Range

b. Military bases.

i. ASB WC. – Touwsrivier area.

ii. ASB Kimberley – Diskobolos

iii. ASB EC – Queenstown Mil base.

iv. SA Army CTC – Upington Mil base.

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3. Attached as Appendix A to this letter, is a spreadsheet of all facilities within the focus areas as listed.

4. Hope you find this in order.

(BRIG GEN E.M. MATHABA)
CHIEF OF THE ARMY: LT GEN

DISTR

For Action

C Log (For Attention Col S.C. Williams)

RESTRICTED

Response from the SEA team:

The inputs from SA Army were taken into consideration and informed Part 3: Section 8 of the SEA report.

Square kilometre Array, 23/08/14

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY
Phase I Study Areas Comment Form
August 2013
Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Tshegofatso Monama
Company	Square Kilometre Arrary
Email	temonama@ska.ac.za
Phone	011 442 2434

Please insert comment under the relevant heading:

1	POSSITIVE MAPPING
2	NEGATIVE MAPPING
3	IDENTIFICATION OF STUDY AREAS
4	STUDY AREAS

	- The following study areas we identified as being either in close proximity or positioned on top of SKA stations:
	  o Solar (SEA Phase I Solar PV Study Areas_August 2013)
	  ▪ FID 1,4 and 6
	  o Wind (SEA Phase I Wind Study Areas_August 2013)
	  ▪ Study Area 4,6,8 and 9
	Should any of the above mentioned study area be selected as preferred areas, appropriate analysis needs to be undertaken in order to mitigate the impact they could have on the SKA project.

5	GENERAL
	- Voice and data communication transmitters that are going to be used or established in the any of the proposed study areas within the Northern Cape Province, which has been declared as an Astronomy Advantage Area, must comply with the relevant AGA regulations and declarations in terms of restrictions on the use of radio spectrum - The SKA supports the current process, and has identified an existing risk in the IPP process where the SKA is not able to assess the integrated risk of facilities.

Response from the SEA team:

Following this submission more detailed sensitivity buffers for the SKA were developed in collaboration with the SKA team. Please see Part 3: Section 11 of the SEA report.

SABAAP, 14/09/14

Attention: Lydia Cape-Ducluzeau **15 September 2013**
CSIR Environmental Management Services

Dear Lydia

This letter represents the views of the South African Bat Assessment Advisory Panel (SABAAP), and is supported by all signatories overleaf.

Whilst we understand and support the need for strategic planning for renewable energy development and we acknowledge that the DEA and CSIR are now engaging with bat and bird specialists, we have some serious concerns with regards to how the Renewable Energy Developments Zones (REDZ) study areas were defined, how the REDZ will be developed and how they will be environmentally regulated. Our concerns from a bat perspective are specified below, followed by our recommendations.

Our concerns being:

1. Wind and solar measurements and mapping, and hence strategic planning initiatives, should have taken place prior to any development applications in South Africa and especially approvals.
2. If there are going to be REDZ and these zones are, according to the DEA and the CSIR the most optimal locations for renewable energy to be developed, then why will applications outside of these areas still be considered for development?
3. The negative mapping was conducted using rushed information and probably meant that many ecologically important areas were not considered due to the lack of data, owing to not enough time being provided for such input and no resources dedicated to it. We acknowledge that the bird and bat community are now being engaged and trust that adequate time and resources will be assigned to filling the knowledge gaps.
4. We are seriously concerned about the cumulative impact of concentrated development in the REDZ. Not only could this be devastating to bats and birds and other ecological systems within the REDZ, but there could be serious regional and national impacts on populations, especially in terms of migrating species.
5. The current suggestion is that developers within the REDZ will not be subject to environmental authorisation through the Environmental Impact Assessment (EIA) process. If that is the case, how will such developers be regulated, i.e. what procedures will they follow and who will enforce this? What role will key stakeholders play?
6. Will the No-Go option still apply within the REDZ, i.e. if a site is found to be critically ecologically sensitive / fatally flawed, will the regulatory option be available for the site NOT to be developed?

We can and will only support such REDZ, if we get clarity on what policies and procedures will pertain to the REDZ and if our recommendations below are applied:

1. A clear set of policies and procedures for development within the REDZ needs to be developed and such policies and procedures need to be gazetted and enforced. Anyone who does not comply with these policies and procedures will be acting illegally and subject to disciplinary action.
2. The number of turbines allowed per region must ultimately be based on population models in terms of population size, natural mortality and reproduction. However, this is information that will take a number of years to gather, therefore, until such time, **initial** mortality threshold ranges per ecological region will be calculated by SABAAP, in consultation with leading international bats and wind energy experts and organisations. These will be continually revised as new information becomes available.
3. All REDZ study areas must be subject to initial broad level bat habitat mapping, for the compilation of a broad level bat sensitivity map.
4. Detailed roost surveys for large (>500 individuals) roosts must be commissioned within the REDZ. This will contribute to the completion and refinement of the negative mapping exercise within these zones.
5. Twelve months of pre-construction bat monitoring will still be required at every development site within the REDZ to account for variation in seasonal movement of bats within different regions of the country and certain major peaks in activity occurring sometimes in very specific periods of the year.

6. Post-construction bat monitoring will also be required at each development site and adaptive mitigation will need to be applied if bat fatality levels exceed the given thresholds for that specified ecological zone.

We look forward to our focus group meeting to discuss the above points in more detail.

Kind regards

SABAAP REDZ Letter Signed:

Name: Kate MacEwan

Signature:

Organisations Representing: SABAAP / Natural Scientific Services.

Name: DAVID JACOBS

Signature:

Organisation Representing: South African Bat Assessment Advisory Panel

Name: Jonathan Aronson

Signature:

Organisations Representing: South African Bat Assessment Advisory Panel

Name: Werner Marais

Signature:

Organisations Representing: Animalia Zoological & Ecological Consultation CC

Name: Katherine Forssman (nee. Potgieter)

Signature:

Organisations Representing: The Endangered Wildlife Trust and SABAAP

Name: ELEANOR F. RICHARDSON

Signature:

Organisations Representing: BAT INTEREST GROUP OF KWAZULU-NATAL

Name: Dr. Teresa C. Kearney

Signature:

Organisations Representing: AfricanBats NPC (Reg# 2012/007836/08)

Name: Ernest C.J. Seamark

Signature:

Organisations Representing: Bat Conservation Africa (signed with approval and support of the steering committee)

Name: Liesjie Cohen

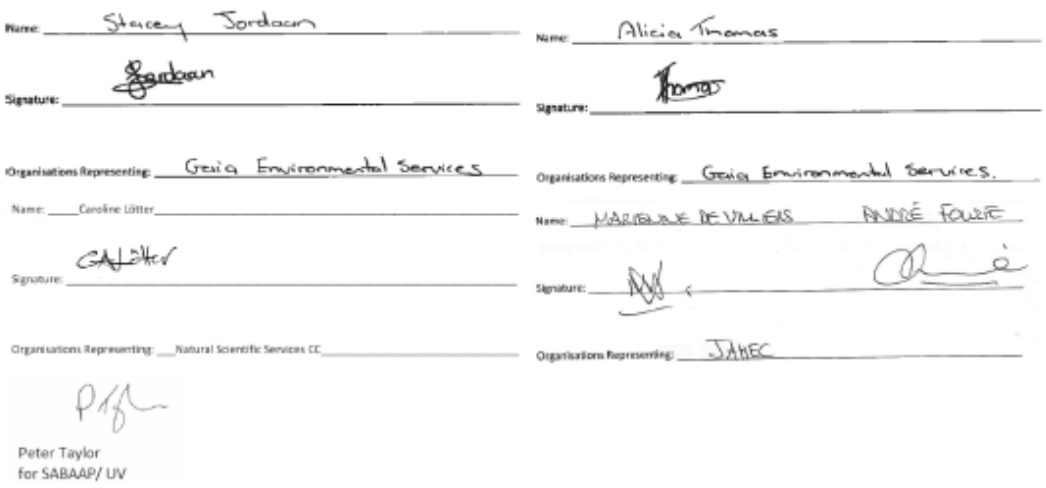
Signature:

Organisations Representing: Private

Name: Wendy White

Signature:

Organisations Representing: The Bat Interest Group of KwaZulu Natal



Response from the SEA team:

Subsequent to this input, bat and bird specialist scoping studies were undertaken for the 8 focus areas currently proposed as REDZs during Phase 2 of the SEA. The findings and requirements in terms of further project level assessment are presented in Part 3: Section 6 of the SEA report.

While the current assessment and authorisation processes makes limited provision for controlling cumulative impacts, the development density limits set by the SEA will as least to some extent address all potential cumulative impacts.

Cape Nature, 13/09/14

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Kerry Maree with contributions form Genevieve Pence, Alana Duffell-Canham, Rhett Smart and Dr. Donovan Kirkwood.
Company	CapeNature
Email	Kmaree@capenature.co.za
Phone	021 799 8731 or 071 461 6906

Please insert comment under the relevant heading:

1 POSITIVE MAPPING

The document provides no indication as to how the seemingly arbitrary distances/buffers were defined. Please ensure that Phase 2 (or a revised Phase 1 document) provides a more in-depth explanation in order to instil further confidence in the methodology adopted.

We request that specialist studies be undertaken to confirm that the infrastructure located within these positive mapping areas is in fact capable of accommodating the proposed extra energy load and that this project is not based on an assumption only.

Certain Forestry Exit Areas may be suitable for wind and solar energy projects if they do not overly impact the biodiversity or ecosystem functioning of these areas and may be considered for demarcation as REDZs.

2 NEGATIVE MAPPING

We are of the opinion that from a biodiversity perspective, the following categories need not necessarily be considered in their entirety as exclusion zones:

- Mountain Catchment Areas: Certain areas within Mountain Catchment Areas (which are not also declared nature reserves or any other form of Protected Areas) could possibly support RE projects.
- Strategic water source areas; and
- Annual crop cultivation (in consultation with DoA)

The use of terms 'not considered' and 'none' under buffer column headings implies different meanings which is confusing. Please provide a clear explanation so that we are able to comment more meaningfully on the allocation of buffers.

We would also like to point you to the following datasets to be used in the negative mapping:

1) Please ensure that the CapeNature 2013 shapefile for Protected Areas is used as it includes updates on the SANBI version which appears to have been used here. We would like to highlight though that in terms of the Contract Nature Reserves, it is only the contracted portion within the entire cadastre which should be considered as an exclusion zone as remaining portions within these cadastres could be suited to support RE projects.
2) CapeNature has also recently updated the ecosystem status layer for those vegetation types falling

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within the Western Cape Province and this layer should be used as the threatened ecosystem layer within the WC province as opposed to the SANBI layer which appears to have been used here. This new ecosystem status layer is based on the national methodology and national vegetation types but has made use of updated transformation layers to produce a more accurate reflection on the current status.

3) CapeNature has undertaken a viewshed analysis within certain of its reserves to determine pure wilderness areas, i.e. those areas where no infrastructure is visible. The protection of these areas is vital and the appropriate buffering should please be applied. We are able to provide you with these wilderness sites but their buffering will require an additional viewshed analysis.

3 IDENTIFICATION OF STUDY AREAS

We have noticed that the actual study area boundaries include listed exclusion features, e.g. irreplaceable CBAs and Vrolijkheid Nature Reserve. 'Please ensure that the finer scaled REDZ located within these study area boundaries, which were defined according to contour lines and density analysis, will in fact exclude these listed features and that no streamlined assessment process will be offered to these areas.'

4 STUDY AREAS

Vredendal: The Knersvlakte Nature Reserve might possibly require a wider buffer area as has been suggested here which should be determined by a viewshed analysis. Please also ensure that the correct boundary for this reserve has been used.

Also, populations of local endemic species usually occurring within unique habitats located within the study area need to be avoided. Upfront mapping of these populations is however not always possible and might need to be determined through expert inputs and groundtruthing.

5 GENERAL

- CapeNature supports the promotion and development of renewable energy facilities. However, it must be recognised that the potential impacts on biodiversity of this relatively new technology are not yet fully understood in South Africa. Furthermore, we are concerned that if not properly considered and planned for, the cumulative impacts of these facilities on biodiversity could be quite significant. It is therefore essential that a precautionary approach is taken and that turbines, solar panels and other associated infrastructure are placed outside of ecologically sensitive areas. It is also vital that a clear monitoring and reporting protocol is put in place so that lessons learned from newly established facilities can be shared with the wider community.

- This methodology document does not clearly define how these REDZ will be considered in the environmental authorization processes. Without this detail, it is difficult to provide full support or adequate comment. Please ensure that the next document out for review includes a detailed breakdown on how the study areas (and refined study areas/REDZ) will be assessed, monitored and managed and what authorization requirements will still remain and which will be negated and/or fast track or streamlined. Also, please indicate if there will be room for norms and standards, EMPs, approval conditions, etc., and how the compliance and enforcement will be addressed.

- We would also like to request that once the draft REDZ have been identified, an expert workshop is arranged with some of the CapeNature specialist staff members. Much of the ground knowledge is not digitised or available in GIS shapefiles and cannot be provided at this stage. This knowledge can however feed in once the study areas have been refined and if facilitated correctly by the project team.

- We are of the opinion that wind farming could take place within some unproductive old lands without threatening the countries food security. This is especially valid when considering the lifespan of the

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infrastructure and the fact that the fallow lands could be used for wind farming on a rotational basis. We request that you draw on international literature (e.g. Kiesecker *et al* 2011[1]) to ascertain how this model could be applied within the country and work closely with the Department of Agriculture to identify the agricultural lands compatible with this dual land use.

Special care should be taken to ensure that the establishment of wind and solar farms on these old agricultural fields does not a) compel agriculture to expand further into natural land thereby having a far larger negative impact on biodiversity; or b) displace biodiversity which may have naturalised and adapted to living within or near to old agricultural fields and are now dependent upon their existence, e.g. the Blue Cranes of the Overberg District wheat fields.

- We notice that the Important Bird Areas (IBA) have not been considered and can only assume that the reason is that they are too large for the scale of this project. We request that the information which informed the identification of these IBAs however been considered by the specialists which are to be appointed in Phase 2, i.e. which species are of concern and in which study areas?

- Our expectations of specialist studies to be conducted within phase 2 include:
  a) Confirmation of the wetland and river buffer zones utilized by bat species (the 100 m buffer zone included as an exclusion feature is only adequate on this course scale and needs to be verified within the finer REDZ).
  b) Bird and bat studies should preferably be over an entire year (as recommended in EWT/ Birdlife Africa's best practice guidelines) and should highlight *actual* species presence, breeding sites, flight paths and habitat preferences.
  c) Viewshed analysis will be conducted to determine actual, appropriate buffers for tourism routes and Protected Areas.
  d) Cumulative impacts of such wind and solar projects will be assessed by all specialists

- Furthermore, we assume that REDZ can still be subject to conditions of approval, pre-construction monitoring (and resultant adaptive project implementation), the drafting and implementing of Environmental Management Plans and stricter compliance monitoring and enforcement conditions. We would also like to see conditions such as on-going monitoring throughout the lifecycle of the project as well as the rehabilitation of land upon the decommissioning to be enforced. The operational approval must be subject to these conditions throughout the lifecycle of the project and not just at the project inception stage and all approvals must be granted in such a way that they can be revoked if evidence proves necessary.

- CapeNature would like to thank you for the opportunity to comment on the above mentioned document. We ask to remain informed on the process and to be given the opportunity to contribute and comment. CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.

[1] Kiesecker JM, Evans JS, Fargione J, Doherty K, Foresman KR, et al. (2011) Win-Win for Wind and Wildlife: A Vision to Facilitate Sustainable Development. PLoS ONE 6(4): e17566. doi:10.1371/journal.pone.0017566

Response from the SEA team:

Information on the identification of the areas currently proposed as REDZs are provided in Part 2 of the SEA report. It should be noted that one of the objectives of the SEA process is to facilitate the development of infrastructure required to allow for continued renewable energy development, and that the necessary infrastructure (e.g. electrical grid) is not necessarily already available in these areas. Please see Part 4 for further information in this regard.

Information on the approval process in the form of a project level Basic Assessment process, informed by the requirements stipulated in Part 3 of the SEA report, and leading to an environmental authorisation, identical to the current, is provided in Part 1 of the SEA report.

It should also be noted that for renewable energy development to proceed in South Africa reasonable and responsible compromise will be required. The example of low potential agricultural land would be such a compromise, and all other stakeholders would need to take a similar view and be willing to make some compromises.

Further information provided in this submission was taken into consideration during the specialist scoping studies presented in Part 3 of the SEA report.

Birdlife South Africa, 12/09/13

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Member of IUCN, International Union for Conservation of Nature and Natural Resources
Reg No: 001 - 298 NPO
PBO Exemption No: 930004518

Paul Lochner
Project Manager: National SEA for Wind and Solar Energy
CSIR
Email: PLochner@csir.co.za

12 September 2013

Dear Paul

National Strategic Environmental Assessments (SEA) for Wind and Solar Energy in South Africa

BirdLife South Africa would like to thank you for the opportunity to provide input into the National Strategic Environmental Assessments (SEA) for Renewable Energy in South Africa. Our comments are divided into three parts: 1) comment on the SEA process itself and on the desired outcome, 2) comments on the study areas for wind energy and 3) brief comments on both the SEA process and study areas for solar energy.

1) BirdLife South Africa's comments on the SEA process (wind energy)

BirdLife South Africa supports the aim of the SEAs which is "to identify geographical areas best suited for the rollout of wind energy projects and the supporting electricity grid network". We recognise the need too for better coordination between the various authorities who have a mandate to issue authorisations, consents or permits. We also recognise the need for Eskom to have more certainty with regards to where energy will be produced which is essential for the planning of transmission corridors.

BirdLife South Africa does, however, have some serious concerns with the ultimate intention of the process, which is to identify Renewable Energy Development Zones (REDZ) where renewable energy will be delisted (i.e. not require environmental authorisation). We are concerned that this may remove environmental oversight in these areas. BirdLife South Africa's concerns are discussed in detail below. While we seek to constructively engage in this SEA process with the aim of finding a workable solution, we caution that this does not imply BirdLife South Africa's tacit agreement with the approach.

The benefits of strategic guidance

International experience has shown that the location of a wind farm is a critical factor influencing the significance of the facilities' impacts on birds. BirdLife South Africa therefore encourages the

responsible development of wind energy in areas where impacts on birds can be minimised and we recognise the benefits of providing strategic guidance in this regard. We believe that providing information on the regional scale benefits and risks of developing wind energy will facilitate the development of a sustainable renewable energy industry.

We suggest that providing detailed information on the opportunities and risks of developing renewable energy in certain areas will help reduce risks and increase certainty for developers. The areas identified as most suitable for renewable energy development could also be used to help guide Eskom's transmission planning. We suggest that this would represent a major incentive for developers to invest in these areas. This approach would not compromise developers' freedom to select areas they believe to be most suitable, it should not result in artificially inflated land prices within the REDZ, and it would not pose a significant risk to the environment.

We believe that the strategic guidance can be provided and the permitting/ authorisation processes can be streamlined, without doing away with the EIA process.

The challenge

BirdLife South Africa's concern is that this SEA is a regional-scale process and the intention is to identify large areas (thousands of square kilometres) as REDZ. While this regional-scale process will be able to add more certainty, through identifying and avoiding large-scale areas of likely conflict, it is unlikely to be sufficient to eliminate significant risks to birds and the environment or ensure that these impacts are kept to sustainable levels. Some challenges include:

1. Lack of available data on potentially vulnerable[1] species with regards to
    a. Distribution*
    b. Abundance+
    c. Local movement patterns+
    d. Regional movement patterns*
    e. Critical habitats (e.g. roost and nest sites, foraging areas)+

2. We also do not have sufficient information on how our species will respond to wind farms, both with regards to collision risk and displacement[1].

3. In many cases, we also do not have sufficient information on the size of a population and the population dynamics of a species to quantify "acceptable" levels of impact.

[1] BirdLife South Africa and the Endangered Wildlife Trust have produced a list of species which are likely to be vulnerable to the impacts of wind energy, but this list needs to be verified by actual data from wind farms once constructed.

Many of the gaps in information can be addressed through further study. In particular the above points marked with * which could be studied on a broad scale within this SEA process. However challenges in obtaining this information include seasonal and annual variation in the presence and movements of species.

Obtaining information at a more local scale (points marked with +) will be more challenging without very detailed, site specific assessments. The large size of the study areas will make these assessments challenging to do within the SEA process.

At this point it is important to note the impacts on avifauna are influenced strongly by both location of the wind farm and the layout of the turbines. It is often only small percentages of the turbines within a wind farm that are responsible for the majority of bird mortalities. Moving a wind turbine 100 meters could significantly reduce its impacts.

Unfortunately, avifaunal specialists' ability to predict impacts on birds, based only on a desk-top analysis and a short site visit, is extremely limited. There are numerous examples where wind farms have been approved based on limited site surveys, yet further monitoring has then indicated the need to significantly alter the layout and reduce the number of turbines[2].

Best Practice in Avifaunal Monitoring and REDZ

It is BirdLife South Africa's position that rigorous pre-construction monitoring, in accordance with international best practice, is essential to reduce risks to both the wind farm developer and to avifauna. While some environmental consultants and the Department of Environmental Affairs (DEA) were slow to recognise the value of this monitoring in informing their decision (resulting in some of

[2] One wind farm development was granted authorisation for 35 turbines. Further monitoring found that the magnitude of the estimated impact on Great White Pelican would be considerably greater than was originally thought and that the development could cause the region's pelican population to have a negative growth rate. The extent of the changes in layout required to avoid this are unlikely to be practically possible.

Another wind farm was granted authorisation for 40 wind turbines. Further monitoring found "extremely high level of activity by priority species, including species that are range restricted and of particular conservation concern in southern Africa". The impacts were found to be more serious than originally thought and after lengthy negotiations and additional studies a revised layout of 27 turbines was eventually approved with potentially onerous conditions attached should higher than anticipated impacts be observed.

And yet another wind farm was granted authorisation for 100 turbines. Further monitoring reveal a number of potential issues including an extended breeding lek for Denham's Bustard (listed as Vulnerable in the Red Data Book and among the top 20 species most vulnerable to the impacts of wind farms in South Africa). The developer has agreed to halve the number of turbines, pending the outcome of further monitoring.

(The name of the developments have been omitted as some of this information is/may be confidential).

the challenges listed above), DEA now regularly recommend a full 12 months monitoring prior to environmental authorisations being considered.

Pre-construction monitoring, in accordance with best practice, is essential to predict and mitigate potential impacts on avifauna. It is also necessary to provide a baseline against which the post-construction condition can be compared (i.e. to determine what the actual impacts of the facility are). This information is critical if the sustainable development of wind energy in South Africa is to be facilitated.

Depending on the level of detail of the studies undertaken to identify the REDZ, it may be possible to identify and mitigate the potential impacts of wind farms through a combination of slightly abridged, more focussed assessments and clear guidelines or controls (e.g. predetermined buffers) relevant to each particular REDZ. The SEA studies would serve as a scoping exercise for each area, highlighting the nature and extent of the required further assessments. However, if the precautionary principle is to be followed, the impacts on birds are to be avoided, minimised and mitigated, it is extremely unlikely that it will be possible to avoid the need for further assessment by an avifaunal specialist.

It is BirdLife South Africa's opinion that, while the SEA process will be able to highlight areas that are suitable for the development for a wind farms, what the wind farm will look like (how many turbines, layout, "micro-siting" of turbines etc.) will need to be determined by further site-specific studies.

Way forward

Should this process continue, with the intention of "delisting" wind farm development (i.e. no longer requiring an environmental impact assessment) within the REDZ, BirdLife South Africa is of the opinion that:

1. **A precautionary approach must be adopted**. We cannot support the gazetting of a REDZ where there is a high level of uncertainty and the potential for significant negative impacts on avifauna. There are areas where no amount of pre-construction monitoring will be able to increase specialists' certainty with regards to what the likely impacts will be. Increased certainly will only be able to be gained once post- monitoring of wind farms has been done. Until then BirdLife South Africa recommends that important habitat for species such as Blue Cranes and Denham's Bustard must be avoided.

2. We suggest that a **phased approach** should be adopted when refining the study areas.
    a. The first, scoping phase, would involve a detailed desktop analysis as well as site visits to identify focal areas that warrant further investigation.

b. The second phase would involve detailed survey of birds within key habitats and focal areas. This assessment should include a record of species distribution and relative abundance, as well as investigation of any possible regional movement corridors identified. This would require site visits over all four seasons.

3. Identifying and avoiding important focal areas (for example leks, nest and roost sites) can be critical to ensure the ecological sustainability of projects. It is, however, unlikely that it will be possible to identify all these within this SEA process. We therefore recommend that **guidelines/controls** be developed for each study area/REDZ highlighting the issues that require further investigation (and how these should be assessed). **Precautionary buffers** should be applied. These buffers should only be relaxed pending the outcome of more detailed monitoring and assessment (in accordance with Best Practice).

4. It is unclear at this stage what authorisation mechanisms will be put in place within the REDZ. BirdLife South Africa is of the opinion that there must be some level of **environmental oversight** to ensure quality standards are maintained and the guidelines are adhered to. BirdLife South Africa would like the opportunity to review the avifaunal specialist reports and assurance that our comments would be considered in the final decision and proposed mitigation implemented

5. We also suggest that any reports produced should be made **freely available for public scrutiny**, both to ensure rigor, transparency and to facilitate a shared understanding of the impacts.

Post-construction monitoring

BirdLife South Africa is of the opinion that it is critical that post-construction monitoring of avifaunal collisions/mortalities is undertaken for all wind farms within the REDZ. This will be critical to improve our understanding of the impacts of wind energy on birds in South Africa and to determine if additional mitigation is required.

Mortality through collisions is, however, just one impact wind energy can have on birds. Disturbance and displacement are also issues that need to be considered. Once again, we have a limited understanding with regards to the nature and extent of these impacts on various species. This calls for a precautionary approach in the context of threatened, endemic and/or range restricted species, which should only relaxed once further data has been obtained. Obtaining this information is therefore critical if the sustainable development of a renewable energy industry is to be facilitated. In light of the above, BirdLife South Africa suggests that it would be ideal for all projects to

undertake pre- and post-construction monitoring in accordance with international Best Practice[3]. However, it might be possible to undertake such monitoring for each REDZ, as opposed to each wind farm. However, this raises the critical question about who would do this work and where the funding would come from[4].

Conclusion

While BirdLife South Africa supports providing strategic guidance for the development of wind energy in South Africa, we are of the opinion that this SEA process should serve only as a first filter. We suggest that it is unlikely that it will be possible to adequately identify, predict and evaluate the actual and potential impact of wind farm on birds within REDZ, nor assess the options for mitigation, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management as set out in the National Environmental Management Act.

We suggest that the SEA process will provide:

- increased amount of information with regards to possible environmental issues within each REDZ,
- increased levels of certainty with regards to the outcome of an environmental application, and
- should Eskom plan according to the REDZ, it would also provide an increased level of certainty with regards to available connectivity to the grid.

We are of the opinion that the above should be sufficient incentive for developers to invest in REDZ. We suggest that the environmental risks associated with eliminating the need for environmental assessment within REDZ outweighs the benefits of the providing an additional incentive for developers. BirdLife South Africa is, however, committed to helping find ways to reduce this risk, should the intention to delist wind farms within REDZ remain.

[3] In many instances wind farm developers have complied with Best Practice although this was not required in the Environmental Authorisation. It is unclear if developers would comply with Best Practice within REDZ regardless of DEA's requirements. Access to monitoring reports in these cases is however a challenge and it is also unclear if and how the monitoring influences decision-making.
[4] Perhaps developers within each REDZ could contribute a levy towards such monitoring?

BirdLife SOUTH AFRICA
Giving Conservation Wings

Member of IUCN, International Union for Conservation of Nature and Natural Resources
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PBO Exemption No: 930004518

2) Comments on the Study Areas for Wind Energy

Please note that numbering used for the study areas below reflects the numbering used in the GIS shape-file of the areas as provided on the CSIR's website.

Please also note that the comments below are based on a simple and rapid desktop analysis and in no way replaces a detailed assessment (desktop or otherwise) by a qualified avifaunal specialist. BirdLife South Africa understands that this will be done in the next phase of the SEA process.

Study Area 1

(Steinkopf, Northern Cape)

This study area is located in the Succulent Karoo Biome and includes mountains and plains and a number of different habitats potentially important for birds (including rivers, wetlands, rocky ridges). This area has not been well covered by the Southern African Bird Atlas Project 2 (SABAP2) and there are no Coordinated Avifaunal Roadcount (CAR) routes in the area.

Priority species[5] that have been recorded in the area by SABAP are listed in the table below. Species ranked within the top twenty in terms of their vulnerability to the potential impacts of wind farms have been highlighted in bold.

Priority Species	Sensitivity rank
Bustard, Kori	29
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Eagle, Martial	**5**
Eagle, Verreaux's	22
Falcon, Lanner	30
Harrier, Black	**6**
Kestrel, Greater	94
Kite, Black-shouldered	97
Korhaan, Southern Black	69

Study Area 2:

(Komaggas to Kleinzee Northern Cape)

[5] Species that are likely to be vulnerable to the impacts of wind energy (see Avian Wind Farm Sensitivity Map for South Africa Criteria and Procedures Used, Retief *et al.*2012).

This study area is primarily within the Succulent Karoo Biome, with a small area of Fynbos in the east. It includes a rocky coastal area, salt pans and gravel plains, which give way to undulating hills in the east. The Komaggas River runs through the study area, joining the Buffels River to the north.

This area has not been well covered by the SABAP2 and there are no CAR routes in the areas.

The proposed Kleinzee wind farm falls within this area and the EIA may provide valuable insights.

Priority species that have been recorded in the area according to SABAP are listed in the table below. Of particular concern are the salt pans which may be important habitat for birds prone to collision. Vulnerable birds could include Great White Pelicans and both species of flamingos. (flamingos fly at night, which increases their collision risk). The area may also include important flight paths for birds moving along the coast line and between wetlands and salt pans. The frequent fog events may increase the collision risk for birds.

Priority Species	Sensitivity rank
Bustard, Kori	29
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Buzzard, Steppe	65
Cormorant, Cape	54
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Lanner	30
Flamingo, Greater	**19**
Flamingo, Lesser	**20**
Kestrel, Greater	94
Kite, Black-shouldered	97
Korhaan, Southern Black	69
Lark, Barlow's	67
Pelican, Great White	**11**
Secretarybird	**9**
Snake-Eagle, Black-chested	57
Stork, Black	**10**
Stork, White	58
Tern, Caspian	60

Study Area 3:

(Kotzerus, Northern Cape)

This area falls within the Succuent Karoo and Fynbos Biomes. The topography of the area is mostly flat to undulating. It includes a coastal area and the vegetation is dominated by strandveld and sand fynbos. The Brak River runs through its centre from east to west. The Oliphants River Important Bird and Biodiversity Area (IBA) (SA 099) is approximately 65 km to the south.

This area has not been well covered by the SABAP2 and there are no CAR routes in the areas.

Priority species that have been recorded in the area are listed in the table below. Of particular concern is that the area may include important flight paths for birds moving along the coast line. The frequent fog events may increase the collision risk for birds.

Priority Species	Sensitivity rank
Bustard, Ludwig's	8
Buzzard, Jackal	44
Cormorant, Cape	54
Crane, Blue	7
Eagle, Booted	56
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Flamingo, Lesser	20
Harrier, Black	6
Kestrel, Greater	94
Korhaan, Northern Black	89
Korhaan, Southern Black	69
Secretarybird	9

Study Area 4:

(Northern Tankwa Karoo, Nieuwoudtville)

This study area falls within the Succulent Karoo and Fynbos Biomes, with the latter occurring in the west. The Cedarberg - Koue Bokkeveld Complex IBA (SA101) is located on the southern border of this Study Area.

This area has not been well covered by the SABAP2 and there are no CAR routes in the areas.

There are a number of rocky ridges and deeply incised rivers in the area, potentially important habitat for a number of raptors. The escarpment is likely to support a number of raptor nests and these birds are likely to use the thermals for hunting.

Birds endemic to the Fynbos Biome (for example Cape Rockjumper and Cape Sugarbird) may also be affected by habitat loss due to the construction of wind farms along the mountain ridges.

Sensitive Species	Sensitivity rank
Bustard, Ludwig's	**8**
Crane, Blue	**7**
Eagle, Booted	56
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Lanner	30
Francolin, Grey-winged	76
Harrier, Black	**6**
Kestrel, Greater	94
Kestrel, Lesser	26
Kite, Black-shouldered	97
Korhaan, Karoo	78
Korhaan, Southern Black	69
Sparrowhawk, Black	101
Stork, Black	**10**

Study Area 5:

(Tankwa Karoo)

This study area falls primarily within the Succulent Karoo Biome, with sparse Tankwa Karoo vegetation. The Tankwa River is deeply incised in places in the east revealing rocky ridges. This gives way to the sandy Tankwa Wash areas to the east.

The study area borders the Tankwa Karoo National Park and the Cedarberg - Koue Bokkeveld Complex IBA (SA101). The southern portion of the study area extends into this IBA. This combined with its rugged terrain make this area unsuitable for the development of wind farms. Large bodied birds such as bustards and korhaans are likely to use the plains.

This area has not been well covered by the SABAP2 and there are no CAR routes in the areas.

Priority Species	Sensitivity rank
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22

Eagle-Owl, Spotted	105
Falcon, Lanner	30
Falcon, Peregrine	24
Francolin, Grey-winged	76
Kestrel, Greater	94
Kite, Black-shouldered	97
Korhaan, Karoo	78
Korhaan, Southern Black	69
Secretarybird	**9**
Snake-Eagle, Black-chested	57
Sparrowhawk, Black	101
Stork, Black	**10**

Study Area 6:

(Moordenaars Karoo, Sutherland to Laingsburg)

This study area includes parts of the Succulent Karoo and Fynbos Biomes. The topography is mixed with open plains, undulating hills, rocky ridges and mountains. The rocky slopes, ridges and cliffs associated with the escarpment are likely to be important habitat for raptors. There are a number of dams, rivers and wetlands which may also be important avifaunal habitats in this otherwise arid environment.

This area has not been well covered by the SABAP2 and there are no CAR routes in the areas. There are, however, a number of wind farms proposed in these areas. The EIA reports may provide some useful information on which to draw.

Priority Species	Sensitivity rank
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Buzzard, Steppe	65
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Lanner	30
Flamingo, Greater	19
Francolin, Grey-winged	76
Harrier, Black	**6**
Kestrel, Lesser	26
Kite, Black-shouldered	97

Korhaan, Karoo	78
Korhaan, Southern Black	69
Stork, Black	**10**

Study Area 7:

(Overberg Wheatbelt, Robertson)

This study area falls within the Fynbos Biome, although much of the natural habitat, particularly renosterveld, has been lost to agriculture.

The area contains a diverse range of topographies from undulating hills to deep gorges. The study area almost surrounds the protected areas of the Riviersonderend Mountains. There are a number of small dams in the area, while Brandvlei dam provides a particularly large expanse of water.

The avifauna in the area has been well surveyed by the SABAP2 and there are a number of CAR routes in the area. There are also a few wind farms proposed in some parts of the study area, including Bioklip Wind Farm which is currently under construction.

BirdLife South Africa is particularly concerned about this study area as it includes approximately 25% of the Overberg Wheatbelt IBA (SA115) and a small portion on the Overstrand IBA (SA124). The avifauna in this area is considered particularly sensitive to the impacts of wind energy. The area is also important for Blue Cranes which occur in large numbers (particularly in the south and south western areas of the study area). It is also important for a number of other large terrestrial species, including Denham's Bustard, White Stork, Southern Black-bellied Korhaan (endemic), Karoo Korhaan, Secretarybird, which are found mostly in the eastern parts of the study area. The also provides foraging for Cape Vultures and raptors using the mountain escarpments include Verreaux's Eagle and Martial Eagle. The area also includes some of the last remaining habitat for Black Harrier. South west of the study area are the Bot River Estuary and its associated watercourses which are important habitats for a suite of species including the African Fish Eagle.

At this stage, it is unclear how vulnerable Blue Cranes and other large terrestrial species will be to the impacts of wind farms (both as a result of collisions with the turbines and possible disturbance and displacement effects). It is also unclear if and how these impacts could be mitigated as in many instances movements of these birds appear not to follow predictable patterns. **BirdLife South Africa therefore urges caution and we suggest that it would be prudent to await the results of post-construction monitoring of already approved wind farms before further wind farms are considered in this area.** The desirability of identifying a REDZ could be reviewed in later iterations of this process, once specialists are able to predict impacts with more confidence.

Priority Species	Sensitivity rank

Bustard, Denham's	**16**
Buzzard, Forest	100
Buzzard, Jackal	44
Buzzard, Steppe	65
Cormorant, Cape	54
Crane, Blue	**7**
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Lanner	30
Falcon, Peregrine	24
Flamingo, Greater	**19**
Francolin, Grey-winged	76
Harrier, Black	**6**
Kestrel, Lesser	26
Kite, Black-shouldered	97
Korhaan, Karoo	78
Korhaan, Southern Black	69
Lark, Agulhas Long-billed	52
Marsh-Harrier, African	**15**
Osprey, Osprey	77
Pelican, Great White	**11**
Rock-jumper, Cape	70
Secretarybird	**9**
Sparrowhawk, Black	101
Sparrowhawk, Rufous-chested	102
Stork, Black	**10**
Stork, Marabou	51
Stork, White	58
Vulture, Cape	**2**
Warbler, Victorin's	98

Study Area 8:

(North of Beaufort West and Karoo National Park)

This study area falls within the Nama Karoo Biome, with small patches of Grassland. It includes a steep escarpment in the south east and contains a number of cliffs, ridges and valleys that are likely to be important habitat for a suit of raptors. The plains are likely to be important habitat for large terrestrial birds.

The study area is moderately well covered by the SABAP2. There are no CAR routes in the area.

Of particular concern is that the study area borders directly on to the Karoo National Park and Karoo National Park IBA (SA102). It is likely that the IBA trigger species will be found in the surrounding areas as these species will forage and range in an area much wider than the IBA. The species of concern include Martial Eagle, Lesser Kestrel, Lanner Falcon, Peregrine Falcon, Black Harrier, Ludwig's Bustard, Secretarybird and Black Stork. The IBA itself does not provide enough habitat to support large populations of these species and it is therefore critical to ensure compatible land uses and reduce threats to these species in the areas surrounding the protected area.

Study Area 9:

(West of Graaff-Reinet)

This study area falls within the Nama Karoo Biome, with parches of Albany Thicket and Grassland. The terrain is mixed, with ridges and valleys especially predominant in the central portions of the study area.

The Camdaboo National Park and Karoo Nature Reserve IBA (SA090) is located a few kilometres south west of the study area. Like the Karoo National Park IBA, this IBA is small and the surrounding habitat is likely to be critical for the IBA trigger species.

The area has been poorly to moderately survey by the SABAP2, but there are three CAR routes which cover portions of the study area.

Priority Species	Sensitivity rank
Bustard, Kori	29
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Buzzard, Steppe	65
Crane, Blue	**7**
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Eagle-Owl, Verreaux's	66
Falcon, Amur	64
Falcon, Lanner	30
Flamingo, Greater	19

Francolin, Grey-winged	76
Harrier, Black	**6**
Kestrel, Greater	94
Kestrel, Lesser	26
Kite, Black-shouldered	97
Korhaan, Blue	31
Korhaan, Karoo	78
Korhaan, Northern Black	89
Korhaan, Southern Black	69
Marsh-Harrier, African	**15**
Rock-jumper, Drakensberg	71
Secretarybird	**9**
Sparrowhawk, Black	101
Sparrowhawk, Rufous-chested	102
Stork, Black	**10**
Stork, White	58

Study Area 10:

(South of Aberdeen, north of Willowmore)

This study area falls within the Nama Karoo Biome with patches of Albany Thicket. It has been poorly surveyed in by the SABAP2 and there are no CAR routes in the area.

Of concerns is that the Kouga - Baviaanskloof Complex IBA (SA093) is located approximately 30 km to the south of the study area.

Priority Species	Sensitivity rank
Bustard, Kori	29
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Buzzard, Steppe	65
Crane, Blue	**7**
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Amur	64
Falcon, Peregrine	24
Kestrel, Greater	94
Kestrel, Lesser	26

Kite, Black-shouldered	97
Korhaan, Karoo	78
Korhaan, Northern Black	89
Korhaan, Southern Black	69
Secretarybird	**9**
Stork, Black	**10**

Study Area 11:

(South of Somerset East)

The study area falls within the Grassland and Albany Thicket biomes. The topography is mostly gently undulating with few cliffs and ridges, with the Brak River running through the study area.

The study area has been poorly surveyed in by the SABAP2. There is one CAR route running through the middle of the area.

Priority Species	Sensitivity rank
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Crane, Blue	**7**
Eagle, Verreaux's	22
Kite, Black-shouldered	97
Secretarybird	**9**
Snake-Eagle, Brown	90

Study Area 12:

(Cookhouse to Alexandria)

This large study area falls within several biomes including Albany Thicket, Fynbos and Savannah. This study area therefore contains a diverse range of habitats and topographies and a there is a long list of priority species found here. The area has been moderately well surveyed by SABAP2 and there are a few of CAR counts in the area. There are a number of wind farms already proposed in the study area.

Of particular concern is that to the south of the study area covers approximately half of the Alexandria Coastal Belt IBA (SA094). Further, Cape Vultures roost approximately 40 km to the north of the study area and in all likelihood will forage within the study area. Blue Cranes are found mostly in the northern parts of the area, while Denham's Bustard are mostly in the south. Large numbers of White Storks are found in this area in summer.

BirdLife SOUTH AFRICA
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Member of IUCN, International Union for Conservation of Nature and Natural Resources
Reg No: 001 - 298 NPO
PBO Exemption No: 930004518

Priority Species	Sensitivity rank
Bustard, Denham's	**16**
Bustard, Kori	29
Bustard, Ludwig's	**8**
Buzzard, Forest	100
Buzzard, Jackal	44
Buzzard, Steppe	65
Chat, Buff-streaked	83
Cormorant, Cape	54
Crane, Blue	**7**
Crane, Grey Crowned	17
Eagle, African Crowned	35
Eagle, Booted	56
Eagle, Martial	**5**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Amur	64
Falcon, Lanner	30
Falcon, Peregrine	24
Falcon, Red-necked	95
Flamingo, Greater	**19**
Francolin, Grey-winged	76
Harrier, Black	**6**
Harrier, Pallid	39
Kestrel, Lesser	26
Kite, Black	61
Kite, Black-shouldered	97
Korhaan, Karoo	78
Korhaan, Southern Black	69
Korhaan, White-bellied	32
Lapwing, Black-winged	85
Lark, Melodious	86
Marsh-Harrier, African	**15**
Osprey, Osprey	77
Owl, Marsh	79
Pelican, Great White	**11**
Pelican, Pink-backed	**14**
Secretarybird	**9**
Snake-Eagle, Black-chested	57
Snake-Eagle, Brown	90

Sparrowhawk, Black	101
Sparrowhawk, Rufous-chested	102
Stork, Black	**10**
Stork, White	58
Tern, Caspian	60
Vulture, Cape	**2**
Warbler, Broad-tailed	99

Study Area 13:

(North Katberg IBA)

This study area falls within the Grassland biome. The vegetation includes rolling grasslands with small patches of Amatole Mistbelt Forest. There a number of steep gorges and rocky ridges that may be important habitat for a number of raptors. The area has been poorly surveyed by SABAP2 and there are no CAR routes in the area.

Of particular concern is the proximity of this study area to Cape Vulture roost/nest sites (which are just over 20 km from the study areas) and the proximity to the Katberg - Readsdale Forest Complex IBA (SA091) is also of concern. The likely presence of Grey Crowned Cranes is also of concern.

Priority Species	Sensitivity rank
Bustard, Denham's	**16**
Buzzard, Jackal	44
Buzzard, Steppe	65
Crane, Blue	**7**
Crane, Grey Crowned	**17**
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Falcon, Amur	64
Falcon, Lanner	30
Francolin, Grey-winged	76
Kite, Black-shouldered	97
Korhaan, Blue	31
Marsh-Harrier, African	15
Rock-jumper, Drakensberg	71
Secretarybird	**9**
Stork, White	58
Vulture, Cape	**2**

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Study Area 14

(north of Tarkastad, Eastern Cape)

This study area falls within the Grassland biome. The topography is diverse, but there are a number of cliffs and ridges that may be important habitat for raptors. There is at least one Cape Vulture nest/roost site within 40 km of the study area.

The area has been poorly survey by SABAP2 and there are no CAR routes in this area.

Priority Species	Sensitivity rank
Bustard, Ludwig's	**8**
Buzzard, Jackal	44
Buzzard, Steppe	65
Crane, Blue	**7**
Eagle, Booted	56
Eagle, Verreaux's	22
Eagle-Owl, Spotted	105
Francolin, Grey-winged	76
Kite, Black-shouldered	97
Korhaan, Blue	31
Korhaan, Northern Black	89
Secretarybird	**9**
Stork, Black	**10**

Study Area 15:

(Sterkstroom to Indwe, Eastern Cape)

This study area falls within the Grassland Biome. It has been poorly surveyed by SABAP2, but there are two CAR routes within the area.

Of particular concern is the number of Bearded and Cape Vulture roost and nest sites nearby (within 40 km). Grey Crowned Cranes are also found in the area, particularly in the east of the study area.

Priority Species	Sensitivity rank
Bustard, Denham's	**16**
Buzzard, Jackal	44
Buzzard, Steppe	65
Chat, Buff-streaked	83
Crane, Blue	**7**
Crane, Grey Crowned	**17**
Eagle, Verreaux's	22

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Falcon, Amur	64
Francolin, Grey-winged	76
Korhaan, Blue	31
Rock-jumper, Drakensberg	71
Secretarybird	9
Stork, White	58

3) Comment on study areas for solar energy

BirdLife South Africa will not comment on the study areas for solar energy at length at this stage of the process. However, we would like to note that we are extremely concerned that the study areas include (or in some cases are adjacent to) Important Bird and Biodiversity Areas and even formally Protected Areas. We suggest that the impacts on birds, particularly threatened and range restricted species, must be carefully assessed by a specialist before the REDZ are considered for gazetting. Potential impacts include habitat loss, disturbance and even possible injury from birds colliding with reflective surfaces (these could be mistaken for waterbodies). The SEA assessments should include site surveys, particularly if these will not be required in the later approval process.

Conclusion

BirdLife South Africa would like to thank you for taking the time to consider our concerns. We trust that our comments will be taken in the constructive light in which they were intended and that by continuing to engage with this process we will be able to support the development of truly sustainable renewable energy in South Africa. Please do not hesitate to contact Samantha Ralston, Birds and Renewable Energy Manager (0836733948, energy@birdlife.org.za) should you wish to discuss anything further.

Yours sincerely,

Mark D. Anderson
Chief Executive Officer

cc: Lydia Cape-Ducluzeau (LCapeDucluzeau@csir.co.za)
Cornelius van der Westhuizen (CvdWesthuizen1@csir.co.za)
Andrew Pearson (Andrew Pearson (andrewp@ewt.org.za)

Response from the SEA team:

The inputs provided have been taken into consideration and the initial intention of delisting and doing away with further environmental assessment and approvals in REDZs have since been replaced with a requirement for a project level Basic Assessment process.

The review of the study areas have provided valuable information which was taken into consideration when refining the study area boundaries as well as during the avifaunal specialist scoping study during Phase 2 of the SEA process. For further details on the outcomes and requirements for further bird assessments in REDZs please see Part 4: Section 5 of the study

SAWEA, 24/01/13 and SAWEA, 17/04/13

South African Wind Energy Association
www.sawea.org.za

DEA National Wind and Solar PV SEAs

Notes from Meeting with RE developers to discuss legal framework CSIR Stellenbosch 24 January 2013

Compiled by Duncan Ayling, Board member and chair environmental working group

Release level:

1. *Initial draft version to SAWEA members who attended the meeting for verification*
2. *Final draft version to all SAWEA members for comment*
3. *'Concerns raised' to be submitted to SEA team*

Contents

SAWEA is the leading trade and professional body representing the wind industry in South Africa. As the voice of South Africa's wind industry, SAWEA's primary purpose is to promote the sustainable use of wind energy in South Africa acting as a central point of contact for information for its members, and as a group promoting wind energy to government, industry, the media and the public.

Our members comprise both national and international developers, manufacturers, and stakeholders working in the industry, and aggregates a substantial amount of knowledge and expertise in a wide range of areas.

1. Introduction

- Strategic Infrastructure Projects (SIPs) have been decreed by the president. SIP 8 relates to the Renewable Energy Programme and the SEA. SIP 8 needs to be coordinated with SIP 10 which relates to electrical grid infrastructure.
- DEA have appointed CSIR to manage the SEA for wind and solar. See CSIR presentation of 24 January 2013 for details.
- Project website launched for stakeholder registration and future consultations: http://www.csir.co.za/nationalwindsolarsea
- SAWEA supports the SEA objective of enabling renewable energy generation by streamlining the consenting process for renewable energy projects.
- SAWEA's concern is of the unintended consequences of the well intentioned SEA. These are outlined in sections 2 and 3 below.

2. General concerns

A. SEA assumption that delisting of REDZ is the best way to solve the problem. The SEA is potentially working at the wrong solution because the problem has not yet been properly articulated. Slide 4 "Problem - Solution" of the presentation of 24 January 2013 at the meeting with RE developers at CSIR Stellenbosch should be further researched and explained.

B. An alternative SEA could be developed as guidance of environmental sensitivities which would guide developers away from high sensitivity areas.

3. Specific concerns

A. Delisting NEMA listed activities for REDZs:

   i. REDZ are required in order to delist. Will REDZ bring more problems than delisting will solve?

   ii. Development Guidelines will be required within delisted REDZ. Will these guidelines become as intensive as an EIA?

   iii. Has the DEA considered all alternatives to delisting and REDZ?

   iv. SEA is only covering certain areas of SA whereas it should cover the entire country

v. Environmental sensitivity analysis will only occur within identified REDZ

B. REDZ concerns:

i. How many REDZ are envisaged? At least one per province.

ii. Geographic size of REDZ is unknown: 10, 100 or 1000km2 – this will be important in the context of getting environmental sign off from bird/bat groups in so far as exempting a huge swath of area from monitoring.

iii. Gold rush occurs for land within REDZ

iv. Land value increases within REDZs

v. Possibility for corrupt practices is high

vi. Assumptions leading to identification of REDZs may be flawed. The accuracy of the data and the original sources that the maps will be based on may be questionable. Experience has shown that some existing maps have many flaws.

vii. REDZs will cause an anti-competitive situation which will affect the competitive REIPPPP

viii. Effect that REDZs will have on development in non-REDZ areas – Will development activities in areas outside find difficulty in getting permits or other authorisations (i.e. rezoning, LUPO). Despite best intentions to ensure projects applying for approvals outside REDZ are not disincentivised, experience with DEADP's guidelines has shown that in practice there will be resistance from approval and commenting authorities outside REDZ, effectively meaning that REDZ are the only areas that can be developed.

ix. Power corridors/substations in SEA areas: How will government guarantee that these corridors can be created and how will they be agreed upon? Also, how will the locations of the substation be determined?

x. Consideration of network and grid impacts caused by REDZ concentrating wind generation into specific locations

xi. Financier buy-in: what will be the outcome of multiple projects in one zone? If projects are all next door to each other, forecasting wake-effects of one project on another become difficult and will result in changed economics. Also will banks be willing to concentrate so much capital investment in specific areas?

xii. Socio-Economic Development: what kind of buy-in have DoE/Treasury given on REDZ as the benefits that would arise from the projects would be concentrated in specific areas rather than broader society?

C. Public consultation

   i. Some I&APs within REDZ will mobilise and object to being targeted

   ii. Delisting will remove certain public consultation rights which may not be legally covered by the SEA consultation i.e. lack of detail; no opportunity to comment on specialist studies etc

   iii. Legal challenge from some elements of civil society is probable

D. Timing

   i. Uncertainty over when the SEA would start effecting development

   ii. Would the 2nd determination of 3200MW wait for the completion of the SEA?

E. Policy alignment

   i. How would the SEA and the Western Cape Guidelines align?

   ii. Difficulty in reaching agreement with multiple government departments will be a significant challenge

4. Actions Required

1. Duncan Ayling to circulate a draft meeting note to SAWEA meeting attendees by 25th January 2013 - complete
2. SAWEA meeting attendees to verify/correct the draft meeting note by 31st January 2013 - complete
3. Duncan Ayling to finalise the meeting note and distribute to all members for comment and/or addition of new concerns by 4th February 2013 - complete
4. SAWEA members to provide comment by 11th February 2013 - complete
5. Duncan Ayling to collate all concerns and provide to SEA team by 15th February - complete
6. Duncan Ayling to arrange next SEA wind focus group meeting with CSIR for end February – in process

SAWEA submission to the programme team for the national Strategic Environmental Assessment (SEA) for wind energy

17th April 2013

1. Summary of SAWEA's concerns

The general aim of easing the consenting process is supported. The concerns stem from the unintended consequences that may result. Broadly, SAWEA has flagged that delisting may not be the best solution. One alternative would be an SEA that lists and publishes environmental sensitivities. This would guide developers away from high sensitivity areas. This approach would be appropriate to the level of uncertainty inherent in such a study. Perhaps the most pressing broad concern is that introducing geographically defined REDZ into an already existing and maturing market may distort the playing field; especially since we are dealing with a competitive procurement market. The investor confidence that underpins the participation of the private sector in developing power production capacity in South Africa could be jeopardised by this.

In addition, SAWEA has several specific concerns relating to matters like the validity of the assumptions used in the SEA process, the accuracy of data, the appropriateness of major exclusion criteria used, and the question of whether the residual permitting requirements in the REDZ might not constitute a hurdle as formidable and time-consuming as the EIA process itself. Additionally, there is disquiet that a "gold rush style" land grab could occur within REDZs, once it is known where they are and especially if they are insufficiently numerous and or large. This could increase land values, increase the possibility of corrupt practices and may lead to an anti-competitive situation vis-a-vis the competitive REIPPPP. Indeed, care has to be taken that the SEA and REDZ do not become effectively a pre-bid selection process, compromising the REIPPPP tender integrity.

Moreover, SAWEA is of the position that projects outside the REDZ must not be jeopardised by the REDZ demarcation. While it is easy to pay lip service to the fact that in law these projects are unaffected, on a practical level it is possible that the bureaucracy will favour projects inside the REDZ.

2. General SAWEA concerns

a. The DEA have concluded that delisting of REDZ is the best way to solve the problem of streamlining the consenting process. SAWEA would like to debate all alternatives to delisting and REDZ as the advantages may be outweighed by the disadvantages. The SEA is potentially working at the wrong solution.

b. An alternative SEA could be developed as guidance of environmental sensitivities which would guide developers away from high sensitivity areas. This approach would be appropriate to the level of uncertainty inherent in such a study.

c. The definition of geographically defined REDZ will distort the playing field in a competitive procurement market. The investor confidence that underpins the participation of the private sector in developing power production capacity in South Africa could be jeopardised by this.

3. Specific SAWEA concerns

a. It would be useful to break down by year the 650+ wind energy EIA applications that have been submitted to the DEA. It may be the case that the majority were submitted in 2009/2010 and since then, applications have declined as developers are consolidating and speculative projects have no longer been introduced. The EIA workload may be self limiting as the industry matures.

b. The expert reference group of 27th March 2013 presented 8 draft study areas to be considered as initial zones which varied in size from 637km^2 to 9737km^2. The assumptions leading to identification of these REDZs may be flawed. The accuracy of the data and the original sources that the maps will be based on appears to be questionable. Expert reference group members identified that some existing maps are flawed.

c. A total available capacity of 70GW was presented to be potentially available within the 8 draft study areas. It is to be noted that if all development requirements are taken into account in these draft areas the potential for wind energy is likely to be significantly less, with Eskom grid capacity, cost of connection and timing of connection potentially the most significant hurdle.

d. Some of the areas proposed do not have cost effective grid access available at the moment, and will require significant investment to be made accessible especially at Transmission voltage level (> 132 kV). It should be noted that Eskom is currently the only entity that can build or upgrade at transmission voltage level and that the cost and timelines for this work is significant. If any proposed REDZ does continue it must be in agreement with Eskom. Eskom should also then give the assurance of making the required grid connection (if at Transmission level) within reasonable timelines and cost.

e. The preliminary and confidential WASA data used for excluding areas without adequate wind resource include surface roughness and topographical information to 250m x 250m resolution. This WASA data had not yet been verified and so will not be publicly released until end of April at the earliest. The SAWEA representatives present at the meeting stated that any information given to them needed to be shared with all SAWEA members to avoid a situation where their respective companies know something that others do not. DEA and CSIR were not able to allow the maps to be circulated to members, with the result that the SAWEA representatives chose to excuse themselves from the meeting. The consultation for this section of the SEA programme has therefore not been carried out fully and SAWEA request that the exercise is redone when the data is public.

f. It should also be noted that no wind map is entirely accurate and will over or under predict at various locations. All wind energy developers will agree that until you have measured actual wind onsite at various locations depending on the complexity of the site – one simply cannot confirm the available resource. There is a real possibility that some of the study areas identified based on the WASA map may have significant areas with unsuitable resource. There may also be other areas where resource is adequate and environmental impacts acceptable, which is not identified by using the WASA map. Especially since the WASA map does not cover the whole country. The 8 draft study areas are only located in the Western and Eastern Cape provinces. With the Western Cape Department of Environmental Affairs and Development Planning potentially requiring additional requirements to the proposed areas, thus REDZ in the Western Cape may be even more limited especially if you consider the additional investment hurdles put in place by Western Cape planning (LUPO) requirements.

g. Various studies, including a study done by Eskom/GTZ indicate that the wider geographically dispersed wind energy is installed the more it contributes to an overall wind energy capacity credit (capacity credit = % of total installed wind energy always available on the grid when you need it

most). Focusing our entire nation's wind energy into pre defined areas, in only 2 of our country's provinces (with 1 province already adding hurdles to investment) will hamper South Africa's wind energy's capacity credit, and will be to the detriment of our cost of energy in the future.

h. The WASA data used 400w/m2 (approx. 6.5-7m/s) as the minimum wind regime required for an area to be included for consideration in the SEA. Attendees who remained in the confidential part of the meeting commented that the WASA data has excluded areas where viable wind projects are already under development. This is a significant concern as it is evidence that the data and/or methodology are not adequate for the SEA.

i. The presence of Preferred Bidder projects inside Major Exclusions and outside wind regime inclusions is a key concern since it indicates that the SEA doesn't accept that the REIPPPP justifiably selects projects which are best value for money for energy, are legally and environmentally sound and able to deliver highest economic development benefit. The argument that round 1 and 2 wind projects targeted low wind areas in order to be close to grid connection is false.

j. Wind energy EIA applications have been mapped by CRSES using DEA data from 4 Dec 2012 however projects could be seen to be missing. The maps will be sent to SAWEA for comment and correction.

k. Eskom cost estimate applications are being mapped by way of an Eskom data collection initiative which is currently underway but developers have reported difficulty with accessing and contributing to the initiative. The current information received by Eskom must therefore be considered incomplete.

l. Major Exclusion Criteria used by the SEA are sometimes debateable:

   i. 400W/m^2 cut-off wind power may prove to be too high when assessing on such a grand scale and good areas may be missed. This appears to have already happened - see 3 (g) above.
   ii. 10 deg slope constraint using a 90m resolution (SRTM) may exclude too many potentially viable areas, since that resolution doesn't allow for micrositing slope consideration. SEA will re-assess with higher resolution data. 20m resolution was suggested.
   iii. 4km coast buffer is not scientifically justified but is currently being used to identify REDZ. The buffer has no justification.
   iv. DAFF Class 1 and 2 agricultural sensitivity constraints should be debated.
   v. Plantations are excluded due to perceived lack of wind resource and fire-risk (to the plantation from the turbines). The SEA team stated this was from international experience. This should be verified as international experience suggests that the fire risk is from the plantation to the turbine and this is mitigated by fire-breaks. Removing plantations from Major Exclusions is requested.
   vi. Game Farms are considered major exclusions, however private game farmers do have the option of being involved in wind projects, should they choose to do so, hence it is suggested that this Major Exclusion is removed.
   vii. SKA constraint. No earth curvature was taken into account. The SKA representative advised to redo the constraint mapping in terms of 'risk' mapping and to apply more accurate modelling of electromagnetic and radio interference characteristics.
   viii. SAAF radar capabilities and locations are confidential and future plans are to expand coverage so it is agreed that this is not included as a constraint.
   ix. Visual constraint will be assessed later within REDZ. This constraint is highly subjective and should be reflected as such.
   x. The cluster point method may have limitations where good potential on all factors exists on the boundary of the WASA area and this is missed since there is no data on the other side of the boundary. This should be borne in mind in case of a possible bias away from boundaries being evident. This is not a motivation for reduction of the study area to exclude some kind of boundary buffer, since there is already concern that the greater study area is too limited.

m. General environmental approval for REDZ will not be possible as specialists will always need to carry out site specific studies. 'Development Protocols' will be required within the delisted REDZ which will undoubtedly require scoping of issues and subsequent specialist studies. 4 seasons bird and bat monitoring is understood to be a requirement. The Development Protocols may therefore become as intensive as an EIA.

n. It is very doubtful that consenting and approving government departments and authorities will reduce any site specific requirements based upon general zone assessments. Requirements for multiple consents and approvals will therefore probably remain as usual.

o. If development within REDZ is successfully given an advantage by way of delisting activities then:

   i. A gold rush style land grab could occur within REDZs.
   ii. Land values could increase within REDZs.
   iii. Possibility for corrupt practices increases.
   iv. An anti-competitive situation will arise which affects the competitive REIPPPP.
   v. The SEA could be seen as an effective pre-bid selection process, compromising the REIPPPP tender integrity.
   vi. It may increase the cost of wind energy to the national economy.

p. REDZs will have a negative effect on developments in non-REDZ areas. Development activities outside of REDZ will find difficulty in getting permits or other authorisations (i.e. rezoning, LUPO). Despite legislation that states that projects must be assessed on their merits, experience has shown that in practice there will be resistance from approval and commenting authorities outside REDZ, effectively meaning that potentially perfectly viable projects outside of REDZ will be disadvantaged. SAWEA is requesting written commitment from approval and commenting authorities to not object to projects on the basis that they are outside REDZ. This should be made clear at two levels:

   i. No consideration whatsoever shall be taken of the SEA where projects fall outside the greater study area, which is the domain covered by the WASA.
   ii. If projects are within the WASA and yet outside REDZ, while it is expected that project sponsors would need to motivate to DEA the merits of the project to undertake an EIA, all commenting and approving authorities shall be advised that the projects are to be evaluated without prejudice based on their inclusion or exclusion from the REDZ.

q. Investors and financiers will need to be fully consulted regarding REDZ and their impacts on commercial aspects. What will be the outcome of multiple projects in close proximity to each other in one zone? Will banks be willing to concentrate significant capital investment in specific restricted areas?

r. Socio-economic census data is being used to influence the location of solar REDZ but not for wind REDZ as wind resource is more location specific. Wind REDZ will therefore create the situation whereby socio-economic development from wind projects is more limited geographically. Benefits arising from projects would be concentrated in specific areas (only 2 provinces based on draft areas) rather than broader society.

s. Delisting will remove certain public consultation rights which may not be legally covered by the SEA consultation i.e. lack of detail; no opportunity to comment on specialist studies etc

4. SAWEA's potential positions on the SEA

Members are currently debating the 2 potential positions below:

a. **Position One: Contest the SEA's geographically defined delisting approach in principle** and lobby for an SEA that gathers socio-environmental sensitivity data and provides approvals risk information to the industry in a spatial format that can be interrogated in detail. This would enable industry members to take most prudent decisions on which areas to pursue, given the likelihood of failure to receive Environmental Authorisation, in combination with their own evaluation of commercial risks and constraints. This position would face two challenges that

   i. the SEA program has already moved past the point of deciding on the approach and methodology.

   ii. it does not address the issue of streamlining the consenting process or reducing the EIA and amendment workload for DEA and developers. However, these issues can be address by other means, some of which are outlined in SAWEA's response to the consultation on the Efficacy of South Africa's EIA Regime of 12th April 2013 which is included below.

b. **Position Two: Conditionally support the SEA's geographically defined delisting approach** and lobby for inclusions in the program that protect the industry from the identified potential pitfalls. Namely:

   i. DEA to ensure that the data and methodology is sound and the constraints are realistic by robust and effective engagement with SAWEA.

   ii. DEA to demonstrate concrete action to prevent bias against projects outside REDZ by issuing a statement that can be presented to any commenting or approving authority clarifying that projects are not to be considered less favourable for authorization on the basis of their being outside any REDZ.

   iii. Department of Energy to demonstrate concrete action to ensure that the SEA does not compromise the fair market for renewable energy procurement programme(s) by acting as any pre-bid selection step in any way, i.e. by factoring any non-socio-environmental considerations into Environmental Authorisations.

   iv. REDZ to be up for iteration on a regular (annual) basis and that iteration can be requested on the basis of new information coming to light and/or where detailed boundary concerns arise.

Note that whichever of the two positions is adopted there is a clear and present request to the SEA team to pause and to re-assess the SEA development programme, the methodology and the data.

For the attention of:
Ms Tyhileka Madubela, Committee Section, Parliament of RSA. tmadubela@parliament.gov.za
cc Mark Gordon, Department of Environmental Affairs.
cc Coenraad Agenbach, Department of Environmental Affairs.

12 April 2013

Re: Consultation on the Efficacy of South Africa's EIA Regime

Dear Ms Tyhileka Madubela,

The South African Wind Energy Association (SAWEA) thanks the Portfolio Committee for Water and Environmental Affairs, for this opportunity to comment on the Efficacy of South Africa's EIA Regime.

Formed in 1998, SAWEA is the leading trade and professional body representing the wind industry in South Africa. As the voice of South Africa's wind industry, SAWEA's primary purpose is to promote the sustainable use of wind energy in South Africa acting as a central point of contact for information for its members, and as a group promoting wind energy to government, industry, the media and the public.

SAWEA members have significant collective years of experience of the Environmental Impact Assessment (EIA) process relating to wind farm developments. SAWEA members have interacted with the Department of Environmental Affairs over the years and are now heavily involved in the Department of Energy's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). SAWEA members have also gained vast experience through working alongside independent Environmental Assessment Practitioners and Environmental Specialists who conduct and manage EIA processes for potential wind farm projects, as per the requirement of the National Environmental Management Act, no 107 of 1998, as amended (NEMA).

SAWEA members comprise of national and international developers, manufacturers, and stakeholders working in the energy industry, and aggregate a substantial amount of knowledge and expertise in a wide range of areas. Our comments are structured to show strengths and also weaknesses of the EIA process, as experienced and/or perceived by our members. We would be grateful if you would consider our comments herein.

Yours faithfully on behalf of SAWEA,

Duncan Ayling
Board Member & Environmental Working Group Chair
South African Wind Energy Association

1. Headline comment

SAWEA believe that the Department of Environmental Affairs requires additional resources and capacity to deal with wind farm applications. This needs to be addressed as a matter of urgency in order to avoid delays which could severely impede South Africa's progress towards renewable energy deployment as supported by the Department for Energy.

2. Strengths

2.1. The Department of Environmental Affairs has outlined a clear, structured and robust EIA process through the NEMA regulations.

2.2. The EIA Regime involves a thorough, inclusive and robust engagement process. The NEMA regulations stipulate a highly inclusive process for comment and participation by interested and affected parties (stakeholders). This ensures that citizens and communities are informed of potential projects and that stakeholders have a fair process to voice concerns or support for the projects. It also allows for information to be shared at a level which the ordinary citizens can understand.

2.3. Clearly regulated time lines allow for a proper planning process so that both stakeholders and applicants know when decisions should be made. However due to significant pressure on the Department of Environmental Affairs from high numbers of detailed applications these timeframes are often not adhered to. This issue is therefore included in 'Weaknesses' below.

2.4. The dynamic nature of the EMP development allows for new information to be built in as it becomes available and does not constrain the project to unrealistic expectations.

3. **Weaknesses**

3.1. The Department of Environmental Affairs has had the task of dealing with over 600 Environmental Impact Assessment applications for potential wind farm developments, totalling around 30,000 MW of potential wind energy projects in South Africa. In SAWEA's view, the Department of Environmental Affairs have been working very hard to deal with this incredible workload. However, as a result of this workload, reviews of applications have been inconsistent and have often exceeded stipulated time-frames.

a. Although around 30,000 MW of potential wind energy projects are being assessed this is no way implies that this many feasible projects exist. International average success rates of projects are in the region of 1 out of every 5 that start development. This is due to any number of the pitfalls in wind project development requirements from concept to construction. Developers tend to cover this risk by a portfolio approach.

b. The number of projects under EIA is likely to include speculative projects with low potential for wind resource or other success requirements. This is driven by the long lead time of the approvals process motivating early initiation of approvals before feasibility has progressed far.

c. Project capacity may be overstated in some applications since feasibility has not progressed enough to accurately assess eventual capacity on the site and there is an incentive to overstate in case of constraints being applied in the approvals process.

3.2. The Department of Environmental Affairs' Strategic Environmental Assessment (SEA), although well intended to resolve a number of issues with Environmental Impact Assessment and to streamline the

environmental consenting process for renewable energy projects; risks further complicating and restricting development of renewable energy in South Africa. Details of these risks are available upon request from SAWEA but are not included in this consultation response.

3.3. Environmental Authorisations are conditional on further compliance with other legislation including the need for permits under the Water Act and SALA. The various government departments that developers deal with as part of the permitting process have sometimes imposed restrictions that conflict with the Environmental permit. This has resulted in the need for Amendments to Environmental Authorisations, which has in turn stretched the Department of Environmental Affairs workload further.

3.4. The quality of reporting by Environmental Specialists and Environmental Assessment Practitioners on potential wind farm sites has varied dramatically. As the wind industry in South Africa matures, a consensus is likely to be reached among experts. In recommending mitigation measures for birds and bats in particular, specialists have started to make recommendations which are often based on misunderstanding of wind farms and wind turbine technology. Some theories and suggestions for mitigation of environmental impacts are found to be based on either academically disreputable sources, or experience from other countries which is not necessarily relevant in the context of the South African environment.

3.5. The current EIA approval process allows for very little flexibility in the development design that is approved under the Environmental Authorisation. Whilst SAWEA recognises the importance of having a near-final layout for the EIA and decision-making process it is not practical to specify every detail of the development design at the time that the EIA process is conducted. Many projects then have to apply for amendments for minor changes such as altering turbine hub height or micro-siting the turbine positions, further adding to Department of Environmental Affairs' workload. It would be beneficial if some flexibility for micro-siting (perhaps 100m variation from the approved turbine locations, not impinging on any environmentally constrained areas) and a range of, or maximum, turbine height and number of placements could be approved.

3.6. Public Participation is an important part of the EIA Process. However based on experience, getting the public involved too early leads to delays or unnecessary concerns as there is not sufficient information or specialist input available at an early stage.

3.7. A major issue is the ease of which stakeholders can lodge appeals on Environmental Authorisations. There are no costs involved in lodging an appeal and some stakeholders appeal in attempts to extract monetary compensation from the developer because it delays the project and/or puts the project at risk.

3.8. Appeal time lines are regulated but in practice are completely open-ended as the 90 day resolution timeframe can be reset by requesting further information or clarification.

4. Recommendations to Improve EIA Process Effectiveness

Department of Environmental Affairs resource

4.1. Additional resources to be employed within the Department for Environmental Affairs to deal specifically with Environmental Impact Assessment applications and appeal resolution processes relating to potential wind farm developments.

4.2. A body of expertise, or advisory capacity, should be created within the Department of Environmental Affairs that is capable of technically understanding and scrutinising environmental specialists' impact

mitigation recommendations relating to wind farms. The body of expertise should be familiar with wind farm technology and developments as well as having appropriate South African environmental assessment experience. This will avoid unworkable recommendations appearing in Environmental Authorisations and limit the need for subsequent clarification and authorisation amendment.

Interdepartmental coordination

4.3. NEMA promotes intergovernmental cooperation and decision making and greater emphasis should be placed on this. If various permitting processes could be integrated and other government departments are involved at an early stage by Department of Environmental Affairs in terms of providing inputs into the EIA process then it could result in:

- a more streamlined process
- avoiding unnecessary or conflicting comments between various departments.
- reducing amendment applications post-authorisation for the Department of Environmental Affairs.

4.4. As part of the EIA process Environmental Assessment Practitioners must ensure that comments are obtained from various government departments. Although there are stipulated timeframes for comments most government departments do not adhere to these timeframes. Department of Environmental Affairs should assist in ensuring that adequate and timely comments are obtained from these departments.

EIA process

4.5. More importance and emphasis should be placed on the Scoping Phase. To date, the Department of Environmental Affairs' scoping response is very standardised even though the receiving environment changes from project to project. At scoping stage, stakeholders and specialists should add any site/area specific information/issues that need to be considered during the Impact Assessment stage for each project. All the potential impacts, proposed specialist studies and methodologies must be adequately identified and included in the scoping approval by the Department at this stage. This will result in a better and more streamlined EIA process as it would avoid additional work needing to be carried out at a later stage and could ensure that the work of Environmental Assessment Practitioners are more consistent and of a better quality. This would save significant resources and time for both the Department and developers.

4.6. For certain listed activities where the impact could be minimal instead of having to undertake a full EIA process or Basic Assessment process the implementation of a good Environmental Management Programme and appointment of an ECO during construction should be recommended by Department of Environmental Affairs as this could be enough to ensure that the development is being undertaken in a sustainable manner.

4.7. In situations where a non-substantive Environmental Authorisation amendment is sought, regulations require an independent EAP to make the application. EAP involvement in this situation delays and complicates the process and further increases the costs for the developer unnecessarily. This could easily be avoided by allowing direct amendment applications from the developer. An EAP could still be involved if the Department of Environmental Affairs considers the amendment to require it.

Renewable Energy Development Zones

4.8. Extreme caution should be taken if the Strategic Environmental Assessment (SEA) proposal to select renewable energy development zones within South Africa for is continued. Creating zones runs the risk of impeding the consenting process for applicants outside preferred zones and penalising them unduly.

Wind farm site selection is an extremely complicated process which requires appropriate expertise and assessment, and it will not be straightforward to delist activity in areas highlighted for renewable energy development, which is likely to increase the workload of the Department of Environmental Affairs rather than to reduce it.

Way forward

4.9. Increased collaboration should be facilitated between SAWEA members, the Department of Environmental Affairs, environmental specialists and Environmental Assessment Practitioners with regards to understanding and promoting environmentally responsible, sustainable and effective wind energy development in South Africa.

4.10. A clear platform allowing for a follow-up on the progress of Environmental Authorisation and appeal processing within Department of Environmental Affairs should be established. Such a platform could be run online, could include official access rights, waiting lists, list of missing documents, standard checklists for both the applicant and the case officer for example. When EIA processing delays occur, effective and open communication with the applicant/EAP should be prioritised. This will ultimately lead to a more efficient, interactive and clearly-scheduled process.

END

Contact: Duncan Ayling Duncan@sawea.org.za

Response from the SEA team:

Most of the concerns and questions raised in these two initial submissions at the start of the SEA process are addressed by the SEA report. Concerns with the initial intention to delist REDZs from environmental authorisation requirements were recognised and the approach accordingly adapted to rather reduce the authorisation requirements to a familiar and excepted authorisation process (i.e. BA process).

It is also recognised that some of the data used for the study may have inaccuracies and precautions have been taken to address this. Precautions include providing developers with the opportunity to influence the identification of the focus areas based on information at their disposal. It is also made clear in the report that sensitivity mapping undertaken as part of the SEA is not sufficient for decision making in terms of environmental authorisation, but rather serves as a scoping exercise that informs project level environmental assessment. The development protocols (i.e. requirements) have been developed to clarify the authorisation processes for all parties involved, and are aimed at creating a consistent and common understanding of requirements. It is also made clear in the report that it is rarely possible to avoid all significant potential sensitivities and that reasonable and responsible compromises will be required for renewable energy development to continue in South Africa.

The report clearly states that it is not intended for development to be in any way limited to the REDZs and that suitable development is still promoted across the country. It is also stated that the wind component of the SEA only covered areas for which WASA data were available, and that the process should be repeated as soon as WASA or similar data become available for other parts of the country.

Policy alignment is addressed through the adoption of REDZs as geographical areas associated with SIP 8, and the PICC and local government consequently being mandated to facilitate development in these areas. The methodology and data used for this national SEA were also shared with the Western Cape SEA team for the updating of their study.

The electricity grid constraints are addressed in the report and potential proactive investment into REDZs associated substations discussed. Since the submission of this input the grid issue has become more severe and the potential for REDZs to facilitate grid development has become one of its greatest potential benefits. As discussed in the Part 3: Section 15 of the report the ability of the REDZs to facilitate grid investment would result in increased competitiveness in the market and address, rather than exacerbate, land price escalations.

It is recognised that there will be unintended consequences resulting from REDZs that might, to some extent, lead to negatively impact the industry. However, not doing strategic integrated planning, not prioritising some areas for development, and not taking decisive action, will almost certainly result in detrimental impacts on the South African renewable energy industry.

BrightSource, 5/03/14

BrightSource

To: Department of Environmental Affairs
Fedsure Forum Building
315 cnr Pretorius & Lilian Ngoyi Street
North Tower
2nd Floor (Departmental reception) OR
Pretoria, 0001

Copied to: CSIR
Meiring Naude Road,
Pretoria

Attention: Lydia Cape-Ducluzeau
Cornelius van der Westhuizen

Date: ***05 March 2014***

Dear Sir/Madam

REQUEST TO INCLUDE CONCENTRATED SOLAR POWER TECHNOLOGY (CSP) IN THE STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) FOR THE ROLLOUT OF RENEWABLE ENERGY IN SOUTH AFRICA.

1. The above subject matter refers.
2. BrightSource Energy South Africa (Pty) (BrightSource Energy) is a CSP developer and technology provider actively developing projects in South Africa.
3. We at BrightSource Energy are deeply concerned about the exclusion of CSP technology from the SEA currently being developed by CSIR & DEA and published for public comments.
4. It is important to note that 400MW of CSP has been procured through the REIPPP Programme of the Department of Energy and a CSP only Round 3.5 will be open for Bid on the 31st of March, 2014.
5. As active developers in the industry, we are aware of approximately 6,000MW of CSP in development by different Independent Power Producers (IPP) in South Africa.
6. Furthermore, in recognition of the value that CSP technology offers, the Integrated Resource Plan for South Africa (IRP, 2010) Update has proposed a 175% increase in allocation of CSP (increasing allocation from 1,200 MW to 3,300MW) by 2030.

BrightSource Energy South Africa (Pty) Ltd

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South Africa **Directors:**

Daniel Brian Ralph Schwab
Mathew Anthony Brett

7. Identifying the geographical areas best suited for the roll out of CSP projects will assist IPP's in their development activities and help assess possible social and environmental impact of the technology.

8. Excluding CSP from technology from the SEA study will send a message which contradicts the national direction as identified by the IRP 2010 Update and could potentially discourage IPP's from continuing their development efforts.

9. In light of the above, BrightSource Energy hereby motivates for the inclusion of CSP in the SEA. BrightSource Energy is in the position to offer technical support where required to facilitate this process for CSP technology.

10. We look forward to your kind consideration and hope to hear from you soon

Yours sincerely,

Daniel Schwab

Regional Director

Response from the SEA team:

The scope of the first iteration of the SEA was informed by the nature and location of the majority of renewable energy environmental applications received by DEA at the time of initiating the project. Since very different criteria need to be considered for CSP than for PV, CSP will need to be dealt with separately and during a future iteration of the SEA process.

Cennergi, 15/11/14

CSIR
PO Box 395;
Pretoria
0001

15 November 2013

Dear Ms Lydia Cape-Ducluzeau

Strategic Environmental Assesment (SEA) Development Prioritisation Submission Report

Many thanks for the opportunity to respond as developers to the above exciting process. This truly illustrates the country's commitment to further development of renewable energy power production, and in streamlining the many facets of the development work required. While we have chosen not to respond specifically to the zonal prioritization matrix you issued for comment, we would however like to make the following submission.

We would firstly like to congratulate the Department of Environmental Affairs (DEA) for embarking on this process. It shows great foresight towards streamlining of the Environmental Impact Assessment (EIA) process, and will undoubtedly make a meaningful contribution towards further developments in the renewable energy industry in South Afrcia.

Furthermore, we recongnise the complexity of such a process, and the inherent challenges associated with it. The specifc challenge regarding the work in the wind sector is the availability of sufficient definitive wind resource data. It is understood that the resource assessment has been based on the ten (10) CSIR wind measurement masts, without including detailed information from the wind atlas due to this not having been specifically verified by local measurements at sufficient locations. In this regard we believe that the foundation of the work being done is inherently immature, and requires significantly more wind measurement data to meet the potential value of the project.

In this regard we propose that the industry work out a way to deal with the confidentiality challenges, and be able to divulge wind measurement data from all projects that have reached Preferred Bidder status. Towards this end I am actively engaging within Cennergi, including obtaining a legal view on our freedom to divulge this data. Once we have obtained such comfort, including gaining permission from any third party involved in the projects, we would like to divulge such level of detail of the wind measurements that

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Alternate Directors: L Groenewald, S. Shrivastava*, CH Wessels, S Kapur*
*Indian

would be sufficient to significantly contribute to the above process.

Towards this end we would appreciate further engagement to define the level of detail that would be required, so that formal approval for the release of said data can be finalised.

Further to the above request, Cennergi is commitment to supporting the process in other ways, including active involvement in SAWEAs various sub-committees.

Once again we would like to congratulate you on the great work being done, and look forward to the culmination of this towards the streamlining of the renewable energy development process.

Yours sincerely,

Brian Day
Head, Advocacy

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Alternate Directors: L Groenewald, S. Shrivastava*, CH Wessels, S Kapur*
*Indian

Response from the SEA team:

The SEA made use of modelled wind resource data which gives a reasonable indication of the regional resource, which is needed for strategic level assessments. Since there is a degree of uncertainty inherent to modelled data, and it is known that developers have access to more accurate measured data which cannot be provided due to confidentiality constraints, a verification process of the identified areas was undertaken. During this process developers were given the opportunity to select areas where they would prefer prioritisation. The current proposed REDZs were informed by the outputs of that process.

Mainstream Renewable Energy, 18/09/13

MAINSTREAM RENEWABLE POWER SOUTH AFRICA
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www.mainstreamrp.com/south-africa

18 September 2013

Att: Mr Paul Lochner
Project Manager: National SEA for Wind and Solar Energy
CSIR - Environmental Management Services

Dear Sir

Comments to the Strategic Environmental Assessment to establish Renewable Energy Development Zones as initiated by the Department of Environmental Affairs

Introduction

Please find below Mainstream Renewable Power South Africa's (Mainstream) position statement with regards to the Department of Environmental Affairs (DEA) proposed Strategic Environmental Assessment (SEA) initiative to determine Renewable Energy Development Zones (REDZ) for wind and solar PV renewable energy (RE).

Mainstream is a responsible and experienced developer in South Africa who has actively participated in shaping the RE industry in South Africa since 2009. Mainstream has more than 3000 MW of wind and solar energy in development located in 5 South African provinces. Three of our projects totalling 238MW of RE are currently under construction and will feed energy into the national grid in the first half of 2014.

Mainstream has received 20 individual environmental authorisations to date for renewable energy projects in 5 provinces, with more projects undergoing environmental impact assessments continually. We are in a position to understand a significant portion of the wind and solar resource availability in South Africa as we have been measuring high quality bankable wind and solar resource in 55 unique locations across South Africa since 2009 (4 years ago). Mainstream has a long term vision in South Africa and wants to ensure South Africa builds wind and solar farms in the best locations to maximize benefits, minimise potential environmental impacts and ensure continuing RE affordability.

Mainstream recognises there may be potential positive impacts for establishing REDZ and we discuss these potential benefits below.

Registered Company Number: 2009/007850/07
Directors: Torben Andersen, Davin Chown, Barry Lynch, Leila Mahomed-Weideman, Fintan Whelan.

Even though there may be advantages, Mainstream has several concerns with regards to the SEA process and establishment of Renewable Energy Development Zones (REDZ). We are of the opinion these concerns may result in disadvantages which outweighs the potential benefits. To date we do not believe that our concerns have been adequately addressed and therefore we find it difficult to support the SEA process unless the primary concerns are addressed satisfactorily.

- *Our primary concern is the lack of adequate protection of development rights of projects that fall outside of the REDZ. The removal of this right may lead to reduced investor confidence in SAs RE industry.*
- *Our secondary concern is that the REDZ have not been developed on defendable data and criteria and will result in non-viable or limited RE project development in SA in the long run.*
- *Our final high level concern is the absence of a guarantee that permitting within the REDZ will be integrated resulting in blockages by the other 38 authorities that projects require consent from. This will result in delayed realisation of projects.*

Potential Benefits

The following is considered as potential benefits if REDZ are gazetted:

- *Streamlined EIA process within the DEA*

  We consider a streamlined EIA process as a benefit to the industry and agree that there has been certain inefficiencies in the DEA environmental approval system.

  - It is not clear at this point how the gazetting of REDZ will remove the inefficiencies from the system within the DEA, apart from the suggestion that certain environmental studies would not have to be undertaken and therefore the volume of data to be assessed would decrease and approvals may be issued quicker. We are not however convinced that gazetting REDZ will necessarily remove said efficiencies.
  - We do not believe that several important environmental criteria can be assessed without doing site specific studies. Site specific studies (similar to what has been taken place to date in EIAs) is, as far as we know, currently not part of the REDZ establishment methodology. Responsible developers will naturally choose to do most of these studies anyway to determine with high certainty the project site environment and risks before they seek finance and invest significant amounts of capital. The current DOE Renewable Energy Independent Power Producer Programme (REIPPP) procurement process demands in-depth knowledge and significant confidence of proposed developments. We reserve our final comment on

the advantages of REDZ till further information is made available on what the requirements, timelines, decision making process and public participation criteria would be within these REDZ once and if gazetted.

- *Non DEA Government permitting*

  We consider a streamlined government permitting process from departments which do not fall within the DEA's domain as a benefit. In our experience there are conflicting requirements in terms of consents in some instances.

  - Mainstream unfortunately cannot comment if this particular benefit would be realised, as it is not clear how other non DEA government departments would integrate into the proposed REDZ permitting process, and if non DEA government departments are in support of the SEA process. We believe that some of the criteria used to determine the proposed REDZ areas would not carry the support of DAFF in our experience. We are not able to value the benefit of a streamlined non DEA government permitting process until we are convinced of buy-in from the respective departments and understand the requirements, timelines and decision making process for additional permits.

  - There is an absence of how Private Sector consents will be tackled in the REDZ. It should be noted that there are various private sector consents required ranging from land owners, private sector telecoms and servitudes to financial institutions. Most of these private rights are protected by law. Our understanding is that there is no guaranteed buy-in nor streamlined process facilitated or enabled by the introduction of REDZ. We elaborate on this in Our Concerns section below.

- *Enabling Eskom to supply affordable transmission grid connection options*

  Mainstream is of the opinion that a big future challenge for the RE industry is affordable access to the transmission grid. One of Eskom's challenges is deciding which areas of the grid to open and where future grid must be. The REDZ may make it easier for Eskom to make these decisions.

  - Eskom transmission planning is complex and decisions made today will have a long term impact on the RE industry and SA as a whole. Eskom needs to plan today for energy developments coming over the next 10 – 20 years. As we cannot easily change the course of transmission planning once it is actioned. There may be considerable risk for Eskom and the country if Eskom uses REDZ as key input to their planning (this we prove below in our analyses of one of the proposed REDZ areas) as Eskom will spend resources in areas which may not be the best areas for RE in South Africa. We support a process which would enable most optimum future

transmission planning, but Mainstream is not convinced REDZ is the best outcome as detailed below and we suggest possible alternative options to the SEA process. Mainstream is concerned, that there is significant risk that Eskom may be planning for and inevitably then action the opening up of the areas which may not be the best suitable locations and that if they do, it will have a tremendous negative long term impact on the industry.

Mainstream's high level assessment of proposed wind REDZ areas

Below gives a quick high level assessment of the current proposed REDZ areas:

- *We assessed the proposed Stormberge and Winterberge REDZ in an attempt to understand the potential impact of the REDZ on the RE industry*

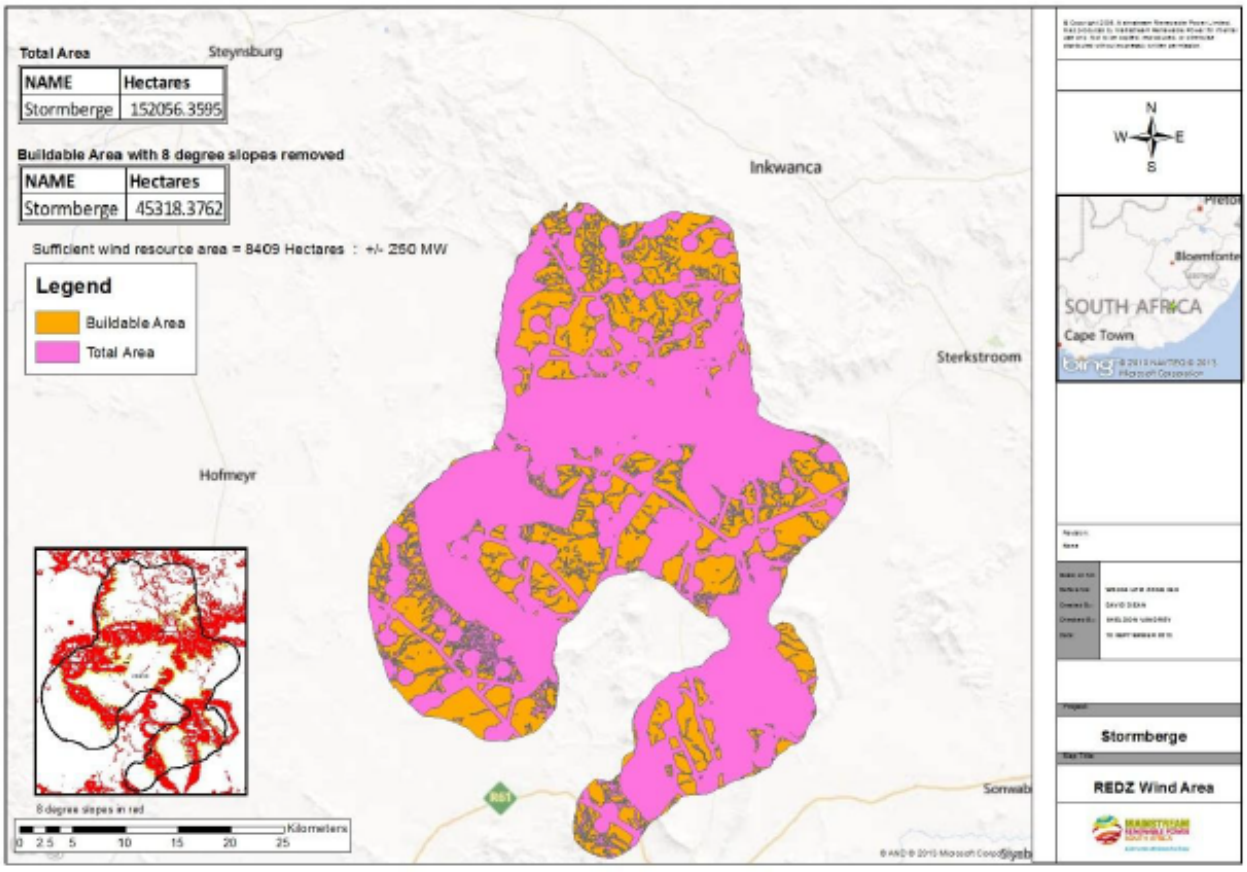


Figure 1 Stormberge Analysis

- The proposed Stormberge REDZ (Figure 1) is currently just over 152 000 ha. After applying buffers for technical, social, environmental and constructability issues the area had approximately 45 000ha available to build (buildable area). After overlaying our proprietary wind map, which has been validated at various locations, and using 7ms and above as the viable wind speed the final outcome resulted in the ability to develop on about 8000ha yielding a maximum of only 250MWs within the proposed Zone. [Assuming 3MW per square kilometre for the specific complex terrain, less complex terrain it may be as high as 5MW per square km]. On a desktop assessment a large proportion of the 250MW buildable area will not be accessible without considerable road works.

- This resultant scenario will clearly not enable South Africa to reach the RE targets in the IRP2010 and the concomitant benefits.
- The Winterberg (Figure 2) assessment resulted in a maximum potential development of only 164 MW in the identified area of over 73000 ha.

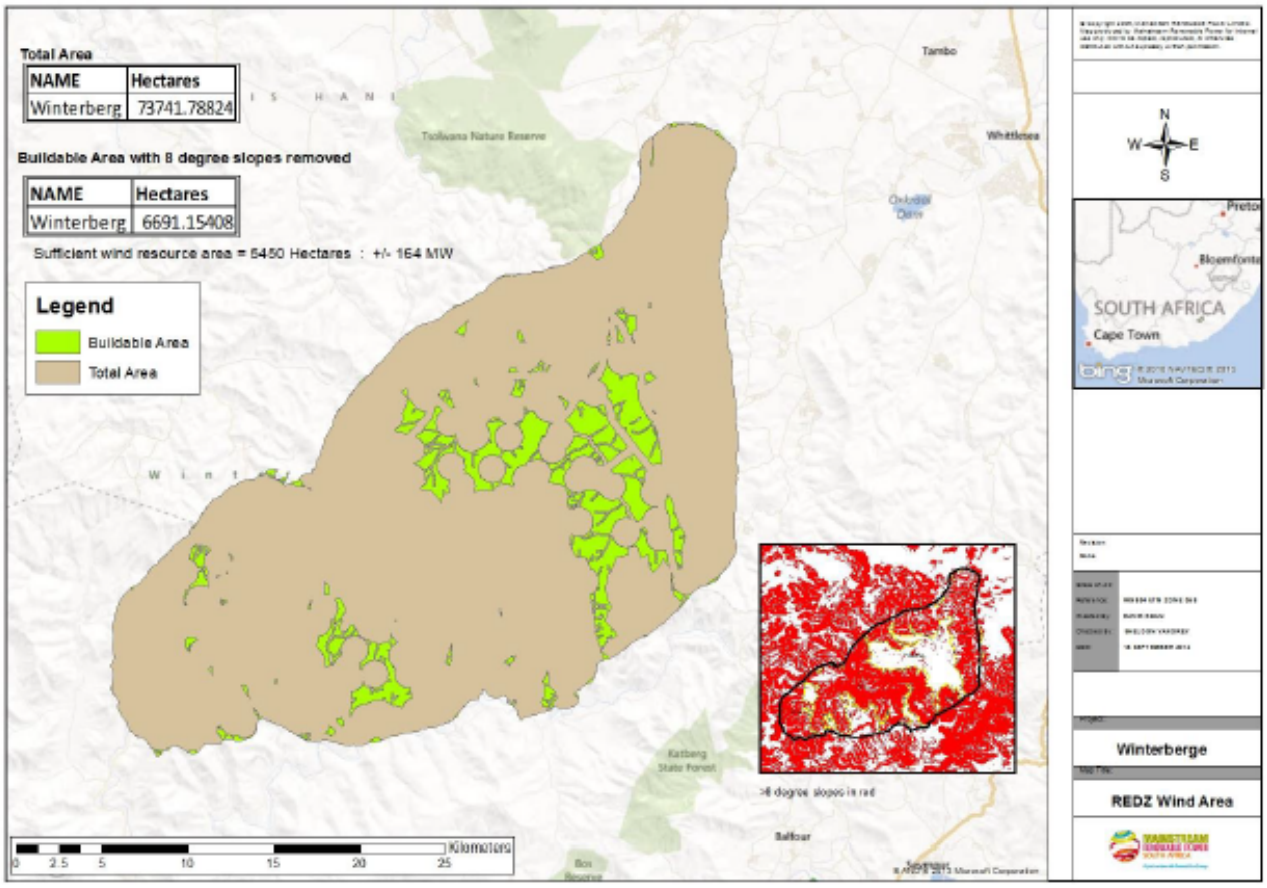


Figure 2 Winterberg Analysis

- *The wind REDZ areas, as explained by CSIR, are derived from a highly weighted wind resource criteria*

  - It appears however that the WASA map is biased to predicting high wind resource in areas where there is significant change in elevation. A large portion of the areas are located in complex terrain and mountainous areas. Complex terrain adds to cost, risks and uncertainty.
  - It appears that the WASA wind map may not be predicting thermally induced resource at all. South Africa has to its advantage several different wind resource driving mechanisms. The thermal wind resource found inland matches our country's demand profile in most cases. Omitting these areas from the proposed REDZ will be to the detriment of South Africa's wind energy capacity credit. These areas are less complex out of an environmental and construction perspective. Not establishing REDZ in these areas will add to South Africa's renewable energy costs in future.
  - Only 2 of the 15 proposed areas have a 60m WASA mast within the boundaries.
  - In just 6 of the 15 areas there may be developers measuring wind at some location, this data has not been utilised to determine whether the WASA data is reliable.
  - The wind REDZ areas seem to have been developed unfortunately on inadequate data leading to resultant areas that will not necessarily yield viable RE projects.

- *In addition there is little RE development activity in some proposed REDZ for a reason*

  - Approximately only 20% of wind development to date fall within the proposed REDZ areas. Approximately 80% of this 20% of current developer projects to date are located in only 3 of the 15 proposed REDZ areas.
  - Only 2 (Cookhouse and Overberg areas) of the 15 proposed areas have successful REIPPP Round 1 and 2 projects inside them. These projects have successfully acquired all permitting, received project financing of billions of rand, which required rigorous due diligence studies, and are currently in construction.
  - Of the 15 Round 1 and 2 preferred wind energy bidders only 3 projects are located within current proposed REDZ areas.
  - In 9 of the 15 areas no onsite environmental work related to wind energy has taken place.
  - Developers have spent millions of Rands over the past 4 years identifying suitable locations for their RE projects. If some of the identified REDZ areas

have not attracted developers to date, unless it is a grid issue, one has to question the areas viability.

This high level assessment suggests that the fundamental method used to determine REDZs is flawed ie nascent resource data and the "clean slate" approach has resulted in areas being identified where seasoned developers might not venture.

The discrepancy in development activity to date and the REDZ is a concern to Mainstream and suggest that determining successful REDZ is heavily dependent on the accuracy and source of data. It also suggest that it is not always likely that all developers or any other party will come to the same conclusions in determining best areas. Selecting the best areas is purely driven by the data available and assumptions made at a given point in time.

Mainstream's high level assessment of proposed Solar REDZ areas

Below gives a quick high level assessment of the current proposed Solar REDZ areas:

- Approximately only 30% of solar developments to date fall within the proposed REDZ areas. Of the 30% solar developments falling within the REDZ solar areas approximately 90% are currently located in 1 of the 8 proposed Solar REDZ areas.
- Only 3 of the 8 proposed solar areas have successful REIPPP round 1 and 2 projects within them. These projects have successfully acquired all permitting, received project financing of billions of rand, which required rigorous due diligence studies, and are currently in construction.
- Of the 30 Round 1 and 2 preferred solar energy bidders only 7 are located within the current proposed solar REDZ areas.
- In 3 of the 8 areas no onsite environmental work related to solar energy has taken place. An additional 4 areas only have limited amounts of environmental work completed. i.e. one environmental impact assessment. In total only one area has to a large extent had detailed environmental work completed.
- 4 of the areas are located in areas with complex terrain factors adding to cost, risks and uncertainty. These factors range from mountainous areas, extensive networks of drainage lines, large extents of irrigated agriculture.
- 4 of the 8 proposed Solar REDZ areas overlap with protected areas as seen below:

Figure 3 Solar REDZ Analysis

Our Concerns

Mainstream has the following key concerns:

- *Protection of Development Rights*

  - Equal opportunity for projects outside REDZ areas once gazetted (and before gazetted)

Mainstream's concern based on past experience interacting with authorities is that current and future projects falling outside the proposed REDZ areas will not be assessed on merit and will simply be rejected because it is outside a predetermined area. Depending on the complexity and location of a project there are between 38 and up to 50 permits required for a project to achieve financial close. These permits and/or consents are issued by all three levels of government and the private sector. There is a risk, and this has already happened, that officials may just take the easy route to make their decisions by using a REDZ map and not make decisions based on merit.

  - Equal opportunity in DoE procurement processes

Mainstream is concerned that projects being bid to the current or any other future government renewable energy procurement processes will be disadvantaged. This

could mean that great value for money, environmentally acceptable and affordable projects which has passed all criteria based on merit will not be successful. This will be to the detriment of the industry and to the country.

DEA will need to guarantee developers that the process is not in conflict with the REIPPPP objectives and processes, and has full support from the National Treasury and DoE, and will not place a project outside REDZ areas in a less favourable position with respect to being considered in the procurement process.

- "Exclusion areas" terminology

It has been noted that the CSIR and DEA refers to area outside the current draft REDZ as "exclusion areas". It is important that this term is not used as it will influence decision makers to the negative. Mainstream requires that areas outside to REDZ should not to be referred to in the negative in order to allow projects other than REDZ projects to be assessed on merit.

- REDZ needs to be an ongoing dynamic process (if gazetted):

It is highly likely, that if REDZ areas are gazetted, it will turn out that some areas are not viable, and that new other areas are fitting the criteria based on new or more accurate data.

Mainstream can only cautiously feel comfortable with the establishing of REDZ if this is an ongoing process where new REDZ areas are identified and gazetted at least every 2 to 3 years and already gazetted REDZ areas, which may not be viable, are delisted as REDZ. This implications of this uncertainty is however problematic to the investor community.

- The distinction of solar and wind REDZ is counterintuitive

The distinction of solar and wind REDZ is counterintuitive particularly in relation to Eskom planning areas in which to expand grid infrastructure. In many instances an early stage wind development may be determined to have an inadequate wind resource. In this case a project may be converted to a solar project. If there is a disjoint between the wind and the solar REDZ areas, such a conversion may not be feasible, resulting in a stranded asset for a developer.

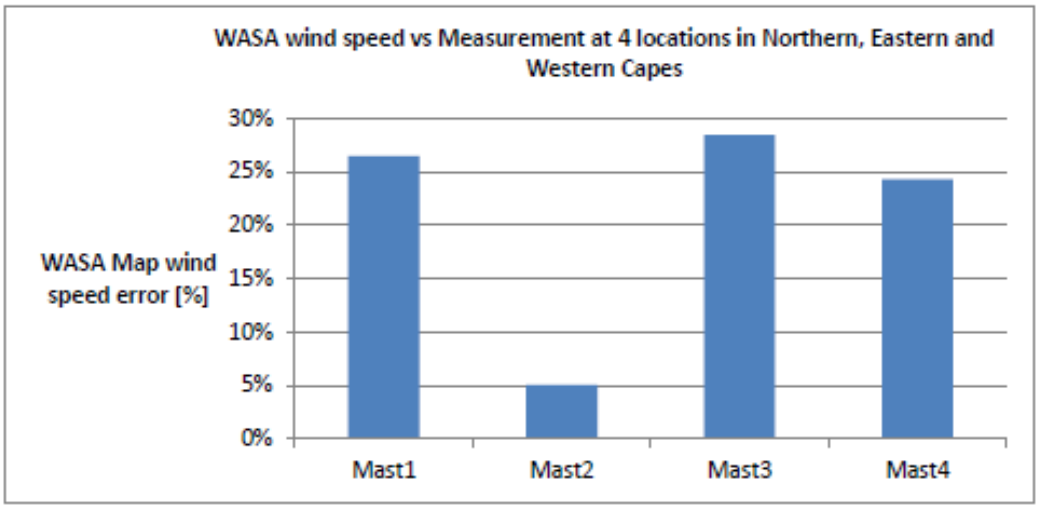
- *Paucity of Data*

- Wind Resource

Mainstream has concerns about the accuracy of the WASA map. We have commissioned two mesoscale models, one uses WRF and the second uses a proprietary model. Both models have been validated against the Mainstream's extensive network of meteorological masts.

Four masts owned by Mainstream have been used as a simple demonstration of the WASA wind map error, shown in the figure below. The masts used in the comparison below have been quality controlled and long term adjusted as required by our financiers and the REIPPP process.

The average wind speed error for these four masts is over 20%. This equates to around 30% in energy resource.



Additionally, Mainstream has concerns over the method which has been used to check the WASA wind map against measured data from the WASA network of 60m masts.

The Mainstream mesoscale wind maps predict very different wind speeds to those predicted by the WASA map. The differences between Mainstream's validated wind maps and the WASA map are of serious concern.

The dominant positive driver in the CSIR methodology for choosing REDZ areas is perceived wind speed. However it is our position that there is significant uncertainty in the wind speeds given our review of the WASA map. It should be noted that only two of the proposed fifteen wind REDZ have WASA measurements. Thus measurements have not taken place in 13 of the 15 proposed areas. This is a big concern and South Africa is taking significant unnecessary risk to plan for our wind energy future using only the WASA map.

The Department of Energy REIPPP process has rigorous requirements for wind measurement. Amongst other, it requires onsite measurements for at least 12 months, at minimum 2/3 of proposed turbine hub height. The correlation and long term adjustment must also be to a high standard. Financial institutions require high quality and high certainty measurements or a project will not be financed.

All of Mainstream's onsite bankable measurements at various locations differ considerably with the predictions of the WASA map.

DEA needs to ensure that areas that gets included in REDZ due to the perceived availability of resource actually do have the resource to warrant REDZ. This resource also need to be confirmed over a large enough area within REDZ to confirm that large scale wind energy deployment is possible.

DEA would also need to ensure areas that are excluded from REDZ due to perceived lack of wind resource only (and no other confirmed push factors) actually do not have enough resource through measurement.

- Birds and Bats

Experience has shown that the sensitivity of areas can only be determined by detailed studies. There are examples of projects that have been abandoned or amended significantly due to bird or bat sensitivity that was not picked up by during the scoping studies. This confirms that the existing desktop/mapping data for birds and bats in South Africa is not sufficient to determine REDZ.

It is likely that areas included in REDZ may have significant bird and bat issues that may not be possible to mitigate.

It is likely that areas outside REDZ, which have been excluded due to bird or bat sensitivities, may not have bird and bat issues.

To Mainstream's knowledge, the bird and bat fraternity will not support projects to continue without doing 12 month pre-construction monitoring. As a responsible developer, Mainstream prefers to perform 12 month pre construction monitoring, as it quantifies and mitigates potential risk for us and our financiers.

- Data dynamics

We note that little or no data and experience, gathered by the multibillion Rand RE industry, has been used to determine the latest draft REDZ areas and that this is a missed opportunity.

From Mainstream's experience, RE development in South Africa is currently quite dynamic and characterised by constant change in requirements and much uncertainty. This ever changing dynamic process is something experienced in any new industry in any country.

Mainstream is convinced our country does not have enough accurate data and experience available across the SEA focus areas at this moment in time to establish viable REDZ which could achieve the potential benefits envisioned by its proponents.

As one of the longest established developers of RE in South Africa with excellent public and proprietary information at our disposal, we still consider it a risk to be fixed on determining the outcomes and success of project locations until actual onsite data and

investigations has been measured and collected. Development is by nature high risk because of the many uncertainties

- *Permitting challenges*

  - Getting clarification from Department of Agriculture, Forestry and Fisheries

One of the significant "push" (were development should not be allowed) factors in the methodology used by the CSIR is based on DAFF's opinion of what RE development may be acceptable on which agricultural land. In Mainstream's experience we do not believe that DAFF has yet formulated a clear policy and decision making framework on how to accommodate RE on agricultural land. We feel that such a policy, (or decision making framework) which is informed by best international practice and all other stakeholders, is required to the benefit of RE and agriculture in SA.

It is also not clear why different "agricultural exclusion" criteria is used for wind and solar. In our experience there is no difference in the way DAFF assesses wind and solar projects. Based on this there are several areas within the current REDZ that would be to our knowledge excluded by DAFF due to it being on cultivated or previously cultivated within the last 10 years land.

Clarity should also be obtained from DAFF in relation to their policy to only allow the development of no more that 10% of any given farm portion. How will this policy impact on the REDZ? Has this been considered?

Before any REDZ can be developed, where agriculture is used as a push factor, there must be a clear decision making framework established by DAFF.

In Mainstream's opinion, if DEA cannot facilitate a clear sensible policy from DAFF which receives support in general from majority of stakeholders, then it is not possible to gazette REDZ where agricultural inputs have been used.

  - Additional permits and criteria

In addition to the criteria considered in the REDZ identification process, there are other important factors that have not been considered. In the normal day to day process of identifying potential wind farm projects, developers go through a detailed exercise of assessing a large number of criteria which could potentially be detrimental to the development of a RE project. Although some of these criteria have been assessed by DEA/CSIR in determining the REDZ, below is a list of such additional criteria we see no evidence of being considered by the DEA/CSIR:

- Telecommunication – The Telecommunications Act provides certain powers to telecoms operators to give immediate notice to stop the operation of any development (including wind/solar farms) causing interference with their telecoms network. In our development process we have identified this as a

major potential obstacle to wind farm development. We therefore consider it extremely important that this issue also be considered in identifying REDZ. All major telecoms role-players have networks crisscrossing South Africa and as such each of these operators should as a minimum be part of this exercise. The major operators include: Telkom, Sentech, Vodacom, MTN, Transnet, SANDF, etc.

- Spatial Development Frameworks (SDF) – As has been highlighted by recent high court rulings, local government is the only authority responsible for land use planning and management within their respective jurisdictions. The question therefore arises whether SDFs have been considered in the REDZ. If not, then this is seen as a major flaw as the potential then exists that some of the identified REDZ may be located in areas identified by the relevant local authority for some other purpose/land use.

- Radar services – Although SANDF radar service have been considered it would appear that other radar operators have not been considered such as SAWS and ATNS.

- Mining/exploration – Another issue that has been causing developers major issues of concern is mining and exploration rights. In accordance with the requirements of Section 53 of the Minerals Resources Act ministerial permission is required for any use of land not zoned agriculture. RE Project developments can be negatively impacted due to the existence of mining and exploration rights on properties. It is not clear whether this risk has been considered by the REDZ process, if not it is strongly advised that this be included in the criteria for identifying REDZ.

- Drainage lines and flood areas – Although consideration has been given to rivers and wetlands, experience have shown us that such high level studies are not sufficient. In order to get the real picture detailed studies will have to be conducted on each of the identified REDZ areas prior to gazetting. Such studies as a minimum, require detailed contour maps (1m intervals or less) to be prepared. Experience has shown that minor drainage lines (even in the dry Northern Cape) could cause significant problems in terms of water use licences. Mainstream has not received information about how the Department of Water Affairs requirements were captured within the determining of REDZ to date.

- Private sector consents - Several private sector entities may have existing rights in specific areas. These rights are protected by law in most cases and may mean that developments within REDZ may not be streamlined. These

private rights would include land ownership, servitude holders, financier bond holding on properties, licensed telecommunication operators and limitations registered on the title deeds of certain properties.

- Accessibility & Buildability – Although slope has been used as an criteria for identifying suitable areas for development it is evident that most of the wind energy REDZ are located in mountainous areas (mostly due to the influence of the wind resource map used) which raises questions of accessibility. Transporting turbines into these areas should be assessed and considered. Apart from the above most of these areas appears to have complex terrain which raises the question of how suitable these areas are in terms of wind farm construction. The more complex the terrain the greater the chance for environmental impact, erosion etc. This also pushes up construction cost considerably thereby impacting on the ability of providing cost effective developments that would benefit the economy. Complex terrain adds to onsite wind resource uncertainty and increase in financing costs.

  - Additional Solar specific concerns

- Although a high global horizontal irradiance is a key component in selecting a viable solar project, access to grid infrastructure at a reasonable distance and cost can be a much more important determinant in selecting a solar project.

- Solar REDZ areas containing high voltage transmission are often not practically accessible to a solar projects with the generation capacity cap under the current REIPPP system.

- The provision of sufficient land area within the Solar REDZ areas will not necessarily prevent a potential 'Gold Rush' scenario. It may well cause significant speculation not necessarily by entities who want to develop projects. The scramble for land will be even more intense in a designated zone.
- There is currently no provision for a scenario where one developer gains the rights over the land surrounding the substation or grid line, therefore obtaining singular control over access to the infrastructure within in the REDZ area. Additionally, making grid access available via the provision of new substations/ grid lines is also problematic. In both cases there is the potential for a 'Gold Rush' scenario by speculators to arise specifically for land with grid access and not simply land within the REDZ area.
- Further to the Gold rush scenario, limited space to access limited grid within a REDZ area may encourage collusion between one or two entities in order to control an entire development node within a REDZ area. What provisions will be made to prevent collusion within the predefined REDZ areas?

- Finally which entity would be liable for the cost implications of stranded assets and increased land values in the case of a 'Gold Rush' scenario?

- Solar REDZ areas have incorporated locations of which significant portions contain centre pivot irrigated agriculture. Input data informing the agricultural push facts in the REDZ process would need to be revisited. What criteria of the assessment allow for the inclusion of large extents of intensive agriculture with in a proposed industrial development zone? Input data informing the agricultural push factors in the REDZ process would need to be revisited and tested.

In order to support the SEA initiative Mainstream would require the expansion of existing areas or the creation of new REDZ areas to accommodate grid infrastructure that is practically accessible and increases the number of connection options available to a developer to prevent a 'Gold Rush' scenario. Furthermore, the expansion of REDZ areas could avoid conflicts requiring a choice between agriculture and a solar facility, rather allowing for enough space to accommodate both activities.

The Alternative

At minimum Mainstream proposes the following:

- *If REDZ process continues: Protection of development rights*

  In order to give our cautious support to the REDZ initiative it must be guaranteed by the DEA that all projects outside any REDZ area will be judged on merit. This can only be done if this concern is specifically addressed in the Government Gazette that governs REDZ. Thus when developers are confronted with decisions not based on merit they can use the Gazette to inform officials that their decision based on a predetermined map is not allowed.

  The DEA must also ensure that no project which falls outside the current draft REDZ areas is discriminated against before and if REDZ gets gazetted. This would be best achieved by a letter confirming this signed by the Minister of Environmental Affairs or delegate. This letter must be circulated as wide as possible and be made available on the relevant public forums throughout this process.

  Even if the DEA does ensure the appropriate use of the REDZ areas is captured in the Government Gazette, Mainstream is still of the opinion that strong, environmental sound and great value for money projects will be disadvantaged outside REDZ.

- *If REDZ process continues: Supplementing the WASA wind map*

Given the high uncertainty with the WASA map, Mainstream proposes extending the validation of the wind map. All sites submitted into the three REIPPP rounds had to have high quality measurements and estimates of long term mean wind speeds as minimum requirement, thus the DOE has access to high quality 3rd party approved wind data for several projects across the country.

The REIPPP independent technical reviewer should assemble the wind speeds at each measurement point and perform an independent validation against that WASA map. This review should be independent of DTU and confidential. It will provide an independent review of performance and allow informed decisions to be made on the suitability of the WASA map for defining future strategy.

In addition to reviewing the wind data submitted in the REIPPP process Mainstream suggests that the DEA commission additional high quality measurements in areas included in the proposed REDZ areas before it gets gazetted. South Africa needs to be certain of the quality of resource in the proposed REDZ. Also, DEA should embark on a programme to measure high quality wind data in strategic areas outside proposed REDZ where independent analysis of the data submitted through the REIPPP process do suggest potential.

- *An alternative to REDZ : Non Geographical "REDZ" facilitated by an Integrated Permitting Process*

The biggest challenge experienced by Mainstream during our 4 years of active development over 5 provinces is that there is no integration between the different levels of government, no clear decision making process or framework and no mandated timelines for officials to operate within.

What we propose and what we believe would have better results than the current proposed geographical REDZs and would address most of our concerns is an integrated permitting process, which is not geographically limited, were:

- There is a clear decision making framework (DMF) established within each relevant government department.
- Each DMF will be developed by each respective department in consultation with all stakeholders.
- The DMF will not be bound by geographical limitations but instead will be based on the actual onsite specifics of the project. This will ensure decisions are based on merit and not on potentially ill-informed maps.
- The DMF will clearly state to all stakeholders what is required to apply for a permit.

- Application requirements will be triggered by actual onsite data and environmental features as established by specialists studies and other public data
- The DMF will enforce which other government departments and stakeholders (where relevant) needs to have input into a specific decision thus ensuring that decisions are integrated.
- Application requirements may include approval from another government department or stakeholder which will ensure integration and a natural permitting flow process.
- The DMF will adhere to strict decision making timeframes, which will streamline the process and ensure industry can plan accordingly. Failure to make a decision within the mandated time will be regarded as approval.
- The DMF will enable officials to make quicker decisions backed by official policy which is absent at the moment in most government departments
- The DMF will identify the specific person in specific areas - by name - who is responsible for making these decisions.
- The DMF will facilitate that the officials named by the DMF dealing with these applications has the proper training and skills in place and are equipped to make decisions.
- The DMF will be amended as required through consultation with all stakeholders. This will ensure that information gathered and experience inform our best decisions.

Using a well thought through DMF, which is not based on geographic zones derived from information which is not ground proofed, will allow the natural progression of the RE industry. Natural progression will adapt and evolve as data and knowledge become available and ensure we place our RE in the best possible locations.

The issue of grid planning

- *REDZ areas may bias future grid plans away from the areas in need of refurbishment, and*

  towards new grid development in the REDZ areas which may not be the most practical solution as many developments have been planned on the basis of existing grid infrastructure.

- *A number of the solar REDZ areas target transmission infrastructure which is costly to access and open up to developers, whereas areas have been excluded where investment in lower cost distribution infrastructure will yield large scale solar deployment.*

- *Alternatives to enabling Eskom to open the grid in the correct areas for Level 2 Transmission Grid Connections*

  Level 2 type connections are considered to be existing Transmission Grid (Tx) which can be opened easily and in relative short timeframes, provided that required

funding is in place. Level 2 connections are in most cases linked to existing transmission sub stations. These locations already exist and the RE industry has naturally started developing in these areas, recognising that affordable access to Tx has to be forthcoming at some point in time. Establishing REDZ is not a requirement in informing Eskom which Level 2 grid to open, Developers are already located and developing the most viable options/sites and Eskom can determine which areas to prioritise by reacting to industry demand. Mainstream suggest that Level 2 Tx connection may be realised by:

- Changing the current REIPPP process to facilitate for Level 2 Tx connections, the current REIPPP process does not facilitate Tx connection and was designed (as it makes sense to do so) to enable the RE with most cost effective and shortest lead times first (distribution grid connections). There are a number of possible changes to the REIPPP process that will enable easier Tx access. Mainstream believes the industry, all stakeholders and the DOE must work towards adapting the REIPPP to enable Tx connection.
- Currently only Eskom can build Tx, which means the timing and costs of Tx is not always reflective of what may be possible within the private sector. We understand from Eskom that a Tx self build policy is imminent for release, which would enable private sector to be in control of timing and costs which will improve affordability and realise more development and clustering within level 2 areas.
- Tx connection enabling changes to the REIPPP process and Tx self build will make projects connecting to existing Level Tx more viable. The industry will respond to this by pursuing more projects in these locations. Naturally the industry will pursue projects where they believe to have the highest chance of success. The areas where developers do have the highest success based on onsite development effort is where Eskom should act on demand.

- *Do we need REDZ to enable Eskom to design the grid in the correct areas for level 3 grid connections? :*

Level 3 connections are considered for areas where there is no existing grid but there may be good potential RE opportunities.

Mainstream believes that the current Eskom planning process (which needs to consider all future generation and demand scenarios) is sufficient to enable level 3 RE connections in future, subject to Eskom and the relevant industries being in ongoing consultation throughout these planning processes. To this point Eskom has been consulting the RE industry and we trust it will proceed as per our consultations. Eskom has to date, by considering development demand and consulting all stakeholders, have a good understanding of what our future grid

must look like.

Mainstream do not consider geographical REDZ as a minimum requirement for establishing future grid demands. Future energy load demand, power generation of all types and South Africa's integration with the Southern Africa Power Pool are all factors contributing to the future grid. There are no SEA's in place or planned to be for all the other contributing factors for future grid planning. It is not clear why RE has to be established in REDZ in order for future grid to be planned.

Mainstream supports the assumptions made by Eskom Tx planning and we also support Eskom's opinion in how South Africa's grid needs to change as presented by Eskom (Mr Ronald Marais) to the SEA process on 30 August 2013. We do not see the establishing of REDZ changing the current Eskom Tx planning conclusions.

Mainstream believes the best alternative to REDZ as a tool to inform Eskom's future level 3 RE grid is the Transmission SEA's which is due to start development. If the process which determines the Tx SEA's corridors is informed by RE industry and other stakeholders the corridors should be within potential future RE opportunity areas. This will enable level 2 connections again and Eskom's planning will be determined by developer demand again as described above.

Mainstream supports the Tx SEA process.

Conclusion

The RE market in SA needs developer, investor and regulatory confidence. For the reasons elaborated on in this letter, REDZ bring uncertainty and risk. There is also the potential legal challenges that may stall a well-intended process and mechanism. At this stage it is not clear to Mainstream how REDZ, once and if gazetted, will be managed and implemented.

Whilst all parties may agree that there may be potential advantages to REDZ, we need to acknowledge that previously applied geographical zones both locally (Western Cape) and internationally (Wales), have failed to deliver the desired results and have resulted in limited RE development in that jurisdiction.

It is unfortunate that rigorous and sufficient consultation with all players in the RE industry did not take place when a decision was made that the SEA process was the best way forward for the industry in South Africa. We are also disheartened that consensus was not achieved by all role players on whether South Africa requires the REDZ to maximise the benefits to society of the RE industry.

In order to ensure a REDZ concept is well suited to the challenges and nature of the market, more in-depth consultations will be needed to gauge industry views and to address the set of complex development and market dynamics.

Mainstream does not believe that REDZ will yield the best results for the future. We would welcome a process or debate where all stakeholders can discuss whether REDZ is the best way forward, and if the majority of stakeholders decides REDZ to be the road forward; the framework of how REDZ will be implemented must first be established before embarking on an exercise to determine REDZ areas.

We do not believe that the current SEA process has sufficient information available to it, to determine the longer term future of our RE industry without taking significant and unnecessary risk. Determining the South African RE roadmap ahead in a relatively short space of time, with inadequate information would not be to the benefit of any stakeholder.

If SEA's for RE is the only way forward then:

- The development rights of projects outside the REDZ must be protected, and all projects inside and outside REDZ must be judged on merit.
- SEA input data and criteria must be defendable.
- All possible benefits of REDZ including streamlined permitting must be realisable.

Although the above will take significant more resource and time we cannot afford to steer our RE industry without this knowledge and effort.

Mainstream will participate in such a process if initiated. Mainstream currently believes however that there is a better alternative to the proposed REDZ.

Furthermore, Mainstream would like to invite the CSIR and DEA to spend some time with our development team in order to appraise themselves of the detailed information that has been put forward in this letter, and to view first-hand our complex and detailed development criteria , so that the DEA and CSIR can better understand the development process and its challenges from a developer perspective, as well as the risk inherent in moving from the current market situation to a new dispensation.

Regards

Leila Mahomed Weideman
Director: Development and Operations

CC ***Dee Fischer:*** **Chief Director:**
Integrated Environmental Management Support, Department of Environmental Affairs

Response from the SEA team:

The first key concern relating to the protection of development rights outside the REDZs have been addressed in the SEA report. It is clearly stated that the REDZs are not intended to hinder any development. It is clearly stated that all projects, whether inside or outside REDZs, must be considered on their own merit.

The second key concern relating to the quality of the data used, especially the resource data, have also been addressed by affording developers the opportunity to inform the location of the REDZs based on more accurate measured data at their disposal.

The final key concern relating to the permitting processes in the REDZs (e.g. how removing the EIA process would result in blockages of other permits that are currently issued based on the EIA process) have also been addressed by not doing away by the environmental authorisation process. The process is rather just streamlined by requiring a Basic Assessment process which is informed by the criterial stipulated by the SEA.

As also responded to the SAWEA comment, it is noted that there are risks involved in making decisions now that will have long term implications for the industry (e.g. deciding where to make strategic investment into the transmission grid). Not making such decisions will, however, almost certainly lead to lack of strategic action and could severely compromise future development.

Red Cap, 14/03/14

redcap
RED CAP INVESTMENTS (PTY) LTD
Reg No. 2008/026283/07
Unit B2, Mainstream Shopping Centre
Main Road, Hout Bay,
7806

National SEA for Wind and Solar- Motivation for the recognition of the Kouga/ Kou-Kamma municipal area as a REDZ or for a detailed overview of why it was not chosen in the support documentation linked to the REDZ

Red Cap has motivated on numerous occasions for the inclusion of the Kouga/ Kou-Kamma area as a REDZ. With the release of the Phase II focus areas it is apparent that this area will not be considered as a REDZ in the SEA. We still believe strongly that it should be a REDZ given it has proven through the REI4P bidding process to be one of the most successful wind development areas in the country and due to the motivation presented later on in this letter. However, if it will not be considered as a REDZ, then we would like to propose a strategy to ensure that this areas potential to deliver world class wind energy projects for South Africa is not unduly constrained by it being left out of the REDZ.

We understand that the REDZ areas determination will be accompanied by a document that explains why and how the REDZ were determined and which details the push and pull factors and specific requirements of each REDZ. We believe this document needs to be prepared from the Phase II delineations stage so that it is clear from this point forward what factors are driving these REDZ. What we propose is that in this document there should be a section on areas that have significant pull factors/ proven track record through the REI4P bidding process but have been left out of the REDZ. There must be a few areas like this that the SEA team deliberated over more than others and for some reason decided that they just did not make the cut.

In the proposed section in the documentation that goes with the REDZ it should be clearly motivated why these areas were not made a REDZ and what factors were the deciding factors in disallowing these areas to be a REDZ. We believe that to ensure the REDZ process overcomes some of the potential pitfalls that have been raised through the REDZ process, such a section in the documentation is critical. By detailing the areas that just did not make a REDZ, one is acknowledging that no process is perfect and you are presenting useful information about the grey areas that would otherwise be lost. This will ensure that if an area was not included in the REDZ for example merely on size of the area, grid or broad sweeping agricultural issue then future projects in these areas will at least be able to reference this section of the REDZ documentation and motivate why they overcome the issues raised. This will go a long way to prevent IAP's and Authorities from incorrectly believing that if a project is outside a REDZ it should not be considered, especially where the reasons for it not being in a REDZ are possibly not due to a fatal flaw but merely due to the global cut off factors that were chosen to make the REDZ workable.

As has been communicated to industry on numerous occasions, it is not the aim of the REDZ process to unnecessarily prejudice areas outside the REDZ. We do have to be pragmatic though and acknowledge that perception is 9/10 of reality and no matter what is done to prevent this the REDZ process will prejudice projects that are in fact world class projects but happen to be outside a REDZ. We thus believe that the areas that did get close scrutiny during the REDZ process, due to many good pull factors, but were still not made REDZ should at least be mentioned and clarity given why they were not eventually included into the REDZ. It is incumbent on DEA to ensure that the effort put into assessing these areas, whether included or excluded, not be wasted but be documented to ensure that the reasons for exclusion are known.

We respectfully request that you consider this proposal and let us know in writing your decision in this regard.

DIRECTORS: Mark Tanton • David Nicol

The motivation for the Kouga/ Kou-Kamma municipal area (Cell K10 in the Development Prioritisation Grid) to be made a REDZ is summarised below.

- It has proven through the REI4P bidding process to be one of the most successful wind development areas in the country
- The fact that we have been told by the team working on the SEA that they spent a lot of time considering this area given its obvious potential and that it was not a simple process to exclude it. The detailed assessment and deliberations that are linked to this should not be lost but should be captured in documentation linked to the REDZ process to ensure that the REDZ process goes further to achieve its goal of "championing" the development of sustainable renewable development in South Africa.
- **Dispelling the push factors**: Due to the significant impact the REDZ will have on the future of wind development in the country one of the major inputs into their determination must be any empirical evidence that is available. The undisputed empirical evidence available is projects that have made it to preferred bidder status, financial close and also projects that have received their EA and DAFF consent (processes that assess in a very detailed manner the majority of the push factors). In K10, there are 5 projects after round three that have been awarded preferred bidder status (and there could be more with the proposed increased MW allocation as three more wind farms were bid in round 3 which could still be successful), 4 that have reached financial close and thus obtained all their permits and about 8 and 6 that have received EA's and Daff approval respectively. Also the cheapest preferred bidder tariff is from a wind farm in this grid showing that it is one of the most competitive areas in South Africa.
- **Highlighting the Pull factors**: K10 contains one of the best wind resources in the country and the fact that this does not stretch far inland should not be any reason to exclude it from a REDZ (as indicated it has already attracted 5 preferred bidders which in itself should be good reason to make it a REDZ and even inland the wind resource is better than many of the other proposed study areas). It also is in an area of good grid capability as it could be upgraded far more easily than a lot of other existing and greenfields areas (a lot of work has already been done by Eskom on upgrading this area given the potential of the Thuyspunt Nuclear site in this area). It is close to a major industrial Centre (PE), and IDZ and Port (Koega) and there are many previously disadvantaged communities in the area that are in desperate need of socio-economic development. The only local tower manufacturer for wind turbines has specifically established themselves in PE given that from their analysis this is the industrial hub that is the closest to the maximum number of future wind farms. Thus making more REDZ close to PE will enhance the success of this tower factory and thus the Green Economy that is linked to the Renewables Industry which government is trying to encourage.
- Given the empirical proof that this area can not have significant environmental factors preventing wind development (the number of projects that have obtained all their approvals after detailed site specific processes) and then the fact that it must also be a very good wind development area (the large number of projects being successful in the competitive bidding process) it is hard to see what factors could be used to prevent this area from being included in a future REDZ.

We appreciate the incredible effort that has gone into developing the REDZ and we hope that you consider this input as something positive to try help improve the final product.

Regards

Lance Blaine

Response from the SEA team:

The SEA team hereby reiterates the SEA report statements regarding the intention of the SEA not being to in any way hinder wind and solar PV development outside the REDZs and that suitable development is still promoted across the country. Each proposed project within and outside REDZs must thus be adjudicated on their own merit. The SEA team also acknowledges that there were areas of suitable development potential that were initially deliberated and finally excluded from further consideration as REDZs.

Some of these wind areas that were deliberated and finally eliminated from further consideration were identified as Phase 1 Study Areas with exceptional development potentials (e.g. areas around Nieuwoudtville, Beaufort West, Murraysburg, Aberdeen and the Tankwa-Karoo). These areas were eliminated predominantly based on the fact that they were not identified as 0-5 year

priority areas by developers during the industry consultation process. The reason for developers not identifying these areas as being of a 0-5 year priority might be due to a lack of existing infrastructure (e.g. the Tankwa-Karoo and Nieuwoudtville areas) or other technical constraints which can be overcome to allow for development in these areas in the longer term.

Other areas of known high wind resource potential that were deliberated and eliminated from further consideration based on potential environmental sensitivities included the Jeffrey's Bay and Bisho areas. The Jeffrey's Bay area was eliminated on the basis of not being a large enough resource area to justify a REDZs and potential agricultural sensitivities. The Bisho area was eliminated predominantly based on potential bird, bat and civil aviation sensitivities. The improvement of available information on these potential sensitivities and impact assessment at a project level may find developments in these high resource areas to make sense on their own merit.

From a solar PV perspective high development potential Study Areas around Vredendal, Ceres and Beaufort West were eliminated based on them not being identified as priority areas by the industry, and the fact that the area around Ceres was already identified as a FA for its wind development potential. Other areas such as Klerksdorp and Kroonstad were also deliberated and eliminated based on their potential agricultural sensitivity. This sensitivity could, again, be addressed through project level assessments to allow development in these areas.

Innowind Pty Ltd, 24/10/14

environmental affairs
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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Louis Dewavrin
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Phone	071 917 0452

Please insert comment under the relevant heading:

1	POSSITIVE MAPPING
2	NEGATIVE MAPPING
3	IDENTIFICATION OF STUDY AREAS
4	STUDY AREAS

Wind Study area 1: No comments (looks good)
Wind Study area 2: No comments (looks good)
Wind Study area 3: Poor Wind resource. Other areas of the country with more potential should be prioritized.
Wind Study area 4: Average/poor Wind resource. This should be a long term target.
Wind Study area 5: Poor Wind resource. Other areas of the country with more potential should be prioritized.
Wind Study area 6: No comments (looks good)
Wind Study area 7: No comments (looks good). Possibility to extend the zone to the East/south East.
Wind Study area 8: The zone is too small and should be extended to the North. There is an airport at the south of the zone as well as some nature reserves in close proximity.
Wind Study area 9: Looks good.
Wind Study area 10: Looks good
Wind Study area 11: Average wind resource, already close to an over concentration of wind farms in the cookhouse area. Higher wind resource to the north of that Zone. This zone should be shifted to the north.
Wind Study area 12: There are lots of game farms within that zone. Their very strong opposition to wind farms has already resulted in the stalling/death of several projects in that area. The southern section (south of N2) looks a bit more promising due to the lower number of game farms in that section of the zone. The area located between Port Alfred and Hamburg should be included and should actually be the centre of that Wind development zone (i.e. part of cell J13 and the south western section of cell J12). This area has no game farms, stronger wind resource and more disadvantaged people living in this area which would benefit from ED, SED and community trusts. Please see the Eastern Cape spatial development plan attached to my email. Appearing in green and Purple are the nature/game farms. The areas hatched are only a potential proposal made by the EC government. The game farm industry is seriously suffering so I don't think this will materialize and this development map doesn't take into account Renewable energy development.
Wind Study area 13: This zone has good wind potential but should be expanded towards the East/south East and end a few kilometres before the reaches the N6 and the R352 (i.e. include south east section of Cell I12 and South West section of Cell I13 . There are a lot of empty grazing lands with good wind resource in that area.
Wind Study area 14: Very good. This zone should be extended towards the North East of Cell H12.
Wind Study area 15: Looks good
Proposed Wind Study area 16: The area between the towns of Butterworth, Nqamakwe and Idutywa in the former Transkei should be included (i.e. Cell I14). There is good wind resource, grazing land available and the people that need development the most I the country. The potential impact on vultures should not prevent the creation of a REDZ. The site specific impacts will be assessed anyway. Why is this historically dis-advantaged region once again being discriminated against?

5	GENERAL

Page 1 of 1

DEA Wind and Solar PV SEA Phase I Study Areas Comments

Response from the SEA team:

The inputs received from Innowind were taken into consideration when refining the boundaries of the study areas. The indication for wind study area No 12 about the abundance of game farms in the area and the objection of several game farmers towards wind energy projects has been noted and discussed with the ERG and PSC as well as relevant departments during the SEA consultation process.

Dr Stuart Shearer, 15/09/13

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Dr Stuart Shearer
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Please insert comment under the relevant heading:

1 POSITIVE MAPPING
The inclusion of municipalities with high social needs as a positive factor is a red herring as the reality is that very few long-term locally sourced sustainable jobs will be created. In sensitive tourist areas jobs may in fact be lost. It is stated that "micro scale WASA wind map was only planned for release early 2014, but delivery expedited for the purpose of the wind SEA. Data are still preliminary and have not been officially launched with necessary disclaimers and supporting documentation." Therefore the whole SEA process is fundamentally flawed at this stage.
2 NEGATIVE MAPPING
There would appear to be enhancements for some natural environmental categories between Phase I, and what is planned for consideration in Phase II: However, even in the second phase DEA Protected areas are not receiving buffer zones, though hopefully the 5km or viewshed buffers will be applied to the SANBI protected areas, and the proposed 10km or viewshed buffers applied to National Parks. Serious flaws are that unprotected CBAs, threatened ecosystems and IBAs are not considered. Several avian species of conservation concern have been totally ignored. E.g. Blue Cranes, Martial Eagles, African Marsh and Black Harriers, Ludwig's and Denham's Bustards to mention but a few. Mountains, hills and ridges should have been considered in line with the Guidelines published by the DEADP of the Western Cape. What is the rationale for the proposed change in the Coastal buffer from 1Km to the 10m contour, which would appear to be a reduction in protection? Important bird flyways such as Saldanha and Verlorenvlei are not considered for buffers in either Phase I or II which is a serious omission. Whilst some broad-brush 'biodiversity' advisers have been consulted there does not appear to have been any input from Specialist Botanists, all of whom should be closely familiar with the different study areas. What were the underlying decision-making criteria for this very mixed bag of buffer zones? While large bat roosts have been identified, bat migratory and foraging routes are largely unknown. THE PRECAUTIONARY PRINCIPLE HAS BEEN IGNORED THROUGHOUT AND IS NOWHERE MENTIONED.
3 IDENTIFICATION OF STUDY AREAS
Mapping is too coarse to consider real differences in environmental and ecological factors at local levels, which is why project-specific EIA studies should not be abandoned. The refined "wind study areas" seem to be based on existing and proposed applications rather than on any scientifically based criteria, bearing in mind the incomplete and possibly inappropriate wind mapping data.
4 STUDY AREAS
Masking and mapping seems to have been driven more by expediency regarding the existence of existing and planned RE projects in certain areas i.e. manipulating the criteria to suit the perceived political and developmental agendas.
5 GENERAL
The subtitle" To facilitate the efficient and effective rollout of wind and solar PV energy in SA" really says it all. The bottom line is that existing environmental legislation is being emasculated for the expediency of political and

investor interests.
Impartiality of the findings should be examined, with Specialists and the Project Team themselves being extensively involved with RE EIAs.
"It is the primary objective of the SEAs to incentivise development in best suited areas (i.e. REDZ). The current EIA process will still be available to apply for RE development outside REDZ." This reveals a disgracefully flippant attitude to environmental protection and legislation.
The delisting of NEMA listed activities for these geographical areas (REDZs) is an outrageous proposal flying in the face of responsible international, national and regional environmental protection, simply to pacify the increasingly strong RE lobby, and may be regarded as being unconstitutional.

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DEA Wind and Solar PV SEA Phase I Study Areas Comments

Response from the SEA team:

The inputs provided have been taken into consideration and the mentioned sensitivities assessed at a scoping level (see Part 3 of SEA report). The need for additional assessment at a project level has been recognised and the assessment and authorisation processed remain in place in REDZs. The precautionary principle is thus applied in this manner.

Alan Mitchell, 17/09/13

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Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	ALAN MITCHELL
Company	RETIRED
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Please insert comment under the relevant heading:

1 POSITIVE MAPPING
The operators of the local distribution and national grid points of connection must approve the mapping of "suitable" wind and solar resource sites, bearing in mind the probable impact of the non-dispatchability of wind and solarpowered generators. The grid operator requirements for the types of wind and solar generators must be complied with. These requirements should address whether asynchronous, permanent magnet, or converter fed machines are permitted, and whether anti-motoring and fault ride-through provisions are to be made, as well as provisions for energy storage.
2 NEGATIVE MAPPING
The list of exclusion zones must be sanctioned by the operators of local distribution and national grid connection points to ensure that the points under 1 above are not problematic, after evaluation of operating experiences with early South African wind and solar powered projects.
3 IDENTIFICATION OF STUDY AREAS
The operating experience with pilot projects already accumulated must be fully and transparently communicated to the satisfaction of the local distribution and national grid operators, as well as the general and local public. So far this has not been the case for wind, despite the Darling Wind and Klipheuvel experiences. Accordingly, any "fast track" simplification of site/project approvals for wind and solar, or any renewable sources of primary energy for that matter, should be ruled out.
4 STUDY AREAS
If South Africa genuinely belongs to all who live there, the local inhabitants and land owners must obviously be fully involved in decisions on what studies are appropriate to whatever projects are proposed. As our governments, whoever they are, are effectively servants and trustees of the South African public, they must meet their fiduciary obligations in this regard, which does not fit with the concept of "fast track" environmental approvals of any sort.
5 GENERAL
There seems to be a quite unnecessary urgency to spend a great deal of public money on "fast tracked" projects to build renewable energy powered generation of electricity. There seems to have been very little attention paid to a considerable body of adverse experience in other countries, raising questions about lack of due diligence by those entrusted with stewardship of South Africa's resources. It would seem that all the attention paid to fast tracking renewables has detracted from the impetus needed to get on with providing dependable dispatchable generation plant run with proven technology. A regrettable situation indeed. I retired after an entire career in South African generating projects and am greatly saddened by much of what has happened to compromise the economic growth of South Africa in an industry that should be structured to avoid political intervention as far as possible Alan Mitchell Simon's Town

Response from the SEA team:

The grid code ensures that generators connected to the grid are compatible and do not compromise the system. The SEA process and the identification of the proposed REDZs were undertaken in close collaboration with Eskom. Part 4 of the SEA report provides further information on current and potential grid capacities in and around the proposed REDZs.

Brian Mc Mahon, 15/09/13

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Phone	028 254 9673

Please insert comment under the relevant heading:

1 POSITIVE MAPPING

Wind farms get approved now on the basis of Government policy on energy needs for SA and the applicant's confirmation that the particular site is suitable in terms of wind quality, land access and connectivity to Eskom, regardless of any impacts on local business, tourism, residents, and the environment in general. This programme seems guaranteed to facilitate an even more aggressive position by the Wind Energy sector, with even less consideration for the environment and the people.

Can we expect to see a report evaluating the WASA wind data in relation to specific site data in terms of wind speeds at various heights above ground level, in particular the daytime and night-time ranges? What is the real reason for this data being withheld? We should by now all have seen the results from Europe etc of actual capacity factors with wind below 25%, sometimes much lower, because of wind speeds varying outside the turbines operating range. It is revealing that Darling wind facility, which has a reported capacity factor as low as 14%, is one of many projects in the west coast area that is not even a confirmed 'study area' now. How can this be explained away?

A proper definition is required of mean power density at 100m above ground level shown as watts/m².

Although the near proximity of a suitably equipped and rated transmission or distribution station is obviously important technically in terms of the suitability of the network and of any specific wind farm site, there seems to be no need for costs to be assessed for upgrading of the station and constructing the new power line connection and comparison of these costs with those of other potential sites. The influence of Eskom in selection and approval of specific wind farm sites seems to be minor importance.

2 NEGATIVE MAPPING

The list of exclusion zones seems total guesswork and ignores the public interest in the environment. At least the DEA&DP Guideline to site selection (2006) was based on visits to and discussions with those in some established international wind energy markets. Since then, turbine power, numbers and size have increased dramatically – so has public resistance at local and national levels. Some of the worse cases are:-

- Residential buildings 300m – there is a known noise problem affecting sleeplessness, or worse, at 2000m.
- CBIs, IBAs, DEA protected areas – zero buffer. Allowing desecration of natural vegetation and wildlife?
- SANBI core areas – 500m (phase 1) up to viewshed (for consideration? By whom?)
- Tourist routes – 2km. What about cumulative impact on tourism of 30km continuous views of turbines?
- Private nature/game reserves – not mentioned!!
- Existing known bird flyways – zero!!

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- Red List birds eg Blue Cranes (the SA National icon bird), Bustards – ignored!!

The Precautionary principle has been totally ignored.

3 IDENTIFICATION OF STUDY AREAS

The authorities seem incapable of learning that societal needs for employment etc will never be met through any policy related to wind energy. In fact, as is being learnt in other countries, the net effect of green energy policies is negative, especially when local tourism ventures are threatened and have to relocate or cease.

It is noted and deeply regretted that environmental issues have not been properly assessed in terms of selection of suitable study areas. The Overberg area is a huge area identified on the CSIR maps – yet no mention of huge potential impacts on the unique Cape CBAs, bird life in general/Red List bird life in particular, tourism, etc. There is no mention of monitoring of impacts or mitigating measures, which is the essence of the EIA process.

The habit of making recommendations that DEA can turn into 'conditions' to be implemented after the environmental authorisation has been issued is not compatible with NEMA. Such recommendations involve moving or removal of specific turbines, or curtailment of their operation under certain generalised circumstances, without defining these circumstances.

There should be major concerns with the large number of approved wind farms along and near the West Coast, some far too close to major rivers and the National Park, although this area is shown largely as an exclusion zone. This project must determine why so many applications were made in this area, which seems contrary to current data.

4 STUDY AREAS

The use of 'study area' is fallacious in the context of wind farms as it seems to apply solely to the process of curtailing in particular the possibility of environmental issues being allowed to interfere with and delay the authorisation of activities required for constructing and operating Wind Farms. Specialists now have problems in adequately covering the study area of a wind farm project, especially where local knowledge is essential. How will they be able to cope with the new study areas of 60 x 60 km?

Why is there a difference in the identified regions shown in the Grid Plan report (pages 29-30) and in the second expert reference group meeting report? The Breede River valley/Overberg study area is not even shown in the former.

The authorities should consider the potential impact on existing and potential future tourism-related businesses of declaring regions to be suited to Wind Farms, especially if they intend to minimise any possible scrutiny and questioning by interested and affected parties of specific applications in such pre-selected regions.

5 GENERAL

Maps must be local, accurate and reliable and with high enough definition to identify farm portions.
Those so far available to be downloaded from the website are inadequate. The level of detail and its resolution, especially when applied to one Wind Farm site and its surrounding area must be considerably enhanced. What possible need is there for a map record of a lapsed or withdrawn application? What WASA data is not being revealed yet? Wind speed data at various heights and locations is already available to the public but is not discussed here – why not?

There is a very strong sense that the majority of the professional and Government sectors supposedly responsible for protecting the SA environment has been coerced into supporting the irrational and harmful growth of an ever more costly and unsustainable wind energy industry. The rest of the World seems to be learning this slowly but surely.

Western Cape Province seems to have been totally side-lined and unwilling or unable to contribute meaningfully

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to most local applications for Wind Farms, even though they are a consulting authority. Local municipalities, responsible for the LUPO Consent Use approval, seemingly have no obligation to comment and often no competency to offer. They are also major potential beneficiaries through extra agricultural Rates where Wind Farms are constructed, and through significant funding of IDP projects from the Community Trust incomes from wind energy generation.

There are glaring errors in the membership of the Project Steering Committee and Expert Reference Group, both of which seem over-loaded in favour of current energy policy:

Specialists – Agriculture, Nuclear, Gas, Noise and Health (turbine origins), Botanists with local experience;
Business – Chambers of Commerce, tourism-related Associations (Game Farms, Safari tours etc), Sanparks;
Local Ratepayers Organisations and NGOs, Cape Nature and local environmental NGOs.

The general basis for this project, 7 years after the Guidelines for selection of Wind Farms (DEA&DP) were researched, published then abandoned under pressure from the Wind Farm developers, after over 50 highly questionable environmental authorisations, is considered to be fundamentally flawed. Stated to be the enabling of the authorities to issue general authorisations and exemptions, and to delist certain NEMA activities, in certain regional areas, based on certain conditions and guidelines – this is not compatible with the NEMA principles and may also be unconstitutional.

Before it is too late to change direction, the authorities really must come to terms with the massive changes in other countries, especially Europe, with an established Wind energy sector in terms of public and expert resistance to what has already been permitted. There should be constant monitoring and assessment of all aspects based on actual records and experience.

Furthermore, a full and proper Public Participation process must be undertaken, with real and discernable intent by the authorities to involve public communities in an honest and comprehensive debate – as opposed to the obfuscatory and devious methodology sometimes evident in the EIA process.

I am a retired Engineer, have been involved in the power generation industry in the UK, have no connection with any South African business or association that might influence my statements above, but I do have a sincere and deeply considered understanding that current wind energy policy should not be the preferred solution to the worldwide problems associated with the generation of electrical power and socio-economic development.

Brian McMahon
Greyton
15 September 2013

##############

Response from the SEA team:

The inputs provided have been taken into consideration and where relevant informed the specialist scoping studies presented in Part 3 of the SEA report. Further project level assessment and public participation will be required for all projects proposed in REDZs. A wind power density of 400 Watt/m^2 is roughly 7 m/s at the same height.

V.C.K Metcalfe, 12/09/13

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013
Webpage: www.csir.co.za/nationalwindsolarsea

Comment Submission:
email to **LCapeDucluzeau@csir.co.za** before **15 September 2013**

Please provide your contact details:

Contact details	
Name	Mrs. V.C.K. Metcalfe
Company	
Email	luanam@btinternet.com
Phone	01866844220

Please insert comment under the relevant heading:

1 POSSITIVE MAPPING	
2 NEGATIVE MAPPING	
3 IDENTIFICATION OF STUDY AREAS	
4 STUDY AREAS	
5 GENERAL	
It may be important for the South African government to recognise the important ruling of the UN's Aarhus Compliance Committee's recent draft ruling about wind power. Please go to their website, United Nations Economic Commission for Europe and ruling for ACCC/C/2012/68. We are seeing world wide negative impacts for wild life and people from excessive implementation of wind power without any proof of the claims made on emission savings or benefits. You will already have received warnings revolving around the following, which are more than valid and should set alarm bells ringing.	

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Eliminating Environmental Impact Assessments to speed up renewable energy developments is a reckless and destructive policy for the following reasons:

1. South Africa should **FIRST** monitor, troubleshoot and learn from the 3,625 MW of renewable energy implementation that includes 1,850 MW of wind energy, before developing so-called REDZs. There are none wind farms of industrial scale operating in SA at the moment and it would be foolish to develop a guideline without any practical on the ground experience.
2. The European green energy regulation and implementation is changing rapidly since economies cannot afford the high cost related to green energy. It would be of strategic importance for South Africa to understand the reason and to learn from this drastic turn-around strategy instead of continuing on a roadmap that is seriously scrutinized.
3. Discoveries of natural gas resources in Mozambique, Botswana, Namibia and South Africa will change the energy landscape within 10 years. Natural gas will play a dominant role in future power generation in Southern Africa, and will assist South Africa reducing CO_2 emissions significantly, while bringing down the energy cost needed to boost economic growth. A wind farm can be seen as an inefficient, not-wanted, not-needed and too and expensive tool to reduce CO_2 emissions in the post natural gas era.
4. Renewable energy (except concentrated solar) cannot replace base load energy and does not contribute to the energy security of South Africa. On the contrary: it introduces more grid complications and expenses, and more difficulties in developing an energy sustainable society.
5. Experience gained and studies done in Europe and the US show that the use of wind power failed to reduce the carbon emissions in any significant amount. Germany, world's front runner on green energy, has seen its carbon emissions increasing since its '*Energiewende*'. The reason is because wind energy production always needs back-up power from conventional power plants that are then forced to run in uneconomic mode, emitting more CO_2 and other gasses then when run economically. Note that the US has seen CO_2 emissions tumble, due to the growing use of natural gas.
6. Natural gas (and hydro) will outperform renewables economically, quality wise (energy on demand) and in the ability of reducing CO_2 emissions.

Please show the leadership required by restricting the use of wind power in South Africa which is so rich in the kind of wildlife vulnerable to this particular form of renewable energy.

Yours sincerely,

Mrs. V. Metcalfe.

Response from the SEA team:

The inputs provided have been taken into consideration. It should, however, be noted that renewable energies have been identified as part of the optimal power mix according to the Integrated Resource Plan 2010 (IRP 2010) and the National Development Plan (NDP) in terms of which this SEA has been undertaken.

Maaike Kallenborn (NNWG), 14/09/13

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Maaike Kallenborn
Company	Nieuwerust Noise Wach Group (NNWG)
Email	info@nieuwerustnoisewatch.org
Phone	073 490 2599

1 GENERAL

In the report: '*Renewable Energy EIA Application Mapping Report Version 1, 'Appendix D: Challenges and problems experienced'* states:

> *'It was found from the environmental practitioners that some of the projects were placed on hold or withdrawn. These project have however not been accordingly updated in the DEA EIA Applications Database'*

I would like to inform that the following Wind Facility projects located in the Saldanha Bay area, the Western Cape, have been given a wrong 'status quo':

Project ref: 12/12/20/2226
The application has been **withdrawn** but the map shows that it is still on **process**.
Details: Inca Vredenburg Wind (Pty) Ltd.
Environmental practitioner Aurecon. For more documentation:
http://aurecon.webfoundryza.com/assets/files/106711%20Vredenburg%20EIA/

Project ref: 12/12/20/2119
The Environmental Impact assessment has been **on hold** but the map shows it is **on process**.
Details: IDP Power (Pty) Ltd,
Environmental practitioner is Aurecon.
http://aurecon.webfoundryza.com/assets/files/vredenburgDSR/Ltr%20to%20IAPS%20re%20Vredenburg%20IPD%20WEF%20EIA%20Application%20on%20Hold.pdf

The Nieuwerust Noise Wach Group representing the community of Nieuwerust near Vredenburg, Western Cape, kindly request clarity about the status quo of above mentioned proposed wind farm developments surrounding the community.

Further: when a development puts the environmental process on hold, how long will that application be allowed to stay 'on hold', before it will be considered 'withdrawn'?

And if a development continues the environmental process after an x amount or years, does the environmental process need to start all over again? What will be the time limit?

We are looking forward to your soonest reply.

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2. NEGATIVE MAPPING / 3. IDENTIFICATION OF STUDY AREAS

Buffer Zones Buildings

The buffer distances given in the Identification of Exclusion Areas (2) and Identification of Study Areas (3) offer no protection against the toxic noise pollution of wind farms and show a complete denial of the many well documented cases where people start experiencing stress related symptoms and sleep deprivation after nearby wind turbines started operating. Dozens of medical and professional studies have been done on the impact of wind turbine noise on neighbours and nearby communities' health. Most of the problems simple could have been avoided if wind turbines would be placed on sufficient distances of 2 to 10 km, as many of the studies conclude.

Wind farms have a unique source of sound and noise. The sounds are often of low amplitude and are constantly shifting in character. Because of the low amplitude and because noise assessment measurements average the recorded sound levels, the wind industry is still able to avoid the discussion around turbine noise and related health problems.

The human senses act as contrast analysers, it responses to changes in sound rather than to the absolute level of the sound itself. None of any noise assessments is linked to the human perception of noise and the risk of adverse health effects.

Although the wind industry does not acknowledge that industrial wind turbines generate Low Frequency Noise (LFN) that affects humans, the National Research Council in 2007 stated:

> *"Wind turbines generate a broad spectrum of noise including low frequency noise…which may be audible or inaudible".*

In addition in 1999 The World Health Organization stated:

> *"It is widely affirmed that exposure to audible low frequency noise can cause* adverse health effects in *humans".*

Noise assessments for wind farms exclude the measurements of LFN which is normally a problem indoors, due to the poor sound insulation of buildings at low frequencies. Room resonances inside buildings can often lead to an amplification of low frequency sound. Since LFN travels much further than the higher frequencies and it resonances inside buildings, wind farms have to be built on far greater distances to protect the nearby communities from long term exposure. (3).

Note: Noise assessments are based upon long out-dated guidelines and methodologies for turbine placement. The buffer distance given in *the Identification of Exclusion and Study Areas* are based on this out-dated methodology, designed for turbines one third of the size they are today.

Wind farms in Australia will soon be require to install a continuous broad spectrum (including infra-sound and LFN) wind turbine noise monitoring system that will be placed inside and outside of homes. When a turbine violates the noise limits, it will automatically be slowed or shut down.
This way, communities near industrial wind facilities can be assured their health and quality of live will not be negatively affected. At the same time, wind farms will think twice before placing turbines too close to homes.

For more information:
Maaike Kallenborn
Member of the Nieuwerust Noise Watch Group

info@nieuwerustnoisewatch.org
www.nieuwerustnoisewatch.org

References

1. "South Africa has no greater environmental challenge in its history than is posed by these cumulative wind farm proposals." Professor Phil Hockey, the Director of the Percy Fitzpatrick Institute of African Ornithology at UCT
2. DEA National Strategic Environmental Assessment For The Efficient And Effective Rollout Of Wind And Solar Photovoltaic Energy report: point 4.3 Identification of Exclusion Areas (negative mapping) Department of Environmental Affairs Wind and Solar PV Strategic Environmental Assessment.
3. SANS 10103:2008: 5.1.11 Determination of the presence of low frequency noise

Response from the SEA team:

A version 2 of the EIA application map has been released by DEA in 2014 which has a more comprehensive database of all renewable energy EIA applications up to December 2013. The EIA application map is a DEA product and all missing information should be communicated to DEA.

Environmental Authorisations (EAs) are valid for a set period of time specifically determined for the type of project proposed for development. If the project has not been constructed within the prescribed period of time after receiving the EA, a new EA needs to be obtained. If new information becomes available during that time, it needs to be addressed before the authorisation will be granted.

The environmental and technical constraint mask developed during Phase 1 of the SEA process was only used for the identification of large clusters of areas with the least "exclusion type sensitivities". The list of exclusion attributes and the associated buffers should not be used on its own as it does not constitute an exhaustive list of all environmental, social and technical sensitivities with respect to renewable energy developments. It should be noted that the list of exclusion and its attributes were presented to several departments and national organisation such as the DEA, the SANBI, the EWT, Birdlife South Africa, the SABAAP, the SAHRA, and the NHCSA.

In order to identify sensitivities and the need for further assessments in the Focus Areas, specialist scoping level pre-assessments were undertaken for agriculture, landscape, heritage, terrestrial and aquatic biodiversity, birds, bats, and socio-economic aspects. Further aspects of sensitivity in terms of aviation, defence, telecommunication, weather services, SKA, mining, noise and flicker effects were determined in consultation with the relevant authorities. Sensitivity

maps were produced as an output for all but the socio-economic assessment and are presented in Part 3 Section 1 to Section 15 of the SEA report.

Potential noise impacts and flicker effects from wind turbines were taken into consideration and assessed during Phase 2 of the SEA. Please see Part 3 Section 13 and Section 14 of the SEA report.

A landscape and visual scoping assessment was undertaken during Phase 2 of the SEA to assess the potential visual impacts from wind farm and associated impacts on receptors. Please see Part 3 Section 2 of the SEA report.

Maaike Kallenborn (STEISA), 14/09/13

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY
Phase I Study Areas Comment Form
August 2013
Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Maaike Kallenborn
Company	Save The Eagles International South Africa (STEISA)
Email	info@savetheeaglesinternational.org.za
Phone	073 490 2599

1 GENERAL

ELIMINATING ENVIRONMENTAL IMPACT ASSESSMENTS IS RECKLESS BEHAVIOUR

Quote Save The Eagles International South Africa (STEISA):
"We support giving the 'new gold rush' for renewable energy some strategic guidance, but we believe neglecting Environmental Impact Assessments is a mistake. We need democratic public participation processes which include the voice of the man in the street and opposition groups that address the wind power industry's history of denial regarding negative environmental impacts (1).
STEISA has no confidence in environmental protection, watching the applied buffer and exclusion zones as described in chapter 4.3 'Identification of Exclusion Areas (negative mapping)' of the document *"DEA National Strategic Environmental Assessment For The Efficient And Effective Rollout Of Wind And Solar Photovoltaic Energy'.*

RECKLESS

Eliminating Environmental Impact Assessments to speed up renewable energy developments is a reckless and destructive policy for the following reasons:

1. South Africa should FIRST monitor, troubleshoot and learn from the 3,625 MW of renewable energy implementation that includes 1,850 MW of wind energy, before developing so-called REDZs. There are none wind farms of industrial scale operating in SA at the moment and it would be foolish to develop a guideline without any practical on the ground experience.
2. The European green energy regulation and implementation is changing rapidly since economies cannot afford the high cost related to green energy. It would be of strategic importance for South Africa to understand the reason and to learn from this drastic turn-around strategy instead of continuing on a roadmap that is seriously scrutinized.
3. Discoveries of natural gas resources in Mozambique, Botswana, Namibia and South Africa will change the energy landscape within 10 years. Cheap natural gas will play a dominant role in future power generation in Southern Africa, and will assist South Africa reducing CO2 emissions significantly, while bringing down the energy cost needed to boost economic growth. A wind farm can be seen as an inefficient, not-wanted, not-needed and a too expensive tool to reduce CO2 emissions in the post natural gas era.

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4. Renewable energy (except concentrated solar) cannot replace base load energy and does not contribute to the energy security of South Africa. On the contrary: it introduces more grid complications and expenses, and more difficulties in developing an energy sustainable society.
5. Experience gained and studies done in Europe and the US show that the use of wind power failed to reduce the carbon emissions in any significant amount. Germany, world's front runner on green energy, has seen its carbon emissions increasing since its 'Energiewende'. The reason is that wind energy production always needs back-up power from conventional power plants that are then forced to run in an uneconomic mode, emitting more CO_2 and other gasses then when run economically. Note that the US has seen CO_2 emissions tumble, due to the growing use of natural gas.
6. Natural gas (and hydro) will outperform renewables economically, quality wise (energy on demand) and in the ability of reducing CO2 emissions.

Buffer Distances

Another point of concern are the buffer distances given in the *Identification of Exclusion Areas* (2) and *Identification of Study Areas* (3) in Phase 1 *'Exclusion'* and Phase 2 *'Sensitivity'*.
The data in the tables show a lack of knowledge of studies undertaken all over the world showing the negative impact that wind farms have on the environment such as birds and bats populations and nearby residents. Some examples:

- The by DEA protected areas such as nature reserves, wilderness areas, world heritage sites, threatened ecosystems, Critical Biodiversity Areas (CBAs) and threatened forests have **NO** buffer zone.
- Important biotopes such as coastline & estuaries, rivers, wetlands and strategic water source areas have **LITTLE TO NONE** buffer zones.
- Bird flyways have **NO** buffer zones.
- Blue Crane colonies and breeding territories are **NOT** mentioned while most wind farm developments are planned inside the habitat of the Blue Crane. Also the Black Harrier and other vulnerable and endemic bird species with high collision and disturbance risk are not mentioned
- Bats buffer zones come only into action for colonies bigger than 500 bats, never mind the conservation status of specific species. Bats are extremely slow reproducing species with an extremely high risk on barotrauma (lung damage) caused by rapid air-pressure reduction near moving turbine blades
- In general, most buffer zones are far too little if the area of movement and migration of avian and bat species and the variable weather, terrain and seasonal feeding ground conditions are taken into account.
- All type of buildings will be protected by a 300m buffer zone. This distance is absurd. Do you wish to have a 140 meter (!) wind turbine with a swept area of the size of a rugby field, a generator of 70 tonnes at a height of 100 meters and three 7 ton rotors flying around with a tip speed up to 300kmh right in front of your house, tourist accommodation or game farm lodge?
- Many studies show the negative health impact of wind turbine noise on residents and communities nearby. Buffer zones from 2 to 10 km are advised.
- US real estate sale data reveals a drop in property value of 25% to 40%, and even sometimes a total loss due to abandonment, within 3 to 5 km distance from wind turbines, according to recent studies and testimony by real estate appraisers from around the world.

Observe and understand

There are many reasons why South Africa should FIRST monitor, troubleshoot and learn from the first 3,625MW installed green energy and study the policy changes in the EU and US as mentioned before. Just to name a few:

1. The Intergovernmental Panel on Climate Change (IPCC)
The UN body, the Intergovernmental Panel on Climate Change became so powerful that it evaluates matters in which trillions of dollars are at stake. Its work is cited by governments around the world. It is the reason carbon taxes are introduced, costly and unreliable green energy technologies are implemented on massive scale, and electricity costs are sky-rocketing. It is the reason why everyone believes carbon dioxide is the world's enemy number 1 pollutant. The IPCC is behind the fight against Anthropogenic Global Warming (AGW), no matter what the costs are and no matter if carbon tax regulations or the implementation of green energy producing technologies are actually working.
Even though the IPCC is one of the world most influential bodies, its team members have never been scrutinized on conflict of interest while it is promoting big western corporations as the solution for the fight against human induced Global Warming.

2. Climate Change is big business, financing is an important part of the World Bank's lending.
At the World Economic Forum in Davos, president of the World Bank Group Jim Yong Kim used the IPCC predictions to remind economic leaders about the potentially devastating impacts that could occur in a world 4°C warmer by the end of the century. Unlocking finance is an essential part of avoiding that future. Besides the fact that the statement is debatable and in the eyes of many scientists utterly wrong, the World Bank has a vested interest: 40 percent of World Bank lending projects is expected to contribute to climate change adaptation, mitigation or both.

3. The global warming hypothesis
IPCC's Anthropogenic Global Warming Hypothesis is NOT scientifically verified: till now it is a hypothesis based on computer model predictions. AGW research should be scrutinized on the merits of empirical evidence.

4. Overestimated global warming over the past 20 years
Recent observed global warming is significantly less than the computer simulated climate models predicted. This difference might be explained by some combination of errors in external forcing, model response and internal climate variability.

A recent study (28 August 2013) in the journal Nature Climate Change compared 117 climate predictions made in the 1990's to the actual amount of warming. The journal finds that 99% overestimated the amount of warming. On average, the predictions forecasted two times more global warming than actually occurred (4)

5. The danger of policies based on not-scrutinized science
Leaked documents show that governments which support and finance the IPCC are demanding more than 1,500 changes to the report's 'summary for policymakers'. They say its current draft does not properly explain the current pause in the global temperatures. The pause - which has now been accepted as real by every major climate research centre - is important, because the models' predictions of ever-increasing global temperatures have made many of the worlds' economies divert billions of Euro's into 'green' measures to counter climate change.

6. The Anthropogenic Global Warming Consensus Report
Mainstream media have been widely citing a study (Cook *et al.)* that shows a 97% scientific consensus regarding human-caused global warming. The authors claim they reviewed nearly 12,000 abstracts of studies published in the peer-reviewed climate literature, and that 97% of the papers that expressed a position on human-caused global warming *"endorsed the consensus position that humans are causing global warming."*

This report is eagerly being used to pinpoint the urgent need for climate action and to justify the environmental and economic damage such action will cause.

Investigative journalists report the authors' claims of a 97% consensus relied on the authors misclassifying the papers of some of the world's most prominent global warming sceptics.

The conclusion is that the quest for defining a climate change consensus is fraught with bias which is not often apparent. The number of abstracts supporting each specified level of endorsement had the effect of not making available the fact that only 41 papers, 0.3 % of all 11,944 abstracts, or 1.0 % of the 4014 expressing an opinion, (and not 97.1 %) had been found to endorse the standard or quantitative hypothesis, that *"human activity is very likely causing most of the current anthropogenic global warming"*.
This document obscures the complexities of the climate issue, it is a sign of the desperately poor level of public and policy debate and it is dividing publishing climate scientists into 'believers' and 'non-believers'.

Costs
The UN Clean Development Mechanism, the European Union's emissions trading scheme and standards has steered the EU and US in directions that have yielded very poor results. Not only are the emissions higher than before, but energy costs and carbon tax regulations are crippling industries, causing thousands of job losses, and pushing more and more household into energy poverty.
In addition the economics and performance of 'green' energy are not sustainable with today's technology. According to a current study for the German federal government, electricity will cost up to 40 Euro cents a kilowatt-hour by 2020, a 40% increase over today's prices in Germany. This is an equivalent of 5.2 RaND PER KwH (!)

Some latest headlines:

- Germany's Energy Poverty: How Electricity Became a Luxury Good (5);
- Australia's newly elected leader Tony Abbott's in his victory speech axed carbon tax: "In three years' time, the carbon tax will be gone" (6);
- Czech Government Votes to End Support for Renewables From 2014 (7);
- Spain Clean Energy Subsidy Cuts will leave many project developers facing bankruptcy, four industry lobby groups said (8);
- Merkel Calls For Cutting Subsidies For Green Energy (9);
- Portugal will cut subsidies to the energy sector by capping "excessive" energy tariffs, saving consumers 1.8 billion Euros by 2020 and boosting competitiveness (10);
- There's no room for wind farms but plenty for fracking, says UK PM (11);
- Merkel's Green Shift Forces Germany to Burn More Coal (12);
- Germany to Open Six More Coal Power Stations In 2013; and12 more in 2020 (13).
- German coal-fired power rises above 50% in first-half 2013 generation mix. Coal plants increased production by about 5% to 130.3 TWh in the first six months of 2013. Wind turbine output fell 10% to 22.4 TWh. Hydro output rose 3% to 9.2 TWh, with nuclear output up 1.8% to 46 TWh (14).

Troubling Wind Farms

Unreliable wind power needs a constant backup from conventional power plants due to the vagaries of the weather; wind power produces anything from zero to 100% of nameplate capacity. Further wind farms do not produce on demand when electricity is needed and often produce electricity when the demand is low. In the UK

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Wind farms are being given around £30million a year in compensation to switch off or slow down their turbines because nearly half the electricity they make is not needed (15).

To maintain grid stability and the ability to supply customer demand for continuous electricity, every wind farm has to have a backup generating facility for 100% of the wind capacity, and this backup system must be able to swing into production immediately, running very uneconomically and under high maintenance cost. The emissions of these on spinning mode standby generators are not calculated into the final picture of CO_2 emissions or reduction. Worse, these costs also are not calculated into the total costs of adding wind power onto the national grid (16).

The wind industry claims that "the wind will blow always somewhere" and that somewhere always energy will be produced. This theoretical claim has failed majorly in practice as most of the land mass of a continent like for instance Europe is affected at the same time by the same weather system.

Wind Farm developers promise investors and governments often a too high energy yield of 30% to 35% of the nameplate capacity. Germany's 22 year average is near 17% and the UK's is around 20% of the total installed capacity.

Also developers do not mention that as turbines age, the Capacity Factor declines. A study done by the Renewable Energy Foundation based in the UK , on wind turbines installed in Denmark and the UK found that the average capacity factor of U.K. onshore wind turbines declined from a peak of 24% in the first year of operation to 15% in the 10th year and 11% by year 15.

Job losses

Another element that has to be taken into account with respect to developing green energy based upon an aggressive climate change policy is the loss of jobs.

- A new analysis of UK government and industry figures show that **each green job in Britain costs £100,000 in subsidises**; a Scotland study by Verso Economics showed that for each Green Job created, 3.7 were lost.
- A Spanish study found that each green job created in Spain cost Spanish taxpayers $770,000. Each wind industry job cost $1.3 million to create and for every green job created 2.2 jobs were lost. Electricity generated was so expensive that **each "green" megawatt installed in the power grid destroyed five jobs elsewhere** in the economy by raising business costs.
- A study performed at Italy's Bruno Leoni Institute found that each green job in Italy cost 5 jobs from the rest of the economy.
- Germany's subsidization regime has reached a level that far exceeds average wages, with per-green-worker subsidies as high as 175,000 Euros. High energy costs drive German firms to the US. Energy prices for industry in Germany are about 40% more expensive than in France and the Netherlands and 15% more expensive than the E.U. average, according to a recent study by the Cologne Institute for Economic Research. Energy-intensive sectors such as chemicals and steel are among the hardest hit and would have to bear almost €740 million and €710 million in yearly additional costs, respectively, if prices increase by 2¢ per kilowatt-hour. Many German companies are considering moving parts of their facilities to the U.S where the energy is far cheaper.
  Note: According to a recent report by the German Association of Energy and Water Industries (BDEW), private households pay 35% of the subsidies for renewable energy but account for only one-quarter of

electricity consumption. Those subsidies in the form of surcharges on electricity for private households rose from 3.6¢ per kilowatt-hour in 2012 to 5.3¢ in 2013 — an increase of 47%..

Noise

The buffer distances given in the Identification of Exclusion Areas (2) and Identification of Study Areas (3) offer no protection against the toxic noise pollution of wind farms and show a complete denial of the many well documented cases where people start experiencing stress related symptoms and sleep deprivation after nearby wind turbines started operating. Dozens of medical and professional studies have been done on the impact of wind turbine noise on neighbours and nearby communities' health. Most of the problems simple could have been avoided if wind turbines would be placed on sufficient distances of 2 to 10 km, as many of the studies conclude.

Wind farms have a unique source of sound and noise. The sounds are often of low amplitude and are constantly shifting in character. Because of the low amplitude and because noise assessment measurements average the recorded sound levels, the wind industry is still able to avoid the discussion around turbine noise and related health problems.

The human senses act as contrast analysers, it responses to changes in sound rather than to the absolute level of the sound itself. None of any noise assessments is linked to the human perception of noise and the risk of adverse health effects.

Although the wind industry does not acknowledge that industrial wind turbines generate Low Frequency Noise (LFN) that affects humans, the National Research Council in 2007 stated:

> *"Wind turbines generate a broad spectrum of noise including low frequency noise…which may be audible or inaudible".*

In addition in 1999 The World Health Organization stated:

> *"It is widely affirmed that exposure to audible low frequency noise can cause* adverse health effects in *humans".*

Noise assessments for wind farms exclude the measurements of LFN which is normally a problem indoors, due to the poor sound insulation of buildings at low frequencies. Room resonances inside buildings can often lead to an amplification of low frequency sound. Since LFN travels much further than the higher frequencies and it resonances inside buildings, wind farms have to be built on far greater distances to protect the nearby communities from long term exposure. (17).

Note: Noise assessments are based upon long outdated guidelines and methodologies for turbine placement. The buffer distance given in *the Identification of Exclusion and Study Areas* are based on this outdated methodology, designed for turbines one third of the size they are today.

Environmental impact justified?

Since green solutions such as wind, solar and the production of bio fuels, require vast areas of land, the impact of these and its related infrastructure is obvious. Industrial wind facilities are known to destroy ecosystems, disturb wild animals and kill millions of birds and bats worldwide each year, threatening the survival of especially the already vulnerable and rare or protected species.

A recent article in the South African Journal of Science found that sub-Saharan Africa has greater diversity at higher taxonomic levels than any other area on earth and is thus arguably the richest corner of the world for birds. This greater level of genetic diversity brings great responsibility. South Africa has world class environmental laws and a proud conservation track record. South African tourism depends heavily on this success.

Many vulnerable and endemic species are at threat because of the cumulative impact the industrial wind facilities will have on their population numbers. It will also be a South African tragedy if we allow our National bird, the most graceful of all cranes, the Blue Crane, become extinct.

South Africa faces many unknowns in relation to the exact impact the green facilities will have on its wildlife. What we do know is that red-listed and protected species will be killed by the turbines. Will a wind farm owner get away with the "accidental takings" of these species like wind farm owners do anywhere else in the world, or will he be forced to take mitigation action or will he be prosecuted like any other law violating individual.

Will the South African government hand out permissions to kill a certain amounts of rare species during the operational live of a particular wind facility like the US government does?

And lastly, who will do the cadaver counting according to the best guidelines, and how certain can we be the outcome was not corrupted.

In short, do we let the 'green' industry make a mockery out of South Africa's conservation success?

For more information:

Maaike Kallenborn
Chairperson Save the Eagles International South Africa (STEISA)

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www.savetheeaglesinternational.org.za

References

1. "South Africa has no greater environmental challenge in its history than is posed by these cumulative wind farm proposals." Professor Phil Hockey, the Director of the Percy Fitzpatrick Institute of African Ornithology at UCT
2. DEA National Strategic Environmental Assessment For The Efficient And Effective Rollout Of Wind And Solar Photovoltaic Energy report: point 4.3 Identification of Exclusion Areas (negative mapping) Department of Environmental Affairs Wind and Solar PV Strategic Environmental Assessment.
3. Database on 31 July 2013, End of Phase I: Identification of Study Areas report
4. http://www.nature.com/nclimate/journal/v3/n9/full/nclimate1972.html
5. http://www.spiegel.de/international/germany/high-costs-and-errors-of-german-transition-to-renewable-energy-a-920288.html

6. http://www.theepochtimes.com/n3/280889-tony-abbotts-victory-speech-axed-carbon-tax-inclusiveness-change/
7. http://www.bloomberg.com/news/2013-07-26/czech-government-votes-to-end-support-for-renewables-from-2014.html
8. http://www.bloomberg.com/news/2013-07-17/spain-clean-energy-subsidy-cuts-raise-bankruptcy-risk.html
9. http://online.wsj.com/article/BT-CO-20130612-702492.html
10. http://uk.reuters.com/article/2012/05/17/portugal-energy-measures-idUKL5E8GHG1X20120517
11. http://www.telegraph.co.uk/earth/environment/10231717/Theres-no-room-for-wind-farms-but-plenty-for-fracking-says-PM.html
12. http://www.bloomberg.com/news/2012-08-19/merkel-s-green-shift-forces-germany-to-burn-more-coal-energy.html
13. http://wattsupwiththat.com/2013/04/23/germany-to-open-six-more-coal-power-stations-in-2013/
14. http://www.platts.com/latest-news/electric-power/london/german-coal-fired-power-rises-above-50-in-first-26089429
15. http://www.dailymail.co.uk/news/article-2388417/Wind-farms-paid-30-million-year-stand-idle-grid-cope-energy-produce.html
16. bentek_how_less_became_more_100420-319.pdf
17. SANS 10103:2008: 5.1.11 Determination of the presence of low frequency noise
18. Legates et al 2013.pdf
19. Montford-Consensus.pdf

Response from the SEA team:

The inputs provided have been taken into consideration and the initial intention of delisting and doing away with further environmental assessment and approvals in REDZs have since been replaced with a requirement for a project level Basic Assessment process. Information on the

approval process in the form of a project level Basic Assessment process, informed by the requirements stipulated in Part 3 of the SEA report, and leading to an environmental authorisation, identical to the current, is provided in Part 1 of the SEA report.

The buffer distances given in the "Phase I Study Areas Metadata and Notes" report containing the details of Phase 1 positive and negative mapping and identification of the 15 study areas (released in August 2013 for public comments) were used to develop an environmental and technical constraint mask which was only used during Phase 1 for the identification of large clusters of areas with the least constraints. The list of exclusion attributes and the associated buffers should not be used on its own as it does not constitute an exhaustive list of all environmental, social and technical sensitivities with respect to renewable energy developments. It should be noted that during Phase 1 the list of exclusion and its attributes were presented to several departments and national organisation such as the DEA, the SANBI, the EWT, Birdlife South Africa, the SABAAP, the SAHRA, and the NHCSA. In order to identify sensitivities and the need for further assessments in the Focus Areas, specialist scoping level pre-assessments were undertaken for agriculture, landscape, heritage, terrestrial and aquatic biodiversity, birds, bats, and socio-economic aspects. Further aspects of sensitivity in terms of aviation, defence, telecommunication, weather services, SKA, mining, noise and flicker effects were determined in consultation with the relevant authorities. Sensitivity maps were produced as an output for all but the socio-economic assessment and are presented in Part 3 of the SEA report.

It is true that wind energy is intermittent and that peak generation does not necessarily coincide with peak usage. A geographical spread of projects will, however, reduce the intermittency to some extent. Furthermore, even during low demand periods renewable energy still results in fuel savings. The excess generation at any time can also be stored (e.g. in existing pump storage) and in that way be used to alleviate generation deficits.

During Phase 2 of the SEA, a socio-economic scoping assessment was undertaken by socio-economic experts. The study has demonstrated that, in terms of the economic and labour baseline information for the Overberg Focus Area, agriculture has declined by 1.6% from 2005 to 2011 in this area resulting in 12 059 job losses in this sector over the same time and area. The sector that is growing and creating jobs is the finance and business services sector. The Cape Agulhas Local Municipality (which makes up the largest part of this Focus Area) in their local planning policies identified the dependency on agriculture a challenge. There is thus motivation for diversification and land use integrations. See Part 3 Section 15 of the SEA report.

Potential issues related to noise pollution were only investigated during Phase 2 of the SEA. More detailed sensitivity buffers for noise impacts were developed based on the South African National Standards (SANS) 10103:2008 and international best practices. Please see Part 3: Section 13 of the SEA report.

R. and E. Chafer, 13/09/13

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

CSIR
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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY
Phase I Study Areas Comment Form
August 2013
Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Roger and Elizabeth Chafer
Email	liz.chafer@wanadoo.fr
Phone	0033555000769

Please insert comment under the relevant heading:

1 POSSITIVE MAPPING
2 NEGATIVE MAPPING
3 IDENTIFICATION OF STUDY AREAS
4 STUDY AREAS
5 GENERAL
We are saddened to see that South Africa intends to install Industrial Wind Turbines which have already been shown not only to be responsible for killing large numbers of bats and birds, to have an adverse impact on those living in the vicinity, but to be inefficient and expensive. We urge you to look closely at the existing reports concerning bat and bird mortality, the numerous studies concerning their impact on human health. The experiences of countries such as Germany highlight the failure of industrial wind turbines to reliably produce electricity . These machines also have a very negative impact on tourism . They are certainly not "green" nor "clean" requiring rare earth elements the extraction of which is highly polluting.

Response from the SEA team:

This comment is noted.

Tomaz Ogrin, 15/09/13

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY

Phase I Study Areas Comment Form

August 2013

Webpage: www.csir.co.za/nationalwindsolarsea

Please provide your contact details:

Contact details	
Name	Tomaz Ogrin
Company	Association for the Environment of Slovenia
Email	Tomaz.ogrin@ijs.si
Phone	+38641691728

Please insert comment under the relevant heading:

1	POSSITIVE MAPPING
2	NEGATIVE MAPPING
	Do not destroy the Nature and the Environment with wind turbines. This is Not a solution, but a new problem for the world and your country.
3	IDENTIFICATION OF STUDY AREAS
4	STUDY AREAS
5	GENERAL

Response from the SEA team:

This comment is noted.

Andre van der Spuy, 14/09/13 and 15/09/13

COMMENTS AND OBJECTION:

NEGATIVE CONSEQUENCES OF THE "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY - PHASE I STUDY AREAS" STUDY ON THE BOK DAM ECOTOURISM AND GAME FARM (BLUE CRANE ROUTE MUNICIPALITY, EASTERN CAPE) AND SURROUNDING ENVIRONMENT.

(DE BEERS GAME RANCH, MAKANA MUNICIPALITY, EASTERN CAPE, ALSO SUPPORTS AND ALIGNS ITSELF WITH THIS COMMENT AND OBJECTION)

Prepared for;

Bok Dam Ecotourism and Game Farm

Prepared by:

AVDS ENVIRONMENTAL CONSULTANTS

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Simon's Town,

7975

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E-mail: avdspuy@iafrica.com

15 September 2013

COMMENTS AND OBJECTIONS REGARDING THE NEGATIVE CONSEQUENCES OF "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY - PHASE I STUDY AREAS" ON THE BOK DAM ECOTOURISM AND GAME FARM, BLUE CRANE ROUTE MUNICIPALITY, EASTERN CAPE, AND ITS SURROUNDING ENVIRONMENT.

Introduction

On behalf of the owners of Bok Dam Ecotourism and Game Farm (BDEF), this document records comment on (and substantive objections to) the Strategic Environmental Assessment (SEA) currently being prepared to aid the "efficient and effective rollout of wind …energy." This objection relates specifically to the aspect of the wind energy initiative as it regards the solar energy potential as substantially more environmentally-appropriate (i.e. sustainable) for South Africa.

BDEF is concerned with the preservation of significant conservation-worthy environment within and outside of its boundaries. It is engaged with a number of veld rehabilitation programmes which deliver real social and conservation benefits to the environment (such as a spekboom rehabilitation program in partnership with the Department of Environmental Affairs). It delivers meaningful social benefits to the impoverished surrounding community and local economy. BDEF falls within the SEA-identified Renewable Energy Development Zone 12 (as this particular REDZ is numbered 12 on the Google earth database).

It should be noted that De Beer Game Ranch located nearby to BDEF but within the Makana Municipality, Eastern Cape also fully supports this objection and comment on account of the threat posed by the SEA's identification of REDZ 12. de Beers Game Ranch is concerned with the breeding of game species as well as running a bow hunting operation where it relies on the silence and sense of wilderness of the area and its natural scenic landscapes.

Acronyms used in these comments and objections are as follows:

EIA	Environmental Impact Assessment
BDEF	Bok Dam ecotourism and Game Farm
WEF	Wind Energy Facility
SWEF	Spitskop Wind Energy Facility (by RES)
PAJA	Promotion of Administrative Justice Act, 2000 (Act 3 of 2000)
NEMA	The National Environmental Management Act, 1998 (Act 107 of 1998), as amended
DEA	Department of Environmental Affairs (National)
SEA	National Strategic Environmental Assessment for the efficient rollout of wind and solar photovoltaic energy – Phase 1 Study
REDZ	Renewable Energy Development Zone (as defined in the SEA)

We have reviewed the SEA and in our professional opinion consider it to be fundamentally–flawed and misrepresentative of the real environmental sensitivities that will be imposed upon the environment in the pursuit of the often unsustainable wind energy industry. Furthermore it is clear the point of departure for the SEA is significantly industry/development-biased at the expense of the environment (biophysical and social). The latter is clear from the very title of the study as well as from internal references which talk of promoting the renewable energy industry. As a consequence thereof, any development initiated or taking guidance out of this study (unless it is refined substantially) will, by definition, be founded upon a flawed definition of "environmentally sustainable development". The study and its out workings will be a violation of, inter alia, the Convention on Biological Diversity to which South Africa is a signatory as well as a violation of the "duty of care" requirement under NEMA. The case of BDEF provides an apt example of the fundamental flaws of the SEA. It is our view that the SEA is an inadequate surrogate for a proper Environmental Impact Assessment to which each proposed wind energy application should be subjected in order to properly assess the environmental impacts of the wind energy industry. The DEA and authors are also reminded that South Africa is the third most biodiverse country on Earth and that the Western Cape and Eastern Cape (in which the bulk of the wind energy industry is focused) are privileged to accommodate two of the world's only 34 globally significant biodiversity "hotspots", being the Cape Floristic Kingdom and the Maputoland-Pondoland-Albany hotspot.

In 2010 Renewable Energy Systems (RES) proposed the development of the Spitskop Wind Energy Facility directly adjacent to, and surrounding BDEF. The SWEF proposal is still going through EIA application processes after more than 4 years despite the known sensitivity of the environment and the massive opposition against this WEF. Portions of the SWEF are recorded in the SEA as being "lapsed" which is incorrect according to our knowledge.

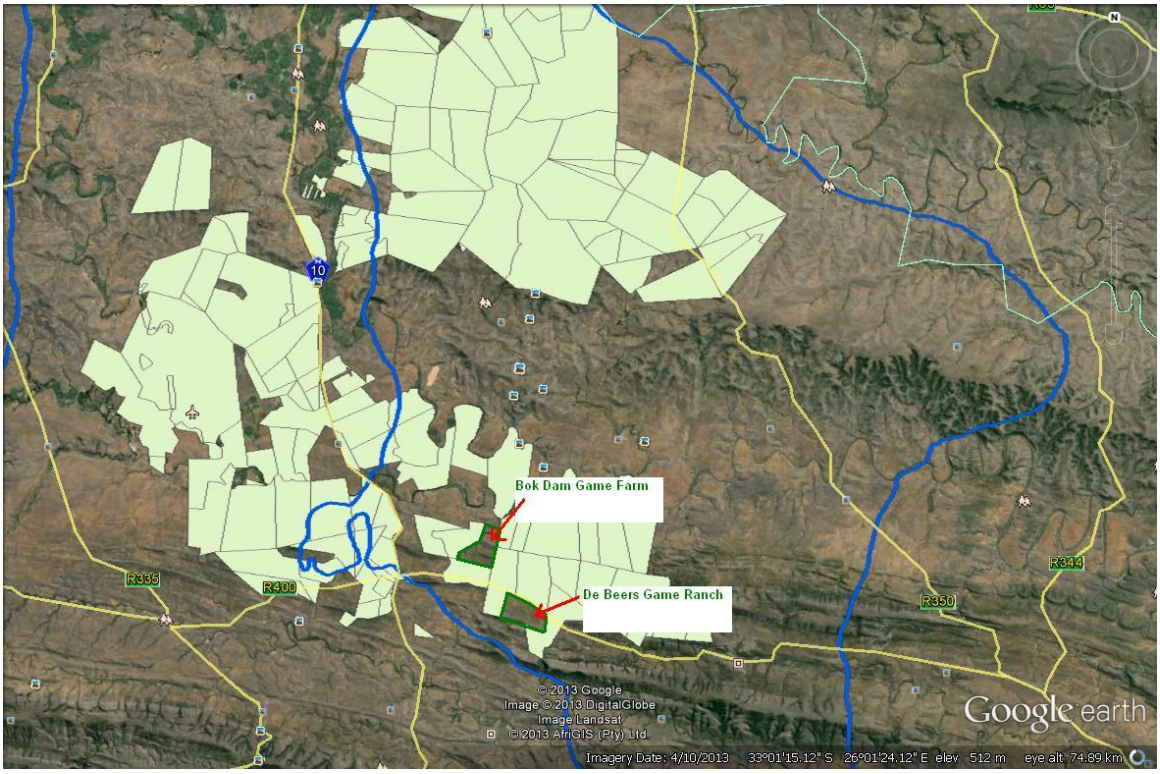

Figure 1: Below shows the BDEF and de Beers Game Ranch boundaries, as well as properties involved in the proposed SWEF, as such relate to the identified REDZ 12 (thin blue lines). Note that there are many other private game reserves/ farms NOT indicated on this plan.

1. General comments on the SEA.

A. Excludes consideration of private game reserves, private game farms and ecotourism-orientated land uses.

The SEA takes no account of ecotourism-related rural land uses and private game reserves/ farms which experience a proven significant negative impact delivered by inappropriate WEFs. The SEA only considers some forms of agricultural land uses and other statutory conservation land uses. This is a significant flaw since such private conservation land use initiatives are proven to deliver significant rural social and economic benefits to hard-pressed rural communities (such land uses are particularly effective direct job creators) whereas WEFs are acknowledged by even the wind energy industry consultants to provide "not provide jobs". Inappropriate placement of WEFs will in fact result in the loss of rural jobs should private ecotourism ventures and private game reserves be forced to close. Personal communication (by AVDS Environmental Consultants) with farmers participating in proposed WEFs has indicated that farm jobs are also likely to be cut on account of the perceived attractive income that will be delivered by the particular WEF.

The SEA is totally misleading in its ignorance of private game reserves, game farms and ecotourism land uses. For instance, the REDZ 12 represented in the below Figure 1 is known to overlap with many world class private game reserves (such Shamwari, Amakhala, Pumba, Kwantu, Frontier Game Ranch to name but a few) and which rely on the scenic beauty of the area while at the same time contributing significantly to conservation targets. Similarly BDEF and De Beers Game Ranch are involved in the preservation of significant conservation vegetation (such as the endangered Albany Spekboom Thicket). The location of the REDZ 12 is therefore totally inappropriate if the mass of Private Game Reserves and farms and ecotourism land uses located within and around its boundaries were to be considered as a map layer. The REDZ 12 also already includes a number of approved massive WEFS (e.g. Cookhouse WEF, Amakhala WEF) and is thus already oversubscribed. The Spitskop WEF (by RES) has run into significant environmental problems while the Riebeeck East Wind Farm (located north-west of Grahamstown but not shown on the SEA) has also run into similar problems.

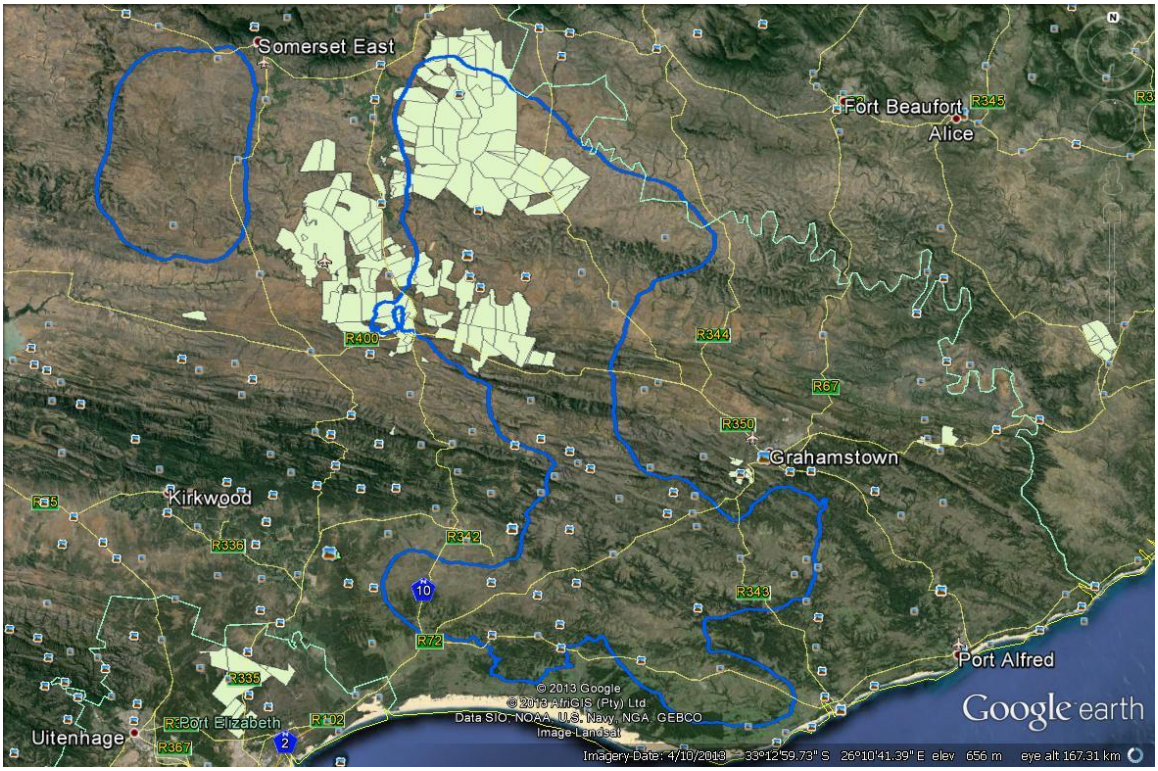

Figure 2: REDZ 12 directly overlaps with more than 8 world class ecotourism ventures and Private Game Reserves (such Shamwari, Lalibela, Bushman Sands, Pumba, Amakhala, Kwantu) and is directly adjacent to many others (e.g. Kwandwe, Kariega, Sibuya etc.)

It is therefore imperative that the SEA broaden its scope of land use considerations to include private game reserves and conservation/ ecotourism land uses. It will therefore be necessary to consult with representatives in the ecotourism and private game reserve industry (such as Indalo Eastern Cape Private Game Reserve Association).

C. Takes no account of real socio-economic impacts on existing land owners.

The SEA fails to account for the fact that significant investment decisions have been made by property owners in rural areas based upon the existing land uses (being mainly agricultural, game-related, conservation and similar). WEFs are industrial land uses with massive geographical spread (including their associated infrastructure such as substations, roads, powerlines etc.) and which are not compatible with ecotourism land uses and most other rural land uses. It also needs to be considered that such land owners have typically purchased their land and are rate-payers with land use rights under legislative protection. In this sense such land use owners have invested significantly in a financial and personal sense whereas WEF developers are typically only potential land tenants having an opportunistic and commercial motive (i.e. low level of real investment).

Apart from the WEF developer, typically only a very few participant land owners would benefit from a WEF, along with a typical token social gesture towards a minority of an associated disadvantaged community. The SEA fails to capture the real (negative) impact on all land owners and community sectors.

BDEF and De Beers Game Ranch have invested a significant amount of time, money and effort in resisting the SWEF by RES and should the current threat be reinforced by the SEA (as may well be encouraged by the identified REDZ 12) they may rather close their operations and relocate to a more secure investment area. Very significant job losses would occur and a noticeable local economic impact would be registered in the local economy including future investor insecurity.

D. Buffers

Without exception all of the (environmental and safety) buffers stipulated under the SEA are exceptionally small and do not constitute an honest or effective impact mitigation measure. Despite the significant differences in biodiversity and landscape character between Europe and South Africa the stipulated buffer distances are less than international standards would recommend. This is a fundamental flaw in the SEA and will account for massive and significant negative impact on the South African environment and economy.

The SEA's tolerance of WEF-associated high negative environmental impacts will result in serious real negative environmental impacts. Buffer distances must be totally and honestly reassessed and the tolerance level reduced significantly (i.e. buffer distances stipulated and increased).

E. Bats

The SEA only considers bat roosts of greater than 500 bats whereas most conservation-significant roosts have less than 500 bats. The effect of this is that bat roosts of endangered bat species of less than 500 individuals are considered to be environmentally insignificant! Some bat species are not communal roosters and will be selected against despite their biological value. The SEA must abide by ALL the SABAAP recommended buffers and recommendations. The manipulation and discard of SABAAP recommendations by the SEA appointed consultants is a cause for serious concern and appears to indicate a lack of objectivity and intentional manipulation.

The SEA's tolerance of potential high negative environmental impacts will result in serious real negative environmental impacts. This must be reassessed and the tolerance level reduced significantly.

F. Birds

The SEA is extremely limited, and therefore deficient, in its consideration of bird constraints. Rather than Birdlife SA it is proposed that the SEA avian constraints be informed by the internationally recognized and esteemed academic research institution, the Percy Fitzpatrick Institute at UCT. Inexplicably, endangered bird species such as blue cranes and the various bustards are totally ignored by the SEA which is unacceptable (note that the REDZ 12 falls partially within the Blue Crane Route Municipality and that the Spitskop WEF by RES has apparently revealed problematic potential impacts on Blue Cranes and other birds). The SEA needs to broaden its scope beyond simply colonies to also include prime habitats for conservation-worthy species. Prof. Phil Hockey had also advised that reliance on bird flyways in the southern African context is misleading since bird movements in this region are typically diffuse (pers. com.).

The SEA's tolerance of potential high negative avian impacts will result in serious real negative environmental impacts. This must be reassessed and the tolerance level reduced significantly under guidance of a reputable academic institution.

G. Critical Biodiversity Areas (CBAs)

CBA areas from the highest category (Protected Area) down to, at least, CBA2 should be excluded from REDZs. This is not the case in the SEA. Again the tolerance levels of significant negative environmental impacts are set much too high and need to be adjusted downwards (i.e. less tolerance). For instance, it is estimated that the Spitskop WEF by RES overlaps an area of CBA 1 or 2 conservation-worthy landscape by approximately 75% yet most of this high CBA landscape falls within the REDZ 12! We find it difficult to accept that SANBI itself has proposed such low tolerance levels.

It would appear that no reference to the Eastern Cape Biological Conservation Plan has been made nor to the STEP database despite the well researched spatial data within these resources. This is unacceptable and the SEA will lack credibility should it not consider same (and similar elsewhere) within its base map layers.

H. Lack of aesthetic landscape map layer

A fundamental flaw of the SEA is its inability to distinguish and exclude landscapes of high aesthetic value and preservation-worthy character (sense of wilderness). There is no map layer with such feature and no stated criteria. The fact that perhaps the most universally acknowledged negative impact associated with WEFs is their visual impact on landscapes makes this a fundamental error and disqualifies the value of the SEA entirely. The existence of ecotourism land uses and private game reserves could possible be used as a

surrogate indicator of such aesthetic value. The location of ecotourism and conservation based land uses should automatically dictate that the entire visible subject landscape should be excluded from any REDZ.

It would appear that the 1:10 slope base layer f the SEA is not included in the SEA exclusion mask. The REDZs must exclude high ridges on account of their visual prominence.

I. The Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape" (Chittenden Nicks de Villiers, 2006)

The SEA appears to pay no heed to the well researched recommendations contained in the Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape" (Chittenden Nicks de Villiers, 2006). Its vision is stated as being:

"The vision of the strategic initiative is to establish a policy on the implementation of a methodology to be used for the identification of areas suitable for the establishment of wind energy projects,…"

Considering the high relevance of this important document and its status as a measure of industry best practice it is surprising that the SEA places so little relevance on this critical document. Consideration of the document reveals that any WEF proposed in the area of SWEF would likely be termed a "(Highly) Restricted" (i.e. "Coincidence of more than one negative criteria") zone, from which wind farm development should be excluded.

The following explanations are also provided for "Restricted" zones such as that around the REDZ 12:

Restricted: "High value landscapes combined with low capacity of landscape to adapt to change : these areas should be restricted from wind energy development."

RESTRICTED (UNSUITABLE) ZONES

"These are landscapes in which wind energy development will be clearly inappropriate from both a criteria based and landscape based perspective. It is assumed that no wind energy proposal will be acceptable at all in these zones, which will have the highest incidence of negative (exclusionary) criteria."

Also, the guideline states that large WEFs should be at least 30km, and ideally exceeding 50km away from each other.

The SEA is significantly more tolerant of high negative environmental impacts than the Strategic Initiative despite being less informed and therefore indicates a lack of regard to the precautionary principle which should be applied in environmental assessment. The Strategic Initiative also provides valuable guidelines which should be applied, as a measure of best practice, outside of just the Western Cape Province.

J. Significantly deficient database

AVDS Environmental Consultants has been involved in the review of a number of WEF EIA applications within particular areas of the Western Cape and Eastern Cape. Our review of the SEA indicates that a significant number of just those WEF applications with which we are familiar have not recorded properly, or at all, in the SEA. We hereby notify you of the following relevant incorrectly recorded WEF EIA processes:

- Spitskop WEF (Eastern Cape) (project has been split into 3 modules and has various DEA ref. numbers): Incorrect DEA reference numbers. Has not lapsed but is still underway.
- Riebeeck East WEF (DEA: 14/12/16/3/3/2/369/ Eastern Cape): Not indicated in SEA and still underway.
- Brakkefontein WEF (Western Cape): A 2012 project (DEA Ref 14/12/16/3/3/2/351) not indicated at all but subsequently terminated.

These omissions are significant and compromise the required standard of the SEA. We recommend that a more thorough Phase 1 study be repeated and then subjected to public review.

2. Comments on the SEA (REDZ 7) as such relate to the position of Bok Dam Ecotourism & Game Farm and De Beers Game Ranch.

This section concerns comments on the SEA, and the consequences of it, as they relate to BDEF and De Beers Game Ranch.

A. Precedent of unsuccessful SWEF proposal within identified REDZ 12.

As has been stated above, in 2010 the SWEF was proposed for an area covering approximately 264km2 within the REDZ 12. After more than 4 years the Applicant for the proposed SWEF is stubbornly persisting despite the clearly significant negative environmental impacts associated with the proposed SWEF. It is thus clear that the area proposed for the SWEF within the identified REDZ 12 is unsuitable for WEF development (despite the stubborn efforts of the Applicant) and therefore REDZ 12 should be amended to exclude the SWEF area (and other unsuitable areas).

B. Cumulative and indirect impacts.

The SEA fails to deal with cumulative impacts from WEF development. Some of the REDZs identified thus far (e.g. REDZ 12) incorporate several approved and/ or proposed WEFs already. However the SEA stipulates no limit on WEF development within REDZs in any way despite the fact that individual REDZs may cover several hundred (or thousand?) square kilometers in a single REDZ. International guidelines stipulate that large WEFs should be at least 30kms apart but preferably more than 50 km apart!

In the below Figure 3 it can be seen that a mass of directly abutting WEFs (approved and under consideration) have effectively sterilized a huge tract of landscape (much of which is of high CBA value) while the Western Cape Strategic Guideline (Chittenden Nicks de Villiers, 2006) document, prepared to guide commercial wind farm development in the Western Cape, recommends that a distance between large WEFs of at least 30km be maintained but preferably more than 50km. The SEA ignores the recommendation of this Guideline which is based upon internationally standards.

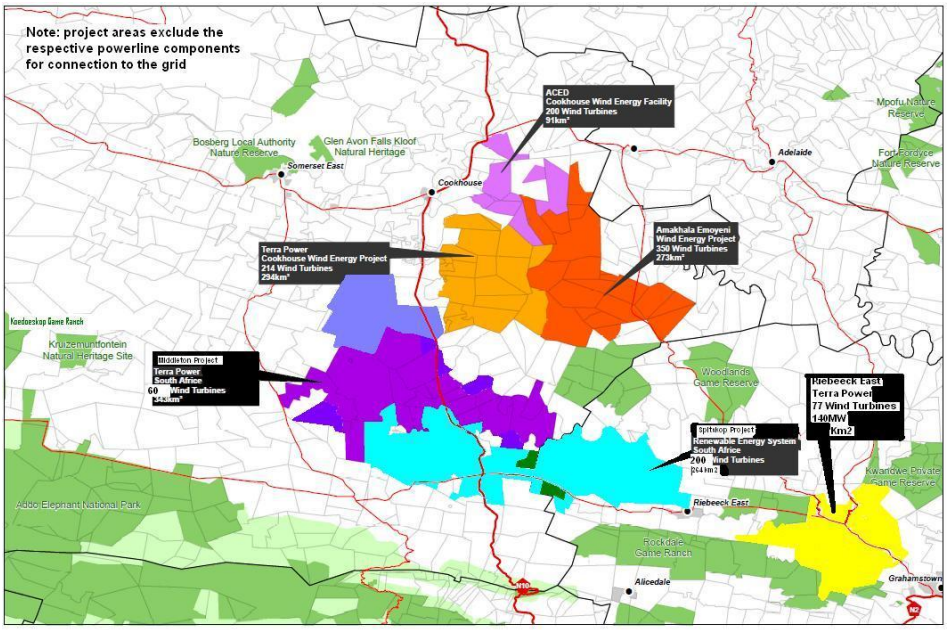

Figure 3: A mass of directly abutting WEFs is already present within and adjacent to REDZ 12 despite the existence of high CBA value landscape. Notice the large number of interspersed private game reserves/ farms which are not detected or considered by the SEA.

Also the SEA does not (cannot) consider the significant negative environmental impacts away from the WEF site itself, such as manufacturing impacts (e.g. in China), roadway, logistic and transportation impacts and infrastructural impacts (e.g. powerlines, electrical grid changes and upgrades) all of which will have significant negative environmental impacts and will contribute to increased atmospheric carbon levels.

C Socio-economic issues

The SEA does not consider the important social environmental negative impacts that its REDZs will deliver to local community sectors and particular individuals and the associated issues of parity. Instead the SEA attempts to deal with social impacts at a broad municipal level and which appears to amount to a crude failure (i.e. it appears that many of the identified "needy" municipalities fall outside of the REDZs anyway).

The SEA fails to consider the resultant devaluation of neighbouring land from WEF development. This is especially true of Private Game Reserves and ecotourism properties. This is a significant negative impact and it will be necessary in the final assessment of any WEF to consider compensation for negatively affected land owners. We refer you to the example of the proposed Proteus WEF Innowind site (Mossel Bay) where the impact on the adjacent game reserves and eco-tourism ventures was indeed investigated thereby acknowledging the impact that WEFs may have on conservation-related land uses.

D Loss of carbon capture capacity by ecotourism land uses

BDEF and de Beers Game Ranch, like all other conservation-related land uses, play a significant role in contributing to the capture and sequestration of atmospheric carbon. Should the threat posed by the SEA result in the discontinuation of such land uses then a significant contribution towards the enhancement of climate change will have been incurred.

E Fire threat

Many of the REDZs are situated within a fire-prone areas. WEFs and their infrastructure are known to pose a significant fire threat. There is no environmental sensitivity factored in for this significant threat to existing land uses.

F Hydrological and geohydrological impacts

The sensitivity thresholds for hydrological features/issues is set much too high in the SEA to be of any real use in determining the geographical location of all significant hydrological features in the landscape. BDEF and De Beers Game Ranch fall within a water-constrained environment where water stress is a continual factor in the existing historical land use activities. The REDZ 12 will promote WEF development which will impose upon the hilly landscape an extensive network of roads, infrastructure and numerous massive structures which will require blasting during construction and will undoubtedly interrupt surface and subterranean drainage patterns, as well as impacting on the limited and valuable water resources. Large amounts concrete batching will be required and will require huge volumes of water.

The issue of surface water bodies and features is also not addressed or identified in the DSR. Such features which would require specialist impact investigation would include the numerous seeps, wetland areas, streams, drainage courses, Sonderend River and Catchment Area. Such essential investigation will require the services of an independent freshwater specialist.

Subterranean aquifers and hydrological systems are not considered in the SEA despite the importance of these natural water resources to the land use activities within many of the REDZs which are located within semi-arid environments. WEF development threatens the survival of BDEF and other existing land uses by the associated destructive construction activities required to build a WEF in the rocky and mountainous terrain of the subject site. The construction of the massive turbines foundations and roadways over such steep and undulating terrain will require extensive rock blasting which will definitely destroy and disrupt various aquifers which play a vital role in feeding the Sonderend catchment Area.

BDEF is extremely concerned about its sole perennial water source, a borehole situated on their border. BDEF, and the surrounding REDZ 12 area is also classified as Aquatic CBA2 (important sub-catchment area) and which would be threatened by any WEF which the Sea would promote.

G Faunal issues.

Of significance is the fact that the area around BDEF, including the REDZ 7, constitutes a key genetic corridor for the threatened Cape Mountain Leopard. Also, the Stormsvleipoort also appears to serve as an important, perhaps sole, natural passage through the Riviersonderend mountain range and which allows for the movement and migration of birds, bats and other fauna. It is therefore clear that the REDZ 7 needs to be amended to exclude this area.

H Heritage issues

No heritage or archaeological constraints have been considered win the SEA which is a fundamental flaw. The REDZ 12 area covers parts of the old “frontier” and which has great significance in South African colonial and cultural history.

I Noise

WEFs generate audible and low frequency noise and which can have significant negative impacts on humans **and animals**. The issue of noise impacts has not been factored into the environmental criteria nor the exceptionally small buffer distances. Low frequency noise is particularly capable of travelling considerable distances.

Many of the Private Game Reserves have elephant which are particularly sensitive to low frequency noise. Also the Addo Elephant National Park is extremely close to the REDZ 12 and poses a significant threat to the fauna of this National Park. The stipulated buffer of 500m from a National Park constitutes a meaningless mitigation measure in reality.

The effect on wildlife in the REDZ 12 of blasting during construction of the deep foundations for any turbines will be significant. The SEA needs to address this aspect.

J Visual impact

Negative visual impacts are one of the best known and predictable impacts associated with WEFs yet the SEA pays no heed to this. The proposed buffers (all of them), where they exist, are ridiculously small and cannot reasonably be considered to be environmental mitigation measures in any honest and ethical environmental assessment. Land uses which derive their function from ecotourism (such as private game reserves, including BDEF and De Beers Game Ranch) rely entirely upon the unpolluted quality of the landscapes at their disposal. WEFs and the associated infrastructure represent an extensive and far-reaching visual pollutant of the unique landscape scenery upon which South Africa’s ecotourism relies. The mass of world class private game reserves, ecotourism ventures and game farms contained within the REDZs 7 and 12 is just such an example of land uses maximizing the aesthetic beauty and sense of wilderness of landscapes but which the SEA has ignored totally.

As an example see Figures 4 and 5 below, as evidence of the severe significant negative visual impact of the terminated Brakkefontein WEF proposal on Melozhori Private Game Reserve within REDZ 7, Western Cape. It is clear that any WEF proposal which is promoted by the REDZ 7 will drastically alter the “sense of place” and will not be compatible with the existing ecotourism and tourism ventures in the area.

Figure 4: Significantly negatively compromised dusk view of superimposed turbines as viewed from deck of Melozhori Game Reserve Lodge.

Figure 5: High negative visual impact of Brakkefontein WEF on Melozhori Private Game Reserve (as viewed from lodge) of superimposed turbines (which are positioned within the identified REDZ 7 of the SEA).

K. Lack of consultation with all sectors of society.

With regard to the SEA, we are not aware of any consultation with the potentially most affected sector of society - the rural and impoverished communities. Most WEFs are likely to be located within rural settings and, in our experience, the marginalized sectors of society located in such rural settings are the most likely to be negatively impacted by WEFs since they have limited available social and economic options. Furthermore levels of illiteracy often exceed 50% in such communities and it is therefore necessary for the SEA consultant team to comprehensively canvas the views of rural communities.

It is also necessary to consult extensively with industry players in the ecotourism, private game reserve and game farm industries.

3. CONCLUSION

The SEA has failed to correctly record the Spitskop WEF application (since terminated) as well as the Riebeeck East Terra Power application. It is a failure in its current form and will require fundamental and extensive revision should it wish to obtain credibility. It excludes significant and essential environmental sensitivity criteria and its tolerances of environmental criteria (in the determination of REDZs) are set unreasonably and significantly too high to be of any real worth in protecting the environment. The SEA Phase 1 Study constitutes a realistic significant threat to the biodiversity, society, and environment of South Africa and it requires an honest, independent and objective re-evaluation of environmental constraints. It is quite clear that the promotion of WEFs is at the heart of the SEA rather than the protection of South Africa's natural and globally-unique heritage. It is our view that the SEA, unless amended, will be complicit in unavoidable violations of the Convention on Biological Diversity to which South Africa is a signatory.

Based on the reasons provide above, and the fundamental flaws identified in the SEA, it is recommended that the REDZ 12 be moved away (out of visual contact) from the BDEF and De Beers Game Ranch and any ecotourism-related land uses. We also propose that the REDZ 12 is now fully subscribed by the approved WEFs located within, and around, it and that any further WEF development will create negative cumulative impacts on the REDZ 12 environment.

Date: 16 September 2013

Comment prepared by:	Senior Consultant:	Credentials:
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AVDS ENVIRONMENTAL CONSULTANTS

COMMENTS AND OBJECTION:

NEGATIVE CONSEQUENCES OF THE "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY - PHASE I STUDY AREAS" STUDY ON THE MELOZHORI PRIVATE GAME RESERVE, BONNIEVALE, AND SURROUNDING ENVIRONMENT.

Prepared for;

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Prepared by:

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14 September 2013

COMMENTS AND OBJECTIONS REGARDING THE NEGATIVE CONSEQUENCES OF "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC ENERGY - PHASE I STUDY AREAS" ON THE MELOZHORI PRIVATE GAME RESERVE, BONNIVALE, AND ITS SURROUNDING ENVIRONMENT.

Introduction

On behalf of the owners of Melozhori Private Game Reserve (MPGR), Bonnievale, Western Cape, this document records comment on (and substantive objections to) the Strategic Environmental Assessment (SEA) currently being prepared to aid the "efficient and effective rollout of wind …energy." This objection relates specifically to the aspect of the wind energy initiative as it regards the solar energy potential as substantially more environmentally-appropriate (i.e. sustainable) for South Africa.

MPGR is concerned with the preservation of significant conservation-worthy environment within and outside of its boundaries. It is the only 100% –blackowned private game reserve in the Western Cape. It delivers meaningful social benefits to the surrounding community and local economy as well as the urbanized employees of the owners' other businesses (as a retreat and recreational facility). MPGR falls within the SEA-identified Renewable Energy Development Zone 7 (as this particular REDZ is numbered 7 on the Google earth database).

Acronyms used in these comments and objections are as follows:

EIA	Environmental Impact Assessment
MPGR	Melozhori Private Game Reserve
WEF	Wind Energy Facility
BWEF	Brakkefontein Wind Energy Facility
PAJA	Promotion of Administrative Justice Act, 2000 (Act 3 of 2000)
NEMA	The National Environmental Management Act, 1998 (Act 107 of 1998), as amended
DEA	Department of Environmental Affairs (National)
SEA	National Strategic Environmental Assessment for the efficient rollout of wind and solar photovoltaic energy – Phase 1 Study
REDZ	Renewable Energy Development Zone (as defined in the SEA)

We have reviewed the SEA and in our professional opinion consider it to be fundamentally–flawed and misrepresentative of the real environmental sensitivities in many respects that will be imposed upon the environment in the pursuit of the often unsustainable wind energy industry. Furthermore it is clear the point of departure for the SEA is significantly industry/development-biased at the expense of the environment (biophysical and social). The latter is clear from the very title of the study as well as from internal references which talk of promoting the renewable energy industry. As a consequence thereof, any development initiated or taking guidance out of this study (unless it is refined substantially) will, by definition, be founded upon a flawed definition of "environmentally sustainable development". The study and its out workings will be a violation of, inter alia, the Convention on Biological Diversity to which South Africa is a signatory as well as a violation of the "duty of care" requirement under NEMA. The case of MPGR provides an apt example of the fundamental flaws of the SEA. It is our view that the SEA is an inadequate surrogate for a proper Environmental Impact Assessment to which each proposed wind energy application should be subjected in order to properly assess the environmental impacts of the wind energy industry. The DEA and authors are also reminded that South Africa is the third most biodiverse country on Earth and that the Western Cape and Eastern Cape (in which the bulk of the wind energy industry is focused) are privileged to accommodate two of the world's only 34 globally significant biodiversity "hotspots", being the Cape Floristic Kingdom and the Maputoland-Pondoland-Albany hotspot.

In 2012 Terra Power Terra Power Solutions (Pty) Ltd. proposed the development of the Brakkefontein Wind Energy Facility directly adjacent to, and in view of, the MPGR. The BWEF was terminated by the Applicant during the EIA application on account of the lack of suitable wind resource in the area (as well as the sensitive environment). The BWEF is not recorded in the SEA which is an oversight.

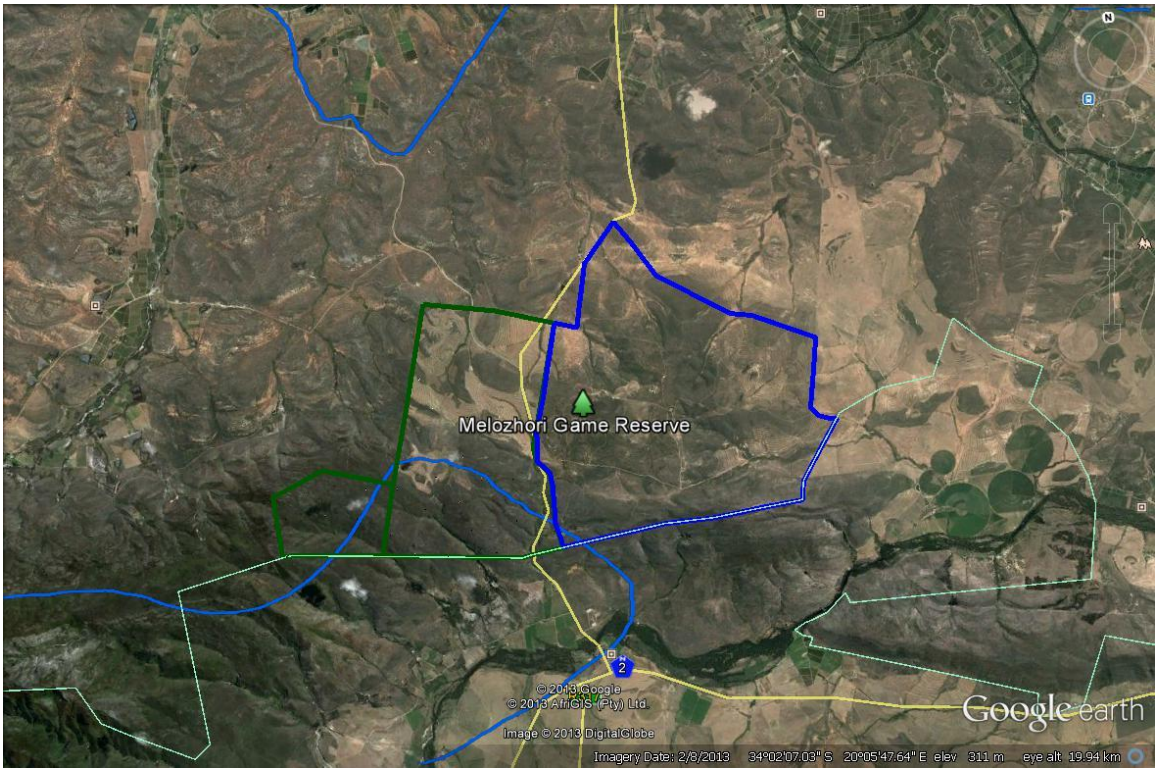

Figure 1: Below shows the MPGR boundaries (thick blue line), as well as boundaries of the properties involved in the proposed BWEF (green lines), as such relate to the identified REDZ 7 (thin blue lines)

1. General comments on the SEA.

A. Excludes consideration of private game reserves, private game farms and ecotourism-orientated land uses.

The SEA takes no account private game reserves and other private conservation and ecotourism-related rural activities and which have a proven negative impact delivered by inappropriate WEFs. The SEA only considers some forms of agricultural land uses and other statutory conservation land uses. This is a significant flaw since such private conservation land use initiatives are proven to deliver significant rural social and economic benefits to hard-pressed rural communities whereas WEFs are acknowledged by even the wind energy industry consultants to provide “not provide jobs”. Inappropriate placement of WEFs will in fact result in the loss of rural jobs should private game reserves be forced to close. Personal communication (by AVDS Environmental Consultants) with farmers participating in proposed WEFs has indicated that farm jobs are also likely to be cut on account of the perceived attractive income that will be delivered by the particular WEF.

The SEA is totally misleading in its ignorance of private game reserves, game farms and ecotourism land uses. For instance, the REDZ represented in the below Figure 1 is known to overlap with many world class private game reserves (such Shamwari, Amakhala, Pumba, Kwantu, Frontier Game Ranch to name but a few) and which rely on the scenic beauty of the area which at the same time contributing significantly to conservation targets. Similarly Melozhori is involved in the preservation of significant conservation flora (renosterveld and fynbos) and fauna and is part of a conservation corridor initiative which would link the Dasberg Conservancy, Riviersonderend Mountain Catchment and Nature Reserve, Melozhori Private Game Reserve and Rietfontein Wildplaas along the Riviersondend Mountain range (see Figure 2).

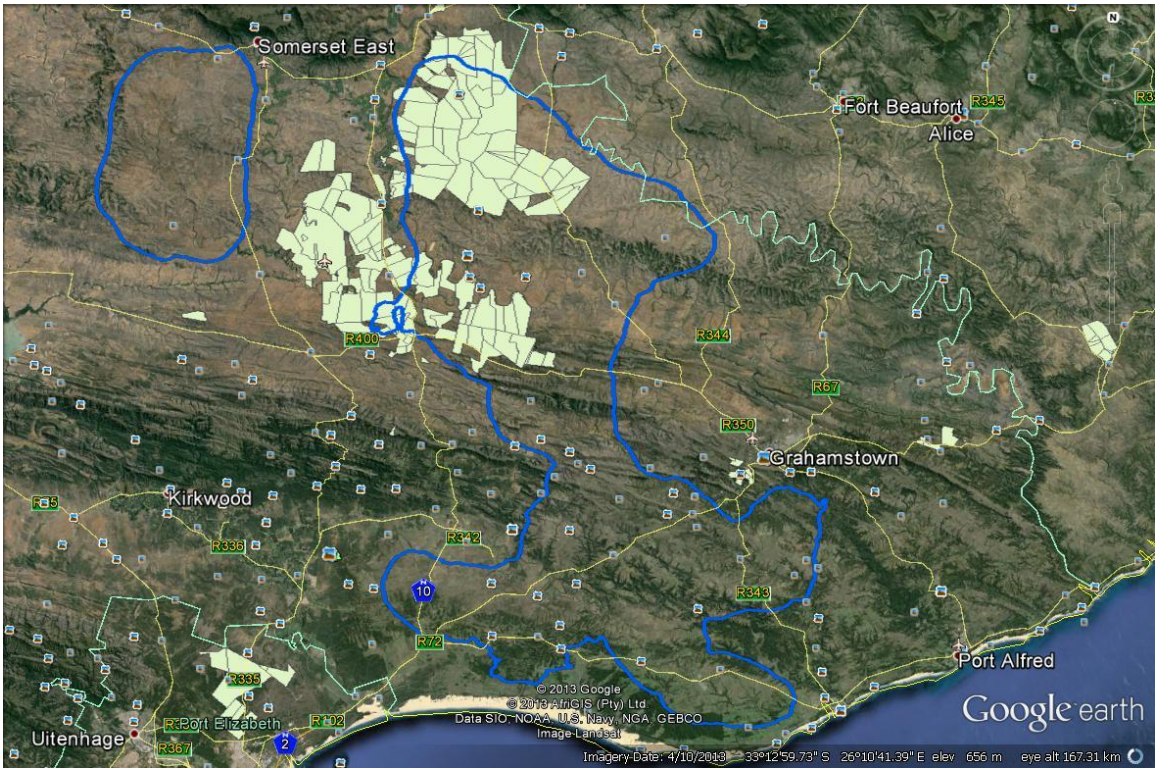

Figure 2: REDZ 12 directly overlaps with more than 8 world class ecotourism ventures and Private Game Reserves (such Shamwari, Pumba, Amakhala, Kwantu) and is directly adjacent to many others (e.g. Kwandwe, Kariega, Sibuya etc.)

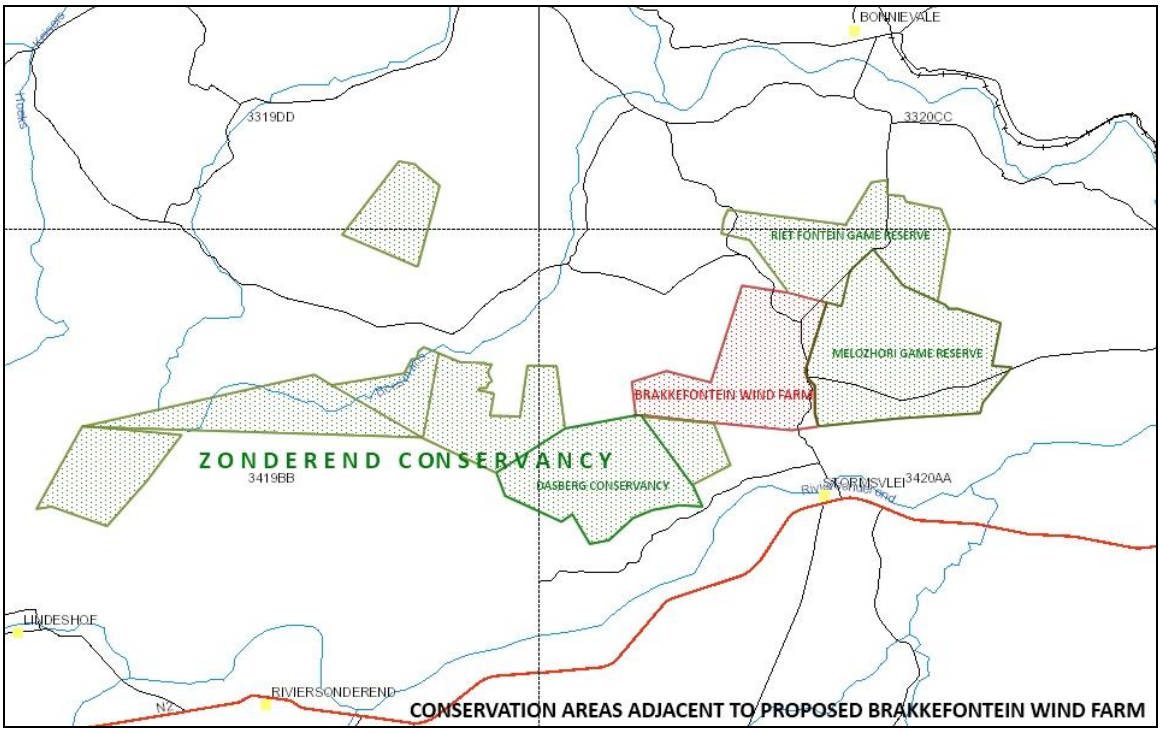

Figure 3: Conservation properties, including MPGR, located within and adjacent to the REDZ 7 and which are involved in the conservation corridor initiative being considered.

It is therefore imperative that the SEA broaden its scope of land use considerations to include private game reserves and conservation/ ecotourism land uses. It will therefore be necessary to consult with representatives in the ecotourism and private game reserve industry (such as Indalo Eastern Cape Private Game Reserve Association).

C. Takes no account of real socio-economic impacts on existing land owners.

The SEA fails to account for the fact that significant investment decisions have been made by property owners in rural areas based upon the existing land uses (being mainly agricultural, game-related, conservation and similar). WEFs are industrial land uses with massive geographical spread (including their associated infrastructure such as substations, roads, powerlines etc..) and which are not compatible with ecotourism land uses and most other rural land uses. It also needs to be considered that such land owners have typically purchased their land and are rate-payers with land use rights under legislative protection. In this sense such land use owners have invested significantly in a financial and personal sense whereas WEF developers are typically only potential land tenants having an opportunistic and commercial motive (i.e. low level of real investment).

Apart from the WEF developer, typically only a very few participant land owners would benefit from a WEF, along with a typical token social gesture towards a minority of an associated disadvantaged community. The SEA fails to capture the real impact on all land owners and community sectors.

MPGR invested a significant amount of time, money and effort in resisting the Terra Power BWEF and should it be forced to undergo a similar threat again (as may well be encouraged by the identified REDZ 7) it may rather close its operation and relocate to a more secure investment area. A significant job loss would occur and a noticeable economic impact would be registered in the local economy.

D. Buffers

Without exception all of the buffers stipulated under the SEA are exceptionally small and do not constitute an honest impact mitigation measure. Despite the significant differences in biodiversity and landscape character between Europe and South Africa the stipulated buffer distances are less than international standards would recommend. This is a fundamental flaw in the SEA and will account for massive and significant negative impact on the South African environment and economy.

The SEA's tolerance of potential high negative environmental impacts will result in serious real negative environmental impacts. This must be reassessed and the tolerance level reduced significantly.

E. Bats

The SEA only considers bat roosts of greater than 500 bats whereas most conservation-significant roosts have less than 500 bats. The effect of this is that bat roosts of endangered bat species of less than 500 individuals are considered to be environmentally insignificant! Some bat species are not communal roosters and will be selected against despite their biological value. The SEA must abide by the SABAAP recommended buffers and recommendations. The manipulation and discard of SABAAP recommendations by the SEA appointed consultants is a cause for serious concern and appears to indicate a lack of objectivity and intentional manipulation.

The SEA's tolerance of potential high negative environmental impacts will result in serious real negative environmental impacts. This must be reassessed and the tolerance level reduced significantly.

F. Birds

The SEA is extremely limited, and therefore deficient, in its consideration of bird constraints. Rather than Birdlife SA it is proposed that the SEA avian constraints be informed by the internationally recognized and esteemed academic research institution, the Percy Fitzpatrick Institute at UCT. Inexplicably, endangered bird species such as blue cranes and the various bustards are totally ignored by the SEA which is unacceptable. The SEA needs to broaden its scope beyond simply colonies to also include prime habitats for conservation-worthy species.

The SEA's tolerance of potential high negative avian impacts will result in serious real negative environmental impacts. This must be reassessed and the tolerance level reduced significantly under guidance of a reputable academic institution.

G. Critical Biodiversity Areas (CBAs)

CBA areas from the highest category (Protected Area) down to, at least, CBA2 should be excluded from REDZs. This is not the case in the SEA. Again the tolerance levels of significant negative environmental impacts are set much too high and need to be adjusted downwards (i.e. less tolerance).

H. Lack of aesthetic landscape map layer

A fundamental flaw of the SEA is its inability to distinguish and exclude landscapes of high aesthetic value and conservation-worthy character (sense of wilderness). There is no map layer with such feature and no stated criteria. The fact that perhaps the most universally acknowledged negative impact associated with WEFs is their visual impact on landscapes makes this a fundamental error and disqualifies the value of the SEA entirely. The existence of ecotourism land uses and private game reserves could possible be used as a surrogate indicator of such aesthetic value. The location of ecotourism and conservation based land uses should automatically dictate that the entire visible subject landscape should be excluded from any REDZ.

I. The Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape" (Chittenden Nicks de Villiers, 2006)

The SEA appears to pay no heed to the well researched recommendations contained in the Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape" (Chittenden Nicks de Villiers, 2006). Its vision is stated as being:

"The vision of the strategic initiative is to establish a policy on the implementation of a methodology to be used for the identification of areas suitable for the establishment of wind energy projects,…"

Considering the high relevance of this important document and its status as a measure of industry best practice it is surprising that the SEA places so little relevance on this critical document. Consideration of the document reveals that any WEF proposed in the area of MPGR would likely be termed a "(Highly) Restricted" (i.e. "Coincidence of more than one negative criteria") zone, from which wind farm development should be excluded.

The following explanations are also provided for "Restricted" zones such as that around the REDZ 7:

Restricted: "High value landscapes combined with low capacity of landscape to adapt to change : these areas should be restricted from wind energy development."

RESTRICTED (UNSUITABLE) ZONES

"These are landscapes in which wind energy development will be clearly inappropriate from both a criteria based and landscape based perspective. It is assumed that no wind energy proposal will be acceptable at all in these zones, which will have the highest incidence of negative (exclusionary) criteria."

Also, the guideline states that large WEFs should be at least 30km, and ideally exceeding 50km away from each other.

The SEA is significantly more tolerant of high negative environmental impacts than the Strategic Initiative despite being less informed and therefore indicates a lack of regard to the precautionary principle which should be applied in environmental assessment.

J. Significantly deficient database

AVDS Environmental Consultants has been involved in the review of a number of WEF EIA applications within particular areas of the Western Cape and Eastern Cape. Our review of the SEA indicates that a significant number of only those WEF applications with which we are familiar have not recorded properly, at all, in the SEA. We hereby notify you of the following relevant incorrectly recorded WEF EIA processes:

1. Spitskop WEF (Eastern Cape): Incorrect DEA reference numbers. Has not lapsed but is still underway.
2. Riebeeck East WEF (Eastern Cape): Not indicated in SEA and still underway.
3. Brakkefontein WEF (Western Cape): A 2012 project not indicated at all but subsequently terminated.

These omissions are significant and compromise the required standard of the SEA. We recommend that a more thorough Phase 1 study be repeated and then subjected to public review.

2. Comments on the SEA (REDZ 7) as such relate to the position of MPGR.

This section concerns comments on the SEA, and the consequences of it, as they relate to MPGR.

A. Precedent of failed BWEF proposal within identified REDZ 7.

As has been stated above, in 2012 the BWEF was proposed for the property portions, Sand Fontein 232, Portion 4 and Brakkefontein 231, Portion 3, which lie directly adjacent to MPGR. However the EIA process and proposal itself was terminated after the Draft Scoping Report stage on account of the overwhelming social and environmental issues which were identified as being under threat of the proposal as well as for the Applicant's stated reason that the site offered insufficient wind resource to make the WEF viable. A visual impact assessment was conducted by MPGR and which revealed the true significant high negative impact which the BWEF would have on the MPGR (see Figure 3 below).

Figure 4: High negative visual impact of BWEF on MPGR (as viewed from lodge) of superimposed turbines (which are positioned within the identified REDZ of the SEA).

It therefore makes sense for the REDZ within the vicinity of MPGR to be suitably moved to outside of the visual range (at least) of MPGR.

B. Cumulative and indirect impacts.

The SEA fails to deal with cumulative impacts from WEF development. Some of the REDZs identified thus far (e.g. REDZ 12) incorporate several approved and/ or proposed WEFs already. However the SEA stipulates no limit on WEF development within REDZs in any way despite the fact that individual REDZs may cover several hundred (or thousand?) square kilometers in a single REDZ. International guidelines stipulate that large WEFs should be at least 30kms apart but preferably more than 50 km apart!

MPGR is located about 20km away from two other approved WEFs, while the Western Cape Strategic Guideline (Chittenden Nicks de Villiers, 2006) document prepared to guide commercial wind farm development in the Western Cape recommends that a distance between large WEFs of at least 30km be maintained but preferably more than 50km. The SEA ignores the recommendation of this Guideline which is based upon internationally standards.

Also the SEA does not consider the negative environmental impacts away from the WEF site itself, such as manufacturing impacts (e.g. in China), roadway, logistic and transportation impacts and infrastructural impacts (e.g. powerlines, electrical grid changes and upgrades) all of which will have significant negative environmental impacts and will contribute to increased atmospheric carbon levels.

C Socio-economic issues

The SEA does not consider the important social environmental negative impacts that its REDZs will deliver to local community sectors and particular individuals and the associated issues of parity. Instead the SEA attempts to deal with social impacts at a broad municipal level and which amounts to a crude failure (i.e. it appears that many of the identified “needy” municipalities fall outside of the REDZ anyway).

The SEA fails to consider the resultant devaluation of neighbouring land from WEF development. This is especially true of Private Game Reserves and ecotourism properties, such as MPGR. This is a significant negative impact and it will be necessary of the final assessment of any WEF to consider compensation for negatively affected land owners. We refer you to the example of the proposed Proteus WEF Innowind site (Mossel Bay) where the impact on the adjacent game reserves and eco-tourism ventures was investigated.

D Loss of carbon capture capacity by ecotourism land uses

MPGR, like all other conservation-related land uses, plays a significant role in contributing to the capture and sequestration of atmospheric carbon. Should the threat posed by the SEA result in the closure of MPGR or its like then a significant contribution towards the enhancement of climate change will have been incurred.

E Fire threat

MPGR, and REDZ 7, is situated within a Fynbos fire-prone area. WEFs and their infrastructure are known to pose a significant fire threat. There is no environmental sensitivity factored in for this significant threat to existing land uses.

F Hydrological and geohydrological impacts

The sensitivity thresholds for hydrological features/issues is set much too high in the SEA to be of any real use in determining the geographical location of all significant hydrological features in the landscape. MPGR falls within a water-constrained environment where water stress is a continual factor in the existing historical land use activities. The REDZ 7 will promote WEF development which will impose upon the landscape an extensive network of infrastructure and numerous massive structures which will undoubtedly interrupt surface and subterranean drainage patterns, as well as impacting on the limited and valuable water resources. Massive concrete batching will be required and will require huge volumes of water.

The issue of surface water bodies and features is also not addressed or identified in the DSR. Such features which would require specialist impact investigation would include the numerous seeps, wetland areas, streams, drainage courses, Sonderend River and Catchment Area. Such essential investigation will require the services of an independent freshwater specialist.

Subterranean aquifers and hydrological systems are not considered in the SEA despite the importance of these natural water resources to the land use activities within many of the REDZs which are located within

semi-arid environments. WEF development threatens the survival of MPGR and other existing land uses by the associated destructive construction activities required to build a WEF in the rocky and mountainous terrain of the subject site. The construction of the massive turbines foundations and roadways over such steep and undulating terrain will require extensive rock blasting which will definitely destroy and disrupt various aquifers which play a vital role in feeding the Sonderend catchment Area.

MPGR is extremely concerned about their sole perennial water source, a borehole situated on their border.

G Faunal issues.

Of significance is the fact that the area around MPGR, including the REDZ 7, constitutes a key genetic corridor for the threatened Cape Mountain Leopard. Also, the Stormsvleipoort also appears to serve as an important, perhaps sole, natural passage through the Riviersonderend mountain range and which allows for the movement and migration of birds, bats and other fauna. It is therefore clear that the REDZ 7 needs to be amended to exclude this area.

H Heritage issues

No heritage or archaeological constraints have been considered win the SEA which is a fundamental flaw. Heritage issues of the Stormsvlei hamlet and remnants on Melozhori Game Reserve, amongst potential others, has not been recognized in the REDZ 7. The Stormsvlei hamlet has elements which have National Heritage status in terms of the National Heritage Resources Act. The ruins on Melozhori have a special significance to the owners who have intentions to preserve them from further decay and sensitively redevelop the locality as a feature of special significance and cultural value to their game reserve and area. Furthermore the Stormsvleipoort which is located alongside the south of MPGR is a transport route of significant historic heritage.

I Noise

WEFs generate audible and low frequency noise and which can have significant negative impacts on humans **and animals**. The issue of noise impacts has not been factored into the environmental criteria nor the exceptionally small buffer distances. Low frequency noise is particularly capable of travelling considerable distances.

The effect on wildlife in MPGR of blasting during construction of the deep foundations for any turbines will be significant. The SEA needs to address this aspect.

J Visual impact

Negative visual impacts are one of the best known and predictable impacts associated with WEFs yet the SEA pays no heed to this. The proposed buffers (all of them), where they exist, are ridiculously small and cannot reasonably considered to be environmental mitigation measures in any honest and ethical environmental assessment. Land uses which derive their function from ecotourism (such as private game reserves, including MPGR) rely entirely upon the unpolluted quality of the landscapes at their disposal. WEFs and the associated infrastructure represent an extensive and far-reaching visual pollutant of the unique landscape scenery upon which South Africa's ecotourism relies. The mass of world class private game reserves, ecotourism ventures and game farms contained within the REDZs 7 and 12 is just such an example of land uses maximizing the aesthetic beauty and sense of wilderness of landscapes but which the SEA has ignored totally.

As an example see previous Figure 4, and Figures 5 and 6 below, as evidence of the severe significant negative visual impact of the terminated BWEF proposal on MPGR luxury lodge. It is clear that any WEF proposal which is promoted by the REDZ 7 will drastically alter the "sense of place" around MPGR and will not be compatible with the existing ecotourism and tourism ventures in the area.

Figure 5: Significantly negatively compromised dusk view of superimposed turbines as viewed from deck of Melozhori Game Reserve Lodge.

From Figure 6 below it is clear that the typical red aviation lights on turbines would constitute a significant negative impact on the presently light-unpolluted vista from the Melozhori Game Reserve lodge at night.

Figure 6: Significantly negatively compromised nighttime view of from deck of Melozhori Game Reserve Lodge.

K. Lack of consultation with all sectors of society.

With regard to the SEA, we are not aware of any consultation with the potentially most affected sector of society - the rural and impoverished communities. Most WEFs are likely to be located within rural settings and, in our experience, the marginalized sectors of society located in such rural settings are the most likely to be negatively impacted by WEFs since they have limited available social and economic options. Furthermore levels of illiteracy often exceed 50% in such communities and it is therefore necessary for the SEA consultant team to comprehensively canvas the views of rural communities.

It is also necessary to consult extensively with industry players in the ecotourism, private game reserve and game farm industries.

3. CONCLUSION

The SEA has failed to detect and record the previous Brakkefontein WEF application (since terminated) as well as the Riebeeck East Terra Power application. It incorrectly lists portions of the RES Spitskop WEF proposal in the Eastern Cape as "lapsed" whereas these are part of an ongoing EIA process. It is a failure in its current form and will require fundamental and extensive revision should it wish to obtain credibility. It excludes significant and essential environmental sensitivity criteria and its tolerances of environmental criteria (in the determination of REDZs) are set unreasonably and significantly too high to be of any real worth in protecting the environment. The SEA Phase 1 Study constitutes a significant threat to the biodiversity, society, and environment of South Africa and it requires an honest, independent and objective re-evaluation of environmental constraints. It is quite clear that the promotion of WEFs is at the heart of the SEA rather than the protection of South Africa's natural and globally-unique heritage. It is our view that the SEA, unless amended, will be complicit in violations of the Convention on Biological Diversity to which South Africa is a signatory.

Based on the reasons provide above, and the fundamental flaws identified in the SEA, it is recommended that the REDZ 7 be moved away (out of visual contact) from the MPGR and the proposed conservation corridor initiative along the Riviersonderend Mountains.

Date: 14 September 2013

Comment prepared by:	Senior Consultant:	Credentials:
AVDS Environmental Consultants	**Andre van der Spuy** 	**BSc. (Hons) Env. & Geogr. Science (UCT)** **MSc. Cons. Biology (UCT)**

Response from the SEA team:

The two reports prepared by AVDS (Mr van der Spuy) were submitted in September 2013, during Phase 1 of the SEA, thus at the beginning of the SEA process. At this stage, specialists' studies had not yet been undertaken and the focus areas for wind and solar PV had not yet been identified and refined. This introduction to the SEA team's response already addresses many of the following comments/concerns as the main criticism from AVDS is associated with the lack of assessment of visual, birds, bats and other specific features which were to be assessed and have been assessed during Phase 2 of the SEA. It is important to note that the list of exclusions used during the negative mapping exercise during Phase 1 of the SEA were only used to develop an environmental and technical constraint mask which was then used to identify large clusters of land available for wind and solar PV development. The list of exclusions does not represent the features with high sensitivity in terms of renewable energy and is not a comprehensive list of all the sensitivities that should be considered when assessing wind and solar PV projects. The list was presented to the PSC and ERG during Phase 1 of the SEA and discussed with the members of the ERG and PSC to make sure that the minimum requirements in terms of sensitivities that should be considered were met.

Although the above introduction addresses most of the concerns and comments included in AVDS reports, the SEA team has drafted specific responses to specific comments and concerns that were expressed in the AVDS reports. Please note that based on the fact that both the Bok Dam Ecotourism and Game Farm and the owners of the Melozhori Private Game Reserve reports contain similar comments and requests, one set of responses from the SEA team is provided below with reference to specific comment/request extracted from both reports.

- AVDS Comment 1: SEA fundamentally–flawed and misrepresentative of the real environmental sensitivities in many respects that will be imposed upon the environment in the pursuit of the often unsustainable wind energy industry; and
- AVDS Comment 2: Point of departure for the SEA is significantly industry/development-biased at the expense of the environment (biophysical and social); and
- AVDS Comment 3: The study and its out workings will be a violation of, inter alia, the Convention on Biological Diversity to which South Africa is a signatory as well as a violation of the "duty of care" requirement under NEMA.

→Response to comments 1, 2 and 3: This SEA is conducted in support of SIP 8 which is the generation of "Green Energy in support of the South African Economy". SIP 8 is one of the 18 Strategic Integrated Projects (SIPs) have been developed to promote fast-tracked development and growth of social and economic infrastructure across all nine provinces under the guidance of the PICC. The three energy related SIPs include: SIP 8 – Green energy in support of the South African economy; SIP 9 – Electricity generation to support socio-economic development; and SIP 10 – Electricity transmission and distribution for all. Green Energy refers to renewable energy sources such as wind energy and solar PV energy which reduce the dependence on fossil fuels and carbon emissions. The SEA aims at ensuring that wind and solar PV energy are rolled out without inducing major environmental impacts. The SEA is led by National Department of Environmental Affairs and is in compliance with the NEMA principles.

- AVDS Comment 4: SEA is an inadequate surrogate for a proper Environmental Impact Assessment to which each proposed wind energy application should be subjected in order to properly assess the environmental impacts of the wind energy industry.

→ Response to comment 4: The SEA is not an impact assessment process (EIA) but a strategic planning process. Government should be able to provide direction with regards to where less sensitive areas are located and development should be prioritised. The precautionary principle will always remain. The SEA process no longer proposes the delisting of NEMA listed activities i.e. an environmental authorisation process will still be required at a project level inside and outside the REDZs.

- AVDS Comment 5: The SEA takes no account private game reserves and other private conservation and ecotourism-related rural activities and which have a proven negative impact delivered by inappropriate WEFs. Imperative that the SEA broadens its scope of land use considerations to include private game reserves and conservation/ ecotourism land uses.

→Response to comment 5: The existence of game farms in the area has been noted as an issue which needs to be addressed. Those important potential impacts have not been dismissed nor understated in the SEA process. Spatial information on game reserves provided by I&APs and departments during the SEA process was taken into consideration in the specialists scoping assessment. It should however be noted that for the privately owned game farms, it is up to the land owner to decide if they want renewable energy development on their game farm.

- AVDS Comment 6: WEFs are industrial land uses with massive geographical spread (including their associated infrastructure such as substations, roads, power lines etc.) and which are not compatible with ecotourism land uses and most other rural land uses. It also needs to be considered that such land owners have typically purchased their land and are rate-payers with land use rights under legislative protection.

→Response to comment 6: Development will be incentivized within the REDZs but not limited to the REDZs. There will always be public participation on the ground as part of the Environmental Authorisation process for a specific project. These Focus Areas will not stop developers from developing outside the REDZs where there are no significant environmental impacts and wind resources are abundant. All renewable energy projects proposed outside the REDZs will still follow the current EIA process.

- AVDS Comment 7: Without exception all of the buffers stipulated under the SEA are exceptionally small and do not constitute an honest impact mitigation measure.
- AVDS Comment 8: The tolerance levels of significant negative environmental impacts are set much too high and need to be adjusted downwards (i.e. less tolerance).

→Response to comment 7 and comment 8: The buffer distances used to identify study areas during Phase 1 were adequate for the type of exercise conducted. The aim of this exercise was to identify large clusters of areas with the least “exclusion type sensitivities”. Those buffers were only representative of on-the-ground sensitivities or features-specific sensitivities, and were not used for the sensitivity mapping exercise during Phase 2 of the SEA. Seven teams of experts conducted scoping assessment in the 8 focus areas to identify the different level of sensitivity across the focus areas and to highlight key sensitive features. The specialists have assessed the different levels of sensitivities in the eight focus areas for the seven fields of expertise and have

prescribed relevant buffers for those sensitivities. The buffers identified by the specialists have been reviewed by the relevant commenting authorities (e.g. DAFF for Agriculture, DWS for freshwater aquatic ecosystems, DMR for Mining, etc) and included in the development protocol for each technology inside the REDZs. The development protocols prescribe the minimum requirements for wind and solar PV development inside the REDZs.

- Comment 9: The SEA must abide by the SABAAP recommended buffers and recommendations. The manipulation and discard of SABAAP recommendations by the SEA appointed consultants is a cause for serious concern and appears to indicate a lack of objectivity and intentional manipulation.

→Response to comment 9: The bat data used during Phase 1 of the SEA, although prepared by SABAAP, was a high level and preliminary dataset. The SEA bat specialist team has conducted a scoping assessment and identified the different levels of sensitivities in the Focus Areas. The buffers, requirements for further bat assessment in the REDZs and mitigation measures prescribed by the bat specialist team have been taken into consideration to make informed decisions with regard to development. In addition to the above, the SEA bat specialist team was working in close collaboration with SABAAP and EWT, and took into consideration any existing guideline for bat monitoring and assessment in terms of wind and solar PV development.

Moreover, as a result of the SEA process, SANBI is currently establishing an online bat database into which all EIA monitoring data will be uploaded. SABAAP participates to the protocol for monitoring and data capturing so that the information uploaded to the database will standardised and so improve the data quality and prevent substandard monitoring and data collection. The data will be verified by an external specialist to ensure the integrity of the data is maintained.

- Comment 10: The SEA is extremely limited, and therefore deficient, in its consideration of bird constraints. Rather than Birdlife SA it is proposed that the SEA avian constraints be informed by the internationally recognized and esteemed academic research institution, the Percy Fitzpatrick Institute at UCT.

→Response to comment 10: The bird data used during Phase 1 of the SEA, although prepared by Birdlife SA, was a high level and preliminary dataset. The SEA bird specialists' team has conducted a scoping assessment and identified the different levels of sensitivities in the focus areas. The buffers, requirements for further birds' assessment in the REDZs and mitigation measures prescribed by the bird specialist team have been taken into consideration to make informed decisions with regard to development. In addition to the above, the SEA bird specialist team was working in close collaboration with Birdlife SA and EWT. This is a strategic level scoping assessment and not an impact assessment. An on-the-ground assessment will be necessary in the sensitive areas of the REDZs and the initial screening of this on site verification will be informed by the current high level scoping assessment. The lead specialist for the bird scoping assessment team is Dr Andrew Jenkins who is a Research Associate at the Percy Fitzpatrick Institute at UCT. A peer review of the bird scoping assessment was undertaken by David Allan, who is curator of birds at Durban's Natural Science Museum and is the author of "A Photographic Guide to Birds of Prey of Southern Africa".

As a result of the SEA process, SANBI is establishing a Bird online database into which all EIA monitoring data will be uploaded. Birdlife-SA participates to the protocol for monitoring and data capturing so that the information uploaded to the database will standardised and so improve the data quality and prevent substandard monitoring and data collection. The data will be verified by an external specialist to ensure the integrity of the data is maintained. Based on consultation with SAWEA, Birdlife South Africa and the wind energy industry, it was concluded that taking away bird monitoring puts a project and investment at risk. Therefore there will always be bird and bat monitoring within the REDZs. Based on the upfront scoping study by specialists in the Focus Areas and the information available, the level of monitoring which should occur in different areas of the REDZs will be clearly stipulated.

- Comment 11: A fundamental flaw of the SEA is its inability to distinguish and exclude landscapes of high aesthetic value and conservation-worthy character (sense of wilderness). There is no map layer with such feature and no stated criteria.

→Response to comment 11: A scoping study for landscape/visual and cultural aspects was undertaken during Phase 2 of the SEA. The findings of this study will inform decision making with regard to visual, scenic, aesthetic and amenity values, which contribute to the area's overall 'sense of place', and which encompass natural and cultural landscape characteristics. The scoping study has identified density limits for the REDZs which address the cumulative impacts of clusters of wind and solar PV facilities. See Part 3: Section 2 of the SEA report.

- Comment 12: The SEA appears to pay no heed to the well-researched recommendations contained in the Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape" (Chittenden Nicks de Villiers, 2006).

→Response to comment 12: The SEA landscape/visual specialists' scoping study mentioned above was partly based on the "Strategic Initiative to Introduce Commercial Land Based Wind Energy development to the Western Cape-towards a regional methodology for wind energy site selection" prepared by CNdV (Chittenden Nicks de Villiers) Africa planning & design. See Part 3: Section 2 of this report. The lead specialist of the SEA landscape/visual specialists' team is Oberholzer, B. who has written the 2005 Guideline for involving visual & aesthetic specialists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 F referred to in the above mentioned report. Oberholzer, B has also been in consultation with CNdV during focus group meetings.

- Comment 13: Three WEF EIA applications missing from the EIA application map.

→Response to comment 13: Please note that a version 2 of the EIA application map has been released by DEA in 2014 which has a more comprehensive database of all renewable energy EIA applications up to December 2013. The EIA application map is a DEA product and all missing information should be communicated to DEA for update of the EIA application map and database.

- Comment 14: The SEA fails to deal with cumulative impacts from WEF development

→Response to comment 14: Clustering of development is naturally occurring in South Africa, but the current EIA process is conducted for an individual project and therefore does not examine cumulative impacts. The SEA considers cumulative impacts of wind and solar PV development by looking at large scale clusters of solar PV or wind energy projects and not individual projects.

Through the visual/landscape scoping assessment, the SEA intends to provide density thresholds for development within an area to ensure that cumulative impacts are controlled and mitigated.

- Comment 15: Western Cape Strategic Guideline (Chittenden Nicks de Villiers, 2006) document prepared to guide commercial wind farm development in the Western Cape recommends that a distance between large WEFs of at least 30 km be maintained but preferably more than 50 km.

→Response to comment 15: The criteria for determining absolute sensitivity were partly based on those from Provincial Government of the Western Cape and CNdV[1] (2006). A wide range of international sources dealing with wind farm buffers were also examined, such as those from Scotland and elsewhere (e.g. Scottish Natural Heritage[2]). Criteria and sensitivity indices from the Strategic Environmental Framework for wind farms (Strategic Environmental Framework for the Optimal Location of Wind Farms in the Coastal Provinces of South Africa[3])

- Comment 16: The SEA does not consider the negative environmental impacts away from the WEF site itself, such as manufacturing impacts (e.g. in China), roadway, logistics and transportation impacts and infrastructural impacts (e.g. powerlines, electrical grid changes and upgrades) all of which will have significant negative environmental impacts and will contribute to increased atmospheric carbon levels.

→Response to comment 16: The SEA does not examine whether RE development should take place. The IRP has stated that RE will be one of South Africa's energy generation scenarios. The objective of the SEA is to determine the best method to implement RE development. The more diverse the energy generation mix, the more stable the generation capacity.

- Comment 17: The SEA does not consider the important social environmental negative impacts that its REDZs will deliver to local community sectors and particular individuals and the associated issues of parity.

→Response to comment 17: A socio economic scoping assessment was undertaken during Phase 2 of the SEA. See Part 3 Section 15 of the SEA report.

- Comment 18: The SEA fails to consider the resultant devaluation of neighbouring land from WEF development.

→Response to comment 18: This socio economic aspect was covered by the scoping assessment which was undertaken during Phase 2 of the SEA. See Part 3 Section 15 of the SEA report.

- Comment 19: WEFs and their infrastructure are known to pose a significant fire threat. There is no environmental sensitivity factored in for this significant threat to existing land uses.

[1] Provincial Government of the Western Cape and CNdV, 2006. A Strategic Initiative to Introduce Commercial and Land Based Wind Energy Development to the Western Cape.
[2] Scottish Natural Heritage, Dec. 2009, Siting and Designing Wind farms in the Landscape. www.snh.org.uk
[3] Environomics and MetroGIS, 2011, Strategic Environmental Framework for the Optimal Location of Wind Farms in the Coastal Provinces of South Africa, prepared for DEA and GIZ

→Response to comment 19: Fire threat was taken into consideration during the SEA terrestrial and freshwater aquatic ecosystems and biodiversity scoping assessment. See Part 3 Section 4 of the SEA report.

- Comment 20: The sensitivity thresholds for hydrological features/issues are set much too high in the SEA to be of any real use in determining the geographical location of all significant hydrological features in the landscape.

→Response to comment 20: A freshwater aquatic ecosystem and biodiversity scoping assessment was undertaken during Phase 2 of the SEA. See Part 3 Section 4 of the SEA report. The SEA terrestrial and freshwater aquatic ecosystems and biodiversity specialists' team worked in close collaboration with SANBI and DWA.

- Comment 21: No heritage or archaeological constraints have been considered win the SEA which is a fundamental flaw.

-Response to comment 21: A heritage scoping assessment including archaeology, palaeontology and cultural heritage, was undertaken during Phase 2 of the SEA. See Part 3 Section 3 of the SEA report. The SEA heritage specialists' team works in close collaboration with SAHRA.

- Comment 22: WEFs generate audible and low frequency noise and which can have significant negative impacts on humans and animals.

→Response to comment 22: Potential noise impacts from wind turbine was taken into consideration and assessed. Please see Part 3 Section 13 of the SEA report.

- Comment 23: Negative visual impacts are one of the best known and predictable impacts associated with WEFs yet the SEA pays no heed to this.

→Response to comment 23: Potential visual impacts from wind farm and associated impacts on receptors was taken into consideration and assessed. Please see Part 3 Section 2 of the SEA report.

- Comment 24: The proposed buffers (all of them), where they exist, are ridiculously small and cannot reasonably considered being environmental mitigation measures in any honest and ethical environmental assessment.

→Response to comment 24: Please see Part 3 of the SEA report for updated buffers.

- Comment 25: With regard to the SEA, we are not aware of any consultation with the potentially most affected sector of society - the rural and impoverished communities.

→Response to comment 25: A roadshow was undertaken in March and April 2014. The SEA team has organised public meetings within each Focus Areas. See Appendix B of the SEA report.

Andre van der Spuy, 14/05/14

COMMENTS AND OBJECTION ON BEHALF OF THE MELOZHORI PRIVATE GAME RESERVE, BONNIEVALE, AND OTHERS, REGARDING THE "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC".

Prepared for;

Melozhori Game Farm (Pty) Ltd.

Prepared by:

AVDS ENVIRONMENTAL CONSULTANTS

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14 May 2014

COMMENTS AND OBJECTION ON BEHALF OF THE MELOZHORI PRIVATE GAME RESERVE, BONNIEVALE, AND OTHERS, REGARDING THE "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC".

Introduction

On behalf of the owners of Melozhori Private Game Reserve (MPGR), Bonnievale, Western Cape, this document records comment on, and objection to, the Strategic Environmental Assessment (SEA) in its current representation. The current version of the SEA still represents a significant environmental and socio-economic threat to the MPGR (see Figure 1) and surrounding environment despite some welcomed adjustment having been implemented since its last version. This objection relates specifically to the aspect of the wind energy initiative as it regards the solar energy potential as being substantially more environmentally-appropriate (i.e. sustainable) for South Africa.

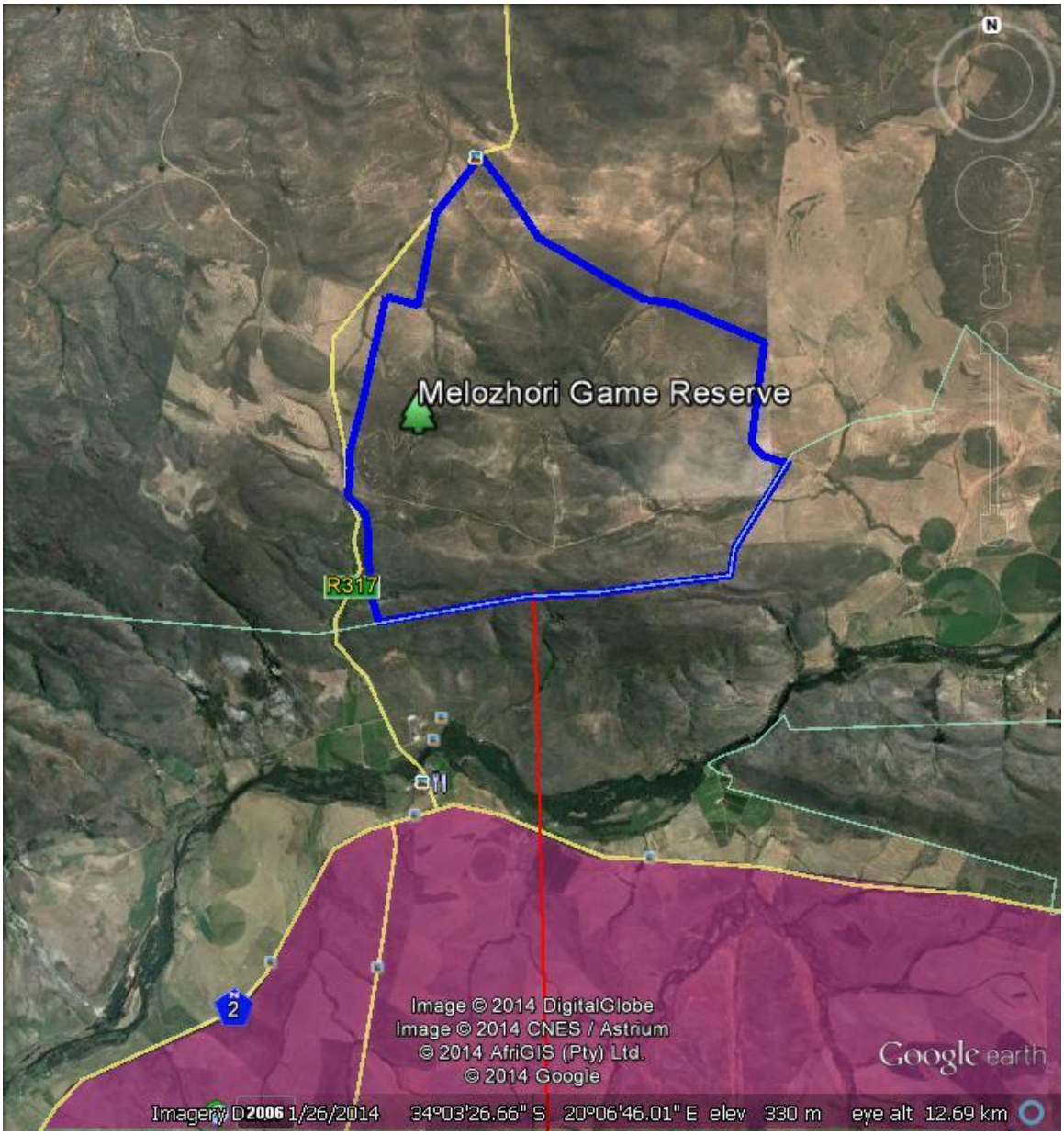

Figure 1: The location and extent of Melozhori Private Game Reserve is indicated in relation to the Focus Area 1 of the SEA (Source: Google Earth).

MPGR is concerned with the preservation of significant conservation-worthy environment within and outside of its boundaries. The high conservation value of environment under care of MPGR, and its surrounds, including that of the Zonderend Conservancy and Rietfontein Game Reserve, has been confirmed (via avian and botanical specialist studies) in the community opposition to the Brakkefontein Wind Energy Facility which was proposed immediately adjacent to MPGR in 2012, but which was subsequently terminated on environmental grounds. The conservation-worthiness of this environment was also communicated to CSIR in detail in the previous objection to the SEA and which was submitted on 16 September 2013. It is emphasized that MPGR also delivers confirmed social benefits to the surrounding community and local economy as well as the urbanized employees of the owners' other businesses (as a retreat and recreational facility).

MPGR and the Zonderend Conservancy, along with the Dasberg Conservancy, Riviersonderend Mountain Catchment and Nature Reserve, and Rietfontein Game Farm are involved in the preservation of significant conservation-worthy and endangered flora (renosterveld and fynbos) and fauna (including leopard and African wild cat) and respectively regard each other as integrated components of a ecological corridor along the Riviersondend Mountain range (see Figure 2). **We accordingly advise CSIR to consult with these other relevant land owners who would likely wish to be advised of this SEA, in light of the transferred environmental impacts that such could have on their interests.**

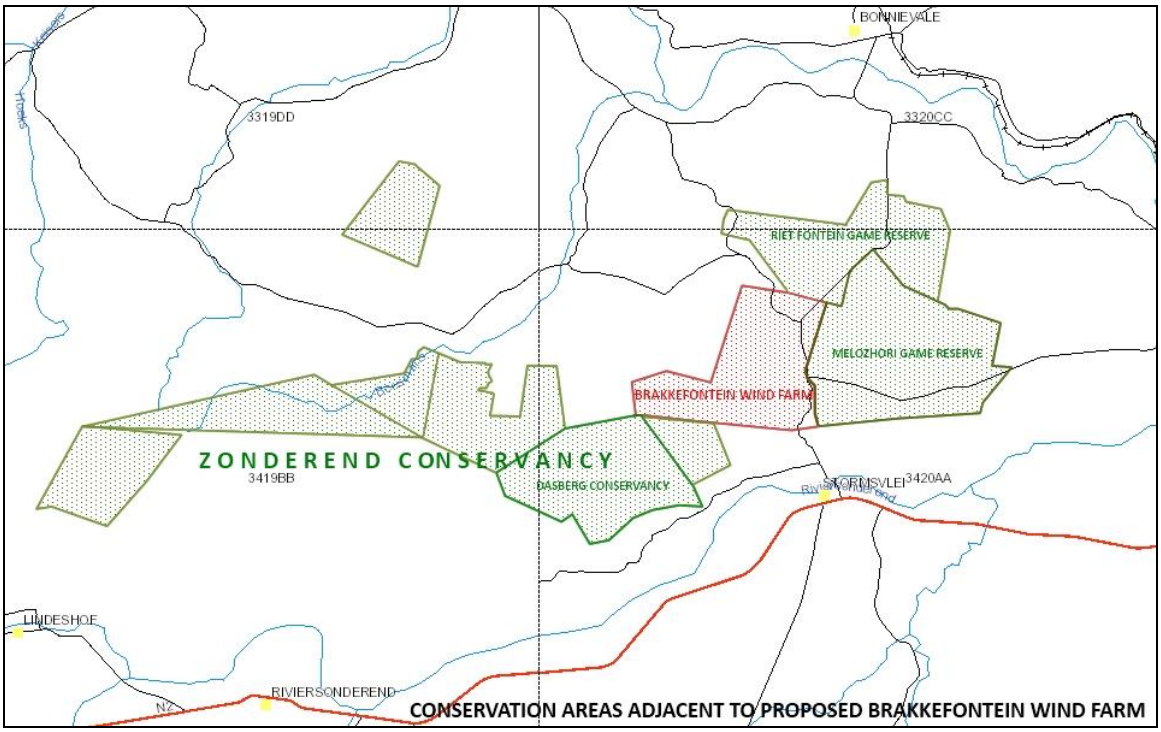

Figure 2: The properties of the Zonderend Conservancy, Dasberg Conservancy, Rietfontein Wildplaas and Melozhori Private Game Reserve are shown as well as the properties (in RED) which were earmarked for the Brakkefontein Wind Energy Facility but which application was terminated in 2012 on environmental and social grounds.

The SEA in spatial relation to MPGR and the Zonderend Conservancy.

During the earlier (Phase 1 Study Areas) version of the SEA, MPGR was incorporated within the Focus Area. An objection was submitted to CSIR on 16 September 2013, on behalf of MPGR. The present version of the SEA has resulted in the relevant Focus Area 1 having been shifted southwards of the MPGR and Zonderend Conservancy. MPGR is now located approximately 2.5 kilometers north of the current SEA Focus Area 1 (as such is labeled and numbered on the Google Earth database provided). This proximity of the Focus Area 1 is however still considered to be inappropriately close to the MPGR and Zonderend Conservancy (see below Figure 3) and is regarded as representing an environmental threat to MPGR, Riviersonderend Mountain range and Sonderend River which runs along the southern base of the mountain range.

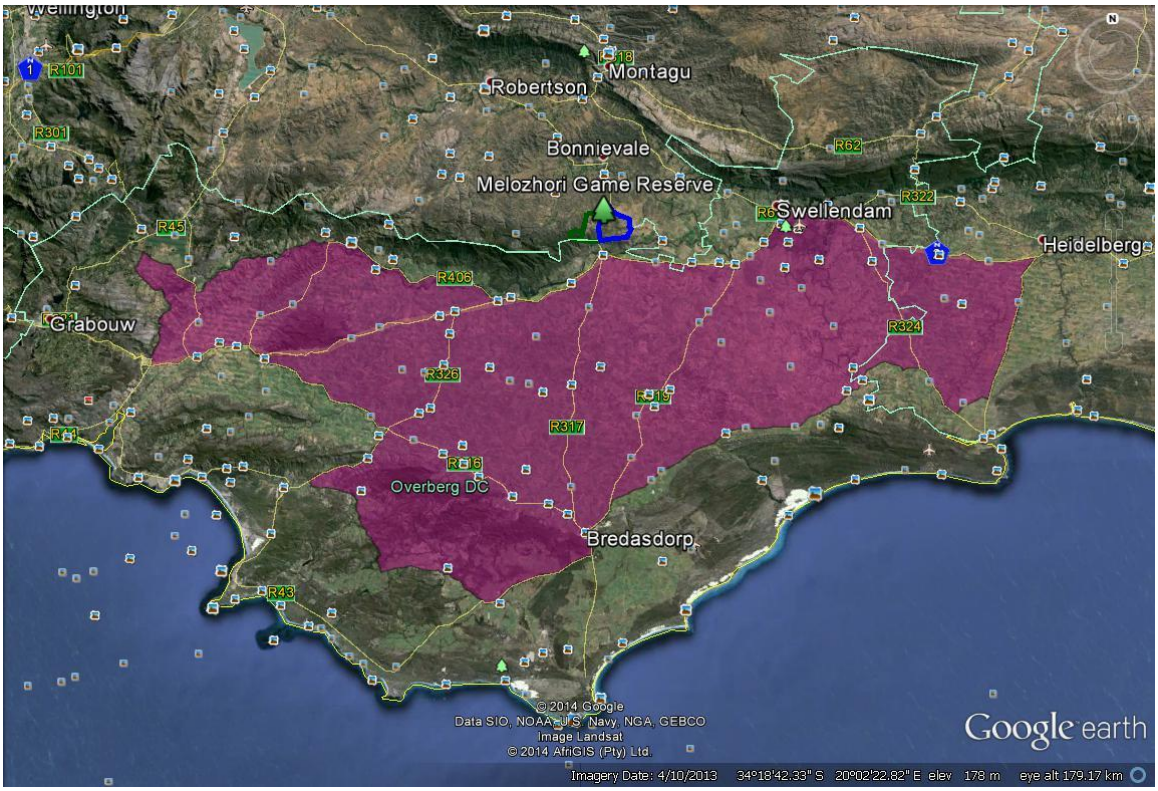

Figure 3: The SEA Focus Area 1 is depicted in the lilac tone with the position of MPGR (outlined in BLUE) indicated to the north of the Focus Area 1 (Source: Google Earth).

Comments on the SEA process.

As a point of departure, the Department of Environmental Affairs (DEA) and consultants (CSIR) are reminded that South Africa is the third most biodiverse country on Earth (ref. SANBI) and that the Western Cape and Eastern Cape (in which the bulk of the wind energy industry is focused) are privileged to accommodate two of the world's only 35 globally significant biodiversity "hotspots", being the Cape Floristic Kingdom and the Maputoland-Pondoland-Albany "hotspots". Focus Area 1 is located within the Cape Floristic Biodiversity "Hotspot".

As enumerated in the objection submitted on 16 September 2013, the SEA remains a fundamentally–flawed initiative and is misrepresentative of the real environmental sensitivities, in many respects, that will be imposed upon the environment in the pursuit of a generally unsustainable (as is defined in the genuine sense of the word) wind energy industry. Furthermore, it is clear that the approach for the SEA is a significantly industry/development-biased one which is at the expense of the environment (biophysical and social). The latter is clear from the very title of the study as well as from numerous internal references which talk of promoting the renewable energy industry as well as from the "road show" meetings of which we attended two (Bredasdorp and Grahamstown). However, very little emphasis is placed upon the globally unique biodiversity under stewardship of South Africa and which is arguably of much greater value, on all levels, than the developing renewable energy industry. As a consequence thereof, any development initiated or taking guidance out of this study (unless it is refined substantially) will, by definition, be founded upon a manipulated and flawed definition of "environmentally sustainable development". Furthermore, the repercussions of the fundamentally-flawed SEA will possibly be a violation of, *inter alia*, the Convention on Biological Diversity to which South Africa is a signatory as well as a violation of the "duty of care" requirement under the National Environmental Management Act No. 107 of 1998, as amended (NEMA).

While the initial reluctance by CSIR to consider the impact of the SEA on private conservation properties now appears to have been superseded by a reluctant acknowledgment of such issues the current retroactive and superficial approach to include such properties (only those which have fortuitously become aware of the SEA initiative) is a failure. This failure is due primarily to the extremely superficial and exclusive public engagement which has effectively excluded a significant portion of land owners who would very likely wish to be informed of the SEA on account of its possible consequences for them. The SEA has availed the public and affected communities just a single, poorly advertised, regional "road show" meeting within each relevant

region. We are aware of landowners who stand to be affected by the consequences of the SEA but remain unaware of its existence. In addition, "occupiers" (per NEMA) of receiving environments have been totally excluded on account of this inadequate public consultation process as well as the technologically sophisticated SEA approach which is significantly beyond the skill levels of such communities (a large proportion of who are illiterate).

The Overberg Region "road show" meeting, held on 18 March 2014 at Bredasdorp, is illustrative of the poor level of public engagement in this SEA. At the designated time for the meeting (5.30pm), there were only 8 motor vehicles parked outside the venue. There were approximately 19 persons in attendance of which 4 appeared to be CSIR and/or DEA representatives. We therefore estimate that there were about only 16 interested parties in attendance for this once-off public meeting (some did enter and leave during the proceeding meeting). Under no circumstances can it therefore be deduced that meaningful and representative public engagement around the SEA has been undertaken in the greater Overberg region (or that fair opportunity for such participation has been made available).

It was suggested by members of the public at the Grahamstown "road show" meeting that CSIR consult with that provincial nature conservation authority to establish which properties have a "certificate of adequate enclosure" (i.e. high game fence) as a means to identify conservation-related properties and which should be considered as potential "no go" properties. This proposal is supported here as a base level identification process but is considered to be incomplete in and of itself. Many properties, especially in the mega-fauna depauperate (but botanically diverse) fynbos biome, do not have high game fences since the focus of conservation efforts is emphasized upon botanical value. Other conservation properties operate according to "purist" conservation approaches which regard high fences as constraining the movement of natural fauna and therefore remain unfenced or have conventional stock fencing despite contributing significantly to South Africa's conservation obligations. Such properties would not be identified through fencing registrations despite their value.

Some of the comments made by the CSIR consultants at both the Bredasdorp and Grahamstown road show meetings are cause for concern. It was mentioned that Aquila Game Reserve in the Western Cape has accommodated a renewable energy project on its property. This example was used by the consultants as illustration that private conservation properties may be compatible with renewable energy projects. It was pointed out by a game industry expert at the Grahamstown meeting that such is a very poor example of compatible land use. His blunt, but meaningful, comment on the authenticity of the Aquila Game Reserve as an example of a game reserve will not be repeated here but will no doubt have been noted by the consultants. It must be accepted that nature-orientated conservation land uses are entirely incompatible with (at least) wind energy facilities without (known) exception.

The consultants also emphasized the point that renewable energy projects in South Africa are entirely funded by private capital. This is untrue. The guaranteed electricity price paid to successful proponents of such projects incorporates an additional levy sourced from other electricity users i.e. cross-subsidization is being used. Such subsidies are sourced from the South Africa tax-payer who uses electricity and without which subsides renewable energy projects would most likely be financially unviable.

It was mentioned that the use of conservation "off-sets" may be a mechanism that is used in the SEA process. It must be pointed out that there is an increasing view in the credible conservation fraternity which regards "off sets" in a dubious light on account the real, and often practiced, unethical manipulation of this mechanism in order to permit development of environmentally sensitive land. Such a mechanism is therefore not compliant with the "risk averse" approach ensconced in the NEMA and must be rejected from SEA approach. Conservation-worthy land must be protected according to its inherent status alone.

It was mentioned that Urban Econ Consultants are tasked with the specialist investigation of socio-economic issues of the SEA. An objection is herewith raised to the appointment of this consultant based upon previous reviews of wind energy facility application specialist studies (e.g. Plan-8 Wind Energy Facility Proposal, Makana District, Eastern Cape) by this consultant and which were found to be unjustifiably in favour of the respective proponents. The socio-economic findings of the SEA therefore stand to potentially be meaningless and will be challenged if necessary.

It must be noted that our clients are of the view that a Strategic Environmental Assessment (SEA) for renewable energy development in South Africa is indeed a valuable tool but that such should be substantially more comprehensive and inclusive than the current SEA and should not be implemented at the expense of the Environmental Management Act (EIA) requirements under NEMA. In order to achieve genuine sustainable development the SEA should prioritise firstly environmental protection while considering viable renewable energy development options (as opposed to the most profitable development). Should viable and sustainable renewable energy not be achievable then there can be no justification for pursuing

(private) renewable energy production. The SEA should function as a supplement to the normal rigorous EIA criteria currently required for wind farm developments.

Proposed amendments to current SEA.

At present the current SEA takes no account of private game reserves and game farms and other private conservation and ecotourism-related activities but which have been proven to be negatively impacted upon by inappropriate WEFs on account of the latter's spatially extensive negative environmental impacts. The SEA only respects some forms of agricultural land uses and formally protected areas. This is a significant flaw since private conservation initiatives are heavily relied upon by South Africa to assist in attaining its specified conservation targets (National Environmental Management Biodiversity Act No. 10 of 2004) as such targets are impossible to achieve within the current suit of formally protected areas.

Also, such private conservation land use initiatives deliver significant rural social and economic benefits to hard-pressed rural communities whereas WEFs are acknowledged by even the wind energy industry consultants to "not provide jobs". Inappropriate placement of wind energy facilities will in fact result in the loss of rural jobs should private game farms and reserves be forced to close. Personal communication (by AVDS Environmental Consultants) with farmers participating in proposed WEFs has indicated that farm jobs are also likely to be cut on account of the perceived attractive income that will be delivered by WEFs when compared with the burdensome bureaucracy and consequences associated with labour laws.

(i) Implementation of an Exclusion Zone:

It is confirmed that MPGR is to be excluded from incorporation within any SEA Focus Areas and it is submitted that it should be regarded as a property component within the Riviersonderend Mountain Range and which should also be excluded. Furthermore, on account of the established conservation value of MPGR, and these other ecologically connected properties, and the surrounding environment, it is proposed that a suitable exclusion zone be extended from the Sonderend River (which runs along the southern base of the Riviersonderend Mountain Range) southwards for a minimum of 5km and within which no Focus Area or Renewable Energy Development Zone (REDZ) should be permitted. We are of the view that such an exclusion zone would not deprive any existing property owner of any existing land use rights to establish a renewable energy facility on their land since such rights do not presently exist anyway (except for already approved WEFs). Please refer to Figure 4 below, and the accompanying kmz. file, which shows the location of MPGR for which total exclusion from any REDZ is confirmed, as well as the Focus Area exclusion zone which would be considered conditionally acceptable. The 5km wide Exclusion Zone is considered a reasonable compromise since any WEF which may be established just outside the exclusion zone (i.e. inside the REDZ) still has the real potential to exert a negative visual impact (at the least) upon our client's properties.

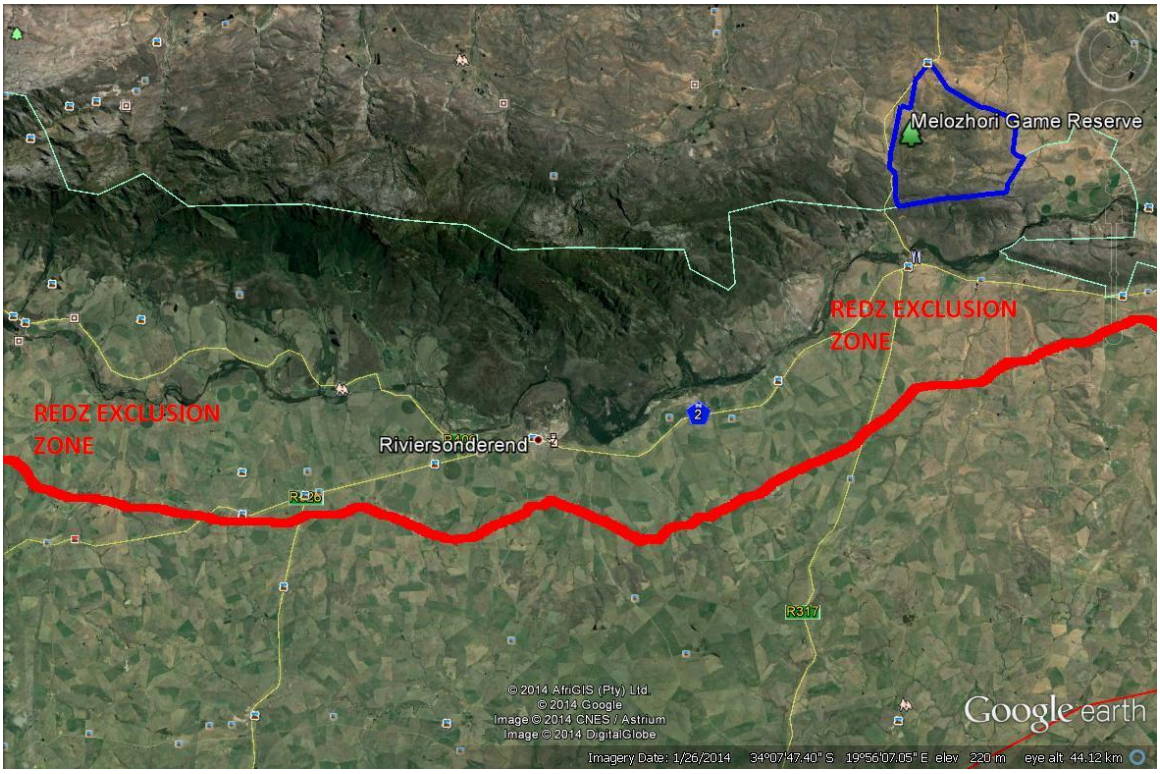

Figure 4: MPGR and the proposed Exclusion Zone indicated by thick RED line (of 5km extent southwards of the Sonderend River).

(ii) Full EIA process to be maintained:

It is insisted that the SEA be regarded as a complimentary environmental planning tool to the normal current and legislated EIA process, as opposed to a replacement, in any measure, to the EIA process. CSIR have consistently, but vaguely, alluded to some form of process being required of renewable energy applications within the final REDZs but have refrained noticeably from referring to the "EIA" process itself. It is insisted that a full EIA process and application remain a requirement and that the SEA be used to supplement the full EIA application for any renewable energy application. Under citizen watch, the current EIA process has effectively served to check several clearly unsustainable renewable energy applications to date and which had often made significant, yet unjustified, progress under administration and endorsement of the DEA. The value of the EIA process, when correctly and honestly administered, has thus been confirmed. The information and guidance of a correctly formulated SEA will serve to expedite EIA applications through the provision of available environmental baseline information. The diluted environmental "process" being vaguely referred to by CSIR, but not explained, is rejected entirely.

A comprehensive public consultation process must be maintained, post promulgation of the REDZs under the SEA, and which is compliant with the provisions of the NEMA and the Promotion of Administrative Justice Act No. 3 of 2000 (PAJA).

Under the EIA process, compensation for negatively affected, but non-participant, land-owners (i.e. already existing ratepayers) must be considered as a fair mitigation measure for the costs borne. Such must be decided by an independent and suitably qualified consultant, as approved by the affected land owner, and the compensation must be concluded and agreed to within, and as part of, the EIA process.

(iii) Comprehensive public consultation process:

It is the view of our clients, and others, that conservation-related properties and their owners have not been adequately considered in the SEA. It is very likely that other community sectors have also been excluded from the process through lack of notification and reasonable opportunity to provide input. On the other hand, it is abundantly clear that private commercial wind and renewable energy industry players have been provided with ample opportunity to input through proactive invitation by the consultants. The biased approach is telling and has resulted in a compromised SEA process. Accordingly, and in line with the requirements of PAJA, it is requested that a comprehensive, independent and genuine public consultation process be engaged immediately and without being subject to the restrictive timeframes imposed by the SEA process.

Conclusion

MPGR remains opposed to the SEA in its current form. It is proposed that an exclusion zone of 5km wide for any REDZ be established immediately south of Sonderend River which runs along the base of the Riviersonderend Mountain range and catchment area. At present this proposal applies to the identified Focus Area 1 which northern extremity should be shifted further southwards. This objection furthermore calls for the full, legislated EIA process under NEMA, as it presently exists, to be maintained and that the SEA is considered to be a supplementary environmental management tool to the full EIA process. A comprehensive, pro-active and genuine public engagement process is advised and in which no sectors of society are excluded.

Accompanying this submission is a kmz. file (per Google Earth) in which is depicted MPGR for total exclusion from the SEA REDZs as well as a proposed exclusion zone which extends approximately 5km southwards from the Sonderend River.

Date: 14 May 2014

Comment prepared by:	Consultant:	Credentials:
AVDS Environmental Consultants	**Andre van der Spuy** 	**BSc. (Hons) Env. & Geogr. Science (UCT)** **MSc. Cons. Biology (UCT)**

Response from the SEA team:

The AVDS report submitted on 14 May is very similar to the two reports submitted by AVDS on 14 and 15 September 2013 thus most of the concerns and comments included in this report have been addressed in the previous responses from the SEA team.

It is important to note that most of the comments provided by AVDS were premature and despite clear and repetitive indications from the SEA team that the SEA process was on-going and further steps in refining the study areas were to be taken. Most of these comments were addressed during Phase 2 of the SEA. Most of the comments are therefore not relevant at this stage of the SEA process.

In addition to the responses provided in the previous sub-section (responses to comments submitted on 14 and 15 September 2013), the SEA team wishes to indicate that although the nature of "offsets" can be contested, SANBI and DEA have indicated that they are willing to look at offsets. If offsets can be proposed in a specific area for a specific ecosystem type the recommendations and conditions should be clear on how offsets should be implemented and managed. The topic of biodiversity offsets was previously discussed with the DENC and the stakeholders involved with biodiversity offsets in the Northern Cape at a meeting in Kimberley. All the information received regarding biodiversity offsets were shared with the specialist team and taken into consideration by the specialists for the assessment of the Focus Areas.

As indicated in the previous sub-section, the spatial information on the Melozhori Private Game Reserve (MPGR) located near Bonnievale in the Western Cape, was taken into consideration by the specialists during the scoping assessments of the Overberg Focus Area.

The refinement of the focus areas and the interpretation of the sensitivities in the focus areas were based on specialist inputs. The comments and inputs from interested and affected parties as well as government representatives were discussed with the PSC and ERG as well as the specialists. Those inputs include the 5 km viewshed submitted by Mr van der Spuy which indicates that the viewshed from the Melozhori Private Game Reserve (MPGR) property falls marginally within the Overberg Focus Area, but within an area that has already been identified with high sensitivity in terms of environmental and visual potential impacts.

As indicated in the previous sub-section, the current intent is to have a BA process in the REDZs. An on the ground verification of the sensitivities identified during the SEA process will still be required in the development protocols that will be implemented in the REDZs. The precautionary principle remains and a sound public participation process is required at site specific level as part of the Environmental Authorisation process for a specific project.

1. Renewable energy projects in South Africa are not entirely funded by private capital. The guaranteed electricity price paid to successful proponents of such projects incorporates an additional levy sourced from other electricity users i.e. cross-subsidization is being used. Such subsidies are sourced from the South Africa tax-payer who uses electricity and without which subsides renewable energy projects would most likely be financially unviable.
    - In round 1 of the REI4P the weighted average (for all technologies) price of renewable energy was 1.94 R/kWh (this price have since decreased significantly to approximately 0.8 R/kWh). The pure fuel (not considering other variable or fixed cost such as CAPEX and O&M costs) saving resulting from the few renewable energy projects on the grid in 2014 was in the region of R 3 Billion (or 1.55 R/kWh). Furthermore, approximately 120 hours of load shedding, which would have resulted

in approximately R 1.6 Billion cost to the South African economy (translating into approximately 0.85 R/kWh), has also been avoided in 2014 by the few renewable projects on the grid. Considering these values, renewable energy in South Africa is currently contributing to a reduction in electricity prices.

2. It was mentioned that Urban Econ Consultants are tasked with the specialist investigation of socio-economic issues of the SEA. An objection is herewith raised to the appointment of this consultant based upon previous reviews of wind energy facility application specialist studies (e.g. Plan-8 Wind Energy Facility Proposal, Makana District, Eastern Cape) by this consultant and which were found to be unjustifiably in favour of the respective proponents. The socio-economic findings of the SEA therefore stand to potentially be meaningless and will be challenged if necessary.
    - Urban-Econ has been found be a well-regarded and adequately qualified and experienced consultancy to undertake the SEA socio-economic scoping assessment.

3. Under the EIA process, compensation for negatively affected, but non-participant, land-owners (i.e. already existing ratepayers) must be considered as a fair mitigation measure for the costs borne.
    - Such compensation is not currently accepted practice in South Africa.

Andre van der Spuy, 09/07/14

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9 July 2014

CSIR
11 Cilliers Street
Stellenbosch

(Per email: LCapeDucluzeau@csir.co.za)

Attention: Ms. Lydia Cape-Ducluzeau

Dear Madam,

MELOZHORI PRIVATE GAME RESERVE, BONNIEVALE: ENQUIRY REGARDING CONSIDERATION OF COMMENTS SUBMITTED ON THE "DEA NATIONAL STRATEGIC ENVIRONMENTAL ASSESSMENT FOR THE EFFICIENT AND EFFECTIVE ROLLOUT OF WIND AND SOLAR PHOTOVOLTAIC".

AVDS Environmental Consultants submits this enquiry on behalf of Melozhori Private Game Reserve located in Bonnievale, Western Cape. Our client remains deeply concerned regarding the apparent lack of consideration given to our last submission, dated 14 May 2014, on the SEA when reviewing the latest version of the SEA as per the notice disseminated on 23 June 2014 by email.

In particular, Focus Area 1 is of concern to MPGR as it is the most likely Focus Area to significantly negatively impact upon the reserve in several ways (as outlined in our previous submissions on the SEA). Our review of the latest SEA version reveals no apparent change in the northern boundary position of the Focus Area 1 and which was proposed to be relocated in a manner that would afford the MPGR and other conservation-related properties a 5km wide "exclusion zone" (or impact buffer zone) from approximately the base of the Riviersonderend Mountains. This proposal would have been considered a reasonable compromise by our client. Under the latest SEA version the Focus Area 1 northern boundary appears to remain in an unchanged position (as far as such concerns MPGR) being mainly located against the N2 National Highway, as it was in the previous SEA version as well. This is unacceptable to our client for the reasons previously stated.

It also remains exceptionally difficult for parties outside of the SEA team to understand the methodology, workings and data of the SEA which is solely web-based and where associated motivations and data presentations are cryptic and without context. There is, for instance, no description (that we are aware of) of the process of the SEA – in this regard a stage flow chart would have been most useful. Neither is there any apparent attempt to ground the SEA within an existing legal framework and it appears to be solely driven according, and subject, to the ruling party's policy. Also, some of the presentations appear to be missing (such as that for SANBI Workshops, amongst others). There is (apparently) nowhere any record of public comments which have been submitted nor any record of response thereto. Accordingly the method and level of so-called public engagement cannot be considered "reasonable" and is likely to fall foul of the

requirements under the Promotion of Administrative Justice Act No.3 of 2000, and probably also the National Environmental Management Act No. 107 of 1998, as amended, at the least.

Of major concern regarding the significant negative impact upon conservation-related properties (such as MPGR) which stand to be affected directly and indirectly by the SEA is the apparent manner in which these critically important potential impacts are dismissed as mere "sensitivities" under the link "Frequently Asked Questions" (see under sub-title "Existing land uses inside REDZs". Correctly stated, the matter is a **potential significant negative environmental impact** and we would insist that it be addressed according to this status. Aside from being highlighted in various previous submissions and email exchanges to you this potential impact (with its related impacts on property values, land use impacts etc.) was also raised by many potentially affected land owners at the Overberg Public Workshop and Grahamstown Public Workshop (despite the very poor public notifications for these workshops). It is indeed offensive to our client that you have sought to deliberately understate this potential (but highly probable) negative impact as being simply a, "sensitivity".

Likewise the question of "Impact on land prices" under "Frequently Asked Questions" is an example of the Renewable Energy-biased approach of the SEA. The issue is only addressed from an industry perspective and entirely ignores the negative impact on unsuitable or unavailable land (i.e. impact-sensitive land). Even land prices on the fringes of REDZs (such as MPGR) are very likely to be devalued by the SEA and any subsequent wind farm developments within the REDZ since the impacts will not be restricted to the particular REDZ. The SEA has failed to address this critical issue honestly and correctly.

It is hereby requested that you provide a response to each of the issues, and the exclusion zone proposal, as presented in our previous submission of 14 May 2014, on behalf of MPGR,.

Failure to deliver adequate and reasonable response to this submission will leave us with no other option but to resort to address at a higher level of authority and we reserve our rights in this regard.

We look forward to receiving your response as soon as possible.

Yours sincerely,

Andre van der Spuy

Response from the SEA team:

Please see above responses.

Appendix B 6 - Formal Submissions from Key Stakeholders

The Draft SEA report was reviewed by the Project Steering Committee and Expert Reference Group during February 2015. Formal submissions received during the review period of the Draft SEA report are captured in sub-section B6 – 1 with associated responses from the SEA team. The original submissions are included in sub-section B6 – 2.

B 6 – 1 Summary of Formal Submissions and Responses from SEA team

Commenter	Submission	Comment – Summarised by SEA team	SEA Team Response
Independent Power Producer Procurement Programme (IPP Office)	Comment on Draft SEA Report submitted 23 February 2015	The IPP Office appreciates and supports the intent of this initiative to drive sustainable renewable energy development via the establishment of REDZs. Feedback on the draft report is provided on the context of the impact that the REDZs may have on the IPP procurement.	The responses provided below are based on discussions between the IPP office and the project team subsequent to this submission and aim to address the concerns the IPP office has with the REDZs.
		Development Density Guidelines: The proposed guideline will constrain the amount of generation that can be connected in particular areas, potentially driving uncompetitive behaviour as the development capacity in the vicinity of the grid capacity will be constrained. We are concerned that the implementation of the "guidelines" as rules will prejudice IPP procurement. We appreciate the need to balance development with visual and environmental impact, and support that such considerations are factored into environmental approvals. We are however concerned that the unilateral implementation of the "recommendations" in environmental assessments and authorisations will have detrimental impact on IPP procurement, and we require assurance that the "recommendations" will not be unilaterally applied, and that each application will be considered on its merits and not be prejudiced by the recommended density limits.	As discussed and agreed to with the IPP office subsequent to this submission there is a need for a development density guideline in order to inform proponents, I&APs and the decision making authorities in terms of what constitutes "significant" landscape and other cumulative environmental impacts. It is noted that the originally proposed limits would have had significant economic implications. The limits have thus been appropriately relaxed and all relevant calculations redone. The density limits prescribed in the report are intended to only be guidelines and should be negotiated and adapted on a case-by-case basis based on the merits of the development under investigation. This point has been reiterated in the report by adding appropriate text to the relevant sections of the report.
		Socio-economic Development Suggestions It is appreciated that the socio-economic suggestions in section 15.3 are suggestions for consideration. The suggestions in their present form wold materially impact on IPP procurement, and specifically the suggestions as regarding a gradual phasing of development and the implementation of a central renewable energy implementation office in each REDZ. Such requirements may prejudice projects in REDZ and would be inequitable for IPP	It is agreed that managing the issues discussed in this section are beyond the scope and mandate of this SEA process. During the SEA process the SEA team had several discussions on socio-economic matter relating to renewable energy development with key stakeholders. The SEA team is therefore of the opinion that those important debate topics raised throughout the process must be mentioned in the SEA report

		procurement given that the IPP procurement needs to procure generation in areas within and outside of the REDZs. We requite assurance that these recommendations will not prejudice projects within the REDZ, and suggest that any requirements in this regard be specified and managed in the IPP procurement programme and not via the REDZs.	to contribute to further discussions on those topics. The introductory paragraph under section 15.3 was amended to state that these issues are beyond the scope and mandate of the SEA process and that any recommendations made in this section will in no way be legally implemented through the SEA process.
		<u>Environmental Authorisation outside of the REDZs</u> We require assurance that the environmental authorisation process outside the REDZs will not preclude development in those non-REDZs areas. IPP developers have already raised their concern that officials may interpret the REDZs to mean that development should be discouraged outside of the REDZs. Such a situation would be unacceptable for the purposes of the IPP procurement programmes. There is a statement to the effect on page 390 "*The adoption of REDZs in not intended to constrain any development outside these areas and all projects inside and outside REDZs must be considered on their own merit. Proactive investment should thus be priorities in the REDZs, but not limited to these areas."* We would hence like assurance as to how effect will be given to this.	As mentioned in above responses, the report states that it is not the intention of the SEA to limit the development of wind and solar PV facilities outside REDZs. As discussed between delegates of SAWEA and the DEA during a dedicated workshop, the legislation that enacts the REDZs (i.e. the *Government Gazette*) will provide the required assurance by stipulating that no project outside the REDZs will be affected by the REDZs, and that the status quo will thus remain outside the REDZs. The legal document enacting the REDZs (i.e. the *Government Gazette*) will ensure that stakeholders evaluate all renewable energy projects on their own merits.
Department of Agriculture, Fisheries and Forestry (DAFF)	Comment on Draft SEA Report submitted 23 February 2015	The Department supports the development of the renewable energy sector on condition that the impact thereof on the strategic goals of the Department is minimized as far as practically possible. The impact assessment should therefore quantify the possible impact of the proposed development on the following three strategic goals: Enhance production, employment and economic growth in the sector; Enabling environment for food security and sector transformation; and Sustainable use of natural (agricultural) resources. In comparison with the other thematic impact assessments, focussing on the impact of the proposed development on the specific theme, the agricultural impact assessment fails to quantify the possible impacts of the proposed development on aforementioned strategic goals and the agricultural sector at large. The focus of the specialist report is rather to provide	Please note that no impact assessment has been undertaken as part of the SEA process. All studies were undertaken at a scoping level to inform potential sensitivities. The key impact of wind and solar development on agriculture, as presented by DAFF, is the loss of agricultural land, and all the strategic goals referred to are linked thereto. At a national scoping level the agricultural section of the study thus puts the potential impact of renewable energy development into perspective by showing that even if all of the 16.8 GW of wind and solar PV development planned up to 2030 takes place in high potential agricultural land (which is an absolute worst case scenario and certainly an over exaggeration), it would result in an 23 520 ha (or 0.02%) loss of agricultural land in South Africa. In addition to the fact that only a portion of development would take place in agricultural land, the potential for impact is further greatly reduced by the agricultural allowable development footprint limits specified in

		arguments to justify the loss of agricultural land, as stated under 2.1. Study Methodology: "This study is motivated by the need to find solutions that will facilitate renewable energy development…" and not first and foremost on the individual as well as the cumulative impacts thereof on the agricultural sector. The specialist report also refers to "wind and solar farms" which is scientifically incorrect. Farms and farming is defined as activities related to the production of crops and livestock. Wind and solar energy are industrial activities and cannot be referred to as farms of farming activities. The Department therefore questions the validity of the specialist report as well as the derived Section 1: Agriculture of the combined report.	the SEA protocols. It must also be noted that the SEA report, and its supporting specialist studies, were not prepared with the first and foremost objective to focus on any individual impact. In line with the opening statement of the DAFF submission, as well as the National Development Plan and the Infrastructure Development Plan, the objective of the SEA and its supporting studies are to facilitate development of wind and solar PV in South Africa in a manner that minimizes all its potential negative impacts on the environment as far as practically possible. The arguments made in the specialist report and the agricultural section of the combined report are thus necessary to put the individual impacts on agriculture (i.e. unavoidable and limited loss of agricultural land) into a holistic national perspective, as is required for strategic and integrated planning for sustainable development. The "wind and solar farm" terminology is widely used and accepted. These terms were specifically used in the specialist report to emphasise some of the common national benefits resulting from both renewable energy and agricultural land uses. The argument is presented that the "farming" of agricultural land for the production of non-food products that are sold or exported to earn a local and national income is no different from utilising the land for wind "farming" that also earns a local and national income. The per hectare direct local (not taking into account the value of served electricity to the national economy) income from wind farming is, however, shown to be as much as 400 times greater than that of high potential agricultural land. The notion of land use (i.e. agriculture and renewables) integration is thus well justified.
		Summary and Content It is important to ensure that a process of cooperative governance is followed and that the legislative mandates; policies and other related areas of jurisdiction impacting on the various levels pertaining to renewable energy and spatial planning be adhered to, even though the purpose of this project	Please note that the SEA was undertaken in terms of NEMA, while supporting the Infrastructure Development Plan objectives, especially Strategic Integrated Project 8 which aims to facilitate the implementation of sustainable green energy initiatives. The SEA was initiated by the DEA in

		was from the National Environmental Management Act (NEMA) perspective. This is to ensure that there is no duplication of effort or conflicting approaches (piii). It is recommended that this principle be acknowledged in the report. Careful consideration should be given to the proposed statement that wind and solar PV development in REDZs will be given priority in terms of planning, approval and implementation processes. The study was conducted on a very high desktop level and the detailed aspects that may be of higher importance could have been omitted that may have a significant impact on any future planning activity within the mentioned zones (piii)	collaboration with the PICC under the NEMA and Infrastructure Development Act. As stated in the report the intention of the SEA is to facilitate cooperative governance through legislative and spatial planning alignment as allowed for by the Infrastructure Development Act and the Spatial Planning and Land Use Management Act. This implies that in order to facilitate cooperative governance the SEA clarifies and enforces existing legislative mandates, policies and other related jurisdictions where appropriate, while also identifying legislative and policy reform where required. The wording: "priority in terms of planning, approval and implementation processes", is taken from the Infrastructure Development Act and describes the mandate given to the PICC once the REDZs have been adopted as areas associated with a SIP, as is the intention. While there is some uncertainty due to the level at which the study has been undertaken there is a risk in identifying these areas as priority areas, but the data provided is the best available. The risk associated with tacking decisive action to facilitate renewable energy development in South Africa is likely to be significantly smaller than not making an integrated and strategic decision.
		<u>Part 1: Strategic Environmental Assessment</u> Although there were a certain level of agreement between the various stakeholders in terms of development protocols that are to be followed within the REDZs, there are still a large number of aspects on which no clarity have been obtained or where more in-depth studies are required that may result in a decision not in accordance with those stipulated within the specified REDZs. This aspects need to be understood and acknowledged by all relevant planner and stakeholders (p 6).	Agreed. It is for this reason that a Basic Assessment process with the appropriate specialist studies are still required at a project level, and why it is clearly stated that the protocols serve as guidelines that need to be applied and adapted on a case-by-case basis.
		<u>Part 3: Agricultural Sensitivity</u> The Agricultural Specialist study conducted is acknowledged and a number of informal consultations were held with the appointed service provider. However no formal consultation process pertaining to the content of the agricultural specialist study was held between the project management team and this	It must be noted that as per formal invitation from the DEA Director General to the relevant DAFF Chief Director, dated 05/03/2013, an elected DAFF representative has been part of the formal Project Steering Committee and Expert Reference Group proceedings throughout the SEA process.

		Department whom is regarded as the custodian of agricultural land in the country.	The last two engagements were specifically dealing with specialist studies. The relevant DAFF representative was also formally invited to provide inputs into the terms of reference prior to the commencement of the agricultural specialist study. The same representative was engaged during at least two dedicated in-person meetings, one of which took place at DAFF national offices and numerous telephonic and email correspondence with both the agricultural specialist as well as the rest of the project team. Please note that further to this level of engagement a ministerial level engagement process is also ongoing.
		Of the 8 proposed REDZs the most concerning zone from an agricultural perspective is FA1 (Overberg). This fact was communicated to the project management team on numerous occasions. Wheat is a staple food, South Africa is already a net importer of wheat and the area is regarded as unique agricultural land. It is recommended that conflicting aspects pertaining to the recommendations made for each REDZ be discussed and finalisation obtained thereon. The Department is of the opinion that the FA1 is not suited for the development of infrastructure related to wind and solar energy and that the planned developments should rather be shifted to Komsberg focus area.	It is noted that that agricultural and renewable land use integration in the Overberg area is not supported by DAFF. The findings of the SEA, however, suggest that such integration would be to the overall benefit of the country. This contradiction will thus need to be resolved through the ministerial engagement process. The capacity for development in any area, including the Komsberg area, is limited due to environmental sensitivities and infrastructure development. Several areas of high development potential (of which the Overberg is one) is thus required. Furthermore a geographical spread of development also reduces generation variances and thus results in a more stable and manageable national electricity system.
		It is acknowledged that the total footprint of the renewable energy impacting on agricultural land is limited in comparison with other related energy sectors such as mining or other forms of development. However, as stated renewable energy is not the only sector impacting on agricultural production and therefore this Department, as the mandated authority pertaining to the protection of agricultural land has the obligation to holistically review an application, not only per the proposed footprint area of the industry in question but also in terms of the current state, use, availability and potential of the larger landscape before making a decision. A “one-sided view” only related to an industry without incorporating other related impacting factors may result in a detrimental impact not only on agricultural production but	If DAFF is of the view that renewables have a lesser impact on agricultural land than the alternative energy generation options; the Department should, from a holistic perspective, support renewable energy development to offset the need for alternative generation options taking into account that those alternative generation options would lead to greater agricultural impacts. Although DAFF has the legal mandate to protect agricultural land, as part of Government its foremost mandate is to facilitate the overall optimal land use that would result in the greatest benefits for the citizens of South Africa.

		also on ensuring continuous food security for the country (p 2).	It is acknowledged that site specific factors need to be taken into consideration for informed decision making, and the protocols allow for this, but such decisions need to be based on a reasonable and agreed guideline (such as the protocols) to inform both the proponents and decision makers.
		Of major concern to the Department is the statements made in the report pertaining to food security and the departure point followed that it is much more economically viable for farmers to "farm with wind" than farm with crop (or live stock). Optimal land use should not only be measured against income that can be generated from the area concerned. The principle of sustainable development is structured on three pillars that should each be seen on equal footing. From a food security and long term sustainability perspective a country relying on food imports and neglecting its food production potential in favour of other land uses not only becomes dependent on other food sources that will have quite significant impacts on the future independent existence of the country but from an economic perspective it will have a severe negative impact on economic growth and the ability to generate income and jobs. A country should be able to produce its own food and therefore the protection of especially high potential agricultural land should receive priority intervention as in the same for any other national priority sector (p 3).	It is demonstrated in the report that "renewable farming" is more economically viable per hectare of occupied land than crops or livestock. The report does, however, not state that agriculture should be abandoned for renewable energy purposes. On the contrary, the argument is made that additional income derived from a minor portion of agricultural land can, and will probably, be reinvested in the remaining land to lead to an overall increase in food production, and thus result in a win-win land use integration. The arguments for food security as a national priority to protect the country's independence and economic viability are all correct, and to an even greater extent true for energy security. Priority interventions for energy security are at the forefront of South Africa's national interest, and further supports the argument for land use integration.
		The argument made that the higher financial returns gained from renewable energy generation (leasing of farm land by farmers for the placement of renewable energy structures) can contribute more to food security than using the land for agricultural production purposes is very controversial and the Department is of the opinion that this statement should be amended. There is limited land in the country that can be used for food production even if the product being produced do not contribute directly to food security such as the wine industry. These products still have an impact on ensuring food security, although not directly. Food producing areas (cultivated areas) are selected based on the natural resource's potential to produce food and an additional income for a farmer obtained through the placement of renewable energy structures will not necessarily result in the farmer using this income to expand its production areas as there may be none other available on the farm. This can therefore	Considering competing land uses (e.g. agricultural and natural conservation), the preferred manner of increasing agricultural production is not through increasing the agricultural production footprint, but rather through optimising production on already producing land. Such optimisation requires capital investment (e.g. more sophisticated equipment such as planters, additional inputs such as fertilisers, or additional infrastructure such as irrigation). The integration of renewable energy and agricultural land uses (especially in high potential agricultural land) presents an opportunity for production optimisation when farmers get access to the required capital. Even though it is not guaranteed that the farmer will reinvest the additional income into farming, it is likely. The South African land use planning legislation (e.g. the development principles in Section 7 of SPLUMA), as well as DAFF's own mandate to protect and increase agricultural production in the

		result in farm land with a production potential being lost with no alternative production options (p 3)	country require land use optimisation potential brought on by agriculture and renewable energy land use integration. The argument made in the report is in line with the one made here by DAFF, which is that renewable energy development can contribute to food security in the same indirect manner that the wine industry is stated to (i.e. through earning local and national revenue).
		It should be noted that the aspect of "Unique agricultural land" is not captured within the land capability data set used for the demarcation of agricultural sensitivity areas. This may have an impact on demarcation of priority agricultural production areas.	Noted. As per consultation with the relevant DAFF representative serving on the PSC and ERG the sensitivities should be updated as soon as an official definition of unique agricultural land has been agreed to and the spatial data is available. It has been indicated by DAFF that such spatial data for the proposed REDZs would have been made available to the SEA team by end 2014 to update the REDZs sensitivity maps. In the absence of the data the report was finalised early 2015 with mention of a requirement to update the sensitivities when the relevant information is made available by DAFF.
		The report is very vague when referring to the fact that a "minimal footprint for wind energy" should be allowed within "certain cultivated fields". Clarity on the mentioned should be given as it can lead to misinterpretation (p 12).	The allowable footprints (in ha/MW) for every agricultural land class (land capability class inside and outside cultivated fields) are clearly specified in Table 4 of the agricultural section of the SEA report.
		As per the recommendations an agricultural impact assessment will be required in certain instances. No detail as to the specifications that should be included in such as assessment is included nor has it been mentioned in an agricultural specialist will/should review the content thereof (p 13).	The instances in which a comprehensive agricultural impact assessment is required and the specifications for such an assessment (i.e. the EIA Reg requirements for specialist studies as the status quo as well as consideration of the SEA outputs) are clearly specified in Table 6 (the protocol) of the agricultural section of the SEA report. The same table also states that such a study must be undertaken by a competent agricultural specialist.
		It is further indicated that an Environmental Assessment Practitioner (EAP) should issue a compliance statement as to whether a proposed renewable energy project within a REDZ complies with the development limit requirements. It is not mentioned as to whether the EAP will also review the Agricultural Impact Assessment based on-site evaluation (the data used to demarcate the REDZ is only suitable for use at a 1:250 000	Noted. The wording has been amended so that only a competent agricultural specialist can prepare such a compliance statement for proposed renewable energy project within a REDZ complying with the development limit requirements. It should be noted that the data used for demarcating the REDZs is the same than used by DAFF for review of EIA

		scale). An EAP is not qualified to make a decision pertaining to agricultural potential and suitability.	specialist reports and decision making.
		<u>Part 4: REDZs</u> In terms of the area FA1 a concern is again raised as to the potential loss of agricultural land in this area currently being utilised for intensive cultivation practices.	It is noted that that agricultural and renewable land use integration in the Overberg area is not supported by DAFF. As discussed earlier, the opportunity for integration of renewable energy and agricultural land uses (especially in high potential agricultural land) is significant for production optimisation when farmers get access to the required capital, and thus needs to be mentioned in the report.
Department of Environmental and Nature Conservation (DENC) Northern Cape Province	Comment on Draft SEA Report dated 05 March 2015	In principle the SEA process is supported and the purpose for which it is intended. However, the fact that no field surveys were done to augment the desk-top studies means that the reports have very "low confidence" results. A desktop study is only as good as its input data and in the case of the Northern Cape the input data is exceptionally limited and/or absent for most of these Focal Areas. The limitations of the current desktop reports have been illustrated by the discovery of e.g. bat roosting sites and protected red larks which was not known prior in other available literature.	The SEA process was undertaken at a national strategic level. At this level it is required to focus on national priorities and higher level considerations and, thereby, provide guidance and focus for further detailed assessments. At the national strategic level it is, unfortunately, not possible to undertake detailed ground level assessments for large parts of the country. The best available data (which in some instances already include ground level assessment) has been used for the SEA.
		Without field surveys within these FAs the DENC cannot ensure that there will not be situations where further specialist studies will have to be done as we would expose ourselves for being accused of not implementing our mandate appropriately. To include more specialist studies in the Protocol result in the SEA process not to reach its intended goals either, as the aim is to alleviate the burden from developers to fast track development. Through improved FA reports with higher confidence levels, the DENC can better defend their actions through the fast tracking of the EIA process.	In the REDZs, proponents will have to undertake a basic assessment for the proposed projects which will include onsite specialist assessments as indicated in the protocols. The SEA is aimed at identifying the best areas for large scale wind and solar PV facilities while providing guidance on the further onsite assessment to be undertaken. By pre-assessing the eight FAs on a desktop based approach, the SEA has undertaken the scoping level assessment of those areas which aims at identifying the main sensitivities and potential fatal flaws of an area of interest for development. The size of the eight FAs being approximately 80 000 km^2, it is not possible to have specialists ground truthing the entire area. It is for this reason that a project level impact assessment which include appropriate site visits is still required in addition to the work done through the SEA process.
		On an ecosystem level the impacts of RE projects (research and monitoring to address ecosystems function and impacts of solar	The level of knowledge on the actual impacts of RE projects is limited in SA due to the low number of facilities which have

		and wind farms on ecosystem health/functionality) lack overall e.g. bats are killed by wind farms which could lead to insects population to increase which in turn could lead to agricultural pests destroying crops (food security). What could the impacts be of RE developments in fragmenting the landscape, preventing ecosystem function and reducing climate change resilience? These are aspects of the department's mandate that needs to be considered.	already been constructed. Most of the potential impacts and mitigation recommendations described in the report are therefore based on international literature review and interpretation of available spatial data based on expert's knowledge. During 2014 several RE projects have been constructed and connected to the grid, and more will be in 2015 and following years. Once the facilities are operating the knowledge of RE impacts on the environment will increase with experience and direct observations. The next iterations of the SEA will take the new knowledge into consideration to improve and refine the SEA protocols and recommendations.
		The comments on the SEA FA studies is aimed at improving the quality of maps and REDZ to ensure that the intended role of the SEAs can be executed i.e. streamlining and speeding up the EIA process for RE project within these zones. However the DENC needs to satisfy themselves that they are confident enough that the DENC will not open themselves up for necessary accusations of negligence in not taking their mandate seriously i.e. not ensuing that reports being used for fast tracking EIA processes have at least fair confidence levels.	The proposed projects inside the REDZs will follow the BA process which includes specialists' inputs and onsite assessment. The relevant competent authority will have the opportunity to review those onsite results and evaluate whether the project should be granted an environmental authorisation or not.
		SEA was mostly a desktop based study using the best available spatial GIS information. Terrestrial and Aquatic specialist study did not include any baseline data collection or field verification. Four FAs were identified and assessed in the province: FA2, FA5, FA7 and FA8 (only parts of FA2 and FA5 fall within the NC). Final FAs with their sensitivity maps and protocols will be gazetted as REDZ areas. REDZs areas will still have to follow the basic assessment process in terms of NEMA in order to obtain environmental authorisation. Certain specialist studies will only be required as prescribed in the protocol for the highlighted. The DENC spatial team was unable to provide their input to the spatial information within the timeframe. It is requested that the Northern Cape CBA draft be incorporated and considered.	The SEA is a national and strategic level assessment which is based on the best available spatial data at that time. Baseline data collection and field verification were not possible at the extent of the SEA. All data and information available to the SEA team and specialists at the time of conducting the SEA was taken into consideration. New data and information will be taken into consideration in the next iteration of the SEA.

		Only a small portion of the Komsberg FA falls within the NC. Only one informal conservation area is located in the FA for the NC and a few terrestrial CBA2 areas. This FA falls within the SALT buffer area which is located near Sutherland. It should be noted that this FA falls within the shale gas exploration area for Falcon Oil and Gas. Potential air quality impacts for wind energy facilities in terms of shale exploration and other mining activities (e.g. uranium mining) should be considered. The Kimberley FA straddles a small portion of the NC covers including ritchie, modderriver, kimberey, platfontein, riverton, hollpan, delapotshoop, barkley west and windsorton. It should be noted that the kimberley FA includes previously mined areas and some agricultural areas; it also includes large game farms (map) that are of tourism and conservation importance. Site verification should be done to check if mining areas need to be rehabilitated prior to construction. This should also be taken into account for wind energy development placements in terms of potential air quality impacts. Minimum distances for wind and solar energy development need to be established taking into account the town expansions plans (NSDF, PSDF, IDP). New research on the Griqualand Wes Centre of Endemism should be incorporated into the Kimberley FA. It was found that the boundaries of the centre of endemism is larger than formerly mapped and thus overlap with a larger part of the DA than reported in the REDZ specialist report. The Upington FA includes Kenhardt, marydale, Putsonderwater, Groblershoop, Grootdrink, karos, Leerkrans, Upington, kanoneilan and Lutzputs. There are a few informal conservation areas in the Upington FA and a limited number of CBA2 areas. The baseline information for this area is limited. Aloe Dichotoma populations have not been mapped. But occur across this area forming part of an important part of the species range to enable adaptation under climate change conditions. The Springbok FA includes a very large area in the Northern Cape that stretches from Aggenys through Springbok to Port Nollioth and Kleinsee. The Springbok FA falls partly in the Gariep Centre of Endemism and includes formal conservation areas, informal consideration areas, IBAs and Namaqua CBA areas. Two biodiversity offset areas (agreement signed between developers	Further onsite assessments will take other land uses and possible resulting impacts into consideration.

		and the DENC already) fall within the springbok FA near springbok and aggeneys (not mapped). Wind energy developments located near mining areas in aggeneys and along the coast should consider the potential air quality impacts.	
		Additional comments on specialist studies included in Appendix A: Several amendments are proposed for the "Relevant Regulatory Instruments" sub-section of the Section 2.4 of the Terrestrial and Freshwater Ecosystem and Biodiversity specialist report included in Appendix A4. Relevant conventions should be included under the legislative framework due to international commitments (i.e. Conservation of Migratory Species of wild Animals (CMS) and Convention on Biological Diversity (CBD)). Update and improve the list under "provincial instruments" based provincial ordinances/ Acts (e.g. Northern Cape Nature Conservation Act No. 9 of 2009). Methods described in the Terrestrial and Freshwater Ecosystem and Biodiversity specialist report included in Appendix A4 should be clearer and more detailed to allow for replication, and allow for addition of new information; making SEA easier to review. Final products should be made available on SANBI BGIS website and include limitations of the study in the metadata of the final GIS shape layer. Request for clarification on the process of adding and removing information from the FEPA layer, mentioned in the appendix 3 of the Terrestrial and Freshwater Ecosystem and Biodiversity specialist report. All changes to the FEPA layer should be communicated to the FEPA custodians with the GIS information for checking and assessment of information. Request for clarification on the FA calculations summarised in Table 13 in the appendix 4 of the Terrestrial and Freshwater Ecosystem and Biodiversity specialist report, and dataset used.	The specialists used the best available information and data at the time of conducting the scoping level assessments. Any newly available and updated data will be used when reviewing the SEA findings. The final spatial data produced and used during the SEA process will be uploaded onto DEA online screening tool. The screening tool portal is similar to the SANBI BGIS portal and will be accessible for all stakeholders. The methodology followed by the specialists is described in Appendices 1 - 7 to allow further studies or use of the data. Some layers were edited based on satellite imagery and specialist knowledge. The rationale behind deleting polygons is included in the methods and was not based on Ollis et al. (2013). The methods described in the Terrestrial and Freshwater Ecosystem and Biodiversity specialist report included in Appendix A4 state that the vegetation 2006 was unioned with the Land cover 2013 to calculate the % transformation statistics per FA. The LC2013 is a composite land cover that at the time represented the best available data. Further studies, permits and licenses associated with the development of wind and solar PV energy on a specific site will be undertaken at the site level while conducting the BA process. There is unfortunately very little spatial data on terrestrial animals currently available. Impacts on Birds and Bats were considered in separate specialist studies. All other potential impacts on fauna (especially small mammals) should be

		List of information, species and dataset listed at point 6 of "Inputs on SIP8 SEA, Part 1" should be considered and incorporated under the protocol (see the following sub-section for the complete list as part of the original submission). Points in need for attention highlighted by DENC in terms of RE installations within the Northern Cape Province, in a letter to the Northern Cape RE Steering Committee (see the following sub-section for the complete list as part of the original submission) including: • Management and disposal of all generated waste, with particular attention to hazardous waste due to absence of existing landfill. • SMME and municipal capacity to deal with generated waste by RE projects and associated influx of people into certain towns. • Management and control of asbestos release by large scale vegetation clearance. GIS information should be available to RE developers during the EIA to enable proper planning and no-go areas for wind and solar energy development with reference to asbestos should be identified. • Management and treatment of contaminated soils by wind turbines and solar energy facilities. • Availability of a sustainable water supply for all RE projects. • Management and financing of end-life of RE projects should receive more attention in EIA's. • Lack of insufficient baseline data on biodiversity, ecology and ecosystem services in the NC, which hinders informative decisions and predictions on the effect of future RE developments. • Concerns of possible impacts of RE facilities on bat, bird and insect populations. More information and research is needed on species numbers, diversity, population dynamics and migration patterns in the NC to assist in guiding RE developments. • Possible impacts of RE facilities on wildlife during locust swarm migration. Operational management	considered at the site level when undertaking the BA process. Due to the nature of the study i.e. strategic and scoping level assessment as well as the extent of the study i.e. 8 focus areas totalling approximately 80 000 km^2 in size, it was not possible to undertake field studies and ground truthing. The SEA scoping assessments were intended to be desktop based and minimal field work to be undertaken. It was not the intent of the SEA to generate baseline data for those areas in South Africa where spatial fine scale data is currently not available. We support the fact that more field surveys should be undertaken by the Northern Cape Province to improve the spatial fine scale data available for fauna and flora baseline data. For birds and bats, monitoring surveys are still required as per best practices guidelines. During the onsite monitoring, information such as movement of birds, breeding and foraging areas etc. will be collected.

		practices should be investigated. • Adopt and implement the recent UNEP/MS/Resolution 11.27; November 2014. • Commission a study to determine RE facilities/ projects could impact climatic conditions i.e. reduction in humidity. • Concerns for Eskom energy crisis. Availability and distribution of diesel with the NC should be investigated, with reference to agricultural ad mining sectors and for CSP solar back up procedures. Severe lack of detailed data for terrestrial animals. Very limited distribution data for the FA's which lowers credibility of determined sensitivity zones. Emphasis on plant species and water bodies. Field studies should have been undertaken to complement the desktop data. Biodiversity data within the Northern Cape Province is limited. Ideally the Terrestrial and Freshwater Ecosystem and Biodiversity specialist study should be divided in 2 or 3 studies e.g. plants and ecosystems, terrestrial animals and aquatic aspects. Bird specialist study based on desktop analysis. Data used is limited and old e.g. SABAP2 counts. On positive side, study did include local knowledge re. IBAs e.g. raptors nesting and roosting sites. High value of field survey undertaken for Springbok FA. Clear need for additional surveys to augment desktop studies for fauna and flora in the Northern Cape Province. Important aspect to be considered is movement of birds within the FAs. Birds' movements form main part of current EIAs. Size of buffer zones for rare large raptors is considered possibly too small. Data on habitat requirements for many bird species is lacking. Higher opportunity for solar PV facilities than wind facilities in the Kimberley and Springbok FAs. Specialist stated that the confidence of their findings is low and this is worrisome for the purpose of the study. Data on bats is extremely limited. Study included field work to uncover important roosting sites. Ideally all FAs should be visited at least once. It is assumed that areas identified with medium to	

		low sensitivity are in reality areas that still need data rather than areas that will have a low impact on bat populations.	
		<u>Additional comments on the protocols in Part 3 of the SEA report:</u> In the protocols, less comprehensive studies are required for low and medium sensitivity areas, in some instances only a desktop study with optional field work is required to confirm the low sensitivity status of the area. This approach has two major flaws: • Low sensitivity already identified on desktop study thus another desktop study will yield to the same results. • Low accuracy of low sensitivity layers For birds, it is foreseen that the new protocols will significantly alter the current practices. For bats, a comprehensive study is still required.	The protocols indicate that even in low sensitivity areas the specialist appointed to undertake the further onsite assessment requirements can and should recommend whether or not ground truthing is necessary based on his/her knowledge and professional opinion. Furthermore, the competent authority reviewing the BA report prepared for a proposed project in the REDZ is entitled to request more studies or more detailed assessment of the proposed site. For birds and bats, a monitoring survey as per best practices guidelines is still required and thus it is unlikely that the protocols alter current practices.
		When all sensitivity layers for all aspects are overlaid voer each other very few areas of the FA surface are of medium or low sensitivity. This underlines the need and value for full EIAs. Always important environmental aspects unique to each area that needs to be evaluated on its own merit. The entire Terrestrial and Freshwater Ecosystem and Biodiversity specialist study should be revised and a separate study should focus more specifically on terrestrial animals. Protocols do not provide the opportunity to identify new sensitive areas or overcome major flaws of the study. Protocols for birds and bats are similar to current reuiqmrents. If protocols are similar to current reuiqmrents, one can ask what is the need for REDZs.	It is correct that once all sensitivity layers are overlaid very little (to none) low and medium sensitivity areas remains; this does not mean that an EIA is necessary. It only means that when taking a holistic level of assessment and considering all sensitivities there will always be one highly sensitive feature in the environment present in a specific area. This is usually overlooked in the EIA process where all sensitivity and features are assessed separately. This emphasizes the need for holistic assessment and finding reasonable and responsible solutions for balancing competing interests. All new information and data will be taken into consideration when reviewing the SEA findings and should be used for project-level assessment. Some of the protocols could not offer much streamlined requirements in term of onsite assessment due to the risk related with the field of expertise; however other protocols have reached a more informed level of assessment with different requirements according to the various sensitivity levels.

Cape Nature-Scientific Services prepared by Rhett Smart, Alana Duffell-Canham and Kevin Shaw	Comment on Draft SEA Report submitted 24 February 2015	The initial concerns of CapeNature during the SEA process was linked to the implications of the SEA for the EIA process for individual applications and the level of detail, particularly in terms of spatial scale, of the study. In particular, how this would relate to bird and bat monitoring and whether it would accommodate accurate ground-truthing for individual applications. It is understood that determining the implications of the study for the EIA process was part of the study, as this was a pilot national SEA. Following review of the SEA documentation and presentations, it is evident that applications within the renewable energy development zones (REDZs) that fall within very high sensitivity zones (for all variables) will follow the full EIA process or as is determined through NEMA listed activities, whereas those that do not fall within the very high sensitivity areas will follow a Basic Assessment process. There are also particular specifications for each of the different specialist studies according to the level of sensitivity.	The full EIA process does not apply to the REDZs. With the SEA process satisfying scoping requirements, the impact assessment process in the REDZs will be in the form of a basic assessment process for all proposed projects. The scope of the basic assessment and further onsite assessment requirements are informed by the protocols.
		In terms of the sensitivity mapping, CapeNature is satisfied with the variables that were used in determining the sensitivities for the biodiversity variables i.e. terrestrial and aquatic biodiversity, birds and bats. It is assumed that all of the original variables that were used in Phase 1 have been carried through to this phase, in addition to the variables used in the specialist studies.	The variables used during Phase 1 negative mapping for the creation of the environmental and technical constraint mask were provided to the specialists undertaking the scoping level desktop-based assessment of the eight proposed REDZs. Additional variables and more recent dataset were included in Phase 2 sensitivity mapping exercise based on inputs from the specialists and the members of the Project Steering Committee and Expert Reference Group.
		The only provincial protected areas expansion strategy that was used was for the Eastern Cape and no other provinces. CapeNature is currently in the process of finalizing our protected area expansion strategy, however there are previous versions. It is noted however that the national protected area expansion strategy was used.	As mentioned the national protected area expansion strategy was used for the assessment. Regional datasets will be considered in the reiteration of the SEA when the data becomes available.
		In terms of the implications for the EIA process, CapeNature	In the REDZs only the basic assessment is required for all

		does not disagree with the proposed process according to the sensitivity classification. It must however be ensured that the process followed for individual applications must take into account all components of the project e.g. wind energy facility applications in the Overberg where cabling and roads pass through areas of very high sensitivity, even if all the turbines are located on non-very high sensitivity areas, must go through the full EIA process (assuming NEMA triggers). This is of particular relevance in the Overberg REDZ as the non-very high sensitivity areas are highly fragmented which is appropriate for the highly fragmented natural areas in this region.	proposed projects. Each proposed projects will need to undertake onsite assessment based on the sensitivities of the site, taking into consideration all components of the project.
		The three different levels of biodiversity assessment are supported, as there are detailed and definite terms of reference that have been attributed to each. The authorities must ensure that these are used in reviewing applications (CapeNature will ensure that these are referred to in reviewing applications).	Once the SEA report and its content are gazetted, the SEA findings will be applicable to the REDZs and thereafter the three different levels of biodiversity assessment should be used by relevant authorities when reviewing applications. It is important to note that the REDZs and the protocols will only become applicable once gazetted.
		CapeNature supports the continued requirement of twelve months of bird and bat monitoring for any application regardless of the level of sensitivity. It is however noted that there is a caveat that the monitoring guideline requirements can be streamlined for low sensitivity areas, such as reducing twelve months of monitoring to six months. It should be noted that reduction of monitoring to six months cannot be considered a suitable streamlining, as the seasonal variation needs to be determined and this can vary significantly, and may not allow for the detection of sensitive seasonal populations.	The relevant competent authority can authorise the relaxation of monitoring requirements in the low sensitivity areas (green) if it is supported by the results of the initial onsite monitoring, conducted in terms of the best practice guidelines.
		Table 9 in the bird specialist scoping report indicates for each of the REDZs, whether the monitoring guidelines can be streamlined or not for both wind and solar applications. This table should be strictly applied. We support the recommendation that the reduction of twelve months cannot be considered for the Overberg REDZ. For the Komsberg REDZ, it is listed as possible. It is recommended that any streamlining for a particular application must be determined by the competent authority with	The specialist reports included in the appendix of the SEA report do not form part of the legal body of the SEA and therefore cannot be enforced. There is no mention of the fact that a relaxation of monitoring requirements in the low sensitivity areas (green) is not supported in the proposed Overberg REDZ in the main body of the SEA report.

		comment from relevant stakeholders e.g. Birdlife South Africa. CapeNature cannot comment on the REDZs outside of the Western Cape.	As indicated in the protocol for this area, comments and recommendations from a body of bird specialists (e.g. Birdlife South Africa) will be considered by the relevant competent authority for decision making.
		The understanding of the impacts on birds and bats by wind and solar PV energy facilities in South Africa is based largely on extrapolation from international experience and how it relates to local species' behaviour and morphology. Post-construction monitoring has only recently started and the dataset of mortalities is at an initial stage. After a few years of monitoring and results, it will be possible to develop a better understanding of impacts based on evidence (provided that post-construction monitoring is being undertaken and enforced and the results are provided for analysis). It is therefore recommended that the bird and bat components of the SEA are revised after a suitable time period of post-construction monitoring e.g. 5 years.	It is planned for the SEA to be revised regularly (e.g. at least every 5 years) in order to incorporate recent knowledge, experience and updated dataset in order to improve the quality of the information in the REDZs and possibly to identify more REDZs.
		In terms of cumulative impacts, the "first come first serve" basis of assessing these impacts is supported, as long as it is widely recognised – applicants cannot raise issues of fairness if this is an accepted principle. It is however hoped that this does not act as a deterrent for applicants in the REDZ or other areas where there are currently renewable energy facilities, as this may just result in a wider distribution of renewable energy facilities through the country.	The 8 proposed REDZs have a combined size of approximately 80 000 km2 and comprise about 17 000 farm portions. It is thus highly unlikely that the "first come first serve" principle will result in too little development capacity being available in these areas.
BirdLife South Africa: Samantha Ralston-Paton	Comment on Draft SEA Report submitted 23 February 2015	Proposed REDZs were identified with very little environmental inputs and a significant opportunity was missed by not dedicating resources to fieldwork. The small amount of avifaunal fieldwork in the Springbok area serves as example of how certainty can be improved and the need for the precautionary approach reduced.	The environmental information used for the identification of the proposed REDZs was the best available and included the information submitted by BirdLife SA. During a workshop with DEA, CSIR and the bird and bat communities on 29 August 2013, the bird and bat communities indicated that very little certainty, and thus potential for relaxation of the precautionary principle, was likely to result from the level of fieldwork that could be done over large areas such as the proposed REDZs. The decision to not make additional resources available for more avifaunal

			fieldwork was the outcome of this workshop, and based on the fact that the additional resources required for such fieldwork could not be justified. The reduction in the need for a precautionary approach based on fieldwork undertaken in proposed REDZs 8 is a positive outcome and can serve as an example of how such work can streamline the environmental assessment process. If it does result in streamlined bird monitoring requirements it will make a strong case for mobilising of the necessary funding to do similar work in other priority areas.
		The main body of the report can benefit from more detail about risks and sensitivities. The conservation status of relevant species should, for example, be in the main body of the report and not only the appendices.	More detail about risks and sensitivities including conservation status of relevant species is provided in Appendix A.5 of the report. The main body of the report provides a summary of key sensitivities and associated recommendations in order to be concise and have maximum impact while being implementable at a legislative level.
		It is very concerning that the main body of the report does not reflect the opinion of the specialist. Even though it is stated that the main report differs from the specialist study based on stakeholder consultation, it must be noted that the changes do not reflect the expert opinion of the external reviewer, or that of BirdLife SA. The changes do not serve sustainable development or developers and their investors who would benefit from being aware of the potential risks associated with developing in some areas.	The opinion of the specialist, peer-reviewer as well as the comments from key stakeholders on the bird study including Birlife SA and other ERG members, are provided in Appendix A.5 and Appendix B of the SEA report. Although the inputs from the specialists preparing the report, as well as the reviewer, forms part of it, the stakeholder consultation referred to here also includes other stakeholders' inputs. These inputs from a range of stakeholders were provided on the specialist studies through the Expert Reference Group that BirdLife SA was part of. The reasoning for either accepting or rejecting specific recommendations made by the specialist and external reviewer were articulated and distributed in the form of a memorandum to the reviewer himself and BirdLife SA. It is to the benefit of all stakeholders (including developers and the competent authority) that Part 3 of the SEA places potential risks into a holistic context.
		It is somewhat comforting to know that avifaunal specialist	Cumulative impacts need to be managed, and the

		assessment in accordance with best practice will still be required. It is, however, concerning that the SEA fails to address, or even acknowledge, the risk of cumulative impacts on certain species in proposed REDZs. The use of development density guidelines based on landscape sensitivities is not defensible. An example of such cumulative impacts is in the case of Red Lark and Barlow's Lark sensitivities that have been changed from "high" sensitivity as proposed by the specialist to "medium" sensitivity in the main body of the report.	determination of an acceptable threshold can be determined in different ways. Some more anthropogenic and others more nature conservation orientated. The use of the general landscape to determine such thresholds is as defensible as other methods. In the case that a more defensible manner of calculating such thresholds is developed, the SEA should make use of such a method when it is updated. As articulated in the memorandum distributed to the external reviewer and Birdlife SA it was only the areas were Lark presence is uncertain and would, according to the reviewer, require further studies to confirm the Lark sensitivity (e.g. SABAAP pentads), that were reduced to medium sensitivity. Other areas that had greater certainty in Lark presence retained the high sensitivity status.
		Cumulative negative impacts in proposed REDZ 1 are of particular concern. The fact that this area overlaps with an Important Bird and Biodiversity Area (IBA) is not mentioned in the main body of the report. The SEA implies that large parts of the IBA is of low sensitivity, which is incorrect.	The IBA overlapping with proposed REDZ 1 was taken into consideration and is included in the description of the area in Appendix A5. Where appropriate, the key sensitive features in some IBAs were used for sensitivity mapping rather than the entire IBA. This stems from the fact that some IBAs are very large in extent and may be based on species that are not sensitive to renewable energy development. This methodology was also used by BirdLife SA when proving inputs to environmental constraints mask used for the identification of study areas during Phase 1 of the SEA.
		Cumulative negative impacts on Cape Vultures are also a major concern, particularly in proposed REDZs 3 and 4. It is questioned whether it is sensible and strategic to encourage costly and lengthy tracking studies in areas where wind energy development is unlikely to be sustainable. Tracking studies can also not replace site survey and should rather be undertaken at a regional/REDZ level.	Environmental, social and economic considerations are equally important in terms of sustainable development. In case of conflict between the different factors it is necessary to identify integration opportunities. For instance, with the already declining Cape Vulture population in proposed REDZs 3 and 4 it is important to explore opportunities to integrate social, economic and environmental objectives with renewable energy development. Such integration could contribute to the prevention of Cape Vultures going extinct by making additional resources available for the assessment of the population status and creation of adapted management and mitigation

			measures. It is agreed that tracking should ideally be done at a regional level, as is already being done through a tracking study associated with the SEA. Such tracking studies are intended to provide additional information on Cape Vulture sensitivities and do not intend to replace site surveys.
		More could have been done to integrate the findings of different specialists. The use of landscape sensitivities is questionable and marginal in value since it does not reflect true sensitivity. It is proposed that all Very High sensitivity areas remain potential red flags for development, but that the remaining areas be assigned a cumulative sensitivity based on a weighted integration of individual sensitivities.	As indicated in the SEA report and recommendations, all sensitivities need to be verified and assessed individually at a project level. Where sensitivities are directly related (e.g. palaeontology, archaeology and the landscape forming part of heritage sensitivities) the findings of the SEA specialists assessments were integrated. The overall integration of sensitivities referred to were undertaken only to test the proposed development density limits and estimate the development capacities of the proposed REDZs. It was not the intent of the SEA to provide an overall sensitivity rating. The integration of sensitivities based on determining a weighted and cumulated sensitivity would be a subjective exercise and would therefore have limited value in informing development.
		Allot more work could have been done to assess the key tensions and sensitivity overlaps in each REDZs. The overlap of terrestrial biodiversity and landscape sensitivities, or how the requirements of agriculture and birds either support or compete, could have been assessed.	It is agreed that the further unpacking of supporting and competing sensitivities would enrich the SEA, but it is not immediately clear how such an analysis would result in implementable findings. Such an analysis could perhaps be the topic of future academic studies or further research projects by organisations such as EWT, SANBI, Birdlife SA, etc.
		The SEA could also have done more to explore how developers within each REDZ could make positive contributions towards national goals (e.g. conservation, socio-economic, heritage etc.). The initiative by a cooperative of wind farm developers and the Kromme Trust in the Kouga-Tsistikamma area sets a great example in this regard.	Contributions from developers towards national goals (e.g. conservation, socio-economic, heritage etc.) are described in a certain extent in the SEA report as well as in the REI4P documents. Additional socio-economic contributions from developers are mentioned in Part 3: Section 15 of the SEA report. The main contribution of developers in terms of national goals is the reduction of negative environmental

			impacts associated with conventional energy sources, the participation to national commitments in terms of renewable energy development, the creation of significant socio-economic benefits at both national and local levels and the national and international investments brought into the country in support of the renewable energy developments.
		It is important for the report to be updated regularly to incorporate information coming from more avifaunal assessments and post-construction monitoring. Will the update include consultation?	It is proposed for the report to be updated within five years and it is envisaged for it to be a consultative process.
South African Wind Energy Association	Comment on Draft SEA Report submitted 23 February 2015	The SEA processes has failed to meets its key objectives, particularly Integration (alignment allowing for efficient implementation of the REDZs) and the creation of an Enabling Environment for wind energy development. To the contrary, the SEA has the potential to significantly hinder the wind energy industry, compromising many projects' ability to be competitive in the REIPPPP. For the majority of projects the SEA will not result in any significant streamlining of the approvals or development process as alignment between different Competent Authorities has not been achieved and the effort required to develop and permit a project has not been significantly reduced. As permits/consents will still need to be applied for with a number of different competent authorities (including CAA, DWA, DMR etc) the SEA's objective of streamlining the development process has not been met; the development process for a project within the REDZ remains largely the same bar the potential for a slightly shorter Environmental Authorisation process. The requirement for potential additional specialist studies such as shadow flicker (which is currently scoped out of the majority of wind farm EIAs) is further evidence that the reduction in effort required for projects within REDZ may be limited. It is doubtful that the development process that a wind project developer will follow within REDZ will be less onerous than the tried and tested EIA process that is currently followed for wind projects, especially as site specific studies including 12-month bird and bat studies will still need to be completed in almost all cases.	It must be noted that although streamlined environmental authorisation processes is an important objective of the SEA process, its real measure of success is whether it achieved integrated and strategic planning leading to the sustainable development of wind and solar PV development in South Africa. The identification of strategic priority areas allows for integrated (i.e. renewables with other national initiatives) forward planning and associated proactive measures (e.g. electricity grid expansion) to facilitate and holistically optimise wind and solar PV development for South Africa. The SEA process is thus intended to facilitate the development of strategically best suited projects while not affecting others. The development protocols produced through the SEA process are intended to provide guidance for proponents as well as relevant authorities and, thereby, provide a platform for integrated decision making. If relevant authorities can agree to the requirements proposed in the protocols, it will allow for integrated and parallel decision making rather than the current mostly *ad-hoc* and cascading processes. For example, if the Department of Agriculture Fisheries and Forestry (DAFF) agrees to the allowable development footprint limits as specified in the protocols, any development not exceeding these limits can be approved by another authority, seeing that DAFF already agreed that the impact would be acceptable. If the footprint exceeds the specified limits, DAFF would need to make the decision, but if the protocols are agreed to (e.g. through PICC gazetting) DAFF would have committed that such a decision would be made during, and feed into, the environmental assessment process. In this way the often

		International experience has shown that site-specific investigation of a wind farm site within an SEA zone or REDZ equivalent can still unearth potential fatal flaws that were missed due to the broad scale of the SEA study. The benefit of REDZ can, therefore, be very limited to developers as the project development process during site selection and screening within the SEA zone remains the same as outside.	contradictory decisions made by the by authorities during authorisation processes will be avoided. The integration and streamlining proposed in the REDZs do not need to be limited to developments in REDZs. The implementation of the processes can be applied to REDZs as a pilot, and then improved and rolled out nationally when proving successful. It must be noted that the Basic Assessment process proposed in the REDZs also a tried and tested process. The bird and bat protocols make provision for some form of streamlining if appropriate, but even if it does not result in any streamlining, the proposed assessment process is not more onerous in REDZs. Combined with other streamlining initiatives in REDZs the resulting process is generally streamlined compared to the status quo. The SEA process serves as a high level scoping study and provides a significant amount of information on sensitivity levels. Such information is not available to developers outside the REDZs without undertaking detailed and costly site screening or scoping assessments as part of an EIA process. Proponents in the REDZs on the other hand have this information freely available to inform screening and site selection at the earliest stages of project development. The same information is also available to other stakeholders and the authorities to inform the further assessment of the site. While a significant amount of information that can inform site screening and selection is provided through the SEA process, it is not possible, or the intention, to completely de-risk development for proponents to the level that no further assessment is necessary. If this was the case the SEA would amount to site selection exercise and developers would no longer have the discretion to identify and select the best suited sites for development.
		Some of the REDZ appear to be in the wrong places or have the inaccurate/wrong boundaries. The wind and environmental data	The SEA is based on the best available data, and as discussed in the SEA report the additional inputs from industry

		used to identify the REDZ is, in general, high level data due to the broad geographic areas considered. Both the wind and the environmental data are therefore likely to have significant inaccuracies that therefore render them not suitable for identifying preferred development zones. The identification of the SEA Focus Zones and proposed REDZ has been based on out of date, incomplete and inaccurate information. The inclusion of additional wind resource data including data from operational projects and the updated (2014) WASA data is essential. The lack of inclusion of the 2014 updated WASA dataset is a concern and indicates a potential flaw in the selection of the REDZ. One would naturally expect a study of this significance to include the most recent and best resource data. Despite CSIR's justification that the updated 2014 WASA was checked against the original data, confirming that the resource areas remained the same but with improved wind speeds in some areas, our members have highlighted incidences where this justification does not appear valid. The following example is provided to illustrate this case and provides evidence that the updated 2014 WASA dataset (and all data from operating wind farms) should be incorporated before finalisation of the REDZ. The Kouga/ Koukamma Area was identified by industry as being of high positive significance due to a very high wind resource but it was not included as a Focus Area even after significant motivation to the CSIR team. One of the main reasons given at the time by CSIR for not making this a Focus Area was that the area of high wind resource was too small to justify establishment as a potential REDZ. The updated 2014 WASA data, however, shows that the area of very attractive wind resource in this area is in fact much larger than indicated in the 2013 WASA data. Thus, the resource assessment aspect of the study should be rerun as soon as possible, incorporating all new data, to confirm that such a large change in one of the major positive mapping factors does not result in the adjustment of the Focus Areas. Any adjustment in	determined which focus areas were finally identified as proposed REDZs. The 118 wind and solar PV projects (of which 36 wind), representing approximately 13.5 GW (of which 8.5 GW wind) of capacity, proposed in and around (within 10 km) the proposed REDZs suggest that many developers do in fact consider these areas suitable for development. The 6 wind and 5 solar PV projects that have been selected as preferred bidders by round 3 furthermore confirms that the resource data in combination with industry's inputs are sufficiently accurate at a regional level, and that development in these areas are environmentally and economically feasible. The limited range of the Kouga/Koukamma resource area was not only due to the area with high wind potential being limited, but also to environmental sensitivities (e.g. agricultural potential) rendering large parts of the resource area potentially unsuited for development. It is thus not only a change in the resource data that would result in this being identified as a proposed REDZs, but also a more detailed assessment and authority agreement to the environmental sensitivities of the area. It should be noted that the WASA resource data was used only to identify study areas, which were then refined based on industry inputs. No micro-scale analyses based on resource data was undertaken. It is noted that specifics on the update of the SEA have not been specified in the draft report. A proposed five year minimum timeframe for updates, have been added to the report as a recommendation.

		the Focus Areas should result in assessment of the revised areas by the specialists to confirm if the area should be incorporated into the REDZ. No approach or process for periodic updates to the SEA has been outlined, despite the study being supposedly iterative in its approach. At the very least, if new data cannot be incorporated now a process for updating the REDZ and amending the locations (once promulgated) needs to be established and included in the report. Furthermore, while the use of the WASA map assists in identifying regional availability of resources (macro level) it remains far too coarse for a local assessment (micro level) and cannot therefore be used in the internal mapping of the respective Focus Areas.	
		The existence of REDZ will be detrimental to environmentally viable projects (both current and future) that are located outside of REDZ (or even the SEA study areas). Permitting and commenting authorities, NGOs and I&APs will use (and are already using) the SEA and REDZ incorrectly by expecting wind projects located outside REDZ to be unacceptable. The ability to develop a wind energy project outside a REDZ or outside the SEA study area is already, and is expected to in the future, be hindered due to ill-informed authorities and other stakeholders deeming these projects to be non-suitable for development without further consideration as 'they are not in a REDZ'. DEA has thus been unable to provide any confirmation that this issue will be addressed despite our requests that a memorandum, with clear instructions on how the SEA should and should not be applied, must be included in the SEA. As many developers feel that the potential to develop competitive projects within the REDZ is limited, assurance that development rights outside the REDZ will not be compromised is a non-negotiable for industry. This significant concern has been raised throughout SAWEA's engagement on the SEA process and to date, no satisfactory	As mentioned above, the 118 project (38 wind), representing approximately 13.5 GW (8.5 GW wind) capacity in and around the REDZs suggest sufficient potential in these areas. As stated in the report it is, however, not the intention of the SEA to limit in any way the development of wind and solar PV facilities outside these areas. As agreed between delegates of SAWEA and the DEA during a workshop dedicated to this issue the legislation that enacts the REDZs (i.e. the *Government Gazette*) will clearly stipulate that no project outside the REDZs will be affected by the REDZs, and that the status quo will thus remain outside the REDZs. This document can be used to correct those stakeholders that might miss interpret the REDZs.

		confirmation has been provided by CSIR or DEA that this issue will be addressed, or that instructions on the interpretation and application of the SEA will be clearly provided to all users. Whilst this issue remains SAWEA will not be in a position to support the SEA as this has major potential to hamper the development of projects and damage the entire industry.	
		Given the potential that, in reality, the development opportunities within the REDZ may be limited, and that the current recommendations set out as part of the development protocols will force projects to be less competitive, it is most likely that developers will continue to pursue significant amounts of development outside the REDZs. This has the potential to negate the intention of utilising the REDZs to inform priority areas for investment into the electricity grid. The proposed buffer zones between projects is likely to have significant negative impacts on the ability of projects to compete within a competitive bidding process that favours low energy prices. As noted in Part 2, Section 15 (Page 22) the wind resource is immovable, and naturally occurs in clusters around landscape features. By imposing a 6 km buffer between projects developers will be forced to move wind turbine placements out of windy positions, which will result in major impacts on project economics. By placing 6 km buffers between projects the benefits of clustering infrastructure will be lost. The very purpose of the REDZ is to concentrate projects within an area, yet by implementing a 6 km buffer between projects exactly the opposite effect is achieved, exacerbating the need for additional infrastructures such as power lines. This buffer is not adequately justified and should not be suggested, even as a guideline. This comment also provides an example of how we believe that each specialist has provided their recommendations in isolation, without considering the bigger picture and the SEA's strategic goal of facilitating project development. The assumption of 2.3MW turbines for the calculation of	The economic implications of the development density limit guidelines have been discussed with the DoE IPP Office who acknowledges the need to balance economic and environmental/social considerations. While low energy prices are of greatest importance, the sacrifice of unlimited areas for development is not acceptable. Based on the discussion it was agreed that the limits will be relaxed, but not removed, and that it will remain clear that these are guidelines that need to be adapted on a case-by-case basis. The limits have thus been relaxed to allow for up to approximately 280 MW (assuming two 140 MW phases with 2.3 MW turbines) development in low sensitivity areas and allow for a potential increase of the project size cap if necessary. It is stated that 2.3 MW turbines, commonly used for current developments, have been used as an assumption to be able to make estimations only. The development potential of the proposed REDZs have been addressed above by referring to the significant amount of development proposed (38 wind projects with 8.5 GW capacity), and already selected as preferred bidders in those areas (6 wind projects with 502 MW capacity). Developers choosing to develop outside the REDZs do not negate the intention of utilising the REDZs to inform priority areas for investment. The SEA process acknowledges the value of a significant portion of development taking place outside REDZs. The calculation of the combined capacity of the REDZs was undertaken only to test the practicality of the proposed development density limit guidelines. These calculations have been redone in the updated report with the relaxed density limits.

		development cluster size is arbitrary and does not account for the fact that some projects will utilise turbine platforms of less than 2.3 MW. The guideline size of a maximum of 60 turbines per cluster in a Low sensitivity area is restrictive and will be misinterpreted by many as a maximum limit, not a guideline. In general, the cluster size guides are very restrictive and will negatively impact project economics (due to not allowing for the cost savings associated with larger developments), forcing projects to be uncompetitive. Cluster size guidelines (limits) should, therefore, be removed. It is incorrect to state that the 8 REDZ have a combined capacity of approximately 12 GW of wind and 93 GW of solar PV. This is based on theoretical calculation that ignores real-world constraints and does not therefore have a basis in reality. The inclusion of Focus Areas 5, 6 and 7 for wind development does not make sense based on the fact that the wind resource data used for the study does not include for these areas. Furthermore, available wind data for these areas indicates that the wind resource in these areas is extremely limited. The CSIR team indicated at the ERG meeting that the allocation of 30% of the proposed generation capacity for wind to these areas was done so on Eskom's request. There is no scientific justification for doing so, and allocating proposed generation capacity based on a judgement approach in this manner goes against the supposed scientific approach of the SEA.	The assumptions with regard to wind development in proposed REDZs 5-7 have been removed as requested. The assumptions of how much of the capacity would probably be unlocked have been removed as requested. In response to this submission the focus of development potential have been shifted away from overall estimated capacities and towards already proposed developments. Considering the amount of wind potential already proposed in these areas, and the relatively small portion of the areas taken up by these proposed developments, the estimated capacities would seem to be tending towards underestimations. Please note that the SEA team worked closely with the entire specialist team through their assessments to ensure that no work was done in isolation. Furthermore, the specialists' findings included in Appendix B of the SEA report were used to inform the scoping assessments integrated by the SEA team in Part 3 of the report. The differences between what was proposed by individual specialists, and what is presented in Part 3 of the report demonstrates how the SEA team took a holistic approach in integrating the different components of the study.
		It was mentioned at the ERG meeting that the SEA approach will include the approval of the development footprint, plus a 50 m buffer to allow for changes to be made to the placement of infrastructure. Although this approach is supported by SAWEA, a buffer of 50 m is inadequate for a wind project as changes in technology, construction conditions or environmental constraints during detailed pre-construction checks can easily result in the requirement for more than 50 m of deviation from the approved positions of the infrastructure. A buffer of the magnitude of 200 m would be more appropriate for a wind project.	The 50 m footprint is a significant improvement on the current situation where no buffer is approved and no amendment to the layout is legally provided for without re-assessment. The detailed impact assessment of 200 m buffers (i.e. 400 m corridors for linear infrastructure) was discussed and is not considered feasible.
		The provision of the detailed individual negative mapping criteria	The environmental and technical constraint mask (referred to

		maps (including all specialists' data in GIS format) is required in Part 2 of the report for the reader to give an informed comment on the negative mapping process. This detailed information is required to understand how each individual constraint contributes to the environmental and technical constraints map. This is critical as this process has a major impact on which areas were assessed as Focus Areas, and it is important for the reader to be able to identify what leads to the "no go" areas/constraints mask. The use of a wind buffer on all types of road is unnecessary and, therefore, unduly restricts project development potential. In the majority of cases a buffer of tip height is appropriate.	as "detailed individual negative mapping criteria maps" in your letter) only served to identify the study areas in Phase 1 of the SEA process. The actual information used for sensitivity mapping in the proposed REDZs is described in Part 3 of the report. All relevant data in this part of the report is made available to the public in GIS format. The buffers applied are as per relevant legislation and as agreed to with the relevant authorities during the SEA process.
		What defines a private game reserve? Any landowner can register land as a private game reserve without proof of actual use or even the intention to treat the land as such. Creating fixed buffers around private reserves is therefore open to error and/or manipulation.	The rights of land owners to manage their land as a game reserve when they have registered it as such must be taken into consideration. The buffers applied are guidelines and must be adapted at a project level. If the land owner does not have any objection the buffer does not need to be applied at a project level. If the land owner does, however, have an objection and can prove that the land is used as a game reserve that can be impacted by the development, the proposed buffers serve as a guideline and should be discussed with all stakeholders involved.
		As discussed by a SAWEA representative at the ERG meeting, the shadows of a turbine only fall to the south. CSIR's response that the circular buffer around the receptor remains is illogical; a semi-circular buffer to the south should only be applied in cases where turbines are positioned to the north of the receptor. Furthermore, in Northern Europe, where issues related to shadow flicker are a much greater concern, the guideline buffer is 10 rotor blades (approximately 1 km). It, therefore, does not make sense for the guideline in South Africa to be 1.5 km where the risk of flicker is much reduced. As shadow flicker is currently scoped out of many EIAs in South	As stated in the SEA report the buffer distance (up to 1.5 km) used is based on a USA panel review (http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf) which found that shadow flicker generally occurs at distances less than 1400 m. It is acknowledged in the report that a 10 times rotor blade diameter (approx. 1 km) buffer is used in Europe. It must be noted that the sensitivity rating in the SEA states that between 1 km and 1.5 km there is some potential for impact (Medium Sensitivity) and only between 500 m and 1 km there is potential for significant impact (i.e. High Sensitivity).

		Africa, this requirement presents a potential additional specialist study, not a reduction in development effort within the REDZ.	In addition to the position of the sun, the distance in any direction in which flicker effects may be observed is dependent on topography. The circular buffer used in the SEA thus only provides an indication of potentially sensitive areas that need to be considered. In line with the SEA protocols, industry would probably agree that where development may have a flicker impact on inhabited residences the impact should not be scoped out prior to the impact assessment phase.
		The recommendation includes that a developer should seek comment from SAWS. A number of SAWEA members are currently facing significant challenges when communicating with SAWS as it appears that a number of key staff have recently left the organisation. If this kind of recommendation is to be made, please provide contact details for the relevant authority. The same comment applies for CAA, DoD, DWA, DMR and any other relevant competent authorities/commenting authorities that need to be contacted. Particular challenges are faced with these organisations with regard to getting comments or authorisations within reasonable timescales. This was raised at the ERG meeting and remains a barrier to development that is not currently addressed by the SEA, and indicates that the objective of streamlining approval processes has not been met by the study.	Once the REDZs and associated protocols have been given legal standing (e.g. through a PICC gazetting) it can be used to leverage participation from the relevant authorities and key stakeholders since development protocols specifies the involvement of relevant authorities and/or key stakeholders. The turnover in staff, and potential changes in which authority or stakeholder may have a mandate in terms of certain legislation, does not allow for the specification of contact details in documentation that will be legally adopted.
		On review of the combined sensitivity maps it appears that the majority of the high wind resource areas are classified as Very High sensitivity, and that in some REDZs a significant proportion of the REDZ area is Very High sensitivity. In these situations many developers have commented that it would appear easier to do a full EIA rather than try to 'fit' a project into the limited available High/Medium/Low sensitivity areas where the wind resource may be less attractive. This is particularly the case where a contentious BA can result in delays/extensions of the BA	Since the SEA process already undertook the scoping process and identified significant sensitivities, the Basic Assessment process is as suited for dealing with the assessment of the identified sensitivities as a full EIA process would be. Undertaking a full EIA would in large part (i.e. the Scoping Phase) result in a duplication of what has already been done through the SEA process.

		process resulting in the approval taking close to the same time that a full EIA would take. This comment relates to our concern that the SEA does not meet its objective of facilitating easier development of wind energy facilities within the REDZ.	
		The buffers recommended in the specialist report are, in many cases, much larger than those currently being recommended and previously recommended for already authorised projects. This conservatism again represents an additional development constraint that is imposed by the REDZs, not the streamlining or facilitation of easier development for wind projects.	The first objective of the SEA is to facilitate sustainable development which requires a balance between environmental, social and economic factors. Where appropriate, the current assessment requirements have been streamlined (e.g. for instance by requiring only impact statements, or not having to consider particular potential impacts in certain instances), and in other cases it might have been increased (e.g. requiring flicker assessments that might previously have been scoped out). The requirements developed through the SEA process would ideally form a national guideline applicable to development proposed both inside and outside REDZs.
		This correspondence serves to confirm that we do not support the SEA process or outcomes in their current form. SAWEA suggests that the only solution to the abovementioned problems with the SEA process and outcome would be to use the SEA to identify possible constraints for future wind development at a broad level, but to not identify preferred areas for development nor classify REDZ.	Not identifying priority areas would negate the greatest potential benefits of the SEA, which is to allow for integrated (i.e. renewables with other national initiatives) forward planning and associated proactive measures (e.g. electricity grid expansion) to facilitate and holistically optimise wind and solar PV development for South Africa.

B 6 – 2 Formal Submissions

CSIR
1 Meiring Naude Road
Pretoria

For Attention : Lydia Cape-Ducluzeau

By e-mail : LCapeDucluzeau@csir.co.za

Dear Lydia

PSC & ERG REVIEW OF WIND & SOLAR PV SEA REPORT

We welcome the opportunity to provide feedback on the draft report titled "Strategic environmental assessment for wind and solar photovoltaic energy in South Africa", 2015.

The IPP Office appreciates and supports the intent of this initiative to drive sustainable renewable energy development via the establishment of Renewable Energy Development Zones (REDZ). Feedback on the draft report is provided in the context of the impact that the REDZ may have on IPP procurement. As such we have identified three issues as follows:

Page 91: Development density limit guidelines: The proposed guidelines will constrain the amount of generation that can be connected in particular areas, potentially driving uncompetitive behaviour as the development capacity in the vicinity of grid capacity will be constrained. We are concerned that the implementation of these "guidelines" as rules will prejudice IPP procurement. We appreciate the need to balance development with visual and environmental impact, and support that such considerations are factored into environmental approvals. We are however concerned that the unilateral implementation of these "recommendations" in environmental assessments and authorisations will have a detrimental impact on IPP procurement, and we require assurance that the "recommendations" will not be unilaterally applied, and that each application will be considered on its merits and not be prejudiced by the recommended density limits.

Page 372 & 373: Socio-economic development suggestions: It is appreciated that the socio-economic suggestions in section 15.3 are suggestions for consideration. The suggestions in their present form would materially impact on IPP procurement, and specifically the suggestions as regards a gradual phasing of developments and the implementation of a central renewable energy implementation office in each REDZ. Such requirements may prejudice projects in REDZ and would be inequitable for IPP procurement given that IPP procurement needs to procure generation in areas within and outside of the

REDZ. We require assurance that these recommendations will not prejudice projects within the REDZ, and suggest that any requirements in this regard be specified and managed in the IPP procurement programmes and not via the REDZ.

Page 390: Environmental authorisations outside of the REDZ: We require assurance that the environmental authorisation process outside of the REDZ will not preclude development in those non-REDZ areas. IPP developers have already raised their concern that officials may interpret the REDZ to mean that development should be discouraged outside of the REDZ. Such a situation would be unacceptable for the purposes of the IPP procurement programmes. There is a statement to the effect on page 390 "*The adoption of REDZs is not intended to constrain any development outside these areas and all projects inside and outside REDZs must be considered on their own merit. Proactive investment should thus be prioritised in the REDZs, but not limited to these areas.*" We would hence like assurance as to how effect will be given to this.

We trust that due consideration will be given to these concerns, such that the final report is inclusive of this feedback.

We look forward to further collaboration on these and related matters, in support of the sustainable development of the IPP programmes.

Should you have any queries as regards this feedback please contact Dr Clinton Carter-Brown, Head of Technical IPP Office, Tel 087 351 3027, email clinton.carter-brown@ipp-projects.co.za.

Yours sincerely

Karén Breytenbach
Head : IPP Office

Date : 23 / 02 / 2015 .

agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Directorate: Land Use and Soil Management, Department of Agriculture, Forestry and Fisheries
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Reference: Proposed REDZs Final report

February 23, 2015

Ms. Lydia Cape-Ducluzeau
CSIR Environmental Services

COMMENTS ON THE FINAL DRAFT REPORT OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT FOR WIND AND SOLAR PHOTOVOLTAIC ENERGY IN SOUTH AFRICA

Your report: "*National Strategic Environmental Assessment for wind and solar photovoltaic energy in South Africa 2015:* as well as the supporting spatial information has reference.

The Department of Agriculture, Forestry and Fisheries has done a comprehensive review of the mentioned report and respectfully submit the following comments as per indicated sections, where possible page numbers are shown in brackets.

General comment
The Department supports the development of the renewable energy sector on condition that the impact thereof on the strategic goals of the Department is minimized as far as practical possible. The impact assessment should therefore quantify the possible impacts of the proposed development on the following three strategic goals:

- Enhanced production, employment and economic growth in the sector
- Enabling environment for food security and sector transformation
- Sustainable use of natural (agricultural)resources

In comparison with the other thematic impact assessments, focussing on quantifying the impacts of the proposed development on the specific theme, the agricultural impact assessment fails to quantify the possible impacts of the proposed developments on aforementioned strategic goals and the agricultural sector at large. The focus of the specialist report is rather to provide arguments to justify the loss of agricultural land, as stated under 2.1 Study methodology: "This study is motivated by the need to **find solutions that will facilitate renewable energy development** ...." and not first and foremost on the individual as well as the cumulative impacts thereof on the agricultural sector. The specialist report also refers to "wind and solar farms" which is scientifically incorrect. Farms and farming is defined as activities related to the production of crops and livestock. Wind and solar energy is industrial activities and cannot be referred to as farms or farming activities. The Department therefore questions the validity of the specialist report as well as the derived Section 1: Agriculture of the combined report.

Summary & Content

- It is important to ensure that a process of cooperative governance is followed and that the legislative mandates; policies and other related areas of jurisdiction impacting on the various levels pertaining to renewable energy and spatial planning be adhered to, even though the purpose of this project was from the National Environmental Management Act perspective. This is to ensure that there is no duplication of effort or conflicting approaches (p iii). It is recommended that this principle be acknowledged in the report.
- Careful consideration should be given to the proposed statement that wind and solar PV developments within the Renewable Energy Development Zones (REDZs) will be given priority in terms of planning, approval and implementation processes. This study was conducted on a very high desktop level and detailed aspects that may be of higher importance could have been omitted that may have a significant impact on any future planning activity within the mentioned zones (p iii).

Part 1 Strategic Environmental Assessment

- Although there were a certain level of agreement between the various stakeholders in terms of development protocols that are to be followed within the REDZs, there are still a large number of aspects on which no clarity have been obtained or where more in-depth studies are required that may result in a decision not in accordance with those stipulated within the specified REDZs. This aspects needs to be understood and acknowledged by all relevant planners and stakeholders (p 6).

B. Part 3 Agriculture Sensitivity

- The Agricultural Specialist study conducted is acknowledged and a number of informal interactions were held with the appointed service provider. However no formal consultation process pertaining to the content of the agricultural specialist study was held between the project management team and this Department whom is regarded as the custodian of agricultural land in the country (p 1).
- Of the 8 proposed REDZs the most concerning zone from an agricultural perspective is FA1 (Overberg). This fact was communicated to the project management team on numerous occasions. Wheat is a staple food, South Africa is already a net importer of wheat and the area is regarded as unique agricultural land. It is recommended that conflicting aspects pertaining to the recommendations made for each REDZ be discussed and finalization obtained thereon. The Department is of the opinion that the FA1 is not suited for the development of infrastructure related to wind and solar energy and that the planned developments should rather be shifted to Komsberg focus area.
- It is acknowledged that the total footprint of renewable energy impacting on agricultural land is limited in comparison with other related energy sectors such as mining or other forms of development. However, as stated renewable energy is not the only sector impacting on agricultural production and therefore this Department, as the mandated authority pertaining to the protection of agricultural land has the obligation to holistically review an application, not only per the proposed footprint area of the industry in question but also in terms of the current state, use, availability and potential of the larger landscape before making a decision. A "one-sided view" only related to an industry without incorporating other related impacting factors may result in a detrimental impact not only on agricultural production but also on ensuring continuous food security for the country (p 2).
- Of major concern to this Department is the statements made in the report pertaining to food security and the departure point followed that it is much more economically viable for a farmer to "farm with wind" than farm with a crop (or livestock). Optimal land use should not only be measured against income that can be generated from the area concerned. The principle of sustainable development is structured on three pillars that should each be seen on equal footing. From a food security and long term sustainability perspective a country relying on food imports and neglecting is food production potential

in favour of other land uses not only becomes dependent on another food source that will have quite significant impacts on the future independent existence of the country but from an economic perspective it will have severe negative impacts on economic growth and the ability to generate income and jobs. A country should be able to produce its own food and therefore the protection of especially high potential agricultural land should receive priority intervention as is the same for any other national priority sector (p 3).

- The argument made that the higher financial returns gained from renewable energy generation (leasing of farm land by farmers for the placement of renewable energy structures) can contribute more to food security than using the land for agricultural production purposes is very controversial and the Department is of the opinion that this statement should be amended. There is limited land in the country that can be used for food production even if the product being produced do not contribute directly to food security such as the wine industry. These products still have an impact on ensuring food security, although not directly. Food producing areas (cultivated areas) are selected based on the natural resource's potential to produce food and an additional income for a farmer obtained through the placement of renewable energy structures will not necessarily result in the farmer using this income to expand its production areas as there may be none other available on the farm. This can therefore result in farm land with a production potential being lost with no alternative production options (p 3).
- It should be noted that the aspect of "Unique agricultural land" is not captured within the land capability data set used for the demarcation of agricultural sensitivity areas. This may have an impact on demarcation of priority agricultural production areas.
- The report is very vague when revering to the fact that a "minimal foot print for wind energy" should be allowed within "certain cultivated fields". Clarity on the mentioned should be given as it can lead to misinterpretation (p 12).
- As per the recommendations an agricultural impact assessment will be required in certain instances. No detail as to the specifications that should be included in such an assessment is included nor has it been mentioned if an agricultural specialist will / should review the content thereof (p 13).
- It is further indicated that an Environmental Assessment Practitioner (EAP) should issue a compliance statement as to whether a proposed renewable energy project within a REDZ complies with the development limit requirements. It is not mentioned as to whether the EAP will also review the Agricultural Impact Assessment based on-site evaluation (the data used to demarcate the REDZ is only suitable for use at a 1:250 000 scale). An EAP is not qualified to make a decision pertaining to agricultural potential and suitability (p 13).

Part 4 REDZ's

- In terms of the area FA1 a concern is again raised as to the potential loss of agricultural land in this area currently being utilised for intensive cultivation practices.

In conclusion

The Agricultural and Renewable Energy sectors have the potential to co-exist within the same land parcel without a conflict of interest and the Department is in full support of such a co-existence.

In order to do so careful planning and consideration should be given to both sectors but with due respect to the mandates of these sectors. It should be acknowledged that the agricultural sector has very limited scope for the re-allocation of production areas, as the natural agricultural resources cannot be re-allocated (with specific reference to combination of the a wide set of soil, agro-climatic and terrain features enabling agricultural production) whilst it is the believe of this Department that the renewable

energy sector do have the option of re-aligning it proposed foot print (as a limited set of climatic and terrain features are required to enable energy production).

This approach will guide both sectors in finding a solution that will be to the advantage of both sectors. Any further communication on this matter is welcomed.

Yours faithfully

HJ Lindemann 23/02/2015
Scientific Manager: Natural Resources Inventories and Assessments

the denc

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Enquiries: B Botes **Ref**: SEA RE comments **Date**: 5 March 2015

Council for Scientific and Industrial Research (CSIR)
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0001
South Africa

Dear Ms Lydia Cape-Ducluzeau and Mr Cornelius van der Westhuizen

INPUTS: SPECIALIST REPORTS ON FOCAL AREAS (REDZ) FOR SIP8'S SEA, I.E. THE STRATEGIC ENVIRONMENTAL ASSESSMENT FOR WIND AND SOLAR PHOTOVOLTAIC ENERGY

The draft Focal Area Specialist Reports and maps provided via the CSIR website refers. Herewith, the DENC would like to provide their views and perspectives.

1. In principle the SEA process is supported and the purpose for which it is intended. However, the fact that no field surveys were done to augment the desk-top studies means that the reports have very 'low confidence' results. A desk-top study is only as good as its input data and in the case of the Northern Cape the input data is exceptionally limited and / or absent for most of these Focal Areas (FAs). The limitations of the current desk-top reports have been illustrated by the discovery of e.g. bat roosting sites and protected red larks which was not known prior in other available literature.

2. Without field surveys within these FAs the DENC cannot ensure that there will not be situations where further specialist studies will have to be done as we would expose ourselves for being accused of not implementing our mandate appropriately.

   To include more specialist studies in the Protocol result in the SEA process not to reach its intended goals either, as the aim is to alleviate the burden from developers to fast track development. Through improved FA reports with higher confidence levels, the DENC can better defend their actions through the fast tracking of the EIA process.

3. On an ecosystem level the impacts of renewable energy projects (research and monitoring to address ecosystem function and impacts of solar and wind farms on ecosystem health / functionality) lack overall. E.g. bats are killed by wind farms, which could lead to insect population to increases (bats eat insects), which in turn could lead to agricultural pests destroying crops (food security). What could the impacts be of renewable energy

developments in fragmenting the landscape, preventing ecosystem function and reducing climate change resilience? These are aspects of the department's mandate that needs to be considered.

The comments on the SEA FA studies is aimed at improving the quality of maps and REDZ to ensure that the intended role of the SEAs can be executed, i.e. streamlining and speeding up the EIA process for Renewable Energy projects within these zones.
However, the DENC needs to satisfy themselves that they are confident enough that the DENC will not open themselves up for unnecessary accusations of negligence in not taking their mandate seriously, i.e. not ensuring that reports being used for fast tracking EIA processes have at least fair confidence levels.

We trust that you understand our point of view in taking our mandate serious while protecting the developers as well through ensuring a sound fast tracking of EIAs.

Please feel free to contact the DENC if you have any questions or need more information.

Yours truly,

MR D VAN HEERDEN
HEAD OF DEPARTMENT: DEPARTMENT OF ENVIRONMENT AND NATURE CONSERVATION
Date:

the denc

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Enquiries: M Smit & N Uys **Ref**: SEA RE comments **Date**: 1 March 2015

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Dear Ms Lydia Cape-Ducluzeau and Mr Cornelius van der Westhuizen
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INPUTS ON SIP8 SEA (Strategic Environmental Assessment for wind and solar photovoltaic energy) IN SOUTH AFRICA: PART 1 OF 2

The Strategic Environmental Assessment (SEA) for wind and solar photovoltaic (PV) energy in South Africa was mostly a desktop study based using the best available spatial GIS information. The terrestrial and aquatic specialist study did not include any baseline data collection or field verification.

Four Focus Areas (FA) was identified and assessed in the province (Figure 1), namely the FA 2 – Komsberg, FA 5 – Kimberley, FA 7 – Upington and FA 8 – Springbok. Only parts of FA 2 – Komsberg and FA 5 – Kimberley fall within the Northern Cape Province.

The final focus areas with their sensitivity maps and protocols will be gazetted as REDZ areas. REDZ areas will still have to follow the Basic Assessment process in terms of NEMA in order to obtain an environmental authorisation. Certain specialist studies will only be required as prescribed in the protocol for the highlighted.

Spatial review of the Focus Areas

The DENC spatial team (comprising of 2 people) was unable to provide their inputs to the spatial information within the timeframe as they are currently busy with the Northern Cape CBA map. It is requested though that the Northern Cape CBA draft be incorporated and considered. Basic QGIS maps are presented below on available information that could be obtained within the limited time available for review.

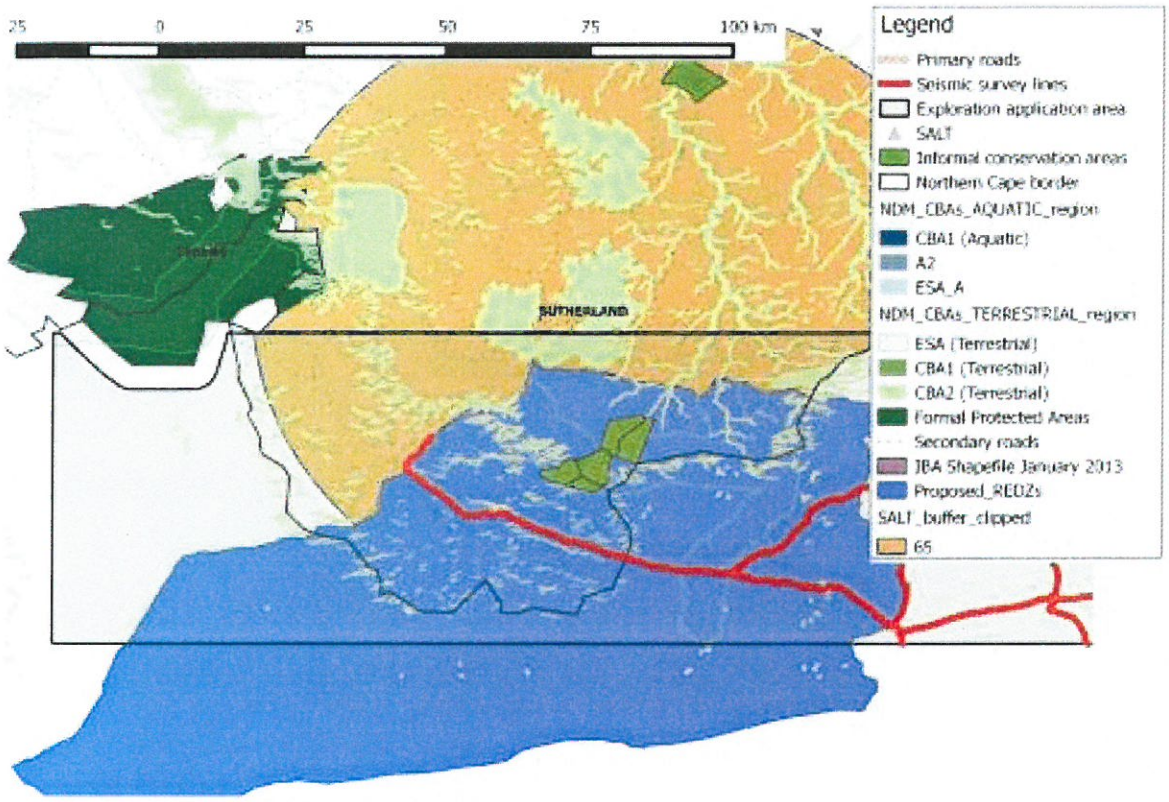

Figure 1 - Komsberg FA in relation to informal conservation areas, Namaqua CBA's, SALT and shale gas exploration, DENC data, 2015.

Komsberg FA

Only a small portion of the Komsberg FA (Figure 1) falls within the Northern Cape. Only one informal conservation area is located in the FA for the Northern Cape and a few terrestrial CBA2 areas. This focus area falls within the SALT buffer area, which is located near Sutherland. It should be noted that this FA falls within the shale gas exploration area for Falcon Oil and Gas. Potential air quality impacts for wind energy facilities in terms of shale exploration and other mining activities (e.g. uranium mining) should be considered.

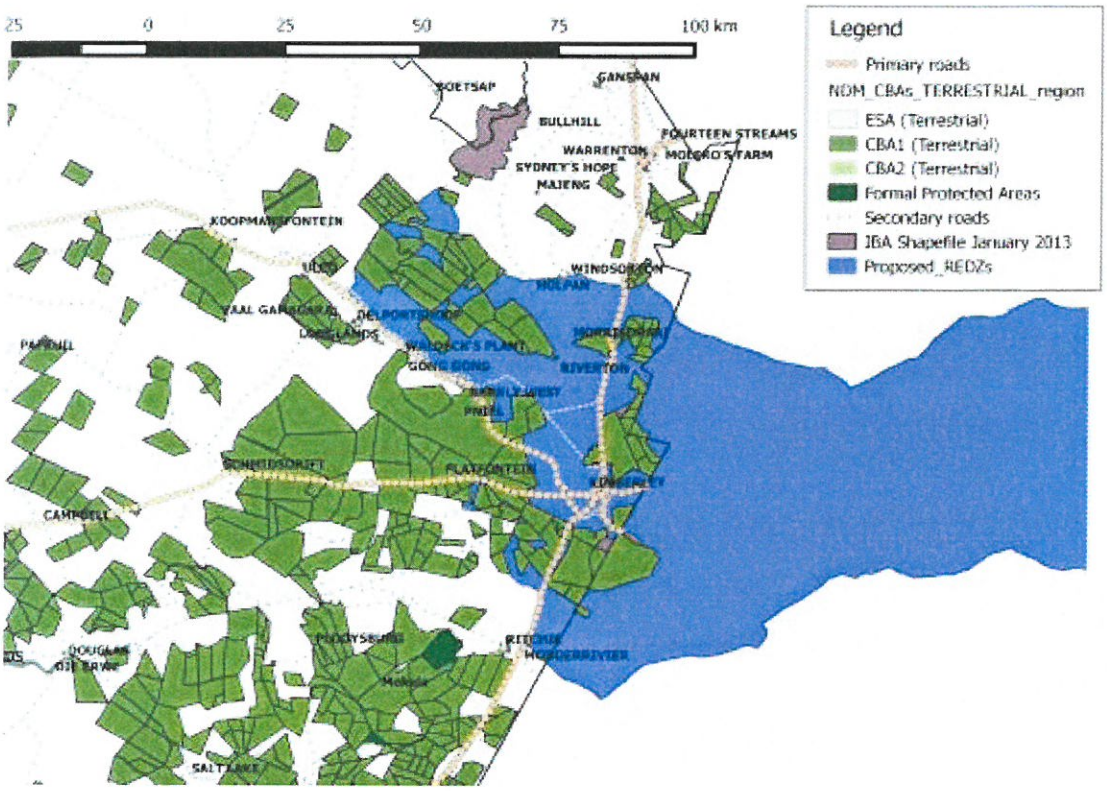

Figure 2 – Kimberley FA in relation to informal conservation areas (green), DENC data, 2015.

Kimberley FA

The Kimberley FA (Figure 2) straddles a small portion of the Northern Covers including Ritchie, Modderrivier, Kimberley, Platfontein, Riverton, Holpan, Delportshoop, Barkley West and Windsorton. It should be noted that the Kimberley FA includes previously mined areas and some agricultural areas. It also includes large game farms (map) that are of tourism and conservation importance. Site verification should be done to check if mining areas need to be rehabilitated prior to construction. This should also be taken into account for wind energy development placements in terms of potential air quality impacts. Minimum distance for wind and solar energy development need to be established taking into account the town expansion plans (NSDF, PSDF, IDP). New research on the Griqualand West Centre of Endemism should be incorporated into the Kimberley FA. It was found that the boundaries of this centre of endemism is larger than formerly mapped and thus overlap with a larger part of the FA than reported in the REDZ specialist report.

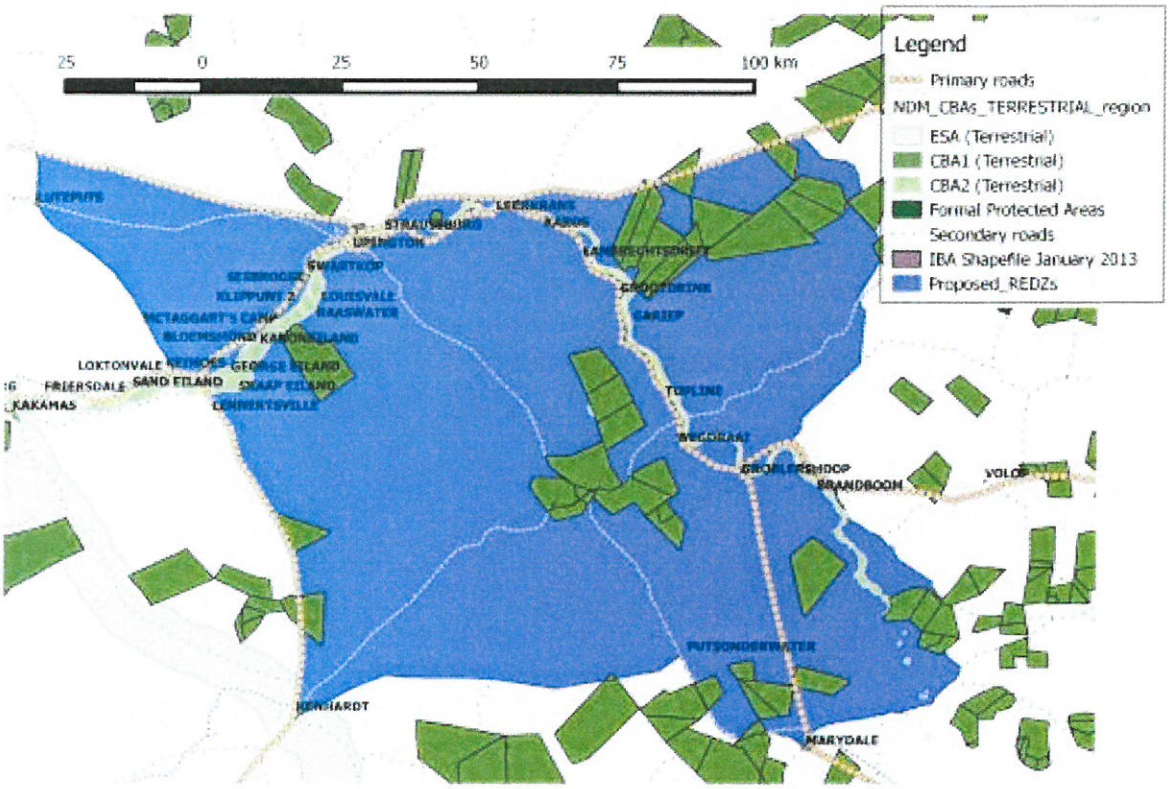

Figure 3 - Upington FA in relation to informal conservation areas and Namaqua CBA's, DENC data, 2015.

Upington FA

The Upington FA (Figure 3) includes Kenhardt, Marydale, Putsonderwater, Groblershoop, Grootdrink, Karos, Leerkrans, Upington, Kanoneilan and Lutzputs. There are a few informal conservation areas in the Upington FA and a limited number CBA2 areas. The baseline information for this area is limited. *Aloe dichotoma* populations have not been mapped, but occur across this area forming part of an important part of the species range to enable adaptation under climate change conditions.

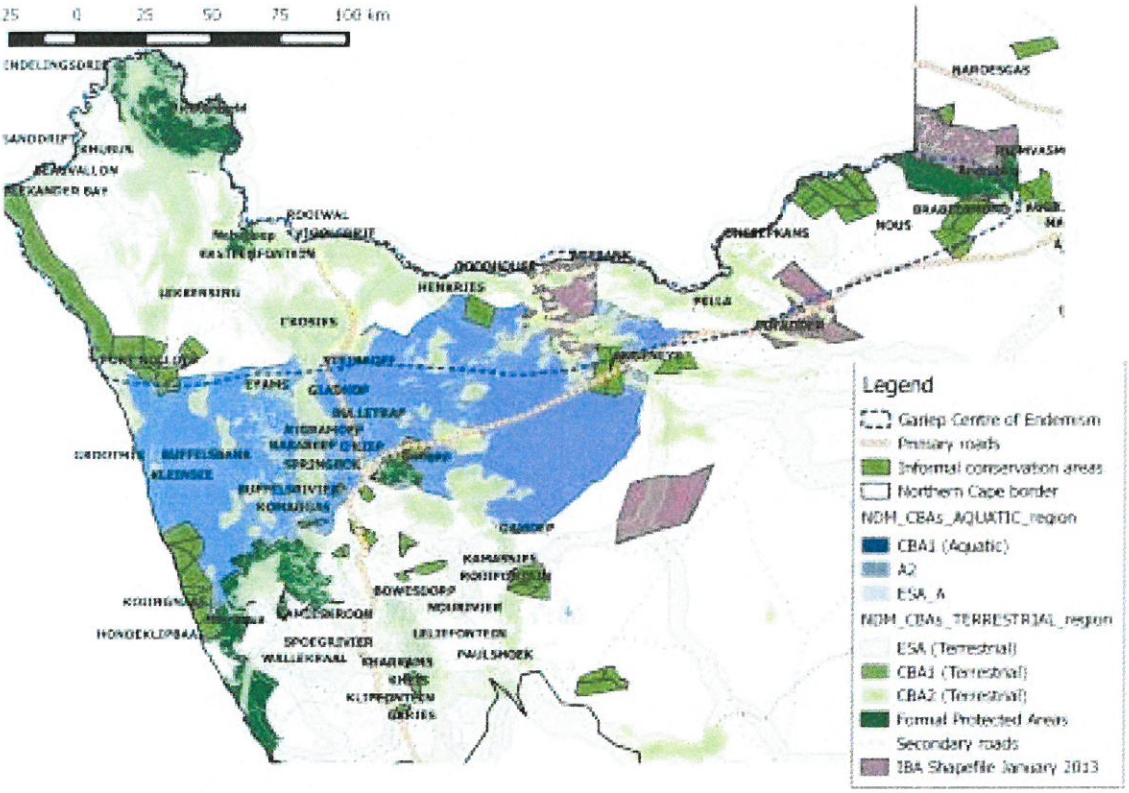

Figure 4 - Springbok FA in relation to informal conservation areas, IBS's, Gariep Centre of Endemism and the Namaqua CBA's, DENC data, 2015.

Springbok FA

The Springbok FA includes a very large area in the Northern Cape that stretches from Aggenys, through Springbok to Port Nolloth and Kleinsee. The Springbok FA falls partly in the Gariep Centre of Endemism (Figure 4) and includes formal conservation areas, informal conservation areas, IBA's and Namaqua CBA areas. Two Biodiversity offset areas (agreements signed between developers and the DENC already) fall within the Springbok FA near Springbok and Aggeneys (not mapped). Wind energy developments located near mining areas in Aggeneys and along the coast should consider the potential air quality impacts.

Terrestrial and Aquatic studies

1. Under the Relevant Regulatory Instruments (section 2.4):
    a. The National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004) NEMBA is not just for the listing of ecosystems but also the listing of protected species. There is e.g. the TOPS legislation for threatened and protected species and the AIS regulations for the removal of alien species.

b. Conventions, e.g. the Conservation of Migratory Species of Wild Animals (CMS) also known as the Bonn Convention (http://www.cms.int/) and the Convention on Biological Diversity (CBD), should be included under the legislative framework as they are international commitments that South Africa agreed to.
c. The NEMA EIA 2010 regulations (Government Gazette 33306 (June 2010) is no longer applicable as the NEMA EIA 2014 regulations came into effect on 8 Dec 2014.
d. Suggest to remove the Activity 12 in Listing Notice 3 (Government Notice R546 of 2010) referred to as EIA 2014 as this refers to NEMA legislation and secondly the EIA 2014 regulations came into effect on 8 Dec 2014.
e. The National Forests Act (NFA) (Act 84 of 1998) is not just for the licencing of trees but also for protecting forested patches and woodlands. The Kathu woodland in the Northern Cape is protected in terms of the NFA, although it does not fall in the FA's.
f. In terms of CARA, alien species are also regulated.
g. There is a huge gap under the heading of "*provincial instruments*". The only act that was listed is the outdated Nature and Environmental Conservation Ordinance (Ordinance 19 of 1974; amended in 2000). Please note that most of the provinces have their own ordinances / Acts governing the use of biodiversity. Northern Cape Nature Conservation act no 9 of 2009 came into effect on 1 Jan 2012.

2. Methods should be more clear and detailed to allow for replication of methods and for also adding new information to the project as it becomes available. This will also make it easier to review the SEA.
3. It is recommended that the final products be made available on the SANBI BGIS website http://bgis.sanbi.org/ for easy access by developers and consultants. It is recommended that all the limitations of the study be captured in the metadata of the final GIS shape layer.
4. In appendix 3 of the terrestrial study under Point 1 it is stated that "Polygons misidentified as natural wetlands were deleted". On what grounds were the information deleted as under section 2.3, page 9 it is stated that "Primary limitation of the study is the lack of ground truthing and local expert consultation". If Ollis et al. (2013) is the basis for adding and removing information from the FEPA layer, then it should be mentioned at the start of the methods in appendix 3. It is also recommended that all the changes to the FEPA layer should be communicated to the FEPA custodians along with the GIS information to allow them to check and further assess the information.
5. How was the FA calculations summarised in table 13 in Appendix 4 of the terrestrial study determined and what data set was used as this is not clear? Under the methods, two datasets are specifically referred to, namely the SANBI 2013 land-cover data and the 2006 Vegmap. It should be noted that the vegetation units area of extent, % transformed etc. for the Vegmap of 2006 was based on land cover data of 2000. The SANBI 2013 data referred to prior in the text

have not been ground truthed, so there remains high uncertainty and low confidence in this estimation of the FA% transformed, FA% remaining intact, etc.

6. The following information, species and datasets should be considered and incorporated under the protocol:
   - A review of the Leslie Hill Succulent Karoo Trust's Investment Priorities (Desmet et al., 2012
   - Agricultural Research Council (ARC) Alien Invasive Species
   - All range restricted species
   - All species protected under the Northern Cape Nature Conservation Act (NCNCA) and associated schedules
   - All the latest Red Data Books (butterflies, mammals, avifauna, reptiles and amphibians)
   - *Aloe dichotoma* and *Aloe pillansii* populations
   - Bats (all species)
   - Biodiversity Geographic Information System (BGIS) data
   - Birdlife SA / EWT Avian Wind Farm Sensitivity Map for South Africa (Retief et al. 2012):
   - Bushmanland Conservation Initiative Spatial Data Report. (Desmet et al. 2005)
   - CAR: Biannual road counts of large terrestrial birds
   - "Centres of Endemism: Van Wyk & Smith 2001. Regions of Floristic Endemism in southern Africa. A review with emphasis on succulents."
   - Climate change corridor, National Biodiversity Assessment 2011
   - Climate Risk and Vulnerability: A Handbook for Southern Africa, CSIR (Davis, 2011)
   - Conservation of Agricultural Resources Act (CARA)
   - Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
   - Convention on Wetlands of International Importance (Ramsar) (1975)
   - CWAC: Coordinated Waterbird Counts (CWAC) Programme
   - DENC protected areas strategy / individual provincial park strategy
   - EchinoMAP: Atlas of African Echinoderma
   - Golden moles (all species)
   - Ground dwelling species that can be impacted on by excavation activities
   - Groundwater Level Monitoring Network (HYDSTRA)
   - IRP: Birds In Reserves Project (BIRP)
   - Lichen hills of Alexander bay
   - Lower Orange River Alluvial vegetation
   - Namaqua CBA map
   - National Biodiversity Assessment (2011)
   - National Environmental Management: Air Quality Act

- National Environmental Management: Waste Act
- National Freshwater Ecosystem Priority Areas (NFEPA)
- National Land Cover dataset 2014
- National Marine Protected Areas and proposed (MPAs)
- National Protected Areas Expansion Strategy (2008)
- National Water Act
- NEMBA Alien and Invasive Species (AIS) regulations
- NEMBA: ToPS regulations
- Northern Cape CBA Map 2015
- Northern Cape Paleontological heritage report, 2009
- Northern Cape Provincial SDF
- ODONATA: Odonata Atlas of Southern Africa
- Orange River Mouth (ORM) boundary
- Pangolin
- POSA: Plants of Southern Africa
- Protected trees under the National Forest Act
- Raptors
- Renewable energy sector planning tool for the Namakwa District Municipality (Conservation South Africa, 2012)
- Riverine rabbit
- SABAP1: Southern African Bird Atlas Project
- SABAP2: Southern African Bird Atlas Project 2
- SABCA: Southern African Butterfly Conservation Assessment (SABCA)
- SABIF : South African Biodiversity Information Facility information
- SAEON: South African Environmental Observation Network data
- SAFAP: Atlas of the Frogs of South Africa, Lesotho and Swaziland
- SAFRING: Southern African Bird Ringing Unit (SAFRING)
- SANParks expansion strategies for National Parks
- SANSA: South African National Survey of Arachnida: About spiders, scorpions and other arachnids
- SARCA: Reptile Atlas of Southern Africa formerly: Southern African Reptile Conservation Assessment
- ScorpionMAP: Atlas of African Scorpions
- SKEP expert mapping for insects, invertebrates, birds, mammals, amphibians and plants
- SKEP geographic priority conservation areas
- South African Fossil Sensitivity Map The South African Fossil Sensitivity Map Version 2
- South African Risk and Vulnerability Atlas (to climate change), DST, 2010
- SPISYS

- The IUCN Red List of Threatened Species - http://www.iucnredlist.org/
- Threatened Species Programme National Red Data List
- Vegetation of the Hantam-Tankwa-Roggeveld Part 1 and Part 2 (Van der Merwe et al., 2011)
- VIMMA: MammalMAP - Virtual Museum of African Mammals
- WARMS: Water Resource Management Systems
- Water flow data of rivers
- WMS: Water Management Systems

7. The following points in need for attention have been highlighted by DENC in terms of renewable energy installations within the Northern Cape Province, in a letter to the Northern Cape Renewable Energy Steering Committee, and should also be considered in the SEA processes.
    a. The management and disposal of all waste generated by the solar parks, wind energy developments and bio-gas facilities within the province. Special attention must paid to the facilities generating hazardous waste as the province currently does not have a landfill where this waste can be disposed of. In terms of wind energy developments potential site contamination can occur by turbines leaking oil and cleaning contaminants leaching into the soil when servicing turbines. Solar CSP contaminants include leakage of oil, diesel, heat transfer liquids (HTF's) and possible contaminants in evaporation ponds. Solar PV contaminants are found in PV modules/ panel such as cadmium that can be leached from broken panels.
    b. Capacity of SMME's and municipalities to deal with the waste generated by RE projects and the associated influx of people into certain towns.
    c. Concerns on the location of asbestos areas in the province like Kuruman, Postmasburg and Prieska. RE developments require large scale vegetation clearance that will result in the asbestos fibres becoming airborne. GIS information should be made available to RE developers during the EIA assessment to enable them to plan accordingly. No-go areas for wind and solar energy developments pertaining to asbestos should be identified.
    d. The management and treatment of soils contaminated from wind turbines and solar energy facilities.
    e. The availability of sustainable water provision for all the renewable facilities constructed and those that still need to be constructed.
    f. The management and financing of the end-life of renewable energy projects should receive more attention in EIA's, e.g. the removal of infrastructure, recycling options in terms of panels, rehabilitation of areas, etc.

g. Lack or insufficient information on baseline data on biodiversity, ecology and ecosystem services within the Northern Cape province hamper efforts to make informative decisions and predictions on the effect of future RE developments.
h. Concerns on the possible impacts of wind turbines and solar CSP towers on bat, bird and insect populations. More information and research is needed on species numbers, species diversity, population dynamics and migration patterns within the Northern Cape to help guide RE developments.
i. Concerns in terms of the possible impacts of wind energy facilities on wildlife (e.g. buzzards) during locusts swarm migration should be investigated. Operational management practices should be investigated.
j. Adoption and implementation of the recent resolution by the Convention on Migratory Species (CMS) taken on renewable energy and migratory species (UNEP/MS/Resolution 11.27; November 2014). South Africa, as a signatory of the Convention, is urged to implement the *Renewable Energy Technologies and Migratory Species: Guidelines for Sustainable Deployment' (UNEP/CMS/COP11/Doc.23.4.3.2).*
k. It is recommended that a study be commissioned to determine if the solar parks and wind energy developments could possibly play a role with climatic conditions regarding e.g. to the reduction in air moisture (humidity) and localised temperature increases of the ambient air within the solar plant, regional or provincial.
l. Availability and distribution of diesel within the province should be investigated in the light of Eskom's energy crisis. Agricultural and mining sectors are largely dependent on the diesel for transport and CSP solar (make use of diesel to as back up and start up power).

CONCLUDING REMARKS

1. In principle the SEA process is supported and the purpose for which it was intended. However, there are huge concerns that the current results do not address the intended results with regard to streamlining the EIA process and lowering the risk of the client in having the development approved. This is primarily due to the fact that specialist studies in the FAs were limited to desktop studies.
2. Overall it should be acknowledged that the FA studies have low confidence value due to the absence or limited availability of baseline information for the Northern Cape. Without field surveys within these areas to augment the specialist desktop studies, this problem will persist and expose developers to possible unexpected specialist studies in the near future as more information becomes available within these areas. Accordingly, the risk remains with the client / developer, which is in essence what the SEA process want to mitigate. One might then question if this process is fatally flawed? – Especially within the Northern Cape.

3. It is recommended that baseline studies be conducted within the REDZ to prevent unplanned expenditure for the client and to ensure that the confidence of the representivity of the REDZ are higher, i.e. lowering the risk of the client to do additional specialist studies.
4. Not all concerns on Provincial level can be addressed through the Protocol that will accompany the REDZ as this SEA process would be futile as in most areas specialist studies would still be requested then due to absence of local knowledge and / or baseline data.
5. On an ecosystem level the impacts of renewable energy projects lack overall, e.g. bats and the consequent changes in insect population sizes, and the risk it poses to agriculture (food security).

   The impacts of renewable energy developments in fragmenting the landscape has not been catered for – e.g. spatial design to ensure ecosystem function and enabling ecosystem (and species) responses to climate change (resilience maintained).

We hope you find the comments and views provided useful and valuable towards making the SEA process a success. Please feel free to contact us should you need any more clarity or information.

Yours truly,

E Swart

DD: RESEARCH AND DEVELOPMENT SUPPORT

the denc

Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

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Enquiries: M Smit & N Uys **Ref**: SEA RE comments **Date**: 1 March 2015

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Dear Ms Lydia Cape-Ducluzeau and Mr Cornelius van der Westhuizen
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INPUTS ON SIP8 SEA (Strategic Environmental Assessment for wind and solar photovoltaic energy) IN SOUTH AFRICA: PART 2 OF 2

Since the correct functioning of the SEA is reliant on the accuracy and credibility of the specialist studies conducted. Most emphasis for commenting was placed on the specialist studies and protocols relating to animals. In this regard the methodology used for developing the sensitivity maps were more intensely analyzed.

The specialist studies

Terrestrial and aquatic biodiversity report

- The terrestrial and aquatic biodiversity specialist report is severely lacking detailed data specifically regarding terrestrial animals. The very limited distribution data regarding terrestrial animals that may occur within the FA's has dramatically lowered the credibility of the sensitivity zones determined. More emphasis was placed in the study of plant species and communities as well as water bodies such as wetlands than animals itself (within limitation of available data as well).

- For the animal aspect of the study only a desktop study was undertaken. The study also only identifies the potential species and listed species (endangered species) that may occur in each of the FA's. The study merely lists the species that may occur in the region. The study does not regard the habitat requirements of any of the listed species or potential fine scale distribution of the species within the FA's. It is preferable that potential areas that may be regarded as good habitat for the listed species are taken into consideration for the sensitivity mapping. Environmental aspects such as rocky outcrops, slopes, soil type and water bodies should all be incorporated (even with a desktop study) to predict to a certain degree the potential distribution of these species.

- Ideally some field studies should have been undertaken to the FA's to supplement the desktop data. The importance of determining relatively accurately the very sensitive habitats for terrestrial animal species is particularly of importance for solar PV planning as

the construction of these plants require the total clearing of areas of its topsoil and vegetation thus destroying the habitat. Especially in view of the baseline data limitations within the Northern Cape Province on biodiversity.

- Ideally this study should have been divided into two or even possibly three separate studies with one focusing solely on the plants and ecosystems, one on the terrestrial animals and one on all aquatic aspects. In its current form the importance of terrestrial animals is perceived to be understated and underestimated.

2.2 Bird specialist report

- As with the other studies the bird sensitivity analysis was mostly determined in the form of a desktop study. Many of the datasets used for the desktop study is too limited for the FA's and is in many instances old data. The SABAP2 counts for instance, that formed a large part of the sensitivity analysis, does not even cover 50% of some of the FA's surface. Furthermore, many of the FA areas that were covered by SABAP2 have very few pendants (Number of bird counts per area). This further restricts the reliability of the available data.

- On the positive side, the study did include as much as possible local knowledge regarding important bird locations such as raptor nesting and roosting sites. Subsequently, such information contributed significantly to the Kimberley FA in determining the main sensitivity areas resulting in a more reliable sensitivity layer for the Kimberley FA.

- The value of actual field surveys to supplement desktop data was clearly underlined with the bird specialist study. One field survey was undertaken within the Springbok FA and from the survey a substantial amount of new data was collected that supplemented the data from the desktop study. The field survey identified various hotspots for the endangered red larks and also numerous nesting sites for bird of prey that would never have been identified from a desktop study alone.

  This clearly emphasize the need for additional surveys to augment desktop studies for fauna & flora in the Northern Cape Province!

- One very important aspect that was not included in the analysis is the movement of bird within the FA's. It was pointed out in the specialist study that no such data exists and that it is important for determining the collision risk of species. This is one of the main concerns relating to the studies' sensitivity analysis since bird movement forms an integral part of any bird EIA report for current applications (and is often the most important aspect of such studies). The flight path or movement of birds will differ for each and every site as it is influenced by numerous factors such as topography, habitat, wind conditions and nesting sites. The flight path of birds is impossible to incorporate in such a broad study and is one important aspect not included in the analysis of sensitivity.

- As is also stated within the specialist report, the impact of wind farms on bird populations is highly site and taxon specific. Even the poor placement of one or two wind turbines can have severe impacts.

- Understanding the diversity of nature of bird species is very important as some species are more vulnerable to collisions with wind farms than others.

- Important habitats were considered for analysis such as large water bodies and cliffs. It also included Important Bird Areas, protected areas and power transmission lines rightfully so as sensitive areas.

- The size of the sensitivity buffer zones used for rare large raptor species can be regarded as possibly too small taking into consideration the forage range of these species can be a lot wider. However for the study the buffer sizes can be seen as acceptable although not ideal as not enough scientific information is available relating to the movement ranges of these birds.

- Data also lacking for many bird species relates to their habitat requirements and preference which is important for identifying areas that can be impacted by solar PV plants.

- It is important to note that the specialist study have found that the opportunities for wind farms in the Kimberley and Springbok FA's are very constrained and conditional, while the opportunities for solar PV plants are more realistic for all the FA's. This view is supported based on the data presented.

- The specialist stated that the confidence of their findings is low and this is worrisome as it undermines the whole purpose of the study.

2.3 Bat specialist study

- As was also stated in the bat specialist study, data about the distribution of bats in South Africa, their local movement, migration paths and the effects of wind and solar farms on bats in RSA is extremely limited. For the study only 14 relevant EIA and scoping reports could be found for the 8 FA's and illustrates the lack of data available.

- The study did however include fieldwork in some of the FA's and did in the process uncover important roosting sites. Again it emphasize the need for surveys in addition to desktop studies. Ideally all FA's should be visited at least once.

- The report did include important aspects in their sensitivity analysis such as the requirements of bats and all known cave systems where bats are known to roost. However many cave systems and other roosting sites that are not known were not included into the sensitivity analysis.

- The number of other limitations that was mentioned within the specialist report is also concerning. Most of these limitations are outside the specialist's control and it yet again points to the limited data available regarding bats in the RSA. This just reiterates the need for comprehensive EIA studies for each and every application, particularly for wind farms and their potential impacts.

- As with the other specialist studies the confidence in the accuracy and reliability of the sensitivity layers is low because of all the knowledge gaps and limited data that still persists. In can be argued that areas identified as medium to low sensitivity in all reality points to areas that still need data rather than areas that will have a low impact on bat populations.

- The impact of solar PV plants on bat populations is so poorly understood that only assumptions can be made regarding the impact these plants may have on bat populations. It is therefore in essence impossible to accurately map sensitivity layers for solar plants specifically and thus these sensitivity maps are of no to little use.

- It must be noted that the Northern Cape Nature Conservation Act is wrongfully referred to as Act no 1374 of 2010 and not Act no 9 of 2009. Please correct.

The protocols

For terrestrial animals

- The protocol for very high and high sensitivity areas still require that a proper study be conducted in the REDZ to prove to the competent authority that the development will not be detrimental for terrestrial life.

- The problem with the protocols come in for medium and low sensitivity areas which require less comprehensive studies, particularly for low sensitivity areas. For areas that are identified as low sensitivity areas only a desktop study (with field work optional) is required to confirm the low sensitivity status of the area. This approach has two major flaws.

    - The first problem being that the low sensitivity areas were already identified in this desktop study. Therefore it is obvious that another desktop study will yield the same result.

    - The second problem relates to the accuracy of the low sensitivity layers. Because only a desktop study was undertaken and not nearly as thorough as required the true sensitivity of areas can be question. And by recommending just another desktop study for these low sensitivity areas will not reveal the true importance of these areas.

For birds

- The changes made according to the new protocols are very similar to current requirements for bat monitoring and thus do not influence monitoring significantly for applications in REDZ.

- It is not foreseen that the new protocol will significantly alter current practices and again the need of this study in the first place can be questioned.

For bats

- The protocols are acceptable as it still requires a comprehensive bat monitoring study to be undertaken if a wind farm is in a proposed REDZ that triggers an EIA process.

- Even for areas of low sensitivity an initial surveys must be conducted in REDZ and only when the surveys in areas of low sensitivity indicate that the impact is limited can monitoring be relaxed.

CONCLUDING REMARKS

For the SEA to function as envisioned and thus enable the streamlining of applications for wind farms and solar PV plans, without compromising the environment, rest solely on the accuracy of the sensitivity maps/layers developed. These sensitivity maps are used to identify REDZ within the FAs (focal areas) where impact is perceived to be low enough to streamline an application process and monitoring regulations. The majority of the specialist studies relating to animal fauna sensitivity areas consisted almost exclusively out of a desktop study. The data for particularly the Northern Cape is too limited and/or too old to be used solely in determining the sensitivity of the areas within the FAs. This shortcoming was clear to see in all the reviewed specialist studies.

All the specialist studies have the same fundamental limitation in accuracy by being mainly desktop studies with limited and in some instances no site visits (data) to supplement knowledge gaps that persist. It is our opinion that field surveys MUST be conducted at least once to each FA in the province to supplement the desktop study data and to fill to some degree part of the knowledge gaps that currently persists. Such a survey should be conducted for each specialist field of concern and is the only way to ensure the accuracy of the maps. This point is clearly illustrated by, e.g., the single site visit to the Springbok FA that yielded three times more data that could be incorporated into the analyses than the desktop study did.

It is also interesting to note that when all the sensitivity layers for all the aspects considered are overlaid over each other that very few areas of the FA's surface are of medium to low sensitivity. This for me underlines the need and value of full EIA's for each application since so many aspects needs to be taken into consideration. There is almost always important environmental aspects unique to each area that needs to be evaluated on its own merit.

The entire terrestrial and aquatic biodiversity study should be revised and it is strongly recommended that a study be undertaken that specifically concentrates on terrestrial animals. The protocols also do not provide the opportunity to identify new sensitive areas or overcome the major flaws of the study.

The protocols for the birds and bats are not significantly changed from what is currently required when an Environmental Impacts Assessment is triggered. In a way it makes one question the whole need of identifying REDZ if protocols are to remain almost unchanged from current requirements with only minor changes.

Yours truly,

E Swart

DD: RESEARCH AND DEVELOPMENT SUPPORT

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reference SSD14/2/6/1/2/National Wind and Solar SEA
date **24 February 2015**

Council for Scientific and Industrial Research
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Attention: Lydia Cape-Ducluzeau
By email: lcapeducluzeau@csir.co.za

Dear Lydia

Strategic Environmental Assessment for Wind and Solar Photovoltaic Energy in South Africa

CapeNature would like to thank you for the opportunity to comment on the project and would like to make the following comments. Please note that our comments only pertain to the biodiversity related impacts of the project.

CapeNature submitted written comment on Phase 1 of the project and has had other inputs into the process. In general our initial concerns related to the implications of the strategic environmental assessment (SEA) for the environmental impact assessment (EIA) process for individual applications and the level of detail, particularly in terms of spatial scale, of the study. In particular, how this would relate to bird and bat monitoring and whether it would accommodate accurate ground-truthing for individual applications.

It is understood that determining the implications of the study for the EIA process was part of the study, as this was a pilot national SEA. Following review of the SEA documentation and presentations, it is evident that applications within the renewable energy development zones (REDZ) that fall within very high sensitivity zones (for all variables) will follow the full EIA process or as is determined through NEMA listed activities, whereas those that do not fall within the very high sensitivity areas will follow a Basic Assessment process. There are also particular specifications for each of the different specialist studies according to the level of sensitivity.

In terms of the sensitivity mapping, CapeNature is satisfied with the variables that were used in determining the sensitivities for the biodiversity variables i.e. terrestrial and aquatic biodiversity, birds and bats. The very high sensitivity areas which have been designated within the REDZs, and effectively excludes these areas, has refined the boundaries such that they definitely more preferable than the REDZ boundaries as defined in the previous phase. It is assumed that all of the original variables that were used in Phase 1 have been carried through to this phase, in addition to the variables used in the specialist studies.

One query we do however have is that the only provincial protected areas expansion strategy that was used was for the Eastern Cape and no other provinces. CapeNature is currently in the process of finalizing our protected area expansion strategy, however there are previous versions. It is noted however that the national protected area expansion strategy was used.

In terms of the implications for the EIA process, CapeNature does not disagree with the proposed process according to the sensitivity classification. It must however be ensured that the process followed for individual applications must take into account all components of the project e.g. wind energy facility applications in the Overberg where cabling and roads pass through areas of very high sensitivity, even if all the turbines are located on non-very high sensitivity areas, must go through the full EIA process (assuming NEMA triggers). This is of particular relevance in the Overberg REDZ as the non-very high sensitivity areas are highly fragmented which is appropriate for the highly fragmented natural areas in this region.

The three different levels of biodiversity assessment are supported, as there are detailed and definite terms of reference that have been attributed to each. The authorities must ensure that these are used in reviewing applications (CapeNature will ensure that these are referred to in reviewing applications).

CapeNature supports the continued requirement of twelve months of bird and bat monitoring for any application regardless of the level of sensitivity. It is however noted that there is a caveat that the monitoring guideline requirements can be streamlined for low sensitivity areas, such as reducing twelve months of monitoring to six months. It should be noted that reduction of monitoring to six months cannot be considered a suitable streamlining, as the seasonal variation needs to be determined and this can vary significantly, and may not allow for the detection of sensitive seasonal populations.

Table 9 in the bird specialist scoping report indicates for each of the REDZ, whether the monitoring guidelines can be streamlined or not for both wind and solar applications. This table should be strictly applied. We support the recommendation that the reduction of twelve months cannot be considered for the Overberg REDZ. For the Komsberg REDZ, it is listed as possible. It is recommended that any streamlining for a particular application must be determined by the competent authority with comment from relevant stakeholders e.g. Birdlife South Africa. CapeNature cannot comment on the REDZ outside of the Western Cape.

The understanding of the impacts on birds and bats by wind and solar PV energy facilities in South Africa is based largely on extrapolation from international experience and how it relates to local species' behaviour and morphology. Post-construction monitoring has only recently started and the dataset of mortalities is at an initial stage. After a few years of monitoring and results, it will be possible to develop a better understanding of impacts based on evidence (provided that post-construction monitoring is being undertaken and enforced and the results are provided for analysis). It is therefore recommended that the bird and bat components of the SEA are revised after a suitable time period of post-construction monitoring e.g. 5 years.

In terms of cumulative impacts, the "first come first serve" basis of assessing these impacts is supported, as long as it is widely recognised – applicants cannot raise issues of fairness if this is an accepted principle. It is however hoped that this does not act as a deterrent for applicants in the REDZ or other areas where there are currently renewable energy facilities, as this may just result in a wider distribution of renewable energy facilities through the country.

CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.

Yours sincerely

Rhett Smart
For: Manager (Scientific Services)
with contributions from Alana Duffell-Canham and Kevin Shaw

BirdLife SOUTH AFRICA
Giving Conservation Wings
Nonprofit Registration No: 001-298 NPO
Public Benefit Organisation Exemption No: 930 004 518

Lydia Ducluzeau
CSIR
Email: LCapeDucluzeau@csir.co.za

23 February 2015

Dear Lydia

Re: Draft Strategic Environmental Assessment (SEA) for wind and solar photovoltaic energy in South Africa

Thank you for the opportunity to comment on the above report and for allowing on-going participation and debate throughout the process.

BirdLife South Africa supports and encourages strategic planning for renewable energy. Unfortunately, while we recognise that this was a challenging process, we are disappointed with the outcome.

We believe that a major limitation of this SEA is that the Focus Areas/REDZ were identified with very little environmental input. A significant opportunity was also missed by not dedicating resources to fieldwork. As the avifaunal specialist study in the Springbok Focus Area demonstrated, even a small amount of groundtruthing can help add certainly and reduce the need for a precautionary approach.

We suggest that the main report would benefit from more detail about the risks and sensitivities. For example, the conservation status of the relevant species should be included in the main text so users can understand the critical issues without delving into the detailed appendices.

We are very concerned that the main report does not reflect the opinion of the avifaunal specialist. The report does acknowledge that changes were made and indicates that these changes were based on consultation with wider stakeholders and relevant government departments. It is important to note that most of the changes do not reflect the expert opinion of the external reviewer of the specialist report, or that of BirdLife South Africa. We are of the opinion that the changes do not serve the purpose of promoting the sustainable development of wind and solar energy in South Africa. It also does not serve the interests of developers and their investors who would benefit of being aware of the potential risks associated with developing in some areas.

We are somewhat comforted by fact that an avifaunal specialist assessment, in accordance with best practice, will still be required for all developments that require environmental authorisation, and that these studies should (in most instances) span a full annual cycle. However, we are concerned that the SEA

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fails to help address (or even acknowledge) the risk of cumulative negative impacts on certain species or important habitats within the REDZ. We suggest that since it is the intention to promote large-scale development of renewable energy in each REDZ, cumulative impacts *are* foreseeable, contrary what is suggested in the Introduction. The use of development density limit guidelines, based on landscape sensitivities, to address cumulative impacts is also not a defensible approach. Sensitivities are not necessarily linked to landscape features. The risk of cumulative impacts is precisely the type of strategic-level issue that should be addressed in an SEA. Instead the SEA places the responsibility of considering cumulative impacts back on the environmental consultants and decision-makers, thereby adding little value to the decision-making process.

The Red Lark can be used to illustrate our concerns. Red Lark is an endemic species with a limited range and has been listed as Vulnerable. Given its limited range and specific habitat requirements, any large-scale disturbance or changes to habitat within its range may pose a risk to the species. We note that that for solar energy the sensitivity category assigned to areas where the presence of this species has been recorded has been decreased from high (recommended by the specialist) to medium in the main report. Similar changes were made for Barlow's Lark. Barlow's Lark also endemic with a limited range. The cumulative impact of large-scale renewable energy developments, as is envisaged by the SEA, could have dire consequences for both species. This risk is unlikely to be addressed on a project-by-project basis, and if development is allowed to continue (or is even encouraged) it may result in the proverbial "death by one thousand cuts". The SEA fails to address or recognise this threat.

We are also particularly concerned with cumulative impacts in Focus Area 1 (Overberg). The main report makes no mention of the fact that this area overlaps with an Important Bird and Biodiversity Area (IBA). The large size of the IBA does not diminish its importance, or the sensitivity of the birds that it is intended to protect to changes in land use linked to renewable energy. We are surprised that the IBA status is not highlighted in the main report, and we are concerned that this feature was not used to determine the sensitivity classes (we understand that this was as a result of the methodology the specialist was required to apply). The SEA suggests that large parts of the IBA are of low sensitivity and "possibly do not support important populations of threatened species that are susceptible to impacts". It states further "these areas are probably suitable for development, but present levels of knowledge preclude confident predictions on the sustainability of impacts". We are of the opinion that these statements are misleading, particularly in light of the risk of cumulative negative impacts likely to be associated with the large-scale development of renewable energy, as is envisaged within REDZ.

Cumulative negative impacts on Cape Vultures are also a major concern, particularly relevant to the Cookhouse and Stormsberg Focus Areas. The SEA recommends that vulture movements should ideally be studied using tracking devices. We question whether it is sensible or strategic to encourage investment and costly, lengthy studies for areas where the large-scale development of wind energy is unlikely to be sustainable.

It is also important to note that while tracking devices can provide valuable data on bird movements, it cannot replace site surveys. Given the wide-ranging movements of vultures, which are likely to span more than one wind farm, such studies should ideally not be linked to individual project, but should rather be coordinated at a regional/REDZ level. Any proposed tracking of vultures must include clear research objectives, and must be conducted suitably qualified and experience specialist. Please refer to the attached position statement in this regard.

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We acknowledge the challenges in balancing the inputs of the various sectors, but we feel that more could have been done to integrate the findings of the different specialists. The maps in Part 4 of the SEA that reflect the landscape sensitivity of remaining areas after the elimination of very high sensitivities are of marginal value. While the exclusion of all areas of high sensitivity is supported, the use of landscape sensitivity classes is questionable, as this does not reflect the actual sensitivity of the area. Similarly, the maps that reflect the highest sensitivity classes add little value, as this does not reflect the collective sensitivity of the area. An alternative approach could be to keep all areas assigned a category of very high sensitivity as such (assuming all specialists used similar criteria to determine this level of sensitivity). This would ensure that areas with major conflicts (potential red flags to development) are clearly reflected. The final sensitivity classes for the remaining areas could be calculated by assigning a cumulative sensitivity score. It may be necessary to weight different sectors' scores to ensure fair representation, as the number of chapters for socio-economic issues far outweighs that for environmental issues, which were largely lumped together.

We suggest that a lot more work could have been done to assess the key tensions and overlaps in each REDZ. For example to what extent do areas important for conservation of terrestrial biodiversity overlap with areas of high landscape sensitivity? How do the requirements of agriculture and that of birds support or compete with each other? This sort of analysis would help facilitate strategic-level debate and possibly help come up with novel solutions.

We also suggest that the SEA could have done more to explore ways in which developers within each REDZ could make a positive contribution towards national goals (e.g. conservation, socio-economic, heritage etc.). For example, priorities/projects that meet multiple objectives (e.g. resource protection and job creation) could be identified, and rather than embarking on fragmented individual efforts, developers could contribute towards achieving strategic goals. The initiative by a cooperative of wind farm developers and the Kromme Trust in the Kouga-Tsistikamma area sets a great example in this regard.

Lastly, we are pleased that the report notes that the SEA should be updated regularly. This is particularly relevant for birds as our understanding of the sensitivity of birds to the impacts of wind and solar energy is also likely to grow as the results of post-construction monitoring become available. The avifauna in many of the REDZ is also poorly studied, and with an increasing number of impact assessments (and possibly other studies) this will improve. How will the SEA updates take place and will this be a consultative process?

Many thanks for taking the time to consider our input. Please do not hesitate to contact me should you wish to discuss anything further.

Yours sincerely

Samantha Ralston-Paton
Birds and Renewable Energy Manager

BirdLife South Africa

Position Statement on Tracking of Birds

BirdLife South Africa recognises that data obtained through the fitting of satellite/GSM/VHF tracking devices to birds can answer many research questions that can contribute to their conservation. It similarly can provide us with a better understanding of local movements of individual birds which can help inform placement of wind turbines or other infrastructure which can pose a significant risk to some species of birds.

Handling birds and attaching devices to them can however carry inherent risks to the individual birds, including potentially impacting on their survival and reproduction. These risks must be minimised as far as possible, and must be justified in terms of the science and conservation outcomes expected from the deployment.

BirdLife South-Africa hereby states and confirms the following:

- The capture of birds for the fitment of tracking devices is controlled by provincial legislation in South Africa. All tracking projects should comply with the relevant legislation in this regard; for example research permits must be obtained from the relevant province(s). Requirements may differ between provinces in South Africa and ethical clearance of the project may be required before permit applications are considered.
- Ethical clearance should be obtained for the project from a suitable ethics committee. When projects are linked to academic institutions, ethical clearance can be obtained directly from the ethics committee of the particular academic institution. Should the project not be linked to an academic institution, zoo or museum where ethics approval can be obtained, we recommend that the research proposal is submitted to BirdLife South Africa's Ethics Committee for review.
- Prior to the fitting of any tracking devices, the project must be motivated through the drafting of a peer-reviewed proposal that sets out clear objectives and questions to be answered through the project. The ad hoc fitment of tracking devices where the research questions are unclear is considered unethical and such studies should not be undertaken.
- It is the responsibility of the researcher to ensure that the impact on the bird be kept to a minimum, both during capture, the fitment process and deployment. Handling time should be kept to a minimum as the event can be stressful to the bird while it is being handled. Fitting of

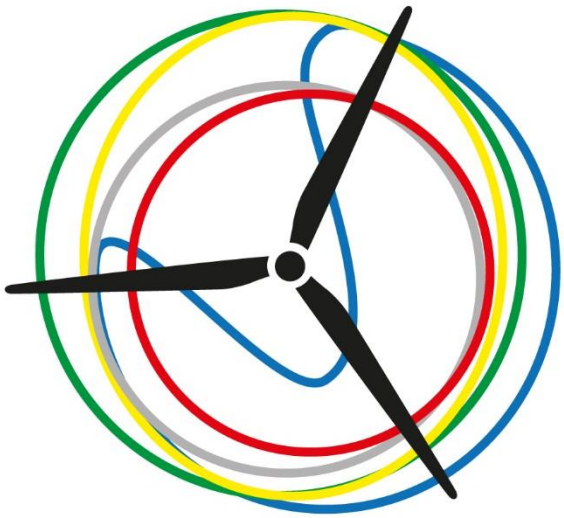
tracking devices should only be undertaken by individuals who are experienced and competent in the capturing and handling of the relevant species as well as the fitting of the tracking device.

- A device should never weigh more than 3% of the body weight of the individual on which it is deployed.
- The type of device used must be of sufficient standard and quality to provide the required data over the full period of the study.
- Before the device is used or made available for use, it must undergo quality tests by a reputable company to minimise the chance of fitting a faulty device to a bird.
- Researchers and specialists using tracking devices are encouraged to share lessons learnt, including with regards to types of devices, fitment methods and harnesses. These lessons should be published and disseminated in an effort to improve tracking methods and techniques, thus minimising impacts on birds by future studies.
- While cost will always be a factor in decision-making, when considering which device to use, careful consideration should also be given to the quality of the product, data requirements and risk the device might pose to birds.
- Where possible, attachment methods (e.g. harnesses) should first be tested on captive birds before a bird in the wild is fitted with a tracking device, especially if the relevant species has not been tracked before or different attachment methods are proposed for use. If the same bird species cannot be found in captivity, a species of similar size and behaviour can be considered.
- The fitment of a tracking device is an exciting event. The media, sponsors and members of public may wish to attend. Although such an event represents an opportunity to get media coverage and promote the project, it is important that the event is well managed and that the attendees are well controlled. Second to the conservation of the species, the welfare of the bird should always come first and handling time must be minimised.
- Any mortalities or injuries, whether attributed to the fitting of the tracking device or not, should be reported to the relevant provincial organisation. BirdLife South Africa would appreciate it if we were informed of such injuries or mortalities, as the reasons for mortalities may assist us in proving future guidance.

New tracking technologies provide opportunities to learn about the biology of birds and the data collected can contribute to the conservation of endangered species. The fitment of a tracking device should however not be done haphazardly. All legal and ethical requirements should be complied with. The data obtained from tracking a bird should contribute to the conservation of the species and lead to the implementation of conservation measures. It could also contribute to knowledge of the biology of the species.

BirdLife South Africa endeavours to lead the way in implementing ethical tracking studies in a way that underpins our mission of protecting wild birds and their habitats.

BirdLife South Africa will compile a list of researchers, with extensive experience in the fitting of tracking devices to specific species, which will be helpful for those planning to initiate studies on the tracking of wild birds.



SAWEA

South African Wind Energy Association

South African Wind Energy Association (SAWEA) Position Statement regarding the National Strategic Environmental Assessment (SEA) for Renewable Energy Development Zones (REDZ)

February 2015

FAO: Dee Fischer
DEA Chief Directorate: Integrated Environmental Management (dfischer@environment.gov.za)

Copied to:

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23 February 2015

The South African Wind Energy Association (SAWEA) has previously communicated the wind energy industry's substantial concerns regarding the creation of Renewable Energy Development Zones (REDZ) for wind energy in South Africa[1]. This Position Statement serves to confirm that despite our ongoing efforts to participate constructively in the consultation process to date, our key concerns about the SEA process and the REDZ (as detailed on our previous communications) remain unaddressed in the Draft SEA for Wind and Solar Photovoltaic Energy in South Africa (February 2015) (the Draft SEA Report), and SAWEA is, therefore, unable to support the process or its outcomes.

SAWEA remains of the opinion, based on the Draft SEA Report, the objectives of the study will not be achieved and that there is a significant risk of detrimental impact on the South African wind energy industry.

Our detailed comments on the Draft SEA Report are provided in the attached Appendix A. A summary of our major and outstanding concerns is as follows.

The SEA processes has failed to meets its key objectives, particularly Integration (alignment allowing for efficient implementation of the REDZs) and the creation of an Enabling Environment for wind energy development. To the contrary, the SEA has the potential to significantly hinder the wind energy industry, compromising many projects' ability to be competitive in the REIPPPP. For the majority of projects the SEA will not result in any significant streamlining of the approvals or development process as alignment between different Competent Authorities has not been achieved and the effort required to develop and permit a project has not been significantly reduced.

The identification of the SEA Focus Zones and proposed REDZ has been based on out of date, incomplete and inaccurate information. The inclusion of additional wind resource data including data from operational projects and the updated (2014) WASA data is essential. No approach or process for periodic updates to the SEA has been outlined, despite the study being supposedly iterative in its approach.

The ability to develop a wind energy project outside a REDZ or outside the SEA study area is already, and is expected to in the future, be hindered due to ill-informed authorities and other stakeholders deeming these projects to be non-suitable for development without further consideration as 'they are not in a REDZ'. DEA has thus been unable to provide any confirmation that this issue will be addressed despite our requests that a memorandum, with clear instructions on how the SEA should and should not be applied, must be included in the SEA. As many developers feel that the potential to develop

[1] See 'South African Wind Energy Association (SAWEA) Position Statement regarding the National Strategic Environmental Assessment (SEA) for Renewable Energy Development Zones (REDZ), 3 July 2014' and various comments submitted as part of the SEA Expert Reference Group (ERG) meetings.

competitive projects within the REDZ is limited, assurance that development rights outside the REDZ will not be compromised is a non-negotiable for industry.

Given the potential that, in reality, the development opportunities within the REDZ may be limited, and that the current recommendations set out as part of the development protocols will force projects to be less competitive, it is most likely that developers will continue to pursue significant amounts of development outside the REDZ. This has the potential to negate the intention of utilising the REDZ to inform priority areas for investment into the electricity grid.

This correspondence serves to confirm that we do not support the SEA process or outcomes in their current form. SAWEA suggests that the only solution to the abovementioned problems with the SEA process and outcome would be to use the SEA to identify possible constraints for future wind development at a broad level, but to not identify preferred areas for development nor classify REDZ.

We welcome further discussion on the concerns outlined in this communication and the attached Appendix and we remain committed to collaborating with you towards the development of any solution that benefits the renewable energy sector in South Africa.

Yours sincerely

Johan van den Berg

SAWEA: CEO

Katherine Persson

SAWEA: Environmental Working Group Chair

Appendix A: SAWEA Detailed Comments on the Draft SEA for Wind and Solar PV Energy in South Africa (February 2015)

In addition to the comments and concerns raised by the SAWEA representatives at the ERG meeting on 11th February 2015, the following submission is made in support of SAWEA's Position Statement.

Page and Section	Comment/Query
General Comments and Concerns	
General Comment: REDZ locations and boundaries	Some of REDZ appear to be in the wrong places or have the inaccurate/wrong boundaries. The wind and environmental data used to identify the REDZ is, in general, high level data due to the broad geographic areas considered. Both the wind and the environmental data are therefore likely to have significant inaccuracies that therefore render them not suitable for identifying preferred development zones.
General Comment: Negative impact on projects outside the REDZ	The existence of REDZ will be detrimental to environmentally viable projects (both current and future) that are located outside of REDZ (or even the SEA study areas). Permitting and commenting authorities, NGOs and I&APs will use (and are already using) the SEA and REDZ incorrectly by expecting wind projects located outside REDZ to be unacceptable. This significant concern has been raised throughout SAWEA's engagement on the SEA process and to date, no satisfactory confirmation has been provided by CSIR or DEA that this issue will be addressed, or that instructions on the interpretation and application of the SEA will be clearly provided to all users. Whilst this issue remains SAWEA will not be in a position to support the SEA as this has major potential to hamper the development of projects and damage the entire industry.
General Comment: Limited reduction in effort for projects inside the REDZ	It is doubtful that the development process that a wind project developer will follow within REDZ will be less onerous than the tried and tested EIA process that is currently followed for wind projects, especially as site specific studies including 12-month bird and bat studies will still need to be completed in almost all cases. As permits/consents will still need to be applied for with a number of different competent authorities (including CAA, DWA, DMR etc) the

	SEA's objective of streamlining the development process has not been met; the development process for a project within the REDZ remains largely the same bar the potential for a slightly shorter Environmental Authorisation process. The requirement for potential additional specialist studies such as shadow flicker (which is currently scoped out of the majority of wind farm EIAs) is further evidence that the reduction in effort required for projects within REDZ may be limited.
General Comment: Limited risk reduction for projects inside the REDZ	International experience has shown that site-specific investigation of a wind farm site within an SEA zone or REDZ equivalent can still unearth potential fatal flaws that were missed due to the broad scale of the SEA study. The benefit of REDZ can, therefore, be very limited to developers as the project development process during site selection and screening within the SEA zone remains the same as outside.
General Comment: Mission statement vs Proposed approach	While the intent of SEA is to identify core areas for the implementation of Renewable Energy facilities, the limitation added to these very areas in the report make the development of wind energy project either largely unfeasible or uneconomical. The current competitive environment the industry is faced with prevents the industry from making any compromise when locating its wind farm projects (i.e. there is a requirement to place these projects in the highest possible wind resource areas). The REIPPPP's main target - to enable the government to purchase electricity at the lowest possible tariff for the benefit of the nation (choice of projects being made 70% on price and 30% on economic development) – does not align with the outcome of the SEA study. All infrastructure developments have an impact on the environment regardless of the technology, yet economic development is required and electricity consumption continues to grow. Even if renewable energy is agreed to be the more sustainable way to generate electricity, inevitably a consensus must be found to accommodate its deployment. This report makes no mention of any consensus as it takes all specialist recommendations at face value (sometimes with recommendations for increased exclusion zones

	when compared to previous reports submitted for already authorized projects). Such a study should rather call for a relaxation of requirements from specialists to the benefit of project developments; the opposite effect is here achieved and the objective of the SEA study has, therefore, not been met.
General Comment: The outcome of the study is flawed.	While the concept of positive and negative mapping has its merits, such can only be valid if the same scale in the mapping itself is applied. In other words, it doesn't make any scientific or logical sense to run such an exercise when having resource mapping information which is regional in scale (macro level and coarse) and environmental specialists' inputs of a more localised nature (micro level within the REDZ). While an entire area is recognized as having high wind resource at a macro-scale, the same area consists of a whole variety of topographic features (such as cliffs, hills, ridges, valleys) which have respective features (height, orientation, slopes, etc) all of which directly affect the actual wind resource at local level (micro-level). This translates into the simple outcome that not all of the earmarked 'windy' area (identified at macro-level) is viable for a competitive wind energy project (when considered at micro-level). Once this macro-level resource data is combined with micro-level environmental data for the REDZ the approach becomes flawed due to the conflict in development objectives and the individual objectives of each of the specialists. For the approach to be valid the conflicting interests of project development and environmental conservation need to be further considered and negotiated where possible to avoid classifying all of the highly attractive development areas as High Sensitivity. *Example*: wind developers will all confirm that wind resources are much higher on ridges than in valleys (precisely what mesoscale models identify and occur on average over an area), as a result the obvious preference is to build wind farms on or close to ridges where the project is economically viable. This objective is in complete opposition with environmental specialists'

	recommendation of avoiding wind projects on all ridges.
General Comment: Non-applicability of the SEA methodology	The location of Preferred Bidder projects and already authorised projects to date in South Africa indicates that many of these projects do not fall within the REDZ. Of the existing or authorised projects that do fall within the REDZ a significant number of these projects lie within High Sensitivity areas. This fact underlines that there is a significant misalignment between the recommendations of the SEA and REDZ proposals and the development conditions that are sort after by developers and are currently required for a winning project in the REIPPPP.
General Comment: Information on the iterative approach of the SEA	The SEA is proposed to be an iterative process that is updated as new information becomes available. The report does not provide any information on how this will be achieved.
General Comment: Approval of a development footprint including buffer	It was mentioned at the ERG meeting that the SEA approach will include the approval of the development footprint, plus a 50m buffer to allow for changes to be made to the placement of infrastructure. Although this approach is supported by SAWEA, a buffer of 50m is inadequate for a wind project as changes in technology, construction conditions or environmental constraints during detailed pre-construction checks can easily result in the requirement for more than 50m of deviation from the approved positions of the infrastructure. A buffer of the magnitude of 200m would be more appropriate for a wind project.
Details Comments on the Draft SEA Report	
Summary and Content, Page iii	It is incorrect to state that the 8 REDZ have a combined capacity of approximately 12 GW of wind and 93 GW of solar PV. This is based on theoretical calculation that ignores real-world constraints and does not therefore have a basis in reality.
Part 2, Page 3; Section 1.1.1 (Resource)	The lack of inclusion of the 2014 updated WASA dataset is a concern and indicates a potential flaw in the selection of the REDZ. One would naturally expect a study of this significance to include the most recent and best resource data.

	Despite CSIR's justification that the updated 2014 WASA was checked against the original data, confirming that the resource areas remained the same but with improved wind speeds in some areas, our members have highlighted incidences where this justification does not appear valid. The following example is provided to illustrate this case and provides evidence that the updated 2014 WASA dataset (and all data from operating wind farms) should be incorporated before finalisation of the REDZ. The Kouga/ Koukamma Area was identified by industry as being of high positive significance due to a very high wind resource but it was not included as a Focus Area even after significant motivation to the CSIR team. One of the main reasons given at the time by CSIR for not making this a Focus Area was that the area of high wind resource was too small to justify establishment as a potential REDZ. The updated 2014 WASA data, however, shows that the area of very attractive wind resource in this area is in fact much larger than indicated in the 2013 WASA data. Thus, the resource assessment aspect of the study should be rerun as soon as possible, incorporating all new data, to confirm that such a large change in one of the major positive mapping factors does not result in the adjustment of the Focus Areas. Any adjustment in the Focus Areas should result in assessment of the revised areas by the specialists to confirm if the area should be incorporated into the REDZ. At the very least, if new data cannot be incorporated now a process for updating the REDZ and amending the locations (once promulgated) needs to be established and included in the report. Furthermore, while the use of the WASA map assists in identifying regional availability of resources (macro level) it remains far too coarse for a local assessment (micro level) and cannot therefore be used in the internal mapping of the respective Focus Areas.

Part 2, Page 20-23; Section 1.2 (Negative Mapping)	The provision of the detailed individual negative mapping criteria maps (including all specialists' data in GIS format) is required in this section of the report for the reader to give an informed comment on the negative mapping process. This detailed information is required to understand how each individual constraint contributes to the environmental and technical constraints map. This is critical as this process has a major impact on which areas were assessed as Focus Areas, and it is important for the reader to be able to identify what leads to the "no go" areas/constraints mask. The use of a wind buffer on all types of road is unnecessary and, therefore, unduly restricts project development potential. In the majority of cases a buffer of tip height is appropriate.
Part 3, Page 4; Section 2.2 (Sensitivity Mapping)	What defines a private game reserve? Any landowner can register land as a private game reserve without proof of actual use or even the intention to treat the land as such. Creating fixed buffers around private reserves is therefore open to error and/or manipulation.
Part 3, Page 22; Section 2.3.1 (Development Density Limits Guidelines)	The proposed buffer zones between projects is likely to have significant negative impacts on the ability of projects to compete within a competitive bidding process that favours low energy prices. As noted in Part 2, Section 15 (Page 22) the wind resource is immovable, and naturally occurs in clusters around landscape features. By imposing a 6km buffer between projects developers will be forced to move wind turbine placements out of windy positions, which will result in major impacts on project economics. By placing 6km buffers between projects the benefits of clustering infrastructure will be lost. The very purpose of the REDZ is to concentrate projects within an area, yet by implementing a 6km buffer between projects exactly the opposite effect is achieved, exacerbating the need for additional infrastructures such as power lines. This buffer is not adequately justified and should not be suggested, even as a guideline. This comment also provides an example of how we believe that each specialist has provided their

	recommendations in isolation, without considering the bigger picture and the SEA's strategic goal of facilitating project development. The assumption of 2.3MW turbines for the calculation of development cluster size is arbitrary and does not account for the fact that some projects will utilise turbine platforms of less than 2.3MW. The guideline size of a maximum of 60 turbines per cluster in a Low sensitivity area is restrictive and will be misinterpreted by many as a maximum limit, not a guideline. In general, the cluster size guides are very restrictive and will negatively impact project economics (due to not allowing for the cost savings associated with larger developments), forcing projects to be uncompetitive. Cluster size guidelines (limits) should, therefore, be removed.
Part 3, Page 3-11; Section 14 (Flicker Effects)	As discussed by a SAWEA representative at the ERG meeting, the shadows of a turbine only fall to the south. CSIR's response that the circular buffer around the receptor remains is illogical; a semi-circular buffer to the south should only be applied in cases where turbines are positioned to the north of the receptor. Furthermore, in Northern Europe, where issues related to shadow flicker are a much greater concern, the guideline buffer is 10 rotor blades (approximately 1km). It, therefore, does not make sense for the guideline in South Africa to be 1.5km where the risk of flicker is much reduced. As shadow flicker is currently scoped out of many EIAs in South Africa, this requirement presents a potential additional specialist study, not a reduction in development effort within the REDZ.
Part 3, Page 5; Section 10 (Weather Services)	The recommendation includes that a developer should seek comment from SAWS. A number of SAWEA members are currently facing significant challenges when communicating with SAWS as it appears that a number of key staff have recently left the organisation. If this kind of recommendation is to be made, please provide contact details for the relevant authority.

	The same comment applies for CAA, DoD, DWA, DMR and any other relevant competent authorities/commenting authorities that need to be contacted. Particular challenges are faced with these organisations with regard to getting comments or authorisations within reasonable timescales. This was raised at the ERG meeting and remains a barrier to development that is not currently addressed by the SEA, and indicates that the objective of streamlining approval processes has not been met by the study.
Part 4, Page 2-9; Section 1 (Combined Sensitivities)	On review of the combined sensitivity maps it appears that the majority of the high wind resource areas are classified as Very High sensitivity, and that in some REDZ a significant proportion of the REDZ area is Very High sensitivity. In these situations many developers have commented that it would appear easier to do a full EIA rather than try to 'fit' a project into the limited available High/Medium/Low sensitivity areas where the wind resource may be less attractive. This is particularly the case where a contentious BA can result in delays/extensions of the BA process resulting in the approval taking close to the same time that a full EIA would take. This comment relates to our concern that the SEA does not meet its objective of facilitating easier development of wind energy facilities within the REDZ. The inclusion of Focus Areas 5, 6 and 7 for wind development does not make sense based on the fact that the wind resource data used for the study does not include for these areas. Furthermore, available wind data for these areas indicates that the wind resource in these areas is extremely limited. The CSIR team indicated at the ERG meeting that the allocation of 30% of the proposed generation capacity for wind to these areas was done so on Eskom's request. There is no scientific justification for doing so, and allocating proposed generation capacity based on a judgement approach in this manner goes against the supposed scientific approach of the SEA.

Appendix A5: Birds Scoping Assessment, Page 33 – 44; Section 4 (Absolute Sensitivity Mapping)	The buffers recommended in the specialist report are, in many cases, much larger than those currently being recommended and previous recommended for already authorised projects. This conservatism again represents an additional development constraint that is imposed by the REDZ, not the streamlining or facilitation of easier development for wind projects.
SAWEA's Proposed Solution	
Suggested Solution to the Above	After SAWEA's ongoing engagement with the SEA team and review of the documents, SAWEA suggests that the only solution to the abovementioned problems with the SEA process and outcome would be to use the SEA to identify possible constraints for future wind development at a broad level, but to not identify preferred areas for development nor classify REDZ.

Appendix B 7 - Formal Submissions from the Public

A formal public consultation on the Final SEA report will be undertaken as part of the gazetting process.