

**HAPPY VALLEY WIND ENERGY FACILITY AND ASSOCIATED INFRASTRUCTURE ON A SITE NEAR HUMANSDORP,
 EASTERN CAPE**

**COMMENTS AND RESPONSE REPORT: I&APs & STAKEHOLDERS
 Scoping Phase: Focus Group Meetings, Public Meeting & Written Comments**

No.	Issue	Raised by	Response
General			
1.	Newspaper owner and editor. Need information for Kouga newspaper readers.	Bev Morting, St. Francis Chronicle, reply form.	Comment noted.
2.	My interest is the environmental impact on our pristine area.	Jenny Dale, St. Francis Kromme Trust, reply form.	The EIA will examine the extent and significance of all identified impacts on the physical and social environment.
3.	I'm a construction contractor.	Dennis Martin, Summit Projects, reply form.	Comment noted.
4.	Vice chairperson of residents association with land-use portfolio. Comments to follow.	H. B. Thorpe, St. Francis Bay Residents Association, comment by reply form.	Comment noted.
5.	Are you considering carbon offsets to reduce the impact of the construction phase of the project?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	The construction phase is limited to around 7 months, compared to 20 years or more of operation of the facility. Very little steel or cement is actually used in construction of the facility.
6.	Have you considered the attitudes of European countries where wind energy projects are now being rejected? Why are countries who have gone for renewable energy reconsidering?	Hilton Thorpe, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	Some countries have reached their targets for renewable energy and have now stopped to develop further projects. Rather than countries retracting and looking negatively at renewable energy it is about limiting over-capacity.

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7.	What alternatives are being considered as part of the EIA process?	Chris Barratt, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	Alternative sites are not assessed within the EIA. This approach has been agreed upon with the Department of Environmental Affairs. Wind is similar to a mining resource – the facility must be situated at a particular location where there is good wind. The EIA therefore considers alternatives within the site itself – for example micrositing of turbines or other infrastructure on the site itself.
8.	Our company was involved in the construction phase of the Klipheuvel facility in the Western Cape. We would be interested in being able to tender for work on these projects in the Eastern Cape.	D.E. Martin, comment at public meeting, 13 July 2010	Comment noted.
9.	What route will be used to transport components to the site?	Freddie Campher, comment at public meeting, 17 August 2011, Kouga Municipality	A roads / logistics study will be done however REISA will probably utilize the N2 as far as possible from Port Elizabeth where the equipment will come in. They will ensure this is done at an optimal time when there is minimal traffic. They will then have to backtrack onto the R102 or R302 roads at some point and we may need to use some onramps and offramps to avoid bridges. On-site turning circles will be an issue so we will have to build some new access roads. Steepness of slopes will also be an issue.
10.	Where will the generated power go? Will it go towards strengthening the electricity supply in the area?	Freddie Campher, comment at focus group meeting, 17 August 2011, Kouga Municipality	The power will go into the national grid but will strengthen local supply in the Eastern Cape.

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Heritage			
11.	What is being done regarding the recording of archaeological/historical sites? Where will this info be available?	Bart & Caryl Logie, Fourcade Botanical Group, CREW, St. Francis Conservancy comment by reply form.	A scoping and EIA heritage impact assessment is being undertaken for the project. This forms part of the scoping and EIA reports.
Noise			
12.	Do you know the noise factors of the technology? Has this all been taken into account in the EIA?	Chris Barrat, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The noise impacts from the turbines will be modelled during the EIA phase. A specialist noise impact assessment will form part of the scoping and EIA reports.
Ecology			
13.	We (St Francis Bay residents) want to be part and parcel of the investigations when specialists come to visit the sites.	Yvonne Bosman, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	Comment noted.
14.	My interest in the project is mainly on the impacts on flora and birds.	Godfried Potgieter, Fourcade Botanical Group, reply form.	The EIA includes both avifauna impact and ecology impact studies, with the assessments being undertaken by qualified, independent specialists. The specialist studies form part of Scoping and EIA reports.
15.	Concerned about power lines, impact on birdlife, especially terrestrial birds that are already endangered.	Valda Barratt, comment by reply form.	A comprehensive avifauna study forms part of the EIA process. Mitigation measures will be examined to reduce potential impacts on birds associated with all components of the project including power lines.
16.	Our interest in the project is focused on the botanical and historical sites that may be affected.	Bart & Caryl Logie, Fourcade Botanical Group, CREW, St. Francis Conservancy, comment by reply form.	The EIA includes both heritage impact and ecology impact studies, with the assessments being undertaken by qualified, independent specialists. The specialist studies form part of Scoping and EIA reports.
17.	Concern about botanical issues.	Valda Barratt, comment by reply form.	A comprehensive ecological study forms part of the EIA process.

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18.	The cumulative impacts of all proposed wind farms in an area need to be assessed. The large number of wind farms proposed for the Kouga area will result in the sterilization of large areas of land for the larger bird species such as Blue Cranes, Denham's Bustards and Secretary birds as they are expected to avoid the areas where the turbines are located. This is expected to have a large negative impact on their populations via loss of useable habitat.	Dr. Paul Martin, Tour guide, Environmental Consultant and Birdlife Eastern Cape, comment by e-mail, 21 July 2010.	A comprehensive avifauna study forms part of the EIA process. Cumulative impacts will be assessed through the EIA specialist report.
19.	Is there any danger to water? Will it cause drought and reduction of wetlands and groundwater?	Burnette William Lappert, Framer, Pampoenlands River and Lippert Bulders, comment by fax, 20 July 2010.	Impacts on wetlands / water resources are assessed through the Scoping and EIA reports. There should be no danger to water through construction and operation of the facility.
20.	Is there any danger to nature and the environment?	Burnette William Lappert, Farmer, Pampoenlands River and Lippert Bulders, comment by fax, 20 July 2010.	Impacts on the natural environment (as well as mitigation measures) are assessed in the Scoping and EIA reports.
21.	Is there any danger to farming and animals?	Burnette William Lappert, Farmer, Pampoenlands River and Lippert Bulders, comment by fax, 20 July 2010.	
22.	Our area incorporates the Baviaanskloof Nature Reserve and UNESCO World Heritage Site as well as the expanded Garden Route National Park. The boundaries of the conserved area, the viewshed protection zone and buffer zone for the World Heritage Site can all be made available for	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	Comment Noted. We would welcome any data about the area that could assist the two EIA studies.

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	your EIA studies.		
23.	What effect would the turbines have on birds and bats in the area?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010 Chris Barrat, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	Impacts on bats and birds are considered through the EIA process. Bats are not affected by power lines. They are impacted by the wind turbines, should they occur in the area. The habitats for birds and bats must be identified and considered in order to assess and address the potential impacts.
24.	I am responsible for stewardship programmes (i.e. for private landowners to manage conservation) in the area. Will you consider biodiversity offsets and/or entering into a biodiversity agreement or stewardship programme on the more sensitive areas of the properties which are not utilised for the facilities?	Tracey Ford, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	Ventusa would consider these options as part of the overall management plan for the facility.
25.	Are you going to get the right bird specialist to do the work? We have some unique red data species and people come from all over the world for bird tourism. We want to know that studies will be properly done. We are concerned as it seems that bird strikes from wind farms are of concern.	Yvonne Bosman, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The specialist team has gained a great deal of experience from assessing several wind energy facilities across the country. In addition the specialists are familiar with the areas where the projects are proposed. The avifauna specialist would be happy to consult with local bird groups to ensure that species related information is as accurate as possible.
Visual			
26.	Concern about visual impacts and noise.	Valda Barratt, reply form.	Noise and visual impacts are assessed through the EIA process. Noise and visual impact assessments form part of

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			scoping and EIA reports.
27.	<p>The cumulative visual impacts of all the wind farms proposed for an area need to be assessed, not just on an individual project basis.</p> <p>The cumulative impacts need to be assessed and authorisations given to only those wind farms that are located in the most appropriate areas. Authorisations should not be allocated on a first come, first served basis. Other areas where cumulative impacts are of concern where several wind farm projects are proposed include Grahamstown and Bedford / Cookhouse areas.</p>	Dr. Paul Martin, Tour guide, Environmental Consultant and Birdlife Eastern Cape, comment by e-mail, 21 July 2010.	<p>The potential for cumulative impacts are assessed in the EIA-phase through the visual impact assessment.</p> <p>Authorisations are granted by the competent authority (in this case the National Department of Environmental Affairs). It is the DEA, in consultation with the Eastern Cape Department of Economic Development and Environmental Affairs, who must consider which projects are authorised.</p>
28.	The visual impact must consider the viewshed protection zones as well as buffer areas.	Tracey Ford, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	Viewshed protection zones as well as buffer areas for parks and conserved areas will be taken into account by the visual impact assessment specialist.
29.	What about the light pollution for perimeter and aviation lights at the wind energy facility?	Warren Manser, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	Lighting will be dictated by the Civil Aviation Authority. Not every turbine will be required to be marked, normally only those on the perimeter of the facility.
30.	Is there any way to camouflage the wind turbines for example by painting them a natural colour?	Johan Strydom, comment at public meeting, 17 August 2011	According to the CAA requirements the turbines must be painted an off-white colour and cannot be painted with any other colour. There is a very specific colour requirement. There are other ways to decrease the visual impact, for example taking the turbine supplier logo off the turbine, but there are not many options for reducing for visual impact during operation.

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Social & Economic			
31.	Does the energy have any danger to the community?	Burnette William Lappert, Framer, Pampoenlands River and Lippert Bulders, comment by fax, 20 July 2010.	This is assessed through the scoping and EIA social impact assessment reports.
32.	Who will own the land? Will it be leased?	Chris Jonker, Kou-Kamma Municipality, comment at focus group meeting, 13 July 2010.	VentuSA would look at leasing the land from current landowner for Happy Valley facility.
33.	I am interested in cheap electricity, job creation and training for the community.	Burnette William Lappert, Farmer, Pampoenlands River and Lippert Bulders, comment by fax, 20 July 2010.	The social impact assessment that forms part of the scoping and EIA reports will examine these issues.
34.	Where will the components for the facility be produced?	Tracey Ford, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010 D.E. Martin, comment at public meeting, 13 July 2010	About 60% of components can be produced locally, the remaining 40% will be sourced internationally.
35.	What type of employment opportunities are being looked at in this project?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	The developer would be looking at direct and indirect employment. Wind projects are generally not large scale job creation projects.
36.	Should for any reason the nuclear power station at Thyspunt not go ahead, what likelihood is there of the wind farms being developed?	Bart & Caryl Logie, Fourcade Botanical Group, CREW, St. Francis Conservancy comment by reply form.	The proposed wind energy facility is independent to any nuclear power station project, which is being developed by Eskom. The Thyspunt site is owned by Eskom.

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37.	Will the people of Kruisfontein be consulted and informed of these projects? Will they understand the extent of the project at Happy Valley – as this is close to their residential area?	Julia Thorpe, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	All communities around both sites will be informed and consulted. There will be notices placed at various points including the Kruisfontein library. Follow-up will be done through the municipality and community leadership.
38.	This project must be economically driven. So Eskom must have indicated what they are willing to pay for electricity from independent power producers. My concern is that the whole community will pay the price for having these wind farms in this area. As an engineering structure they are beautiful but as a landscape structure they are dreadful. I understand the business case for wind energy facilities. The issue not being addressed here is the tariff that was developed by Eskom.	Garth Perry, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The tariff was not set by Eskom but by the National Energy Regulator of South Africa (NERSA). The price that NERSA has announced is R1.25 per kilowatt hour.
39.	The closeness of the facilities to the urban edge is a concern. Do you have a setback line for the proximity for where the first wind turbine would be? In Australia they set a buffer of 2km and I notice that the previously disadvantaged community of Kruisfontein might sit as close as 500m to the closest wind turbine. This needs to be taken into account.	Warren Manser, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The 2km buffer distance referred to relates to mitigating noise impacts. The distance of a homestead from a wind turbine can range from 500m – 2000m, depending on a number of factors including the absorption capacity of the land. In South Africa, the noise emission limits are regulated in terms of the SANS noise guidelines, which states the maximum noise levels at the boundary of the facility, depending on the type of environment.
40.	Will REISA be bringing people in to do the work or will they use locals from the area?	Freddie Campher, comment at public	REISA require unskilled and semi-skilled workers, mainly during construction, so these will be sourced

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		meeting, 17 August 2011, Kouga Municipality	from the local areas wherever possible. Skilled engineers and maintenance staff will likely need to be brought in from overseas.
41.	How many people will you need for construction? What kind of job creation would be associated with the project?	Freddie Campher, comment at public meeting, 17 August 2011, Kouga Municipality	REISA will require approximately 50 unskilled people during construction and about 10 semi-skilled people. The construction period is very short. This project will not create thousands of jobs. There will be beneficiation programmes put in place to benefit the surrounding community. The Kruisfontein community will be very important. There may be opportunities for long term training-up of locals. We will also have about 12 permanent positions during operation for things like security, maintenance etcetera.
42.	Will workers be employed for the entire construction phase or will they be employed on a phase by phase basis?	Freddie Campher, comment at public meeting, 17 August 2011, Kouga Municipality	Construction workers will be employed for the full construction period. During operation there will also be opportunities for skills training for locals.
43.	Have all the immediate landowners and locals been consulted?	Freddie Campher, comment at public meeting, 17 August 2011, Kouga Municipality	The environmental team have communicated with all these people as part of the process and surrounding landowners are on the project database.
44.	If this project is a success what will that mean for the area?	Eugene Groep, comment at public meeting, 17 August 2011, Kouga LM	This is a 600 million rand investment. There will be BBBEE opportunities as well as associated spinoffs and other opportunities. This will be an incremental investment, REISA will put in place a 20 year programme in this regard.
Technical			

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45.	I question the viability of it all.	Valda Barratt, comment by reply form.	From the site identification process undertaken by VentuSA Energy, as well as the analysis of monitored wind data at the site, VentuSA Energy considers the site to be a highly preferred site for the development of a wind energy facility.
46.	Where will the power generated at the Happy Valley site be distributed to?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	It is proposed to evacuate the power to the Melkhout substation. The power line alignment will be included in the EIA study. Various power line routes will be investigated to ensure the best routes are chosen.
47.	What is the length of the construction period for the Happy Valley project?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	Roughly about 18 months, if all goes well with all the project phases.
48.	What happens when the facility is decommissioned? Will the components be removed from the site?	Chris Barratt, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The practical approach would be to upgrade the infrastructure rather than remove it. It also depends on the conditions provided by NERSA and the Power Purchase Agreement.
49.	How deep will the foundations be?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010 Chris Barrat, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	This is subject to a geotechnical study. Foundations are typically 15m x 15m, and about 2m deep.
50.	How will the sites be accessed, as the turbine components would need to be transported on trailers. What sort of access road is required? When will the logistics	D.E. Martin, comment at public meeting, 13 July 2010	The developers are currently considering the logistics component for each project. This includes access onto the sites, as well as access to the broader area.

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	study be done?		
51.	What is the weight of the nacelle?	D.E. Martin, comment at public meeting, 13 July 2010	The nacelle weight is approximately 50 tons.
52.	Who will benefit from the localised power generation?	Wayne Erlank, Eastern Cape Parks Board, comment at focus group meeting, 12 July 2010	The power would strengthen the local Eastern Cape transmission grid, so it would be a benefit to stabilising the Eastern Cape and Kouga Region energy supplies.
53.	Can you clarify the technology to be used? Will it be new technology?	Chris Barrat, Comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The developer would be looking at utilising modern new technology from a wide range of suppliers. However the turbine type will be informed by the wind monitoring data programme. The developer will not purchase out-dated technology. Recent research in blade design and making use of direct drive has reduced noise emissions from turbines.
54.	Where will the power lines go? Will it be above ground or underground and will there be an EIA done for the entire route up to where it integrates into the Eskom grid?	Valda Barrat, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	The power lines for the development will be distribution lines. The internal cables connecting the wind turbines to the facility substation will be underground. From this point to the Eskom substation will be overhead distribution lines. The distribution lines would be constructed using either a concrete or steel monopole structure. The EIA will consider the power line route. A key focus is on consolidating linear infrastructure. Alternatives for the power line corridors will be investigated and as well as concerns such as mitigating for bird strikes through the EIA and EMP.
55.	If the wind blows too hard, do the turbines then switch off?	Bridget Elton, comment at focus group meeting with St Francis Bay residents,	The modern technology turbines include their own management system which controls each wind turbine. Wind turbines operate from 5 m/s to 12

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		12 July 2010.	m/s. In higher wind speeds they will automatically brake, shut down and wait for wind speeds to subside.
56.	Will electrical transformers be required to be installed?	Eugene Groep, comment at focus group meeting, 17 August 2011, Kouga LM	There will be a small substation on-site. The wind turbines will be connected to this.
Cumulative Impacts			
57.	Please record my comments below with respect to the Deep River and Happy Valley Wind Energy Projects, Draft Scoping Reports. Note that these comments hold for all wind farm projects, e.g. the Amakhala project at Bedford / Cookhouse. Please register me as an I&AP for all wind farm projects that you may be involved in the Eastern Cape and note the comments below for those that are still active. While renewable energy initiatives are welcomed, a lack of policy direction and guiding SEA with respect to the potential locations of wind farms in SA and the maximum number of turbines to be allowed in each area so as to maximize the positive impacts and minimize the negative impacts has resulted in a plethora of proposals for wind farms in the Eastern & Western Cape Provinces. The projects cannot be assessed on a piecemeal basis.	Dr. Paul Martin, Tour guide, Environmental Consultant and Birdlife Eastern Cape, comment by e-mail, 21 July 2010.	Comments noted. Cumulative impacts in terms of multiple wind farms in the area will be considered in the specialist EIA reports. The difficulty in assessing cumulative impacts of multiple facilities in the area should also be noted as no facilities have been constructed yet in the Eastern Cape. Therefore it is not possible to accurately assess these impacts as it is not known whether these other facilities will receive environmental authorisation, power purchase agreements etc. or even be constructed.
58.	We need a broader perspective on wind farms in this area. We are currently dealing with an epidemic of wind farm	Hilton Thorpe, Comment at focus group meeting with St Francis Bay	There is no policy developed at this stage. The Eastern Cape would need to consider developing a position on wind energy as has been done in the

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	<p>investigations. If all of it goes ahead we would have a solid curtain of wind farms from Tsitsikama to Grahamstown. There should be a policy, by the authorities or even the Cacadu District Municipality on how much wind generation will be tolerated in this area. We cannot escape the fact that all of the wind energy facilities will have an impact on the entire area. We would like to support clean and renewable energy, however there do seem to be problems with cost and where to place them.</p>	<p>residents, 12 July 2010.</p>	<p>Western Cape – possibly through the development of a guideline for wind energy facilities in the Eastern Cape as was done by the Western Cape with their wind energy facility development guidelines. The Western Cape was confronted with the possibility of large scale wind energy applications and the Department of Environmental Affairs and Development Planning developed a set of guidelines for siting of these facilities. The Eastern Cape Province could benefit from such guidelines to guide applications and developments. However, the guidelines do not prescribe the maximum amount of wind energy facilities per area.</p> <p>The National Department of Environmental Affairs (DEA) are the regulating authority for all wind energy applications throughout South Africa. The environmental authorisation issued for any of these projects by DEA does not give the developer a generation licence, a power purchase agreement, or allow for rezoning. Therefore, number of other processes would have to be completed and approved to make a project viable. Only a portion of the applications you might see will go ahead as not all will prove to be bankable. It is important for stakeholders to follow the national REFIT programme to understand all the components.</p>
59.	How will the EIA deal with the cumulative	Warren Manser, comment	The social impact assessment will address the

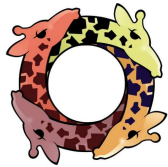
No.	Issue	Raised by	Response
	effect of wind energy facilities of this sort on the tourism industry in this area? What measure will be used to determine the impact on tourism?	at focus group meeting with St Francis Bay residents, 12 July 2010.	potential for impacts (positive and negative) on tourism during the EIA phase. The local tourism industry authorities and specialists will be interviewed by the social impact assessment consultants. The tourism component is seen as valid for this area, due to the economy in this area being partly tourism-driven.
60.	How many wind energy facilities are proposed for this area? Are there no monitoring bodies in the area tracking these projects?	Yvonne Bosman, comment at focus group meeting with St Francis Bay residents, 12 July 2010.	There is no monitoring authority. This should be done by the Eastern Cape Department of Economic Development and Environmental Affairs and the National Department of Environmental Affairs. Currently there is a large amount of speculation as to the amount of proposed sites between Tsitsikama and Grahamstown. There is currently a process underway by the Eastern Cape to start tracking the number of applications for monitoring masts and wind energy facilities in this area. This can be clarified with the Eastern Cape Department of Economic Development and Environmental Affairs in Port Elizabeth.
61.	<p>The St Francis Kromme Trust, an environmental NGO based in St Francis Bay, Eastern Cape Province, is currently registered as an Interested and Affected Party for the following wind farm developments situated within the Kouga Municipality:</p> <ul style="list-style-type: none"> • Dieprivier Mond 	Chris Barrat, Chairperson, St. Francis Kromme Trust, comment by e-mail and pdf document, 04 August 2010. See appendix for the full pdf document.	<p>Comments Noted.</p> <p>Developing a regional regulatory framework dealing with issues around renewable energy developments would be the responsibility of the Eastern Cape provincial government.</p> <p>The EIA-phase of the project will contain detailed, provisional layouts from the developer and the specialists</p>

No.	Issue	Raised by	Response
	<p>DEA ref: 12/12/20/1863</p> <ul style="list-style-type: none"> • Happy Valley DEA ref: 12/12/20/1861 • Jeffrey's Bay DEA ref: 12/12/20/1718 • Broadlands DEA ref: 12/12/20/1752 • Zuurbron DEA ref: 12/12/20/1753 • Redcap Investments DEA ref: 12/12/20/1756 <p>Several submissions relating to these wind farm developments, which are at various stages of the EIA process, have already been submitted. However it has become clear that collectively these will have a significant cumulative effect on a 2500 km² area situated within the heart of the present Kouga tourism precinct. In addition, several of these farms are within close proximity to three major towns Jeffrey's Bay, Humansdorp and St Francis Bay/Cape St Francis.</p> <p>Each wind farm applicant has assessed the impact of their proposed development on their specific sites, and as these applicants are acting independently of one another, no cumulative impact of these developments has been noted for the region as a whole. The St Francis Kromme Trust has initiated a two part study to examine these impacts and the conclusions are</p>		<p>will consider this layout in their EIA studies. The scoping studies referred to are broader desktop studies. This is the process followed for any EIA: where a detailed layout is required it is normally provided and assessed in the EIA-phase (and not the scoping phase).</p> <p>Cumulative impacts in terms of multiple wind farms in the area will be considered in the specialist EIA reports. The difficulty in assessing cumulative impacts of multiple facilities in the area should also be noted as no other facilities have been constructed yet. Therefore it is not possible to accurately assess these impacts as it is not known whether these other facilities will receive environmental authorization, power purchase agreements etc. or even be constructed.</p> <p>The DEA&DP Guidelines for siting wind energy facilities in the Western Cape were specifically formulated for use and application in the Western Cape province.</p> <p>The benefits of these developments are not only considered on a national basis, the benefits to the local community are considered in the Scoping and EIA reports.</p> <p>The Kouga Spatial Development Framework will be considered in the Social Impact Assessment.</p>

No.	Issue	Raised by	Response
	<p>summarized below:</p> <ul style="list-style-type: none"> » There is an absence of a regional regulatory framework regulating the implementation framework for wind farms in the Eastern Cape and more specifically the Kouga region. » The absence of this framework in our opinion is leading to applications for uncontrolled and haphazard wind farm development, without due consideration of their cumulative impacts on the region. » Borrowing set thresholds from a strategic initiative from the Western Cape it is clear that the above applications will saturate the Kouga region with turbines beyond accepted international norms (A Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; CNdV Africa planning & design; May 2006). » Experiences learned by other countries on wind farm development do not appear to have been taken into account in these applications. » The impacts and their mitigation specific to these sites are diluted in their applicability, as the cumulative view of several wind farms within a small area is not considered. » The benefits of these developments are only considered on a national basis and the benefits to the local community are 		

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	<p>considered insignificant.</p> <ul style="list-style-type: none"> » Individual site studies cannot provide detailed site layouts, due to the absence of site specific wind data. In consequence, the actual size, positioning and capacity of wind turbines and associated specific infrastructure placement, are not known. This renders specialist studies, such as the visual impact of these wind farms, meaningless. » The Kouga Spatial Development Framework (2009) is not taken into account on some applications. Vital information, such as bio-diversity and desired urban development is not included. This SDF framework is in need of an urgent upgrade to include the provision of renewable energy resources within the Kouga Region. » Specific site criteria and thresholds recommended by Western Cape initiative when applied to local applications are found to be non-compliant. <p>The St Francis Kromme Trust, whilst supportive of alternative renewable energy sources, submits that the applications listed are pre-emptive and should be placed on hold, until an equitable regional and national renewable energy policy framework is put in place. Our desire is to see an orderly and sustainable development of alternative energy resources for</p>		

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	the benefit of the whole Kouga community, and is keen to assist where possible.		



**SUSTAINABLE
FUTURES ZA**

**PROPOSED HAPPY VALLEY AND
DEEP RIVER WIND ENERGY
FACILITIES
ENVIRONMENTAL IMPACT
ASSESSMENTS**

FOCUS GROUP MEETING

NOTES OF FOCUS GROUP MEETING

Held on

Tuesday, 13 July 2010,

**Chris Jonker, Director Technical Service,
Kou-Kamma Municipality, Kareedouw**

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Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

EIA PROCESS FOCUS GROUP MEETING: PROPOSED DEEP RIVER AND HAPPY VALLEY WIND ENERGY FACILITIES

Venue: Kou-Kamma Municipality
Date: Tuesday, 13 July 2010
Time: 14h30 – 15h00

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked Chris Jonker, Director Technical Services at the Kou-Kamma Municipality in Kareedouw for the opportunity to meet with him as a representative of the municipality to introduce the proposed Deep River and Happy Valley Wind Energy Facility projects.

MEETING ATTENDEES

Name	Organisation & Position
Chris Jonker	Director Technical Services Kou-Kamma Municipality
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	Ventusa & REISA
Patrick Hailot	Ventusa & REISA
John von Mayer	Savannah Environmental
Karen Jodas	Savannah Environmental

APOLOGIES

No apologies were received.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the focus group meeting. The project team (Karen Jodas, John von Mayer, Patrick Hailot and Keith Kirby) to clarified various technical and environmental aspects of the project. The background information documents and the maps on the two projects were used to introduce the projects.

DISCUSSION SESSION

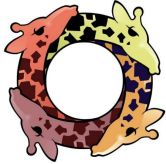
Question / Comment	Response
Chris Jonker: What will the height of the wind turbines be?	Karen Jodas: The turbines being proposed will be up to 80 m in height.
Chris Jonker: Who will own the land? Will it be leased?	Keith Kirby: We would look at leasing the land from current landowner for Happy Valley, Deep River there are 2 properties, 1 will be purchased the other leased.
Chris Jonker: Where will you connect the Deep River wind energy facility into the Eskom grid?	Keith Kirby: We are looking at connecting into the Diep Rivier substation or alternatively the Melkhout substation.
Chris Jonker: I would like to suggest that your team do a full project presentation on the Deep River wind energy facility to the Kou-Kamma Municipality at a Council meeting. You would need to clarify what the Deep River project's direct and indirect economic contributions would be to the local community.	Shawn Johnston: Thank you for the suggestion. I will follow-up with your office to check the council schedule for such meetings.

WAY FORWARD AND CLOSURE

Shawn Johnston thanked Chris Jonker for the opportunity to meet and brief him on the Deep River project. John von Mayer provided Chris Jonker with a pdf copy of the Deep River scoping phase presentation which Chris Jonker undertook to circulate to the entire Kou-Kamma Municipality and to put the Deep River Wind Energy Facility project on the Kou-Kamma Municipal agenda for future discussion and input.

Shawn Johnston requested that the Kou-Kamma Municipality study the draft scoping report and provide the team with their comments or concerns. He undertook to keep the Kou-Kamma Municipality informed about the progress of the project and the follow-up that will be done in the near future.

The meeting closed at 15h00.



**SUSTAINABLE
FUTURES ZA**

**PROPOSED HAPPY VALLEY AND
DEEP RIVER WIND ENERGY
FACILITIES
ENVIRONMENTAL IMPACT
ASSESSMENTS**

FOCUS GROUP MEETING

NOTES OF FOCUS GROUP MEETING

**Held on
Monday, 12 July 2010,
Eastern Cape Parks Board - Patensie
Eastern Cape Province**

Savannah Environmental (Pty) Ltd

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Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

**EIA PROCESS FOCUS GROUP MEETING:
PROPOSED DEEP RIVER AND HAPPY VALLEY WIND ENERGY FACILITIES**

Venue: Eastern Cape Parks Board Offices – Patensie – Eastern Cape

Date: Monday, 12 July 2010

Time: 14h00 – 14h40

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked Wayne Erlank and Tracy Ford from Eastern Cape Parks Board for the opportunity to meet with his team to introduce the proposed Deep River and Happy Valley projects. He asked everyone present to introduce themselves.

MEETING ATTENDEES

Name	Organisation & Position
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	Ventusa & REISA
Patrick Hailot	Ventusa & REISA
John von Mayer	Savannah Environmental
Karen Jodas	Savannah Environmental
Wayne Erlank	Eastern Cape Parks Board
Tracy Ford	Eastern Cape Parks Board

APOLOGIES

No apologies were received.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the focus group meeting. The project team (Karen Jodas, John von Mayer, Patrick Hailot and Keith Kirby) to clarified various technical and environmental aspects of the project. The background information documents and the maps on the two projects were used to introduce the projects.

DISCUSSION SESSION

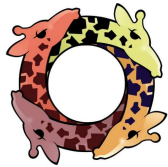
Question / Comment	Response
Wayne Erlank: Our area incorporates the Baviaanskloof Nature Reserve and UNESCO World Heritage Site as well as the expanded Garden Route National Park.	Comment noted.
Wayne Erlank: The boundaries of the conserved area, the viewshed protection zone and buffer zone for the World Heritage Site can all be made available for your EIA studies.	Shawn Johnston: We would welcome any data about the area that could assist the two EIA studies.
Wayne Erlank: Where is the Happy Valley site situated?	Karen Jodas: This is the site close to Kruisfontein near Humansdorp.
Wayne Erlank: How many turbines are planned for the Happy Valley site? What is the planned height of the turbines?	Karen Jodas: Up to 15 wind turbines are planned for this site. Turbines are proposed to be ~60m at hub height. This will be confirmed following analysis of the wind strength at the site.
Wayne Erlank: What effect would the turbines have on birds and bats in the area?	Karen Jodas: The avifauna study in the EIA would determine all aspects and concerns raised in regard to avifauna. The impact on bat species would also be looked at through the ecology assessment.
Wayne Erlank: Are you considering carbon offsets to reduce the impact of the construction phase of the project?	Patrick Halliot: The construction phase is limited to around 7 months, compared to 20 years or more of operation of the facility. Very little steel or cement is actually used in construction of the facility.
Tracy Ford: I am responsible for stewardship programmes (i.e. for private landowners to manage conservation) in the area. Will you consider biodiversity offsets and/or entering into a biodiversity agreement or stewardship programme on the more sensitive areas of the properties which are not utilised for the facilities?	Keith Kirby: We would factor all of these issues raised into our management plan for a facility of this nature.
Tracy Ford: The visual impact must consider the viewshed protection zones as well as buffer areas.	Karen Jodas: These will be taken into account by the visual impact assessment specialist.
Wayne Erlank: Where will the power	Karen Jodas: It is proposed to evacuate the

Question / Comment	Response
generated at the Happy Valley site be distributed to?	<p>power to the Melkhout substation. The power line alignment is included in our EIA study.</p> <p>Keith Kirby: We will be investigating various power line routes to ensure the best routes are chosen.</p>
Wayne Erlank: Who will benefit from the localised power generation?	<p>Karen Jodas: The power would strengthen the local Eastern Cape transmission grid, so it would be a benefit to stabilising the Eastern Cape and Kouga Region energy supplies.</p>
Tracy Ford: What is the length of the construction period for the Happy Valley project?	<p>Keith Kirby: Roughly about 18 months, if all goes well with all the project phases.</p>
Tracy Ford: Where will components be produced?	<p>Patrick Haillot: About 60% of components can be produced locally, the remaining 40% will be sourced internationally.</p>
Wayne Erlank: How deep will the foundations be at Happy Valley?	<p>Keith Kirby: This is subject to a geotechnical study. Foundations are typically 15m x 15m, and about 2m deep.</p>
Wayne Erlank: What type of employment opportunities are being looked at in this project.	<p>Patrick Haillot: We would be looking at direct and indirect employment. These wind projects are generally not large scale job creation projects.</p>
Tracy Ford: Have you considered the high fire risk within the Fybos biome and how it could affect your wind energy facility during operation? Flames have been known to reach 20 to 30 m in height	<p>Keith Kirby: The fire regime in the area would have to be factored into the environmental management plan for the site during construction and the operational phase.</p>
Wayne Erlank: Please contact Sam van der Merwe and Alwyn Stander at the Kou-Kamma Municipality in Kareedouw about the Langkloof Fire Protection Agency (fpa).	<p>Comment noted.</p>
Wayne Erlank: Please note we would raise all of the same questions for the proposed Deep River wind energy facility. You should seek comment from the Kou-Kamma Municipality, the Garden Route National Park and the Langkloof Fire Protection Association.	<p>Comment noted.</p>

WAY FORWARD AND CLOSURE

Shawn Johnston thanked the Eastern Cape Parks Board team and undertook to keep them informed about the progress of the project and the follow-up that will be done in the near future.

The meeting closed at 14h40.



**SUSTAINABLE
FUTURES ZA**

**PROPOSED HAPPY VALLEY AND
DEEP RIVER WIND ENERGY
FACILITIES
ENVIRONMENTAL IMPACT
ASSESSMENTS**

PUBLIC MEETING

NOTES OF PUBLIC MEETING

**Held on
Tuesday, 13 July 2010,
Kouga Cultural Centre - Humansdorp**

Savannah Environmental (Pty) Ltd

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Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

**EIA PROCESS FOCUS GROUP MEETING:
PROPOSED DEEP RIVER AND HAPPY VALLEY WIND ENERGY FACILITIES**

Venue: Kouga Cultural Centre, Humansdorp
Date: Tuesday, 13 July 2010
Time: 18h00 – 18h45

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked the participants present and introduced the team from Savannah Environmental, Ventusa and REISA.

MEETING ATTENDEES

Name	Organisation & Position
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	Ventusa & REISA
Patrick Hailot	Ventusa & REISA
John von Mayer	Savannah Environmental
Karen Jodas	Savannah Environmental
D.E Martin	Summit Projects
J. November	Summit Projects

APOLOGIES

No apologies were received.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the public meeting. John von Mayer reported on the findings of the draft scoping report for both the Deep River and Happy Valley projects.

A copy of the Scoping presentation for the Deep River and Happy Valley projects is included as Appendix A.

DISCUSSION SESSION

Question / Comment	Response
D.E. Martin: our company was involved in the construction phase of the Klipheuwel facility in the Western Cape. We would be interested in being able to tender for work on these projects in the Eastern Cape.	Shawn Johnston: Comment noted.
D.E. Martin: Where will the wind turbine towers be manufactured? Would this be in South Africa, or internationally?	Keith Kirby: There is a possibility that parts of the turbines could be produced locally in South Africa. However, the need for many turbines would be the driver behind this, as it is not cost effective to set up manufacturing plants for small numbers of turbines
D.E. Martin: How will the sites be accessed, as the turbine components would need to be transported on trailers. What sort of access road is required? When will the logistics study be done?	Keith Kirby: The developers are currently considering the logistics component for each project. This includes access onto the sites, as well as access to the broader area.
D.E. Martin: What is the weight of the nacelle?	Keith Kirby: The nacelle weight is approximately 50 tons.
D.E. Martin: Have you looked at the availability of cranes? There are only a few cranes which can lift that weight.	Keith Kirby: There are at least 3 cranes available in South Africa that could be used. This would be considered at a later stage in the project.

As the participants expressed interest in being eligible to provide services to the developers should these projects reach construction phase, the developer posed the following questions:

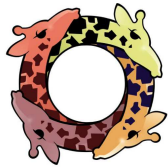
Keith Kirby: What would your interest be in a wind energy project like this?	D.E. Martin: Our team did work on the Klipheuwel wind energy facility and we would be interested in doing the civils component on projects like Happy Valley and Deep River. We could also assist with turbine erection.
Keith Kirby: Where would you obtain borrow pit material and concrete in this area?	D.E. Martin: We would source our concrete supplies from Lafarge Ready Mix – we would work with Lafarge to set up a batching plant on or close to the site. We would have to consider borrow material for each site.

Keith Kirby: Would you be interested in doing foundations for wind monitoring masts on the Deep River and Happy Valley sites?	D.E. Martin: Yes, we would be interesting in tendering for any component that meets our skills set.
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WAY FORWARD AND CLOSURE

Shawn Johnston thanked all present for their attendance and requested that the stakeholders study the draft scoping report and provide the team with their comments or concerns. He undertook to keep the stakeholders informed about the progress of the project and the follow-up that will be done in the near future.

The meeting closed at 18h45.



**SUSTAINABLE
FUTURES ZA**

**PROPOSED HAPPY VALLEY AND
DEEP RIVER WIND ENERGY
FACILITIES
ENVIRONMENTAL IMPACT
ASSESSMENTS**

FOCUS GROUP MEETING

NOTES OF FOCUS GROUP MEETING

**Held on
Monday, 12 July 2010,
St. Francis Bay Community Organisations -
Eastern Cape Province**

Savannah Environmental (Pty) Ltd

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Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

**EIA PROCESS FOCUS GROUP MEETING:
PROPOSED DEEP RIVER AND HAPPY VALLEY WIND ENERGY FACILITIES**

Venue: Heritage Centre, St Francis Bay

Date: Monday, 12 July 2010

Time: 18h00 – 21h00

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked Bridget Elton from St. Francis Bay Residents Association for co-ordinating the opportunity to meet with all the St. Francis Bay Community Based Organisations to introduce the proposed Deep River and Happy Valley Wind Energy Facility projects.

MEETING ATTENDEES

Name	Organisation & Position
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	Ventusa & REISA
Patrick Haillot	Ventusa & REISA
John von Mayer	Savannah Environmental
Karen Jodas	Savannah Environmental
B. Mortimer	St. Francis Chronicle
H. Engel	Resident St. Francis Bay
Wolfgang Engel	Resident St. Francis Bay
G. Knight	St. Francis Bay Club
Red Knight	Resident St. Francis Bay
Maggie Langlands	Resident St. Francis Bay
Bridget Elton	Resident St. Francis Bay
Peter Bosman	St. Francis Bay Residents Association
Yvonne Bosman	St. Francis Bay Bird Club
Bart Logie	Fourcade Botanical Group
Caryl Logie	CREW & St. Francis Conservancy
Jenny Dale	Kromme Trust
Carrol Hemsley	Residents St. Francis Bay
Robert Hemsley	Residents St. Francis Bay
Godfried Potgieter	Fourcade Botanical Group
Frank Silberbauer	Kromme River Properties
Warren Manser	St. Francis Tourism

Name	Organisation & Position
Sally Silberbauer	Resident St. Francis Bay
R & B Andrews	Resident St. Francis Bay
Ed Elton	Resident St. Francis Bay
G. Perry	Resident St. Francis Bay
S. Masekew	Resident St. Francis Bay
P. Maskew	Resident St. Francis Bay
J. Tudhope	Resident St. Francis Bay
H. Freercks	Resident St. Francis Bay
V. Barratt	Resident St. Francis Bay
C. Barratt	Resident St. Francis Bay
H. Thorpe	St. Francis Bay Residents Association
J. Thorpe	Resident St Francis Bay

APOLOGIES

Apologies were received from Sandra Hardie of the St. Francis Conservancy.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the public meeting. John von Mayer reported on the findings of the draft scoping report for both the Deep River and Happy Valley projects.

A copy of the Scoping presentation for the Deep River and Happy Valley projects is included as Appendix A.

DISCUSSION SESSION

Question / Comment	Response
Julia Thorpe: Will the people of Kruisfontein be consulted and informed of these projects? Will they understand the extent of the project at Happy Valley – as this is close to their residential area?	Shawn Johnston: All communities around both sites will be informed and consulted. We will be placing notices at various points including the Kruisfontein library. Follow-up will be done through the municipality and community leadership.
Hilton Thorpe: We need a broader perspective on wind farms in this area.	Shawn Johnston: There are two questions raised by Mr. Thorpe. The first being the cumulative

Question / Comment	Response
<p>We are currently dealing with an epidemic of wind farm investigations. If all of it goes ahead we would have a solid curtain of wind farms from Tsitsikama to Grahamstown. There should be a policy, by the authorities or even the Cacadu District Municipality on how much wind generation will be tolerated in this area. We cannot escape the fact that all of the wind energy facilities will have an impact on the entire area. We would like to support clean and renewable energy, however there do seem to be problems with cost and where to place them.</p>	<p>effects of the large number of proposed wind energy facilities for the area and the second being the international trends that have emerged from the wind energy industry.</p> <p>Karen Jodas: Regarding policy: There is no policy developed at this stage. The Eastern Cape would need to consider developing a position on wind energy as has been done in the Western Cape – possibly through the development of a guideline for wind energy facilities in the Eastern Cape as was done by the Western Cape with their wind energy facility development guidelines. The Western Cape was confronted with the possibility of large scale wind energy applications and the Department of Environmental Affairs and Development Planning developed a set of guidelines for siting of these facilities. The Eastern Cape Province could benefit from such guidelines to guide applications and developments. However, the guidelines do not prescribe the maximum amount of wind energy facilities per area.</p> <p>The National Department of Environmental Affairs (DEA) are the regulating authority for all wind energy applications throughout South Africa. The environmental authorisation issued for any of these projects by DEA does not give the developer a generation licence, a power purchase agreement, or allow for rezoning. Therefore, number of other processes would have to be completed and approved to make a project viable. Only a portion of the applications you might see will go ahead as not all will prove to be bankable. It is important for stakeholders to follow the national REFIT programme to understand all the components.</p>
<p>Hilton Thorpe: Have you considered the attitudes of European countries where wind energy projects are now being rejected? Why are countries who have</p>	<p>Patrick Haillot: Some countries have reached their targets for renewable energy and have now stopped to develop further projects. It is not about countries retracting and looking negatively</p>

Question / Comment	Response
gone for renewable energy reconsidering?	at renewable energy. It is about limiting over-capacity.
Chris Barratt: Would we be able to get a copy of the notes of the meeting as well as the presentation?	Shawn Johnston: The notes of the meeting including the presentation will be circulated to all attendees.
Chris Barratt: Can you clarify the technology to be used? Will it be new technology? Do you know the noise factors of the technology? Has this all been taken into account in the EIA?	Keith Kirby: We would be looking at utilising modern new technology from a wide range of suppliers. However the turbine type will be informed by our wind monitoring data programme for both sites. We will not purchase out-dated technology. Recent research in blade design and making use of direct drive has reduced noise emissions from turbines. The noise impacts from the turbines will be modelled during the EIA phase.
Chris Barratt: What are the size of the foundations, as these could cause major ecological damage if close to wetlands.	Keith Kirby: The size would be determined by the geotechnical study of the area. On average we are looking at 15 m x 15 m by 3 m deep foundations. However this would have to be confirmed in a geotechnical study. The position of the turbines will be guided by the potential for environmental impact, and so would avoid ecologically sensitive areas as far as possible.
Garth Perry: This project must be economically driven. So Eskom must have indicated what they are willing to pay for electricity from independent power producers. My concern is that the whole community will pay the price for having these wind farms in this area. As an engineering structure they are beautiful but as a landscape structure they are dreadful. I understand the business case for wind energy facilities. The issue not being addressed here is the tariff that was developed by Eskom.	<p>Shawn Johnston: The tariff was not set by Eskom but by the National Energy Regulator of South Africa (NERSA).</p> <p>Keith Kirby: The price that NERSA has announced is R1.25 per kilowatt hour.</p>
Warren Manser: How will the EIA deal with the cumulative effect of wind energy facilities of this sort on the tourism industry in this area? What	Karen Jodas: The social impact assessment will address the potential for impacts (positive and negative) on tourism during the EIA phase. The local tourism industry authorities and specialists

Question / Comment	Response
measure will be used to determine the impact on tourism?	will be interviewed by the social impact assessment consultants. The tourism component is seen as valid for this area, due to the economy in this area being partly tourism-driven.
Warren Manser: The closeness of the facilities to the urban edge is a concern. Do you have a setback line for the proximity for where the first wind turbine would be? In Australia they set a buffer of 2km and I notice that the previously disadvantaged community of Kruisfontein might sit as close as 500m to the closest wind turbine. This needs to be taken into account.	Karen Jodas: The 2km buffer distance referred to relates to mitigating noise impacts. The distance of a homestead from a wind turbine can range from 500m – 2000m, depending on a number of factors including the absorption capacity of the land. In South Africa, the noise emission limits are regulated in terms of the SANS noise guidelines, which states the maximum noise levels at the boundary of the facility, depending on the type of environment.
Warren Manser: What about the light pollution for perimeter and aviation lights at the wind energy facility?	Karen Jodas: Lighting will be dictated by the Civil Aviation Authority. Not every turbine will be required to be marked, normally only those on the perimeter of the facility.
Valda Barratt: Where will the power lines go? Will it be above ground or underground and will there be an EIA done for the entire route up to where it integrates into the Eskom grid?	Karen Jodas: Firstly, the power lines for the development will be distribution lines. The internal cables connecting the wind turbines to the facility substation will be underground. From this point to the Eskom substation will be overhead distribution lines. The distribution lines would be constructed using either a concrete or steel monopole structure. The EIA will consider the power line route. A key focus is on consolidating linear infrastructure. We will look at alternatives for the distribution power line corridors and will investigate concerns such as mitigating for bird strikes through the EIA and EMP.
Chris Barratt: What about bats and birds? What do these studies entail?	Karen Jodas: Impacts on bats and birds are considered through the EIA process. Bats are not affected by power lines. They are impacted by the wind turbines, should they occur in the area. The habitats for birds and bats must be identified and considered in order to assess and address the potential impacts.
Warren Manser: With population growth there is an obvious increased	Shawn Johnston: Unfortunately we cannot speak for Eskom. This is a point which you need to

Question / Comment	Response
<p>need for base load power. What are the alternatives for energy generation if these wind energy facility projects do not come off the ground? What projects are Eskom working on? What about solar energy?</p>	<p>clarify with Eskom. They are currently looking at a suite of power generation projects, this information is on the Eskom website.</p> <p>Patrick Hailot: Both solar and wind energy are the two up-and-coming technologies that you will begin to see more and more. Eskom need to spread risk and will need to investigate mixed electricity generation technologies.</p>
<p>Bridget Elton: We are concerned about the mixed messages being sent about the different forms of renewable energy and Eskom’s ability to deliver.</p>	<p>Comment noted.</p>
<p>Bridget Elton: If the winds blow too hard, do the turbines then switch off?</p>	<p>Patrick Hailot: The modern technology turbines include their own management system which controls each wind turbine. Wind turbines operate from 5 m/s to 12 m/s. In higher wind speeds they will automatically brake, shut down and wait for wind speeds to subside.</p>
<p>Yvonne Bosman: What is of concern for us is the integrity of the studies. With the nuclear EIAs we found so many discrepancies and flaws in the reports, and due process was not followed. The wrong specialists were used. Are you going to get the right bird specialist to do the work? We have some unique red data species and people come from all over the world for bird tourism. We want to know that studies will be properly done. We are concerned as it seems that bird strikes from wind farms are of concern.</p>	<p>Karen Jodas: Our team has gained a great deal of experience from assessing several wind energy facilities across the country. In addition, our specialist are familiar with the areas where the projects are proposed. Our avifauna specialist would be happy to consult with local bird groups to ensure that species related information is as accurate as possible.</p>
<p>Yvonne Bosman: Specialists need to come to site and use local knowledge that stakeholders in the area have.</p>	<p>Comment noted.</p>
<p>Bridget Elton: We want to be part and parcel of the investigations when specialists come to visit the sites.</p>	<p>Comment noted.</p>
<p>Yvonne Bosman: How many wind energy facilities are proposed for this</p>	<p>Shawn Johnston: There is no monitoring authority. This should be done by the Eastern</p>

Question / Comment	Response
area? Are there no monitoring bodies in the area tracking these projects?	Cape Department of Economic Development and Environmental Affairs and the National Department of Environmental Affairs. Currently there is a large amount of speculation as to the amount of proposed sites between Tsitsikama and Grahamstown. There is currently a process underway by the Eastern Cape to start tracking the number of applications for monitoring masts and wind energy facilities in this area. This can be clarified with the Eastern Cape Department of Economic Development and Environmental Affairs in Port Elizabeth.

WAY FORWARD AND CLOSURE

Shawn Johnston thanked all present and undertook to keep the St. Francis Bay Community Based Organisations informed about the progress of the project and the follow-up that will be done in the near future.

The meeting closed at 21h00.

POST-MEETING DISCUSSION

The following points were raised during a post-meeting discussion with a few of the original attendees:

Question / Comment	Response
Chris Barratt: What happens when the facility is decommissioned? Will the components be removed from the site?	Keith Kirby: The practical approach would be to upgrade the infrastructure rather than remove it. It also depends on the conditions provided by NERSA and the Power Purchase Agreement. What happens when the government withdraws its subsidies? These factors would need to be taken into account.
Bridget Elton: What is the story with carbon credits?	Karen Jodas: There is a detailed and complicated application process to register a project as a Clean Development Mechanism (CDM) project. Patrick Haillot: Companies can sell their carbon

Question / Comment	Response
	credits for profits to another business that is about to exceed its allowed amount. With the CDM (Clean Development Mechanism) a country can sponsor greenhouse gas reduction projects in another country where the cost of these activities is lower.
Chris Barratt: What alternatives are being considered as part of the EIA process?	Karen Jodas: We do not examine site alternatives through our process for wind energy facilities. This approach has been agreed upon with the Department of Environmental Affairs. Wind is similar to a mining resource – the facility must be situated at a particular location where there is good wind. We can therefore only consider alternatives within the site itself – for example micro-siting of turbines or other infrastructure on the site itself.
Yvonne Bosman: We want our local people on the ground to assist the project team and the specialists.	Karen Jodas: We will put Andrew Jenkins, our bird specialist, in contact with Yvonne so that this consultation can take place.

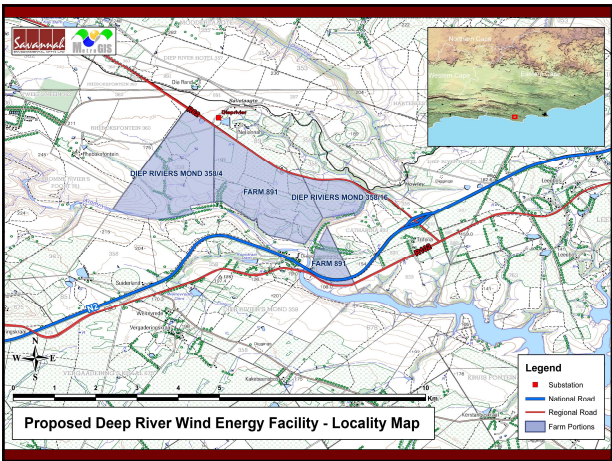


- ## MEETING AGENDA
- Welcome, introduction & apologies
 - Purpose of the meeting
 - Project background
 - EIA process & feedback on the Scoping Phase
 - Way forward
 - Question & Answer session
 - Closure

- ## BACKGROUND TO THE PROJECTS
- Two wind energy facilities near Humansdorp:
 - Deep River
 - Happy Valley
 - Favourable sites identified from an extensive pre-feasibility analysis & site identification processes
 - Applicants:
 - VentuSA
 - Renewable Energy Investments South Africa

- ## PURPOSE OF THE MEETING
- To provide details of the project & the EIA process
 - To provide feedback regarding the EIA process
 - To provide the opportunity to seek clarity regarding the proposed project
 - To record comments, issues & concerns raised to inform the EIA Process

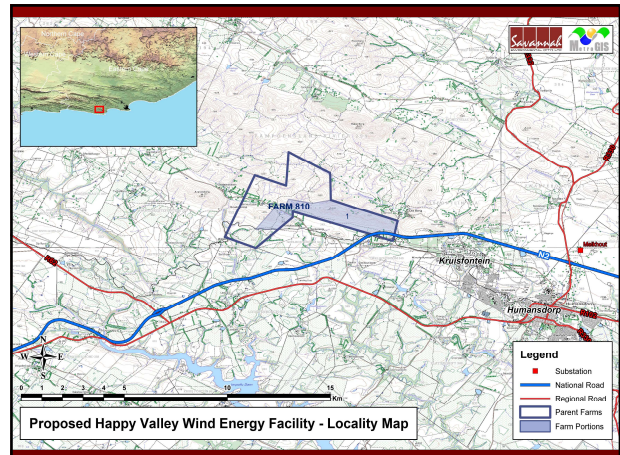
- ## BACKGROUND TO THE PROJECTS
- Deep River:**
- Applicant: VentuSA (Pty) Ltd
 - Site located within Kou-Kamma Local Municipality
 - Situated ~17 km west of Humansdorp on Portion 4 & 16 of the farm Deepriviermond 358 & the remaining extent of Farm 891
 - Up to 50 wind turbines
 - Overhead power line to connect to Eskom's existing Deep River substation (or alternatively the Melkhout substation)
 - Site ~7,4 km² in extent



BACKGROUND TO THE PROJECTS

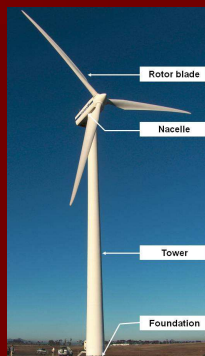
Happy Valley:

- Applicant: Renewable Energy Investments South Africa (REISA) (Pty) Ltd
- Site located within Kouga Local Municipality
- Situated ~9 km north-west of Humansdorp on Portion 1 of Farm 810
- Up to 15 wind turbines
- Overhead power line to connect to Eskom's existing Melkhout substation
- Site ~5 km² in extent



OVERVIEW OF THE PROJECTS

- Towers up to 80 m high with nacelle
- Three blades of up to 45 m
- Concrete foundations
- Internal access roads
- Substation
- Electrical cabling between turbines & substation
- Distribution power lines linking to existing Eskom substation/s
- Access/haul roads

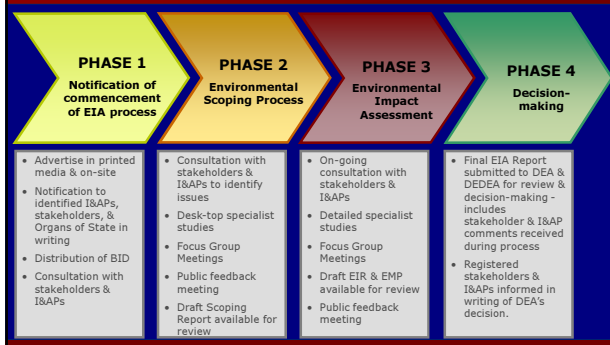


LEGAL CONTEXT

- National Environmental Management Act (No 107 of 1998)
 - Overarching environmental legislation in South Africa
 - Specifies the EIA process
- Applicant requires authorisation from DEA (in consultation with DEDEA)
- Independent environmental studies must be undertaken in accordance with the EIA Regulations



EIA PROCESS & PUBLIC INVOLVEMENT



EIA PROCESS

Biophysical Studies	Social Studies
<p>Impacts on ecology, fauna and flora: the construction of the wind energy facility & the associated disturbance of vegetation may result in impacts on ecology.</p>	<p>Visual quality and aesthetics: due to their size, wind turbines have the potential to have a visual impact on the surrounding area.</p>
<p>Impacts on avifauna: birds & bats may be impacted through collision with the blades during operation of the wind energy facility.</p>	<p>Impacts on heritage sites and fossils/palaeontology: disturbance to or destruction of heritage sites & fossils/palaeontology may result during the construction of the wind energy facility.</p>
<p>Impacts associated with geology: impacts associated with geology: relating to underlying soil conditions & erosion potential.</p>	<p>Noise impacts: the rotation of the blades may result in noise emissions which could impact on nearby residents/receptors.</p>
<p>Impacts on agricultural potential: impacts on agricultural areas & potential, & land capability.</p>	<p>Impacts on the social environment: the construction & operation of the facility may result in limited job opportunities and could impact on local land use.</p>

FINDINGS OF SCOPING STUDIES

■ Potential for visual exposure

Deep River

- 5km radius of potential impacts
- Potential visual exposure to the north & north-east interrupted due to topography
- Potential high visibility from N2, R62, R102 & secondary roads within the region
- Potential visibility from parts of the Jumanji Fishing & Game Ranch, the ThabaManzi Game Farm and Lodge & the Kromrivierspoort Natural Heritage Site
- Visible from short distances from residences in close proximity to proposed facility

FINDINGS OF SCOPING STUDIES

Potential for visual exposure

Happy Valley

- 4 - 8 km radius of potential impacts
- Structures exposed to a large area to the south of study area
- Potential visual exposure to the north interrupted due to topography
- Potential high visibility from the N2, R102 & the secondary roads within the region
- Potential visibility from parts of the ThabaManzi Game Farm and Lodge
- Visible from short distances from Kruisfontein & residences in close proximity to proposed facility

FINDINGS OF SCOPING STUDIES FOR BOTH SITES

■ Potential ecological impacts on individual organisms & habitats

- Potential for red-data plant & animal species to occur
- Habitat destruction & disturbance are considered the most important impacts on birds during the construction phase
- Long-term programme for monitoring impacts on birds in EIA phase
- Potential impacts on threatened bat species

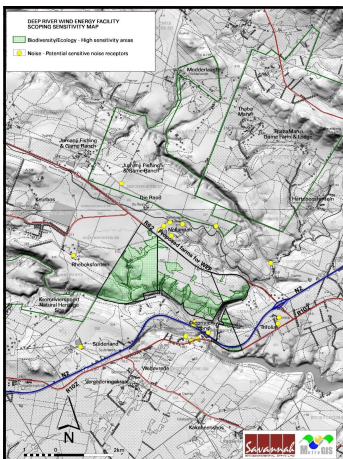
■ Potential for soil erosion & degradation impacts during construction (occurrence of steep slopes on Happy Valley site)

- Impacts on agricultural potential are of limited significance
- Potential positive & negative social impacts

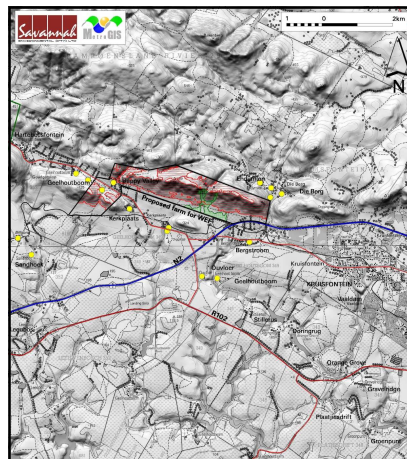
FINDINGS OF SCOPING STUDIES FOR BOTH SITES

■ Potentially sensitive areas already identified through the scoping study include:

- All natural wetlands, rivers, drainage lines & associated buffer zones
- Potential sensitive noise receptors within the study areas
- Potential heritage sites within the areas for the proposed wind energy facilities - to be identified in EIA phase
- Potential ecological high sensitivity areas



DEEP RIVER:
PRELIMINARY
SENSITIVITY MAP



HAPPY VALLEY:
PRELIMINARY
SENSITIVITY MAP

KEY CONSIDERATIONS

- Footprints of disturbance for facilities are localised, small-scale disturbances
- Primary impacts for both sites: Visual impacts and Ecological impacts
- Detailed environmental studies & sensitivity maps in EIA phase
- Preliminary layouts & turbine positioning in EIA phase

WAY FORWARD

- Draft Scoping Report available for review until 3 August
 - www.savannahSA.com
 - Humansdorp Library
- Public invited to submit written comment
- Final Scoping report submitted to DEA
- Undertake detailed specialist studies and public participation process
- Draft EIA Report and draft EMP available to the public, stakeholders and authorities
- Submission of Final EIA Report (November 2010)
- DEA review and decision-making (~105 days)

WHO TO CONTACT?

Shawn Johnston: Sustainable Futures ZA

PO Box 749, Rondebosch,
CAPE TOWN, 7701

Phone: 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

Website: www.savannahsa.com





**SUSTAINABLE
FUTURES ZA**

PROPOSED HAPPY VALLEY FACILITY

ENVIRONMENTAL IMPACT ASSESSMENT

PUBLIC MEETING

NOTES OF MEETING

Held on
Wednesday, 17 August 2011,
Humansdorp Boutique Hotel

Savannah Environmental (Pty) Ltd

Address: PO Box 148
Sunninghill, 2157
Tel: 011 234 6621
Fax: 086 684 0547
E-mail: john@savannahsa.com

Sustainable Futures ZA

Address: PO Box 749
Rondebosch,
Cape Town, 7701
Tel: 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

**EIA PROCESS FOCUS GROUP MEETING:
PROPOSED HAPPY VALLEY WIND ENERGY FACILITY**

Venue: Humansdorp Boutique Hotel, Humansdorp
Date: Wednesday, 17 August 2011
Time: 18h35 – 19h30

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked the participants present and introduced the team from Savannah Environmental and REISA.

MEETING ATTENDEES

Name	Organisation & Position
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	REISA
John von Mayer	Savannah Environmental
Freddie Campher	Kouga Local Municipality
Eugene Groep	Kouga Local Municipality
David Hoare	David Hoare Consulting
Johan Strydom	Hartebeesfontein Farm

APOLOGIES

No apologies were received.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the meeting and spoke about the project in general. John von Mayer then provided a presentation on the findings of the draft EIA report, the environmental process and project status.

A copy of the presentation is included as Appendix A.

DISCUSSION SESSION

Question / Comment	Response
<p>Johan Strydom: Is there any way to camouflage the wind turbines for example by painting them a natural colour?</p>	<p>John von Mayer: According to the CAA requirements the turbines must be painted an off-white colour and cannot be painted with any other colour. There is a very specific colour requirement. There are other ways to decrease the visual impact, for example taking the turbine supplier logo off the turbine, but there are not many options for reducing for visual impact during operation.</p>
<p>Freddie Campher: Will REISA be bringing people in to do the work or will they use locals from the area?</p>	<p>Keith Kirby: We require unskilled and semi-skilled workers, mainly during construction, so these will be sourced from the local areas wherever possible. Skilled engineers and maintenance staff will likely need to be brought in from overseas.</p>
<p>Freddie Campher: How many people will you need for construction?</p>	<p>Keith Kirby: We will require approximately 50 unskilled people during construction and about 10 semi-skilled people. There may be opportunities for long term training-up of locals. We will also have about 12 permanent positions during operation for things like security, maintenance etcetera.</p>
<p>Freddie Campher: Will workers be employed for the entire construction phase or will they be employed on a phase by phase basis?</p>	<p>Keith Kirby: Construction workers will be employed for the full construction period. During operation there will also be opportunities for skills training for locals.</p>
<p>Freddie campher: How far will the project be from homesteads and communities in the area? Will noise affect them?</p>	<p>Keith Kirby: The map indicates the project will be approximately 3 km from Kruisfontein and 2.5 km from Die Berg community. Noise dissipates over space and time. The Die Berg community will not hear the wind turbines due to the altitude of the site, the height of the wind turbines and the technology being utilized. Noise monitoring is also required to be conducted at potential receptors as per the recommendations of the EMP.</p>
<p>Freddie Campher: Have all the immediate landowners and locals been</p>	<p>Shawn Johnston: We have communicated with all these people as part of the process and</p>

Question / Comment	Response
<p>consulted and have any complaints been received?</p>	<p>surrounding landowners are on the project database.</p> <p>Keith Kirby: We understand the people of Die Berg and Kruisfontein are the focus group in terms of our broad based partners.</p>
<p>Freddie Campher: What route will be used to transport components to the site?</p>	<p>Keith Kirby: A roads / logistics study will be done however we will probably utilize the N2 as far as possible from Port Elizabeth where the equipment will come in. We will ensure this is done at an optimal time when there is minimal traffic. We will then have to backtrack onto the R102 or R302 roads at some point and we may need to use some onramps and offramps to avoid bridges. On-site turning circles will be an issue so we will have to build some new access roads. Steepness of slopes will also be an issue.</p>
<p>Eugene Groep: If this project is a success what will that mean for the area?</p>	<p>Keith Kirby: This is a 600 million rand investment. There will be BBBEE opportunities as well as associated spinoffs and other opportunities. This will be an incremental investment, we will put in place a 20 year programme in this regard.</p>

WAY FORWARD AND CLOSURE

Shawn Johnston thanked all present for their attendance and undertook to keep the stakeholders informed about the progress of the project.

The meeting closed at 19h30.



**SUSTAINABLE
FUTURES ZA**

PROPOSED HAPPY VALLEY FACILITY

ENVIRONMENTAL IMPACT ASSESSMENT

FOCUS GROUP MEETING

NOTES OF MEETING

Held on
Wednesday, 17 August 2011,
Chameleon Restaurant - Humansdorp

Savannah Environmental (Pty) Ltd

Address: PO Box 148
Sunninghill, 2157
Tel: 011 234 6621
Fax: 086 684 0547
E-mail: john@savannahsa.com

Sustainable Futures ZA

Address: PO Box 749
Rondebosch,
Cape Town, 7701
Tel: 083 325 9965
Fax: 086 510 2537
E-mail: swjohnston@mweb.co.za

Notes for the Record prepared by:

Sustainable Futures ZA & Savannah Environmental

Please address any comments to Shawn Johnston at the above address.

**EIA PROCESS FOCUS GROUP MEETING:
PROPOSED HAPPY VALLEY WIND ENERGY FACILITY**

Venue: Chameleon Restaurant, Humansdorp
Date: Wednesday, 17 August 2011
Time: 13h30 – 15h00

WELCOME AND INTRODUCTION

Shawn Johnston welcomed everyone and opened the meeting. He thanked the participants present and introduced the team from Savannah Environmental and REISA.

MEETING ATTENDEES

Name	Organisation & Position
Shawn Johnston	Sustainable Futures ZA- Public Participation Specialist
Keith Kirby	REISA
Ricardo Panzeri	REISA
John von Mayer	Savannah Environmental
Freddie Campher	Kouga Local Municipality
Eugene Groep	Kouga Local Municipality

APOLOGIES

No apologies were received.

BACKGROUND & TECHNICAL ASPECTS REGARDING THE PROPOSED PROJECT

Shawn Johnston provided an overview of the objectives of the meeting and spoke about the project in general. John von Mayer reported briefly on the findings of the draft EIA report and project status.

DISCUSSION SESSION

Question / Comment	Response
<p>Freddie Campher: Does Eskom's proposed Thyspunt nuclear power station have anything to do with this project?</p>	<p>Shawn Johnston: This project has nothing to do with Eskom, it is an independent power producer looking at renewable energy. Eskom only comes into the equation because the developer will need to speak to them about feeding the power into the grid.</p>
<p>Freddie Campher: Where will the generated power go? Will it go towards strengthening the electricity supply in the area?</p>	<p>Shawn Johnston: The power will go into the national grid but will strengthen local supply in the Eastern Cape.</p>
<p>Eugene Groep: Will electrical transformers be required to be installed?</p>	<p>Shawn Johnston: There will be a small substation on-site. The wind turbines will be connected to this. Wind turbine technology is increasing at a rapid pace and generally the associated environmental impacts are low. Keith Kirby: The modern turbines are also less noisy than they were in the past.</p>
<p>Freddie Campher: Have any issues been recorded to date on the project?</p>	<p>Shawn Johnston: No major issues have been recorded thus far.</p>
<p>Eugene Groep: What kind of job creation would be associated with the project?</p>	<p>Keith Kirby: The construction period is very short. This project will not create thousands of jobs. There will be beneficiation programmes put in place to benefit the surrounding community. The Kruisfontein community will be very important.</p>
<p>Freddie Campher: Why is this such a long process? What is the hold up?</p>	<p>Shawn Johnston: There are many things that must be in place before the project can begin: environmental authorization, power purchase agreement and rezoning amongst other things. Keith Kirby: There is a bidding process that we will need to enter into. The bidding bond is 4 million rand that we have to put down, and that is just be to part of the bidding process.</p>
<p>Eugene Groep: Who is invited to the public meetings?</p>	<p>Shawn Johnston: It is an open meeting, anyone can attend. Notifications were sent to all parties on the database. John von Mayer: Adverts were also placed in</p>

Question / Comment	Response
	local and regional newspapers.
Freddie Campher: Are all the surrounding landowners informed of the project?	Shawn Johnston: Yes, all surrounding landowners are part of the database and are registered on the project, as per the legislation requirements.

The developer also posed the following questions to the municipality:

Keith Kirby: Do you expect any issues in terms of the rezoning process that will need to be undertaken? An land use issues?	Freddie Camphere and Eugene Groep: Not from our side, the problems may come from other stakeholders but we support the project.
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WAY FORWARD AND CLOSURE

Shawn Johnston thanked all present for their attendance and undertook to keep the stakeholders informed about the progress of the project.

The meeting closed at 15h00.



DRAFT AGENDA

- Welcome & introduction
- Purpose of the meeting
- Background to the project
- EIA process & feedback of the findings of the EIA Phase
- Question & Answer session
- The Way Forward & Closure

CONDUCT OF THE MEETING

- Work through the facilitator
- Language of choice
- Keep your questions for Question & Answers Session
- Identify yourselves
- Equal participation
- Cellphone etiquette

PURPOSE OF THE MEETING

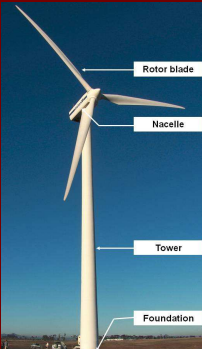
- To provide a recap of the project and the EIA process
- To provide I&APs with feedback regarding the findings of the EIA Study
- To provide I&APs the opportunity to seek clarity regarding the proposed project
- To record comments, issues & concerns raised to inform the EIA Process

BACKGROUND TO THE PROJECT

- Applicant: **Renewable Energy Investments South Africa (Pty) Ltd**
- Site located within Kouga Local Municipality
- Situated approximately 9 km north-west of Humansdorp in the Eastern Cape
- Up to **20** wind turbines
- Site **~12 km²** in extent

OVERVIEW OF THE PROJECT

- Towers up to 80 m high
- Nacelle
- Three blades of up to 50 m
- 16m x 16m x 2.5m foundations
- Access road to site
- Internal access roads (3m wide)
- Electrical substation (of up to 35 m x 22 m)
- Electrical cabling between turbines & substation
- Up to 132 kV power line linking to existing Melkhout Substation
- Workshop / offices area

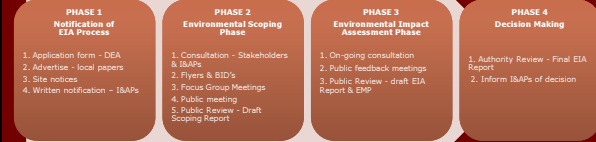


LEGAL CONTEXT

- National Environmental Management Act (No 107 of 1998)
 - Overarching environmental legislation in South Africa
 - Specifies the EIA process
- REISA requires authorisation from DEA (in consultation with DEDEA)
- Independent environmental studies must be undertaken in accordance with the EIA Regulations



EIA PROCESS & PUBLIC INVOLVEMENT

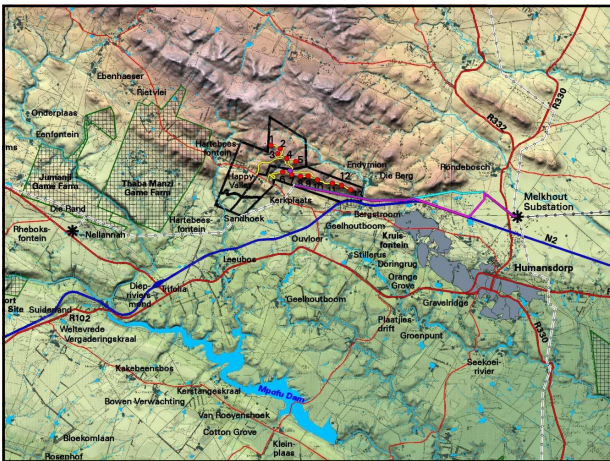


- PHASE 1
Notification of EIA Process**
1. Application form - DEA
 2. Advertise - local papers
 3. Site notices
 4. Written notification - ISAPs

- PHASE 2
Environmental Scoping Phase**
1. Consultation - Stakeholders & ISAPs
 2. Flyers & BID's
 3. Focus Group Meetings
 4. Public meeting
 5. Public Review - Draft Scoping Report

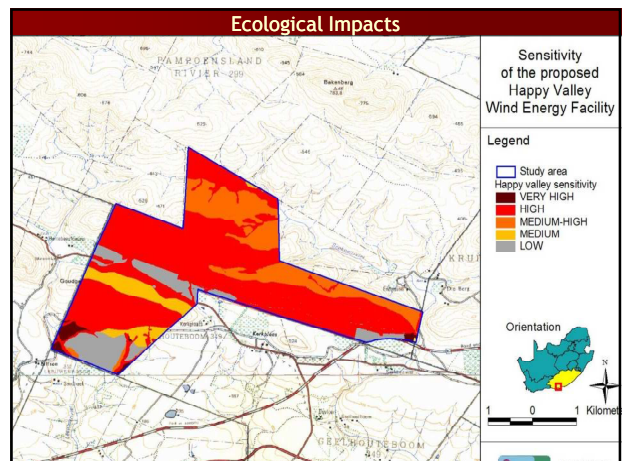
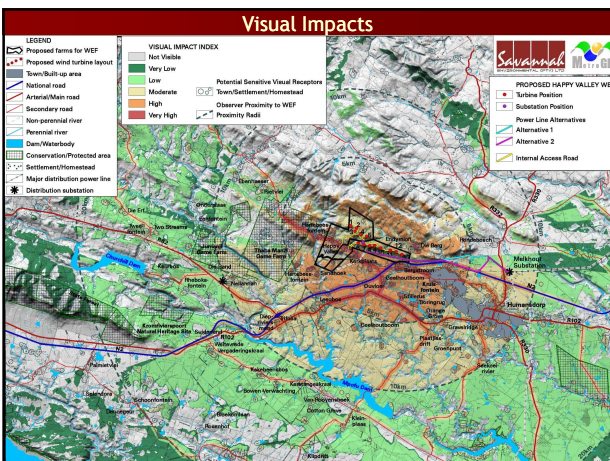
- PHASE 3
Environmental Impact Assessment Phase**
1. On-going consultation
 2. Public feedback meetings
 3. Public Review - draft EIA Report & EMP

- PHASE 4
Decision Making**
1. Authority Review - Final EIA Report
 2. Inform ISAPs of decision



LOCAL SITE-SPECIFIC IMPACTS

- Construction of facility does not result in whole-scale disturbance to the site
- Permanent disturbance associated with permanent components of facility:
 - foundation areas
 - access roads
 - substation and power line footprint
- Temporarily affected areas:
 - laydown areas for turbines & construction equipment
 - additional track for movement of crane between turbine positions & crane pad at turbine site
 - construction facilities



Impacts on Birds and Bats

- Potential Impacts include:
 - Disturbance of raptors by construction and/or operation of the facility & mortality of these species
 - Disturbance and displacement of large terrestrial birds & mortality of these birds while commuting between resource areas
- Collision monitoring & mitigation measures
- High risk bat areas identified

Heritage Impacts

- The area is of a low archaeological sensitivity
- Very low likelihood of finding well preserved fossils

Soils & Geology Impacts

- Direct impacts of soil degradation & erosion of topsoil from the area of activity
- Geology generally favourable towards the proposed layout
- Mitigation measures to reduce zones of disturbance
- Natural drainage lines “no-go” areas

Noise Impacts

- Sources:
 - Traffic & construction activities (Construction)
 - Wind turbine noise, noise from substation transformer & power line (Operation)
- Mitigation options proposed to reduce the significance of the impact to acceptable levels
- Few potential sensitive receptors, mainly various farmsteads around the proposed facility

Social Impacts

Construction phase

- Creation of employment & business opportunities
- Influx of construction workers & job seekers
- Increased risk of stock theft, poaching & damage to farm infrastructure
- Threats to safety & security
- Impact of heavy vehicles

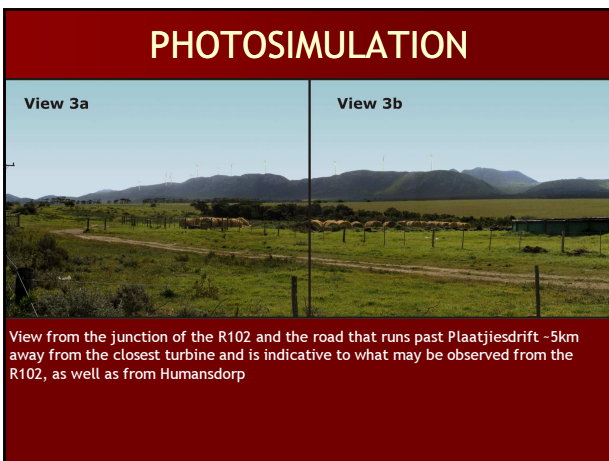
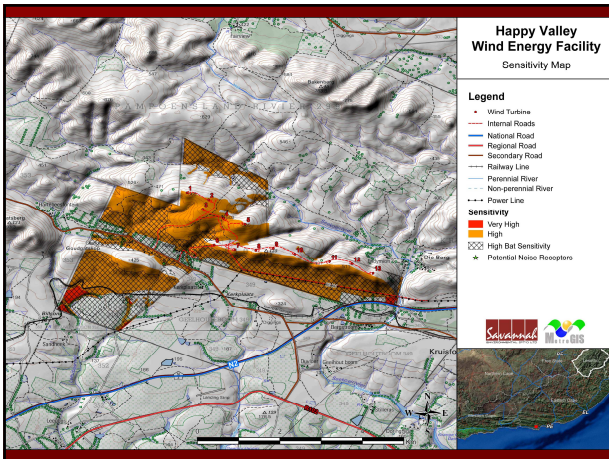
Social Impacts cont.

Operation phase

- Creation of employment & business opportunities, as well as create opportunities for skills development & training
- The promotion of clean energy as an alternative energy source
- The visual impacts & associated impact on sense of place

Cumulative Impacts

- It would appear that at least five other wind energy facilities are proposed in the immediate region:
Authorised RedCap Kouga Wind Energy Facility -9 km south, Deep River Wind Energy Facility -10 km west, Tsitsikamma Wind Energy Facility -15 km south west, the authorised Jeffreys Bay Wind Energy Facility -20 km east, Oyster Bay Wind Energy Facility -15 km south
- The cumulative impacts associated with the proposed wind energy facilities from a social perspective relate largely to the impact on sense of place & visual impacts





CONCLUSIONS & RECOMMENDATIONS

- No environmental fatal flaws identified to prevent proposed project from proceeding
- Footprints of disturbance for facility are localised, small-scale disturbances
- Impacts of moderate to high significance can be mitigated
- All mitigation measures must be implemented
- Draft Environmental Management Plan (EMP)
- The primary visual impact - the dimensions of the wind turbines is not possible to mitigate
- Turbine positioning to avoid high sensitivity areas.

WAY FORWARD

- Draft EIA Report available for review from 05 August to 04 September 2011
 - www.savannahSA.com
 - Humansdorp Library
- Public invited to submit written comment
- Final EIA Report to be submitted to DEA (& DEDEA) for review
- Stakeholders and I&APs notified of DEA decision

WHO TO CONTACT?

Shawn Johnston: Sustainable Futures ZA

PO Box 749, Rondebosch, CAPE TOWN, 7701

Phone: 083 325 9965

Fax: 086 510 2537

E-mail: swjohnston@mweb.co.za

Website: www.savannahsa.com



**OMGEWINGSIMPAAKVALUERINGSPROSES: VOORGESTELDE HAPPY VALLEY WIND
ENERGIE FASILITEIT NABY HUMANSDORP**

OPENBARE DEELNAMEPROSES REGISTRASIE/KOMMENTAAR VORM

Stuur voltooidde registrasie/kommentaar vorm aan: **Shawn Johnston by Sustainable Futures ZA**

Faks: **086 510 2537**

Telefoon: **083 325 9965**

E-pos: **swjohnston@mweb.co.za**

Posadres: **Posbus 749, Rondebosch, Kaapstad, 7701**

Verskat asseblief u persoonlike kontak besonderhede:

Naam & Van:		Buurnette William Lippert	
Organisasie & Rol:		Plaas. Rampeenhuis Rivier, Lippert Bouers	
Posadres:		Pos Bus 482 Humansdorp 6300	
Telefoon:	042 295 2569	Selfoon:	083 439 0525
Faks:	086 6190 920	E-pos:	

Stel u belang om te registreer as 'n belangstellende en/of geaffekteerde party JA NEE

(B&G)? (Merk met X)

Nota: Dit word van u vereis om te registreer as 'n B&G om alle toekomstige inligting in verband met die Omgewingsimpakvalueringsproses te ontvang.

Verduidelik u belangstelling in hierdie projek (gebruik addisionele bladsye soos benodig):

* goed koper krag.
* werkskepping plaaslik.
* opleiding vir die gemeenskap

Lys u vree, opinies of besorgede in verband met hierdie projek (gebruik addisionele bladsye soos benodig):

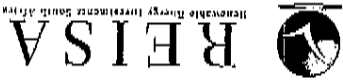
* Stel dit enige gevaar in vir die gemeenskap.
* Is daar enige gevaar vir die natuur en omgewing.
* Is daar enige gevaar vir die biodiversiteit en diere.
* Is daar enige gevaar vir water.
* Is daar enige gevaar vir grond en veewald.

Verskat bykomende kontak besonderhede van addisionele persoon/e wie u beskou as potensiele belangstellende en/of geaffekteerde partye:

Naam & Van:			
Organisasie & Rol:			
Posadres:			
Telefoon:		Selfoon:	
Faks:		E-pos:	

Dui u taal van keuse en korrespondensie aan (Merk met X)

Engels
Afrikaans



Hierdie studie word namens Renewable Energy Investments South Africa (Pty) Ltd gedoen (see reverse side for English)



From: "Paul Martin" <pmartin@axxess.co.za>
Subject: Deep River & Happy Valley Wind Energy - comments
Date: 21 July 2010 2:24:27 PM
To: "Shawn Johnston" <swjohnston@mweb.co.za>

Shawn,

Please record my comments below with respect to the Deep River and Happy Valley Wind Energy Projects, Draft Scoping Reports.

Note that these comments hold for all wind farm projects, e.g. the Amakhala project at Bedford / Cookhouse. Please register me as an I&AP for all wind farm projects that you may be involved in in the Eastern Cape and note the comments below for those that are still active.

While renewable energy initiatives are welcomed, a lack of policy direction and guiding SEA with respect to the potential locations of wind farms in SA and the maximum number of turbines to be allowed in each area so as to maximise the positive impacts and minimize the negative impacts has resulted in a plethora of proposals for wind farms in the Eastern & Western Cape Provinces. The projects cannot be assessed on a piecemeal basis.

The cumulative impacts of all proposed wind farms in an area need to be assessed. The large number of wind farms proposed for the Kouga area will result in the sterilization of large areas of land for the larger bird species such as Blue Cranes, Denham's Bustards and Secretarybirds as they are expected to avoid the areas where the turbines are located. This is expected to have a large negative impact on their populations via loss of useable habitat.

Similarly the cumulative visual impacts of all the wind farms proposed for an area need to be assessed, not just on an individual project basis.

The cumulative impacts need to be assessed and authorizations given to only those wind farms that are located in the most appropriate areas. Authorizations should not be allocated on a first come, first served basis.

Other areas where cumulative impacts are of concern where several windfarm projects are proposed include Grahamstown and Bedford / Cookhouse areas.

Dr Paul Martin
PO Box 61029
Bluewater Bay 6212
Tel: 041 4665698
Cell: 0732524111
email: pmartin@axxess.co.za



ST FRANCIS KROMME TRUST

PROPOSED HAPPY VALLEY WIND ENERGY FACILITY

DEA Ref No. 12/12/20/1861

Registration as I&AP

28th June 2011

Shawn Johnston
Sustainable Futures ZA
PO Box 749
Rondebosch
Cape Town
7701

Please register me on the database for the above project. This request is accompanied by a document setting out the issues that the St Francis Kromme Trust has with the project.

Maggie Langlands
Renewable Energy Portfolio
St Francis Kromme Trust



agriculture, forestry & fisheries

Department:
Agriculture, forestry & fisheries
REPUBLIC OF SOUTH AFRICA

Directorate Land Use and Soil Management, Private Bag x120, Pretoria, 0001
Delpen Building, c/o Annie Botha & Union Streets, Riviera

From: Director: Land Use and Soil Management

Tel: (012) 319 7678 ☐☐Fax: (012) 329 5938 ☐☐e-mail: agriland@nda.agric.za

SAVANNAH ENVIRONMENTAL (PTY) LTD
P.O. Box 148
SUNNINGHILL
GAUTENG
2157

2011/08/10

Dear Sir/Madam

This serves as a notice of receipt and confirms that your application has been captured in our electronic AgriLand tracking and management system. It is strongly recommended that you use the on-line AgriLand application facility in future.

Detail of your application as captured:

Type: **EIA**

Your reference number: **12/12/20/1861**

Dated: **05 AUGUST 2011**

Please use the following reference number in all enquiries:

AgriLand reference number: 2011_08_0069

Enquiries can be made to the above postal, fax or e-mail address.

Yours sincerely,

L. Mongoato
pp DIRECTOR: LAND USE AND SOIL MANAGEMENT

Online application available at: <http://www.agis.agric.za/agriland>



From: "Paul Martin" <pmartin@axxess.co.za>
Subject: **Deep River & Happy Valley Wind Energy - comments**
Date: 21 July 2010 2:24:27 PM
To: "Shawn Johnston" <swjohnston@mweb.co.za>

Shawn,

Please record my comments below with respect to the Deep River and Happy Valley Wind Energy Projects, Draft Scoping Reports.

Note that these comments hold for all wind farm projects, e.g. the Amakhala project at Bedford / Cookhouse. Please register me as an I&AP for all wind farm projects that you may be involved in in the Eastern Cape and note the comments below for those that are still active.

While renewable energy initiatives are welcomed, a lack of policy direction and guiding SEA with respect to the potential locations of wind farms in SA and the maximum number of turbines to be allowed in each area so as to maximise the positive impacts and minimize the negative impacts has resulted in a plethora of proposals for wind farms in the Eastern & Western Cape Provinces. The projects cannot be assessed on a piecemeal basis.

The cumulative impacts of all proposed wind farms in an area need to be assessed. The large number of wind farms proposed for the Kouga area will result in the sterilization of large areas of land for the larger bird species such as Blue Cranes, Denham's Bustards and Secretarybirds as they are expected to avoid the areas where the turbines are located. This is expected to have a large negative impact on their populations via loss of useable habitat.

Similarly the cumulative visual impacts of all the wind farms proposed for an area need to be assessed, not just on an individual project basis.

The cumulative impacts need to be assessed and authorizations given to only those wind farms that are located in the most appropriate areas. Authorizations should not be allocated on a first come, first served basis.

Other areas where cumulative impacts are of concern where several windfarm projects are proposed include Grahamstown and Bedford / Cookhouse areas.

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A COMMENTARY ON THE CUMULATIVE AND SITE IMPACTS OF CURRENT WIND FARM APPLICATIONS WITHIN THE KOUGA REGION, CACADU DISTRICT EASTERN CAPE PROVINCE.



This report is produced under the auspices of the St Francis Kromme Trust who is registered as an Interested and Affected Party for several proposed wind farms in the Kouga Region. The St Francis Kromme Trust, an NGO which represents individual landowners and interest groups within the St Francis Bay region, some of which have registered as I&APs for the proposed wind farm developments in their individual capacities and support this commentary.

Compiled by Frank Silberbauer of Infinity Consulting with the assistance of Chris Barratt, Hilton Thorpe, Bridget Elton and Maggie Langlands on behalf of the St Francis Kromme Trust. Their work is gratefully acknowledged.

Sections of this report have been directly sourced from an initiative commissioned by the Western Cape Provincial Government: A strategic initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; CNdV Africa planning & design (May 2006), and the Kouga Spatial Development Plan (2009) these works are acknowledged.

August 2010



St Francis Kromme Trust.
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St Francis Kromme Trust

WIND FARM APPLICATIONS WITHIN THE KOUGA MUNICIPALITY

EXECUTIVE SUMMARY

The St Francis Kromme Trust, an environmental NGO based in St Francis Bay, Eastern Cape Province, is currently registered as an Interested and Affected Party for the following wind farm developments situated within the Kouga Municipality:

- Dieprivier Mond DEA ref: 12/12/20/1863
- Happy Valley DEA ref: 12/12/20/1861
- Jeffrey's Bay DEA ref: 12/12/20/1718
- Broadlands DEA ref: 12/12/20/1752
- Zuurbron DEA ref: 12/12/20/1753
- Redcap Investments DEA ref: 12/12/20/1756

Several submissions relating to these wind farm developments, which are at various stages of the EIA process, have already been submitted. However it has become clear that collectively these will have a significant cumulative effect on a 2500 km² area situated within the heart of the present Kouga tourism precinct. In addition, several of these farms are within close proximity to three major towns Jeffrey's Bay, Humansdorp and St Francis Bay/Cape St Francis.

Each wind farm applicant has assessed the impact of their proposed development on their specific sites, and as these applicants are acting independently of one another, no cumulative impact of these developments has been noted for the region as a whole. The St Francis Kromme Trust has initiated a two part study to examine these impacts and the conclusions are summarized below:

- There is an absence of a regional regulatory framework regulating the implementation framework for wind farms in the Eastern Cape and more specifically the Kouga region.
- The absence of this framework in our opinion is leading to applications for uncontrolled and haphazard wind farm development, without due consideration of their cumulative impacts on the region.
- Borrowing set thresholds from a strategic initiative from the Western Cape it is clear that the above applications will saturate the Kouga region with turbines beyond accepted international norms (A Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; CNdV Africa planning & design; May 2006).



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- Experiences learned by other countries on wind farm development do not appear to have been taken into account in these applications.
- The impacts and their mitigation specific to these sites are diluted in their applicability, as the cumulative view of several wind farms within a small area is not considered.
- The benefits of these developments are only considered on a national basis and the benefits to the local community are considered insignificant.
- Individual site studies cannot provide detailed site layouts, due to the absence of site specific wind data. In consequence, the actual size, positioning and capacity of wind turbines and associated specific infrastructure placement, are not known. This renders specialist studies, such as the visual impact of these wind farms, meaningless.
- The Kouga Spatial Development Framework (2009) is not taken into account on some applications. Vital information, such as bio-diversity and desired urban development is not included. This SDF framework is in need of an urgent upgrade to include the provision of renewable energy resources within the Kouga Region.
- Specific site criteria and thresholds recommended by Western Cape initiative when applied to local applications are found to be non-compliant.

The St Francis Kromme Trust, whilst supportive of alternative renewable energy sources, submits that the applications listed are pre-emptive and should be placed on hold, until an equitable regional and national renewable energy policy framework is put in place. Our desire is to see an orderly and sustainable development of alternative energy resources for the benefit of the whole Kouga community, and is keen to assist where possible.

Chris Barratt – Chairman

St Francis Kromme Trust.

August 4, 2010



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WINDFARM APPLICATIONS WITHIN THE KOUGA MUNICIPALITY: PART A

THE NEED FOR NATIONAL, REGIONAL AND MUNICIPAL POLICY GUIDELINES

INTRODUCTION:

Within the Kouga Municipality (EC108), several applications for the establishment of wind farms have been advertised for public participation over the last 8 months. The advent of such a renewable energy source is new and challenging for this region. These wind farm applicants are requesting environmental authorization in terms of current legislation and these EIAs focus primarily on the local site context.

What is absent from this process in the Kouga Region is any national, provincial or municipal policy to regulate this industry in terms of existing, future regional and local spatial development frameworks. On a municipal level the Kouga Spatial Development Framework (Kouga SDF; 2009) makes no mention of this technology and therefore by inference their impact has not as yet been thought through in terms of bio-diversity, population densities, landscape character, urbanization, key industries such as tourism, and public participation.

Given that most wind energy development will be taking place on land that is zoned for agricultural use, a rezoning in terms of Section 17 of LUPO to an alternative appropriate zone will be required. On the assumption that most wind energy developments will be made outside of local authority town planning schemes (where a host of different zoning categories would apply), it is anticipated that any wind energy development would require a rezoning to either: Industrial Zone 1 or Special Zone as defined in the Scheme Regulations in terms of Section 8 of LUPO. (Government Gazette December 1988): It is highly recommended that a new SPECIAL ZONE (Wind Energy) is created in the LUPO Scheme (Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; 2006). It is also anticipated that wind developers will ideally require separate title by means of freehold or long term lease to secure long term tenure of a wind energy site. In this case, the Subdivision of Agricultural Land Act (Act 70 of 70) will apply for subdivision of all agricultural land and will have to be in place prior to any subdivision approval in terms of Section 24 and 17 of LUPO.

On the wider regional level a similar situation prevails. On a national level white papers and international global carbon level requirements and treaties have been concluded. This aspect is well covered within the EIA's presented within the Kouga region and is the prime motivation for the development of these wind farms. While these applications could satisfy national policy on renewable energy the question is asked – 'are these wind farms fulfilling their obligations in terms of a regional and local context?'

The absence of any local and regional policy framework on wind farms within the Eastern Cape is an issue which needs to be dealt with immediately as we have several proposed wind farms, which will very possibly fulfill their responsibilities in terms of the

NEMA and will gain environmental authorization. Is this is a classic case of 'the cart before the horse'

Numerous countries now have extensive experience of wind farms. These include Denmark, Germany, Holland, the UK, Ireland, Switzerland, Spain, Australia and New Zealand. These countries have had both positive and negative impacts, and have developed policies based on experience. It would be helpful to have input from these countries in seeking to provide a suitable working framework for the prioritization of areas best suited for the placement of wind farms. Closer to home a strategic initiative was initiated by the Provincial Government of the Western Cape based on the following vision (Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; 2006):

The vision of this 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, and is supported by the following objectives:

- To facilitate the practical implementation of wind energy generation technology in a manner that meets the principles of the White Paper on Energy Policy for the Republic of South Africa;***
- To introduce wind energy developments to the Western Cape in a coordinated manner, that meets the requirements of sustainability as reflected in the National Environmental Management Act, 1998 (Act 107 of 1998), and which is based on international best practice;***
- To encourage responsible and rational wind energy developments, which are beneficial not only to developers, but to communities at large;***
- To discourage the investment of time and money in potentially unsuitable sites;***
- To introduce the wind energy industry to the public and thereby increase support for and interest in alternative renewable energy sources; and***
- To provide policy guidance in terms of the environmental impact assessment process.***

From: A Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; CNdV Africa planning & design; May 2006.
http://www.capegateway.gov.za/eng/pubs/reports_research/S/138757

The above initiative runs into several parts and its current status in terms of its applicability in the Western Cape is not known. However, it does provide insight into a potential establishment of a base framework on which wind farms are to be established within a region.

METHODOLOGY OF THE WESTERN CAPE PROVINCIAL STRATEGIC INITIATIVE - 2006:

Figure 1 provides a summary of a proposed regional methodology. Using this methodology, and relating it to our local context, the following observations can be made:

- *Level 3* - refers to site level EIA's are well advanced within the Kouga area.
- *Level 2* - the national level is incomplete with no definitive white paper on wind energy.
- *Level 1* – the regional level requires attention with regard to an overall strategic plan for wind energy.

A brief overview of this initiative is set out below:

In order to obtain the desired wind energy plan several key output maps are assembled as detailed in figure 2. This figure illustrates the key criteria to be used when building up the 8 recommended map layers, with an indication of the recommended buffers extracted from figure 2. The net results of this process are '**Preferred, Negotiated**' and '**Restricted**' locations for wind farm development.

Based on a similar model to the UK and Europe, which *Preferred Locations* do not specify any definitive boundaries but are broadly classified as general preferred locations. This should be based on a targeted output in accordance with natural or regional energy targets. Such a wind energy plan could differentiate between possible large (greater than 10 to 20 turbines) and small wind farms (less than 10 turbines). It is also recommended that the spacing between large wind farms be in the order of 50km and small wind farms 30km. This framework is a guideline and with the full motivation a wind farm could be located within the negotiated or restricted locations.

Conclusions

The following conclusions, which are relevant to the Eastern Cape Region, are taken verbatim from the Western Cape document:

1. It is crucial that the Provincial Government **publish formal guidelines and policy directives** relating to the Regional Assessment Method for Wind Energy in order to regulate the introduction of wind energy development to the Province.
2. The proposed Regional Method for determining suitable areas for Wind Energy developments (*the "Regional Wind Plan"*) should be accepted as complying with the objectives of a Strategic Environmental Assessment (SEA). Given that a Regional Wind Plan has **formal status as a SEA**, and ideally is incorporated into Regional and District Spatial Development Frameworks (SDFs), a "fast track" EIA process should be facilitated by appropriate guidelines.
3. Regional and district planning authorities must be encouraged, with the support of the Provincial Government, to embark upon the **Regional Landscape Character Assessment (RLCA)** incorporating visual resource mapping as part of the planning process.

4. **Formal policy guidance** should be published by the Provincial Government on landscape character assessment, including sensitivity and capacity analysis which should emphasise the value of expert opinion and professional judgments in preference to complex computer aided technology methods. This should include empirical observations made on the ground.
5. Appropriate **Public Information** on wind energy should be published to inform the public and assist in meaningful interaction in the planning process at regional and local level. Such public information should emphasise South Africa's climate change obligations and the need to accept certain landscape change at appropriate locations. It is important to engender a positive attitude to this technology.
6. It is recommended that, as South Africa a signatory to the Kyoto Protocol, a **Policy on Renewable Energy**, particularly wind, should be published at national level, similar to the Planning Policy 22 in the United Kingdom. The national perspective should establish targets at provincial level (PPS22; Office of the Deputy Prime Minister; 2004)
7. A **Positive Regulatory Framework** is required, along with financial incentives to support wind energy development.
8. Local and regional **Spatial Development Frameworks** must include a specific zonation for areas identified by the Regional Wind Plan, and ensure appropriate public participation at this level.
9. Government (DME) should **publish wind resource mapping** for South Africa, along with the regional targets referred to above, to support the efforts of the private sector.
10. Provincial policy while, on the one hand, encouraging large wind farms to be located in generally remote '**greenfield**' rural areas, should, on the other hand, also ensure that smaller scale projects can occur on urban and industrial '**brownfield**' sites.

Methodological Conclusions are listed below:

1. The assessment of **cumulative impact** is imperative and forms an important part of the proposed regional method. Minimum distances between large wind farms are recommended at 30km, with preference being greater than 50km.
2. Whilst encouraging large wind farms in appropriate rural locations, it is imperative to protect the **scenic value of landscapes** important to the tourism industry.
3. The methodology must include appropriate **public participation** with defined interest groups, particularly Biosphere Reserve Associations (if applicable) and other non-statutory organisations and environmental groups.
4. Locations for wind farms should where possible be placed in already '**visually compromised landscapes**'.
5. Reliable, up to date, and comprehensive information is a pre-requisite for the effective application of the Regional Method which is critically supported by GIS / 3D CAD technology, but this should not be a substitute for human intuition.

Site Level Conclusions:

1. Given that the Regional Wind Plan is effectively an SEA, the EIA process at the local level should be 'fast tracked' as far as possible for sites that conform to those identified in the Wind Plan.
2. A detailed policy guidance dealing with layout, siting, aesthetics, access and a host of other considerations should be published by regional authorities.
3. Figure 3 represents thresholds specific to the EIA process as recommended by the PGWC (Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape; CNdV Africa planning & design; May 2006).

DISCUSSION & CONCLUSIONS:

1. National and Regional Government must provide a clear cut and concise framework for the provision of renewable energy resources. The vision and conclusions detailed from the Western Cape initiative are a good starting point. It is important to note that the absence of this legislative framework can lead to opportunism from developers and decisions made which will have to be rectified at a later date. This could have negative consequences for the long term viability of this renewable energy source.
2. The methodology of the Western Cape initiative has merit as it sets out thresholds for the orderly development of wind farms, and the provision of map overlays assist in identifying preferred, negotiated and restricted areas. This is an important aspect of regional planning. These will assist in the calculation of the potential total wind farm output. What is of importance to wind farm developers through this type of analysis is the potential to fast track the regulatory approval of wind farms in preferred areas while the remaining locations, would need to be fully investigated and motivated.
3. A potentially positive aspect is that small wind farms can be used to bolster the energy needs of local communities. These small wind farms should be situated on 'brownfield sites' on the urban edge.
4. A point of concern is that having 8 wind farms within a confined area (2500 km² compared with the West Cape Study of 8 small wind farms over 5340 km²) is that the cumulative effects of 8 wind farms in the Kouga region are not addressed thus negating all the specialist reports as this is not factored into these applications.
5. There is a wealth of experience in other countries, not all of it positive, and we should learn from their experience. This is true of Denmark, Germany, Holland, the UK, U.S.A., Spain, Ireland, Australia and New Zealand. There is no doubt that mistakes have been made in these countries, which have led to a negative reaction to wind generation. Let us learn from these mistakes, and not duplicate them.

Environmental authorization is being sought for eight wind farms within the Kouga area and one wind farm of 16 turbines has already been authorized. This raises the following questions:

1. How can this process continue without the necessary national, provincial and regional legislative framework?
2. Are the applicants aware that, although environmental authorization may be granted, a future Eastern Cape regulatory framework could preclude the admissibility of these applications?
3. Who would be held liable for the wastage of this time and effort?
4. How can one part of the process continue when other key components are missing?

The absence of a regional framework compromises the validity of the assumed impacts and their mitigation, thus rendering these assessments invalid. *It is recommended that the current applications be placed on hold until such time as the required regulatory framework is put into place.*

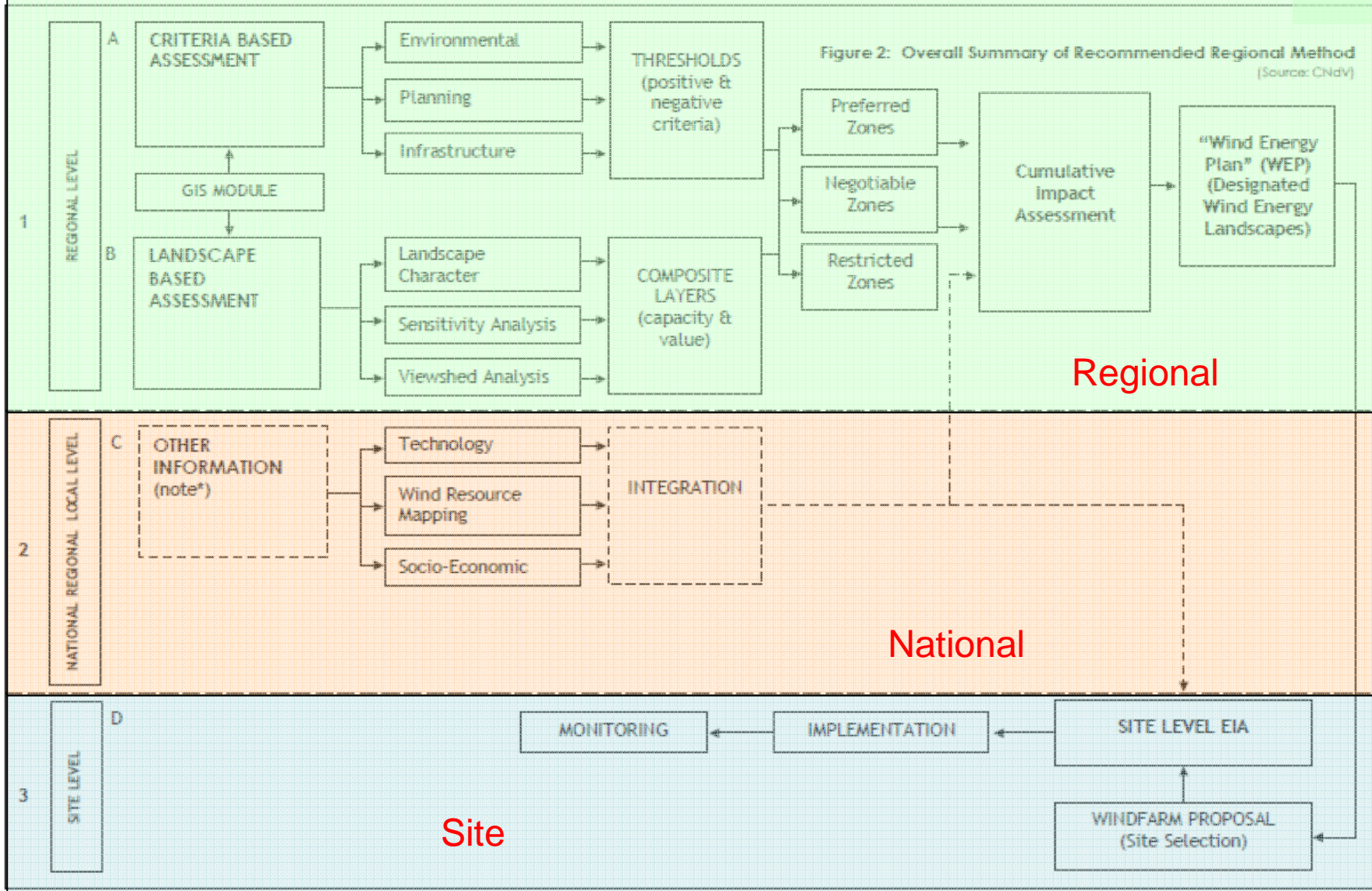


Figure 2: Overall Summary of Recommended Regional Method (Source: CNdV)

Figure 1 - Showing the 3 level approach to the authorization of a wind farm. In terms of the current 8 applications only Level 3 – Site Level is being complied with and Level 2 – National is partial and at this time Regional – Level 1 is not as yet available.

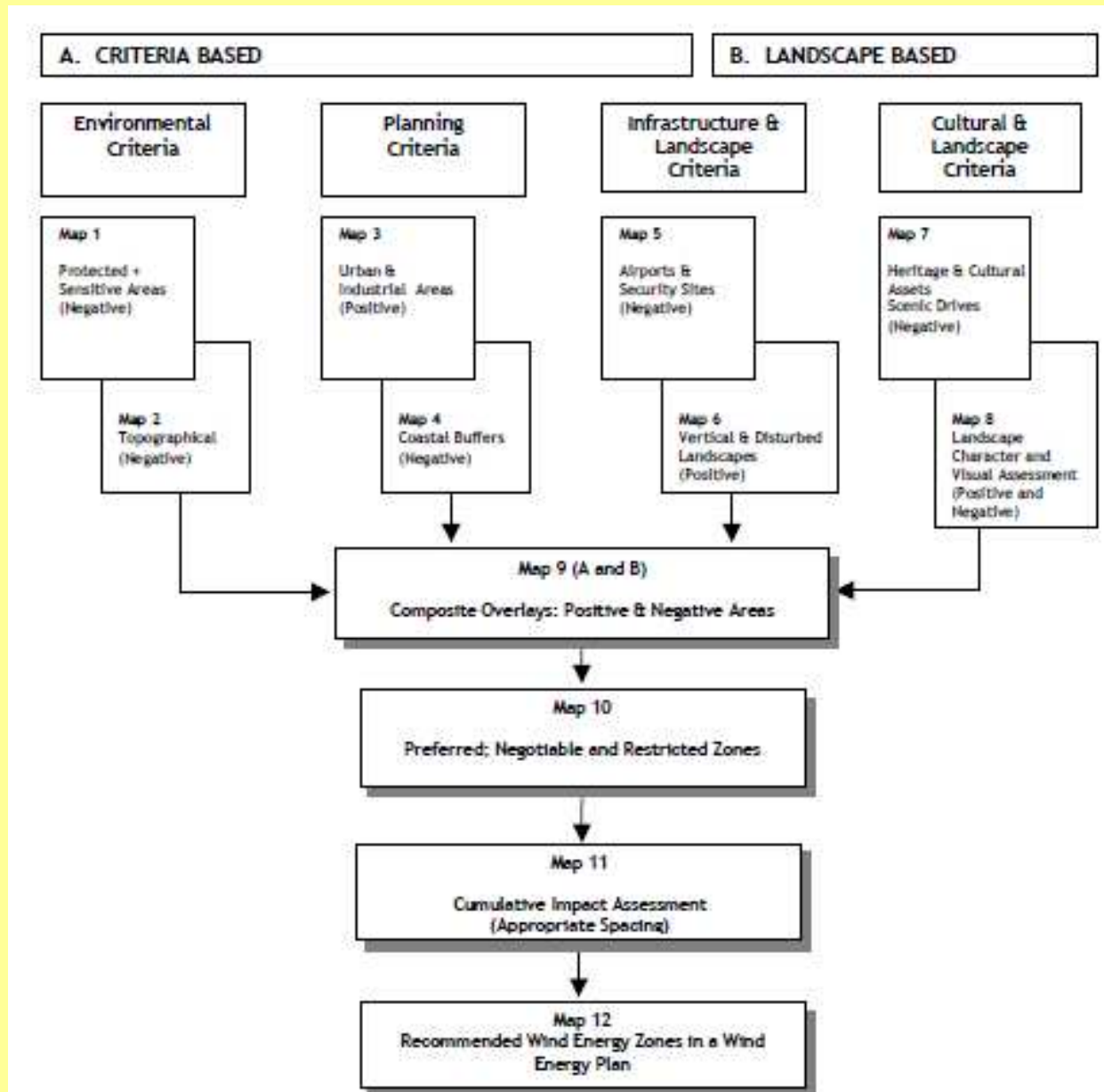


Figure 2 - illustrates in more detail the key criteria to be used when building up the 8 recommended map layers, with an indication of the recommended buffers extracted from Figure 3 to obtain a Preferred, Negotiated and Restricted wind farm zones within a Region

Figure 3 – This table is extracted from Wind Energy Landscape Study: Executive Summary - CNdV Africa May 2006; p XVI and provides thresholds to be used as guidelines for regional and site level assessments of wind farm installations.

No:	Criteria - distance from	Threshold Value	Notes / Data Source
1	Urban Areas	800m from urban edge	Urban edge lines assumed where necessary for rural towns with no formal urban edge. This distance adequately covers noise and flicker criteria.
2	Residential Areas (including rural dwellings)	400m	Threshold adequately covers noise and flicker criteria. All rural dwellings mapped from 1:50000 series, but these are not comprehensive or up to date.
3	Transport Routes		
3a	National roads	3 km	Should depend on scenic value of route can be reduced
3b	Local roads	500m	Review if high scenic value
3c	Provincial tourist route	4km	Statutory scenic drives
3d	Local tourist route	2.5km	Assumption made for local importance - could be reduced
3e	Railway Lines	250m	No distinction drawn between passenger and goods lines. Also rail corridors are usually visually disturbed. Safety consideration.
4	Transmission Lines		
4a	Major power lines	250m	Excluded gas lines (safety considerations)
4b	Cellphone masts & Communication towers	500m	no data available - should be mapped at local level
4c	Radio and navigation beacons	250m	digitized from aeronautical maps
5	Key Infrastructure		
5a	Airport with Primary radar	25km	To be confirmed with agency at local level
5b	Local airfield	2.5km	ditto above
5c	National security sites (Nuclear Power Station)	15km	To be reduced on confirmation with agency
6	National Parks & Provincial Nature Reserves	2km	Increased from 1km international standard
7	Protected Areas		
7a	Mountain catchments	500m	Not mapped. No defined info available
7b	Protected natural environment	2km	or as per statutory protection
7c	Private Nature Reserves (open space Zone II)	500m	Deal with at local level
7d	Heritage and Cultural sites	500m	Includes fossil sites national and provincial monument sites graves and memorials
8	Coast & Rivers		
8a	Distance to coastline of undisturbed scenic value	3 to 4km	Negotiable - may include areas of low scenic value
8b	Distance to rivers	500m	Only perennial rivers used at regional level
8c	Distance to 1:100 flood line	200m	Deal with at local level
9	Sensitive Areas (Avian)		
9a	Distance to major wetlands (RAMSAR sites)	2km	Assumed to increase bird safety
9b	Distance to local wetlands	500m	Bird safety
9c	Distance to bird habitats or avian flight paths	1km	Increased from 500m. Specific breeding sites to be dealt with at local level
10	Topographical		
10a	Elevation & slopes	Expl. 1:4 slopes & high mountain features	Map at a local level
10b	Distance from ridge lines	500m	Required and local scale
11	Vegetation		
11a	Distance from important indigenous / remnant vegetation areas.	locally determined	Mapped at a local scale.

WINDFARM APPLICATIONS WITHIN THE KOUGA REGION PART B

THE NEED FOR SITE GUIDELINES

INTRODUCTION:

Within the Kouga Municipality (EC108), several applications for the establishment of wind farms have been advertised for public participation over the last 8 months. The approximate locations of these wind farms are detailed on Map No: 14. It would appear that the Kouga Region falls within a 'favourable wind regime area' and it is expected that as time goes by, further applications for the erection of wind farms will be made.

The advent of such a renewable energy source is new and challenging to this region. The current wind farm applicants are attempting to fulfill their obligations in terms of current environmental legislation and the EIA's presented all focus on the immediate wind farm sites and their effect within the local context. This commentary attempts to utilize the criteria and thresholds used in the Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape (2006) in order to provide a comparison with the actual data presented by the applicants. This initiative is available via the following link: <http://www.capegateway.gov.za/eng/pubs>. This initiative runs into several parts and its current status in terms of its applicability in the Western Cape is not known. However, it does provide insight into the potential establishment of a base framework on which wind farms are to be established within a region. A full regional framework is not within the scope of this commentary but in the absence of any alternative this initiative is the best option to date.

BACKGROUND TO PROPOSED WINDFARMS IN KOUGA REGION:

The locations of the proposed wind farms are presented in Table 1, as at the time of writing this commentary. The farm Dieprivier Mond situated in the Kou-Kamma Municipality (EC109) is included in this commentary as it is only 17km from Humansdorp on the border of the Kouga (EC108) & Kou-Kamma municipalities. This table is summarized below:

1. There are 8 different wind farm project areas and their locations are shown on Map No: 14 (Kouga SDF; 2009 - Rural Development).
2. The project areas cover 71 farms with an estimated total area of 15,558 Ha or 155.8 km².
3. The total known wind turbines to be erected are estimated at 300 turbines, varying from a column height of 60 to 100 with a blade length of up to 60 meters in height.
4. The max power generation capacity is estimated in the region of 610MW with an average output between 120 and 200MW.
5. The future numbers of wind turbines for the applicant Windcurrent are not included in these calculations; however an estimate of 30 additional turbines is made for Broadlands and 15 for Zuurbron, providing a total estimate of 345 units

and a possible increase in maximum generation power to 700MW with an average output of 140 to 230MW

6. Of the 8 applications only the Jeffery's Bay wind farm EIA is reaching the final stages of submission.
7. 5 applications are at the Draft Scoping Report Stage.
8. 2 applications are Basic Impact Assessments for masts

SITE CRITERIA AND REGIONAL TRESHOLDS COMPARED TO CURRENT APPLICATIONS:

As the Jeffery's Bay wind farm is the most advanced in the EIA process, this wind farm is used in this discussion. However, the points discussed are applicable to all other applicants.

Site Level:

Table 2 (2 pages) lists criteria to be covered in a typical wind farm application and are discussed with reference to the Jeffery's Bay wind farm:

1. Of the 50 criteria listed 14 (28.57%) are within the 'positive category'. This indicates that the report has provided sufficient information to adequately answer these criteria.
2. Of the 50 criteria listed 15 (30.61%) fall within the 'query category'. This is interpreted as there being insufficient information in the report to adequately satisfy these criteria. These criteria it is hoped can be satisfied with a written reply to these comments on Table 2.
3. Of the 50 criteria listed 20 (40.8%) cannot be satisfied from the information in the report. In order to explain the high 'no information' component further clarity is provided:
 - a. 2 criteria relating to the regional context cannot be evaluated due to the absence of a regional wind farm development plan.
 - b. 3 criteria related to ownership and land use issues are not addressed in the report. The view is held that some sort of agreement must have been entered into between the landowner and applicant and it would be a requirement to place this agreement into the public domain as the long term viability of any project will depend on adequate legal protection being provided to all parties. In addition this wind farm is a potential national energy resource. Therefore the same protection should be provided to the state. The third criterion relates to zoning and this must be sorted out in terms of current legislation within a regional and national context.
 - c. 15 criteria with no information relate to the turbine technical specifications, their specific layout, and substation and transmission corridors positions on the wind farm. This detail is vital to the determination of impacts and their mitigation, as the specialist studies must refer to specifics not generalizations. For instance the Visual Impact Assessment (a crucial variable) cannot be a valid representation until the

exact layout and turbine specifications (height and positions) are determined.

Regional Level: Table 3 lists thresholds used in the Western Cape initiative. A comparison of these thresholds with the wind farms in the area is presented in Table 4 (In many cases due to the status of these applications information is not available therefore some thresholds cannot be adequately answered). Other demographic information was derived from the Kouga SDF (2009). Areas of concern are blocked in 'Red' and discussed below:

- a. **Urban & Residential Areas:** The desired spatial form for Jeffrey's and Bay, Humansdorp (Kouga SDP; 2009, Maps 13A, B & C) has not been taken into account with regard to visual impact and urban edge for the following wind farms:
 - Jeffery's Bay wind farm - Jubilee Estate.
 - Jeffery's Bay wind farm - Cob Creek Estate.
 - Broadlands - Kwanomzamo Township.
 - Happy Valley - Kruisfontein Township.
- a. **Transport Routes:** Although these thresholds do not seem to figure prominently in the present applications the following areas are of importance;
 - i. The N2 national road which passes through the Jeffery's Bay wind farm. If the threshold of 3km was applied a large portion of this wind farm would be excluded. It is also important to note that the portion of the N2 that passes through this wind farm has a 'high accident rating'.
 - ii. The N2 also passes through Happy Valley and it would be appropriate to apply the same threshold at this point.
 - iii. The thresholds provide setback lines for official tourist routes. As tourism is an important component of the economy in this region, similar thresholds should be applied in the case of all wind farm applications. It is important that tourism routes are formalized by the Kouga Municipality, as is required by law.
- b. **Transmission Lines:** These thresholds should be applied to the present applications, including the possible impact of the proposed transmission line to and from Thyspunt. The impact of transmission lines from individual sites has not been adequately addressed.
- c. **Key Infrastructure:** All applicants should be aware of possible restrictions for key infrastructure such as airports, and national security. If the Thyspunt Nuclear facility is built then the issue of the 15km or 16km radius must be taken into account. If St Francis Bay in time decides to upgrade the airport what will the impact on the Red Cap Eastern Sector site be?
- d. **National Parks, Provincial Nature Reserves & Protected Areas:** Each application must take full cognisance of these. These are noted on Table 4 for each wind farm.
- e. **Coast, Rivers, and Wetlands:**
 - Distance to coastline applies to Redcap – Western & Eastern Sectors.

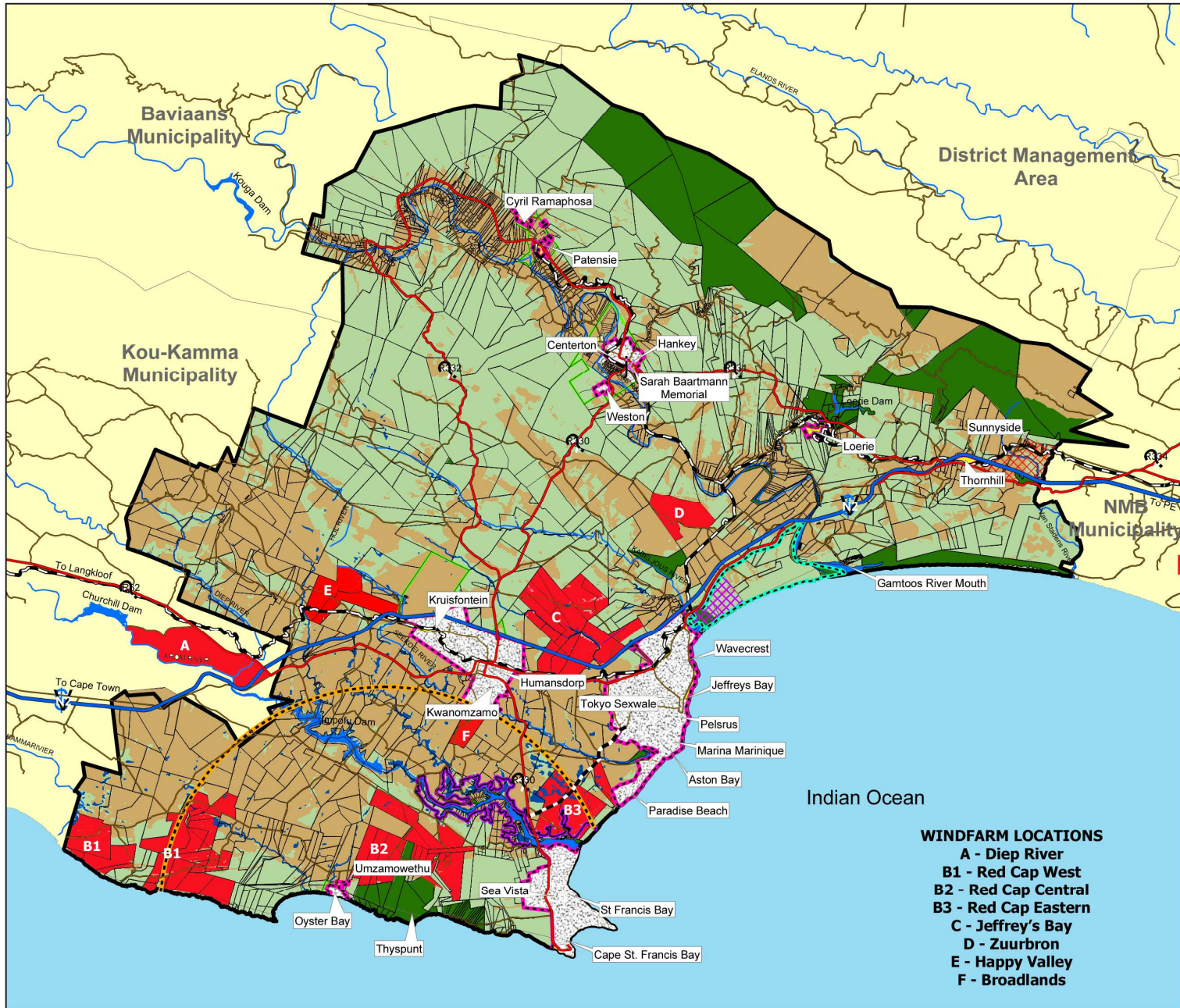
- No distinction is made for major or minor rivers. Broadlands and Redcap Eastern Sector wind farms are situated near major rivers.
 - The wetlands areas will most affect the Redcap Central and Eastern Sectors.
- f. **Topographical & Vegetation:** Both Happy Valley and Jeffrey's Bay will have possible topographical issues relating to slope and ridge lines.
- h. **Bio-diversity Regional:** Map No: 9 represents the official Bio-diversity of the Kouga Region with the 8 proposed wind farms as an overlay. Table 5 provides guidelines as to how areas are to be developed within the region. In most cases it is clear from the Kouga SDF that large areas situated within the wind farms should be managed for biodiversity conservation only with limited, small-scale tourism amenities. The implication is that these areas are not suitable for wind farms.
- i. **Visual Impacts Regional:** As the proposed wind farms are all in different stages of the EIA process it is pertinent to note that when 8 wind farms are viewed collectively covering an area of some 15,500 HA with associated infrastructure (buildings, workshops, and both the above and below ground provision of cabling, substations, burrow pits etc), the prime tourist coastal area will be irrevocably altered.

Prime resorts such as St Francis Bay will have a 240° vista interspersed with structures 80 to 100m high with a blade length of 60m. Humansdorp will also have a 240° vista of turbines. Paradise Beach will also be significantly affected. Jeffery's Bay and Oyster Bay are affected but, to a lesser extent. In every case the visual experts have attempted to satisfy this issue, but it does not negate the reality that these wind turbines will have a medium to high impact on the landscape for the lifetime of these projects.

DISCUSSION & CONCLUSIONS:

1. All the Kouga wind farms state that they will feed into the national grid. As employment opportunities on these wind farms are limited, would it not be of greater benefit if the farms situated in brownfield urban areas fed directly into the local urban grid? This will go along way to negate any negativity from communities arising from the visual impact and proximity of these wind farms to the urban edge.
2. A concern is the absence of any detailed layout plan revealing turbine specifications, their exact position, exact height, and associated infrastructure such as roads, buildings, cabling, overhead connections to the site substations and grid. The reasons provided this absence is that until specific site wind data is available these specifications cannot be determined. This negates the validity of some of the specialist reports such as the visual impact assessment, and those dealing with sensitive areas. How can one assess the impacts when data specific to the validity of these specialist reports is absent? It is clear that there are too many unknowns in the current applications such as mentioned above.

3. It is imperative that the wind data collected is site specific, before any application is considered.
4. The recommendation in the Western Cape guidelines that wind farms in rural areas be concentrated in intensive clusters at intervals of 50km is supported. This would provide protection to the landscape from wind-farm sprawl. A wind farm of 50 turbines will require in excess of 300 hectares (3 square kilometers). The capacity of the Kouga region to absorb such clusters, without major negative visual and landscape impact, is limited. The area of the Western Cape initiative is 5340 km² and on a 30km grid 8 small wind farms are proposed. In the Kouga region the wind farms are situated over a total area of 2500 km² and we have an application for 8 wind farms. Is this not overkill in trying to fit all these wind farms into an area 46% smaller in size to the Western Cape? There is no way that the Kouga area can accommodate 345 turbines without catastrophic degradation of the landscape.,
5. The Kouga Spatial Development Framework (2009) has been ignored by all applicants and this SDF has made no provision for wind farms.
6. It is clear that these wind farm applications have not adequately addressed specific site requirements and as a result diminishes the validity of stated impacts and their mitigation, thus leading to the conclusion that they be rejected until such time as proper scoping reports can be produced.
7. There is clearly an urgent need for policy guidelines at all levels for the handling of wind farm applications, with very specific criteria laid down and enforced. Until these are in place, it is proposed that no authorizations to construct wind farms be considered.



KOUGA MUNICIPALITY

RURAL DEVELOPMENT

- National Roads
- Secondary Roads
- Minor Roads
- Railway Line
- Town Allotment
- Rivers
- Dams
- Urban Area
- Thyspunt 16km Buffer Line
- Urban Edge
- Kromme River Setback Line
- GAMKAB SDF Area Boundary
- Proposed Coastal Road
- KDA Mandate Area
- Thornhill/Sunnyside Node
- Existing and Potential Agricultural
- Protected Areas
- Critical Biodiversity Areas
- Wetland
- Windfarm locations

KOUGA SPATIAL DEVELOPMENT FRAMEWORK



Date: December 2009
 Ref: D/GIS/Cacadu DM/Kouga/SDF/Maps/Final
 Created by Franco Cilliers



MAP NO.14

- WINDFARM LOCATIONS**
- A - Diep River
 - B1 - Red Cap West
 - B2 - Red Cap Central
 - B3 - Red Cap Eastern
 - C - Jeffrey's Bay
 - D - Zuurbron
 - E - Happy Valley
 - F - Broadlands

Table 1 – Proposed wind farms in the Kouga Region.

5 Applications – Draft Scoping Reports for comment – Blue

2 Applications – Basic Impact Assessment for comment – Brown.

1 Application – Draft Environmental Impact Assessment for comment – Yellow.

DATE of Application	Status	Applicant:	DEA Ref:	FARMS;	ERF No's:	SIZE HA	No of Turbines	Turbine Height m	Capacity MW	Mun.
Jul-10	Draft Scoping Regport for comment	VentuSA Energy Corp (Pty) Ltd	12/12/20/1863	Dieprivier Mond	358/4/16; 891	740	50	90	100	EC109
Jul-10	Draft Scoping Regport for comment	VentuSA Energy Corp (Pty) Ltd	12/12/20/1861	Happy Valley	810/1	500	15	90	30	
Jun-10	Draft EIA for comment	Mainstream SA	12/12/20/1718	Jeffrey's Bay	15 farms	3000	85	120	180	
Jun-10	Basic Impact Assessment for comment	Windcurrent SA	12/12/20/1752	Broadlands	688	1138	1 mast	80	n/a	
Jun-10	Basic Impact Assessment for comment	Windcurrent SA	12/12/20/1753	Zuurbron	845	825	1 mast	80	n/a	
Apr-10	Draft Scoping Regport for comment	Redcap Invest.	12/12/20/1756	Western Sector	25 farms	4578	50 to 150	80 to 90	100 to 300	
Apr-10	Draft Scoping Regport for comment	Redcap Invest.	12/12/20/1756	Central Sector	22 farms	3070				
Apr-10	Draft Scoping Regport for comment	Redcap Invest.	12/12/20/1756	Eastern Sector	4 farms	1734				
						15585				

Table 2/1 – Criteria for specific to wind farm EIA submission: Jeffrey’s Bay

	Location		Specific Criteria for Wind farms	Jeffery's Bay wind farm	Comment
1	REGIONAL CONTEXT	a	A clear demonstration of how the proposed site fits into a Regional Plan for wind energy development must be presented	X	No regional plan exists
2	SITE INFORMATION	a	Location of the site - to be described and mapped on a locality indicating where the site fall on RWDP.	X	As no regional plan exists this information cannot be assessed.
		b	Area - This the area of the site, or sites if not contiguous separate areas must be given for the cadastral area of the property and the wind farm site itself.	√	OK - a list of all the farms and the owners should be supplied.
		c	The property must be described as per Title Deed description.	X	No information provided on this item
		d	The ownership of the site must be described in terms of freehold, leasehold or other contractual relationship with the property	X	On the assumption that most wind energy developments will be made outside of local authority town planning schemes (where a host of different zoning categories would apply), it is anticipated that any wind energy development would require a rezoning to either: Industrial Zone 1 or Special Zone as defined in the Scheme Regulations in terms of Section 8 of LUPO. Government Gazette (December 1988):
		e	Existing land uses – the existing land uses on the wind farm site and the property as a whole must be described and mapped at an appropriate scale	?	Not sure on this one should look at surrounding areas in terms of Kouga SDP 2009 and the desired spatial form.
		f	Built form – all buildings and major services should be described and mapped at the appropriate scale, inclusive of photographs	√	Not provided
		g	Zoning – all zoning in terms of Ordinances must be indicated.	?	Not provided
		h	Any land-use designation in terms of Draft or Statutory Land Use Plans must be indicated	X	Not provided
		i	Any historical or heritage information applicable.	√	
3	SITE ENVIRONMENT	a	A detailed description of the natural environment of the site must be provided.	√	
		b	Topography – contours to 1m intervals, slopes and landforms at appropriate scale	?	One cannot gauge the real topographical features of this site without contour map showing 1m intervals
		c	Rivers and streams – indicating which are perennial and flood lines in the case of major rivers (may require a specialist study)	?	Ok but don't like desktop studies.
		d	Dams and wetlands – constructed dams (all sizes) and all forms of wetlands (may require specialist study)	√	
		e	Soils and underlying geology (may require specialist study)	√	
		f	Natural vegetation (may require specialist study)	√	CRITICAL BIODIVERSITY AREA 1 and 2a
		g	Avian species with attention to nesting and migratory patterns (will require specialist study if relevant)	?	The studies of avian species is just too localised and really in order to gain a better understanding of this subject the wider regional context should be viewed.
		h	Faunal species with attention to special habitats (may require specialist study)	√	

Table 2/2 – Criteria for specific to wind farm EIA submission: Jeffery's Bay

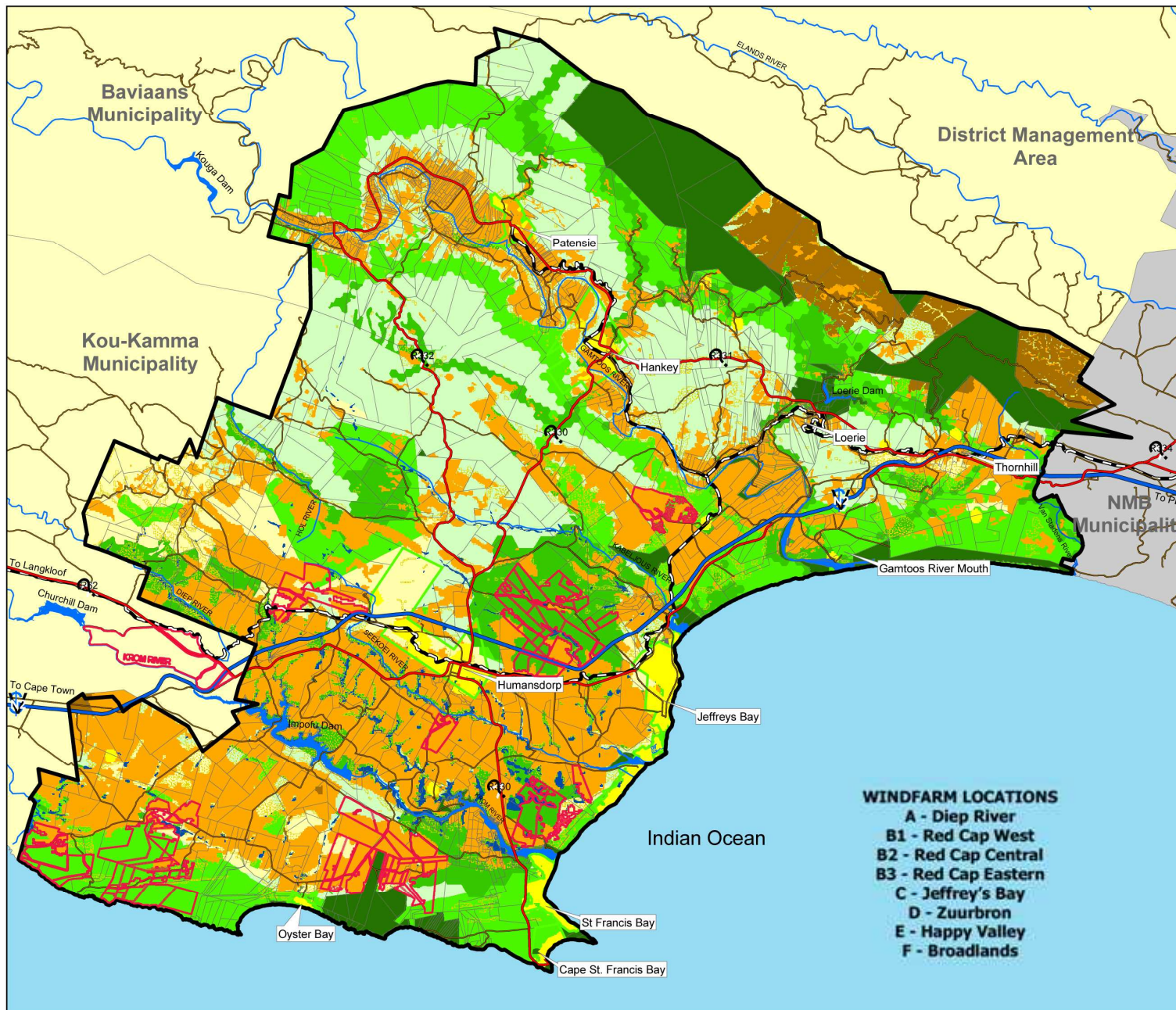
4	VISUAL AND CRITERIA BASED ANALYSIS	a	This is an area surrounding the proposed site in which a mapping exercise must be undertaken in terms of the criteria identified as both dependent on the nature of the wind farm. The study area may be expanded or reduced by DEA&DP depending on local conditions.	?	You have missed out of the Kouga 2009 desired spatial form - developments such as Jubilee and Cob Creek
		b	Small wind farms – turbines of less than 750kW and 10 in number – 15 kilometer radius	n/a	I am surprised that this alternative was not included in the study??
		c	Large wind farms – 30 kilometer radius	√	
		d	Viewshed analysis – within a zone of visual influence (ZVI) within a 20- 30km radius dependent on turbine sizes	?	Really does not tell us very much just that our views are going to be messed up and there is nothing we can do about it? Is this a Level 4 Visual assessment?
		e	Shadow flicker – on all main / provincial roads (other than internal site access roads) and any residence within a 500m radius of the turbines	√	
		f	Visually significant points – ridgelines and landforms within the study area	?	No ridgelines - your tentative layout holds no real planning or sensitivity.
		g	Key viewpoints within study area – from which visually significant points and wind farm will be visible	?	This Windfarm is going to have a significant impact on a high tourist area. Some sort of sensitivity must be adopted or we will end up like Palmerston North in New Zealand.
		h	Photomontages of turbines on the proposed Windfarm site – at the correct scale, colour and layout	?	Not qualified on this one, don't see any SANS mentioned
		i	Cumulative impact – of all other major industrial developments, or other wind farms within the study area	X	We have 8 others in the area and more which need to be accounted for?
5	TECHNICAL DATA	a	The following technical data must be submitted:		
		b	Total planned capacity of the wind farm (in phases if necessary)	√	Not exact - waiting for wind data
		c	Turbine manufacturer	X	Not sure
		d	Turbine type, output and model	X	not mentioned
		e	Tower type	X	not mentioned
		f	Hub height	X	not sure
		g	Rotor Diameter	X	Not sure
		h	Total tip height	X	Not sure
		i	Foundation details	X	We know they will be big?
6	WIND FARM LAYOUT	a	With reference to Appendix D and Section 4 above, the following information must be provided:		
		b	Site plan - mapped to appropriate scale	?	not specific enough
		c	Layout configuration – description and footprint analysis	?	not mentioned
		d	Exact position of turbines	X	not mentioned
		e	Turbine base heights (plan to note meters above sea level (MSL) for each turbine foundation)	X	not mentioned
		f	Substations	X	mentioned but where?
		g	Other buildings	X	mentioned but where?
		h	Access Roads	X	mentioned but where?
7	MAJOR SUBSTATION AND TRANSMISSION CORRIDORS	a	In the case of larger wind farms (where applicable), the following must be indicated:		
		b	Major substations – description and mapped to 1:10 000 scale, or as appropriate (to 1:50 000)	X	mentioned but where?
		c	• New transmission corridors – mapped to 1:10 000 scale, or as appropriate (to 1:50 000)	X	mentioned but where?
8	SOCIO-ECONOMIC ASSESSMENT	a	Information on anticipated local job creation and local economic multipliers, procurement policies etc. must be provided and should form part of the overall assessment.	?	there must be more than a handful of permanent jobs or some other offset to the community
9	ENVIRONMENTAL MANAGEMENT	a	The EMP will be a fundamental component of any approval and must address:		
		b	Minimization of impact on the landscape	√	What about the barrow pits?
		c	Minimization of impact on avian and faunal species	?	This needs more detail and work
		d	Minimum disturbance of natural vegetation and wetlands	?	Is a desktop analysis enough?
		e	Minimum disturbance of cultural factors	√	
		f	Remediation of degraded vegetation and soils	√	

Table 3 – This table is extracted from Wind Energy Landscape Study: Executive Summary - CNdV Africa May 2006; p XVI and provides thresholds to be used as guidelines for regional and site level assessments of wind farm installations.

No:	Criteria - distance from	Threshold Value	Notes / Data Source
1	Urban Areas	800m from urban edge	Urban edge lines assumed where necessary for rural towns with no formal urban edge. This distance adequately covers noise and flicker criteria.
2	Residential Areas (including rural dwellings)	400m	Threshold adequately covers noise and flicker criteria. All rural dwellings mapped from 1:50000 series, but these are not comprehensive or up to date.
3	Transport Routes		
3a	National roads	3 km	Should depend on scenic value of route can be reduced
3b	Local roads	500m	Review if high scenic value
3c	Provincial tourist route	4km	Statutory scenic drives
3d	Local tourist route	2.5km	Assumption made for local importance - could be reduced
3e	Railway Lines	250m	No distinction drawn between passenger and goods lines. Also rail corridors are usually visually disturbed. Safety consideration.
4	Transmission Lines		
4a	Major power lines	250m	Excluded gas lines (safety considerations)
4b	Cellphone masts & Communication towers	500m	no data available - should be mapped at local level
4c	Radio and navigation beacons	250m	digitized from aeronautical maps
5	Key Infrastructure		
5a	Airport with Primary radar	25km	To be confirmed with agency at local level
5b	Local airfield	2.5km	ditto above
5c	National security sites (Nuclear Power Station)	15km	To be reduced on confirmation with agency
6	National Parks & Provincial Nature Reserves	2km	Increased from 1km international standard
7	Protected Areas		
7a	Mountain catchments	500m	Not mapped. No defined info available
7b	Protected natural environment	2km	or as per statutory protection
7c	Private Nature Reserves (open space Zone II)	500m	Deal with at local level
7d	Heritage and Cultural sites	500m	Includes fossil sites national and provincial monument sites graves and memorials
8	Coast & Rivers		
8a	Distance to coastline of undisturbed scenic value	3 to 4km	Negotiable - may include areas of low scenic value
8b	Distance to rivers	500m	Only perennial rivers used at regional level
8c	Distance to 1:100 flood line	200m	Deal with at local level
9	Sensitive Areas (Avian)		
9a	Distance to major wetlands (RAMSAR sites)	2km	Assumed to increase bird safety
9b	Distance to local wetlands	500m	Bird safety
9c	Distance to bird habitats or avian flight paths	1km	Increased from 500m. Specific breeding sites to be dealt with at local level
10	Topographical		
10a	Elevation & slopes	Expl. 1:4 slopes & high mountain features	Map at a local level
10b	Distance from ridge lines	500m	Required and local scale
11	Vegetation		
11a	Distance from important indigenous / remnant vegetation areas.	locally determined	Mapped at a local scale.

Table 4 – Comparative table showing Thresholds used in the Western Cape to determine Regional Guidelines applied to current applications.

No:	Criteria - distance from	Threshold Value	Jeffrey's Bay	Happy Valley	Redcap Western Sector	Redcap Central Sector	Redcap Eastern Sector	Broadlands	Zuurbron
1	Urban Areas	800m from urban edge	Refer Kouga 2009 SDP and Map No:14	Refer Kouga 2009 SDP Map No: 14	Refer Map No: 14	Umzamazowethu refer Map No:14	St Francis Bay	Kwanomzamo and Humansdorp	Kabeljous River Mouth
2	Residential Areas (including rural dwellings)	400m	Missed out Jubilee and Cob Creek estate in Kabeljous River.	Kruisfontein Township	Refer Map No: 14	As above	Krom River Mouth Shareblock & Osbosch	Kwanomzamo and Humansdorp	Kabeljous River Mouth
3	Transport Routes								
3a	National roads	3 km	Issue with high accident area and setback line	Should be taken into account	n/a	n/a	n/a	n/a	N2
3b	Local roads	500m	To be taken into account	Should be taken into account	Should be taken into account	Refer Thyspunt access road	MR381	MR381	R 103
3c	Provincial tourist route	4km	Not determined	Not determined	Not determined	Not determined	Proposed Jeffrey's Bay to St Francis Road cuts through this site	MR381	R 103
3d	Local tourist route	2,5km	Not determined	Not determined	Not determined	Not determined	MR381	MR381	R 103
3e	Railway Lines	250m	YES	YES	n/a	n/a	n/a	n/a	YES
4	Transmission Lines								
4a	Major power lines	250m	On layout plan	Cant find them on map	Cant find them on map	Thyspunt transmission lines	melkhout to Oyster bay Rd	Cant find them	Detailed on map
4b	Cell phone masts & Communication towers	500m	On layout plan	Humansdorp	Oyster Bay	Oyster Bay	St Francis Bay	Humansdorp?	Jeffrey's Bay
4c	Radio and navigation beacons	250m	Not sure if there are any?	Not sure if there are any?	Oyster Bay ?	Oyster Bay	not sure	Not sure if there are any?	Not sure?
5	Key Infrastructure								
5a	Airport with Primary radar	25km	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5b	Local airfield	2,5km	Humansdorp Airfield	n/a	n/a	Thyspunt?	St Francis Airpark	Humansdorp?	Jeffrey's Bay?
5c	National security sites (Nuclear Power Station)	15km	Not affected by Thyspunt	Not affected by Thyspunt	could be affected by Thyspunt within 15km radius	Thyspunt within 15km radius of Thyspunt	within 15km radius of Thyspunt	Within 15km Thyspunt radius	n/a
6	National Parks & Provincial Nature Reserves	2km	Kabeljous Park & KDA development area	Not sure if there are any?	not sure if there are any	Thyspunt?	Aston Bay	not known	Kabeljous River Mouth
7	Protected Areas		Not known	Not known	Not known	Thyspunt transmission lines and conservancy	Cape St Francis Conservancy	not known	KDA area
7a	Mountain catchments	500m	yes	yes	not sure	n/a	n/a	not known	n/a
7b	Protected natural environment	2km	Biodiversity area 1 and 2a	Predominantly cultivated	Cultivated and biodiversity area 2a	Cultivated and Sand River Dune bypass system	Krom River	Krom River?	Kabeljous River
7c	Private Nature Reserves (open space Zone II)	500m	Possibly areas of Cob Creek Estate	Not known	Not known	Not known	Sand River Nature Reserve	not known	not known
7d	Heritage and Cultural sites	500m	Might be something in Humansdorp?	Not known	How far from Klasiess River caves?	Not known	Osbosch	not known	KDA area
8	Coast & Rivers								
8a	Distance to coastline of undisturbed scenic value	3 to 4km	n/a	n/a	Applicable to this site	Applicable to this site	Applicable to this site	n/a	n/a
8b	Distance to rivers	500m	not sure if there are major rivers on site	what is the importance of the local river	n/a	Not known	Krom; Huis and Soutpan	Krom and Seekoei rivers	OK
8c	Distance to 1:100 flood line	200m	Not determined	Not determined	n/a	Not known	Applicable to this site	not known	Ok
9	Sensitive Areas (Avian)								
9a	Distance to major wetlands (RAMSAR sites)	2km	n/a	n/a	n/a	Sand River Northern Dune bypass system could be a future RAMSAR site	All over the area - Soutpan, Krom River Huis river and Osbosch	n/a	not known
9b	Distance to local wetlands	500m	local wetland	there are local wetlands	not sure if there are any	many in dune system	All over the area - Soutpan, Krom River Huis river and Osbosch	not known	not known
9c	Distance to bird habitats or avian flight paths	1km	possible areas specialist study not clear on this issue.	Not determined	Not determined	Not determined	Paradise/Aston Bay; Krom River; Soutpan and most of the coastal plain	not known	not known
10	Topographical								
10a	Elevation & slopes	Expl. 1:4 slopes & high mountain features	Not determined	there are slopes on this site	no	Not sure	Small river valleys	Krom & Seekoei rivers	not known
10b	Distance from ridge lines	500m	Not determined	there are ridge lines on this site	not sure	Not sure	n/s area is flat	flat area	flat area?
11	Vegetation								
11a	Distance from important indigenous / remnant vegetation areas.	locally determined	Biodiversity area 1 and 2a - Map 9	Cultivated land and Biodiversity areas 2a,2b and 3 Map 9	Biodiversity area 2a	Cultivated and Sand River Dune bypass system	Biodiversity area 2a	cultivated	Cultivated



KOUGA MUNICIPALITY

BIO-DIVERSITY

- National Roads
- Secondary Roads
- Minor Roads
- Railway Line
- Town Allotment
- Rivers
- Dams
- Urban Area

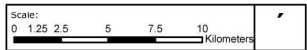
- Biodiversity**
- Cultivation
 - Plantations
 - Degraded
 - Protected Areas
 - Critical Biodiversity Area 1
 - Critical Biodiversity Area 2a
 - Critical Biodiversity Area 2b
 - Critical Biodiversity Area 3
 - Estuaries and Wetlands

KOUGA SPATIAL DEVELOPMENT FRAMEWORK



- WINDFARM LOCATIONS**
- A - Diep River
 - B1 - Red Cap West
 - B2 - Red Cap Central
 - B3 - Red Cap Eastern
 - C - Jeffrey's Bay
 - D - Zuurbron
 - E - Happy Valley
 - F - Broadlands

Date: December 2009
 Ref: D/GIS/Cacadu DM/Kouga/SDF/Maps/Final
 Created by Franco Cilliers



MAP NO.9

Table 5 - Guidelines for Urban Development Code Kouga Municipality.

Windfarm Name	Bio-diversity placing
<i>Dieprivier Mond</i>	<i>n/a as this wind farm falls within EC109</i>
<i>Happy Valley</i>	<i>Mix of predominantly cultivated and CRITICAL BIODIVERSITY AREA 2a, 2b and 3.</i>
<i>Jeffrey's Bay</i>	<i>Predominantly CRITICAL BIODIVERSITY AREA 1 and 2a</i>
<i>Broadlands</i>	<i>Predominantly cultivated lands</i>
<i>Zuurbron</i>	<i>Predominantly cultivated lands</i>
<i>Western Sector</i>	<i>Predominantly CRITICAL BIODIVERSITY AREA 2a</i>
<i>Central Sector</i>	<i>Predominantly cultivated lands & CRITICAL BIODIVERSITY AREA 3</i>
<i>Eastern Sector</i>	<i>Predominantly CRITICAL BIODIVERSITY AREA 1</i>

Guidelines for Urban Development Code	Guideline
National Parks , Provincial, Local, and Private Nature Reserves	To be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate at some sites.
Critical Biodiversity Area 1	To be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate at some sites.
Critical Biodiversity Area 2a	To be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate at some sites.
Critical Biodiversity Area 2b	To be managed for biodiversity conservation only. Limited, small-scale tourism amenities appropriate at some sites.
Critical Biodiversity Area 3	Urban development appropriate in many areas, but loss of habitat must be compensated for by corresponding allocations of land for biodiversity conservation purposes.
Estuary/River/Wetland	To be managed for biodiversity conservation only. No development to be allowed on immediate river banks, floodplains or other wetlands. As a general rule, no development should take place within 50 m of estuaries, rivers or other wetlands, and no development below the 5m contour of estuaries.
GAENP Visual Interface Zone	Urban development appropriate if consistent with the underlying category. However, land use must not affect visual qualities and experiences associated with the GAENP beyond a minimum desirable state.
Degraded lands	Urban development may be possible on degraded CRITICAL BIODIVERSITY AREA 3 land, depending on the extent and type of degradation. All degraded CRITICAL BIODIVERSITY AREA 1, 2a & 2b land should be restored or rehabilitated.
Agricultural lands	Urban development is appropriate (from a biodiversity perspective), unless the agricultural land serves as an important linkage between adjacent protected areas, CRITICAL BIODIVERSITY AREA 1, 2a or 2b areas.
Urban development	Further urban development is appropriate.

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY
WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston of Sustainable Futures ZA**

Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:	BART LOGIE + Caryl Logie		
Organisation & Designation:	FOURCADE BOTANICAL GROUP, CPW + St Francis		
Postal Address:	P O BOX 435 conservancy		
	ST FRANCIS BAY		
Telephone:	042 294 0588	Cellphone:	
Fax:		E-mail:	BART.LOGIE@GMAIL.COM

Would you like to register as an interested and affected party (I&AP)? YES NO
(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

BOTANICAL / HISTORICAL SITES.

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

① SHOULD FOR ANY REASON THE NUCLEAR POWER STATION AT THYSPUNT NOT GO AHEAD. WHAT LIKELIHOOD IS THERE OF THE WIND FARMS BEING DEVELOPED?
② WHAT IS BEING DONE REGARDING THE RECORDING OF ARCHEOLOGICAL/HISTORICAL SITES? WHERE WILL THIS INFO BE AVAILABLE?

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:		Cellphone:	
Fax:		E-mail:	

What is your preferred language of correspondence? (please tick the relevant box) English Afrikaans



This assessment is being conducted on behalf of Renewable Energy Investments South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY
WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

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Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:	Bev Mortimer		
Organisation & Designation:	St Francis Chronicle		
Postal Address:	PO Box 343		
	St Francis Bay		
Telephone:	6312	Cellphone:	
Fax:	042 2941964	E-mail:	sfca@stfrancis.co.za

Would you like to register as an interested and affected party (I&AP)? YES NO
(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

*Newspaper owner & Editor
- need to inform Kouga readers*

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

(Empty box for questions, views or concerns)

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:		Cellphone:	
Fax:		E-mail:	

What is your preferred language of correspondence? (please tick the relevant box)

English
Afrikaans



This assessment is being conducted on behalf of Renewable Energy Investments South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

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WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

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Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:

Godfried POTGIETER

Organisation & Designation:

Fourcade Botanical Group (Member)

Postal Address:

P.O. Box 514 ST FRANCIS BAY

6312

Telephone:

042 2941 301

Cellphone:

083 261 8604

Fax:

E-mail:

potgieterga@telkomsa.net

Would you like to register as an interested and affected party (I&AP)? YES NO

(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

Mainly Flora and Birds

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:

Organisation & Designation:

Postal Address:

Telephone:

Cellphone:

Fax:

E-mail:

What is your preferred language of correspondence? (please tick the relevant box)

English

Afrikaans



REISA
Renewable Energy Investments South Africa

This assessment is being conducted on behalf of Renewable Energy Investments South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston of Sustainable Futures ZA**

Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:	REWIN DOLE		
Organisation & Designation:	ST FRANCIS URWANE TRUST		
Postal Address:	PO BOX 14, ST FRANCIS BAY 6312.		
Telephone:	042 240516	Cellphone:	NA
Fax:	NA	E-mail:	NA MEDDOP4 PLEASE.

Would you like to register as an interested and affected party (I&AP)? YES NO
(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

ENVIRONMENTAL IMPACT ON OUR BIODIVERSE RESERVE AREA.

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:		Cellphone:	
Fax:		E-mail:	

What is your preferred language of correspondence? (please tick the relevant box) English Afrikaans



This assessment is being conducted on
behalf of Renewable Energy Investments
South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY
WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston of Sustainable Futures ZA**

Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:	VALDA BARRATT		
Organisation & Designation:			
Postal Address:	PO BOX 263		
	ST FRANCIS BAY 6312		
Telephone:		Cellphone:	084 921 5784
Fax:		E-mail:	valda@barratt.co.za

Would you like to register as an interested and affected party (I&AP)? YES (please tick the relevant box) NO

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

Concerned about fauna lives
Impact on bird life, especially terrestrial birds that
are already endangered - Concern about botanical
Visual impact, issues
Noise
Question the viability of it all

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:		Cellphone:	
Fax:		E-mail:	

What is your preferred language of correspondence? (please tick the relevant box) English Afrikaans



This assessment is being conducted on
behalf of Renewable Energy Investments
South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY
WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston** of **Sustainable Futures ZA**

Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:

Organisation & Designation:

Postal Address:

Telephone:

Fax:

D.E. MARTIN	
SUMMIT PROJECTS (PTY) LTD, -DIRECTOR	
P.O. BOX 19316	
LINTON GRANGE 6015	
041-3602935	Cellphone: 0828951529
041-3609831	E-mail: dennismar@mweb.co.za

Would you like to register as an interested and affected party (I&AP)? YES NO
(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

CONSTRUCTION CONTRACTOR

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:

Organisation & Designation:

Postal Address:

Telephone:

Fax:

	Cellphone:	
	E-mail:	

What is your preferred language of correspondence? (please tick the relevant box)

English
Afrikaans



This assessment is being conducted on behalf of Renewable Energy Investments South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

**ENVIRONMENTAL IMPACT ASSESSMENT PROCESS: PROPOSED HAPPY VALLEY
WIND ENERGY FACILITY ON A SITE NEAR HUMANSDORP**

PUBLIC INVOLVEMENT PROCESS REPLY FORM

Return completed reply form to: **Shawn Johnston of Sustainable Futures ZA**

Fax: **086 510 2537**

Phone: **083 325 9965**

E-mail: **swjohnston@mweb.co.za**

Postal Address: **PO Box 749, Rondebosch, Cape Town, 7701**

Please provide your complete contact details:

Name & Surname:	H.B. THORPE		
Organisation & Designation:	ST. FRANCIS BAY RESIDENTS' ASSOCN		
Postal Address:	P.O. BOX ST. FRANCIS BAY 6312		
Telephone:	042-2940282	Cellphone:	083-6608409
Fax:		E-mail:	hbthorpe@telkom.sa.net

Would you like to register as an interested and affected party (I&AP)? YES NO
(please tick the relevant box)

Note: You are required to register as an I&AP to receive further correspondence regarding the EIA process for the project.

Please state your interest in the project (add additional pages if necessary):

VICE-CHAIRMAN OF RESIDENTS' ASSOCN WITH LAND-USE PORTFOLIO

Please list your questions, views or concerns regarding the project (add additional pages if necessary):

TO FOLLOW

Please provide contact details of other persons who you regard as a potential interested or affected party:

Name & Surname:			
Organisation & Designation:			
Postal Address:			
Telephone:		Cellphone:	
Fax:		E-mail:	

What is your preferred language of correspondence? (please tick the relevant box) English Afrikaans



This assessment is being conducted on behalf of Renewable Energy Investments South Africa (Pty) Ltd (Sien keersy vir Afrikaans)

**OMGEWINGSIMPAKEVALUERINGSPROSES: VOORGESTELDE HAPPY VALLEY WIND
ENERGIE FASILITEIT NABY HUMANSDORP**

OPENBARE DEELNAMEPROSES REGISTRASIE/KOMMENTAAR VORM

Stuur voltooid registrasie/kommentaar vorm aan: **Shawn Johnston by Sustainable Futures ZA**
 Faks: **086 510 2537** Telefoon: **083 325 9965**
 E-pos: **swjohnston@mweb.co.za**
 Posadres: **Posbus 749, Rondebosch, Kaapstad, 7701**

Verskaf asseblief u persoonlike kontak besonderhede:

Naam & Van:	Burnette William Lippert		
Organisasie & Rol:	Plas: Kamponlands rivier, Lippert Bowers		
Posadres:	Pos Bus 482 Humansdorp 6300		
Telefoon:	042 295 2569	Selfoon:	083 439 0525
Faks:	086 6190 920	E-pos:	

Stel u belang om te registreer as 'n belangstellende en/of geaffekteerde party (B&GP)? (Merk met X) JA NEE

Nota: Dit word van u verels om te registreer as 'n B&GP om alle toekomstige inligting in verband met die Omgewingsimpakevalueringproses te ontvang.

Verduidelik u belangstelling in hierdie projek (gebruik addisionele bladsye soos benodig):

<ul style="list-style-type: none"> • Goed koper krag. • Werk skepping plaaslik. • Opleiding vir die gemeenskap

Lys u vrae, opinies of besorghede in verband met hierdie projek (gebruik addisionele bladsye soos benodig):

<ul style="list-style-type: none"> • Stel dit enige gevaar in vir die gemeenskap. • Is daar enige gevaar vir die natuur en omgewing. • Is daar enige gevaar vir die boenderheid en diere. • Is daar enige gevaar vir water. • Is daar enige gevaar vir verdroging van grond en veelveld.

Verskaf bykommende kontak besonderhede van addisionele persoon/e wie u beskou as potensiele belangstellende en/of geaffekteerde partye:

Naam & Van:			
Organisasie & Rol:			
Posadres:			
Telefoon:		Selfoon:	
Faks:		E-pos:	

Dui u taal van keuse en korrespondensie aan (Merk met X) Engels Afrikaans



Hierdie studie word namens Renewable Energy Investments South Africa (Pty) Ltd gedoen (See reverse side for English)

