SOCIAL ASSESSMENT

FOR

SCOPING REPORT

(DRAFT REPORT)

ESKOM WIND ENERGY FACILITY

July 2007

Prepared for

SAVANNAH ENVIRONMENTAL (Pty) Ltd

By

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SECTION 1: INTRODUCTION

1.1 INTRODUCTION

Savannah Environmental (Pty) Ltd were appointed by ESKOM as the lead consultants to manage the Environmental Impact Assessment (EIA) process for the establishment of proposed wind energy facility and associated infrastructure in an area to the north of the mouth of the Olifants River, on the west coast of the Western Cape Province, South Africa (Figure 1.1). In terms of its specific location, the northern half of the site falls within the DMA of Western Cape Municipal Area 1 (WCMA01). The southern section of the site falls within the Matzikama Local Municipality (LM) area. Vredendal, the largest town in the region, is located approximately 60 km east of the site.

Tony Barbour was appointed by Savannah Environmental (Pty) Ltd to undertake an independent specialist Social Impact Assessment (SIA) as part of the EIA process. The terms of reference for the study include a scoping level assessment to identify key social issues that need to be addressed as part of the EIA. This report contains the findings of the initial scoping level social assessment undertaken as part of the EIA process. The report is in a draft stage and should not, in whole or part, be reproduced for use in other documentation without the consent of the author.

1.2 TERMS OF REFERENCE

The terms of reference for the Scoping Report Assessment require:

- A description of the environment that may be affected by the activity and the manner in which the environment may be affected by the proposed facility;
- A description and evaluation of environmental issues and potential impacts (including direct, indirect and cumulative impacts) that have been identified;

The direct, indirect and cumulative impacts of the identified issues must also be evaluated within the Scoping Report in terms of the following criteria:

- The nature, which shall include a description of what causes the effect, what will be affected and how it will be affected;
- The extent, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development), regional, national or international;
- A statement regarding the potential significance of the identified issues based on the evaluation of the issues/impacts;
- 'Red Flag' any sensitive or no-go areas within the broader study area which could influence the siting of turbines;
- Identification of potentially significant impacts to be assessed within the EIA phase and details of the methodology to be adopted in assessing these impacts. This should be of sufficient detail to include within the Plan of Study for EIA, and

must include a description of the proposed method of assessing the potential environmental impacts associated with the facility.

1.3 PROJECT LOCATION

ESKOM has undertaken a regional site identification and selection process for a broader study area on the West Coast (the Olifants River as the southern boundary and the boundary with the Northern Cape as the northern boundary) to determine and delineate areas suitable for wind energy development. This process was based on the regional assessment methodology developed and implemented by Western Cape DEA&DP and included the consideration of sites/areas of special environmental importance and planning criteria, as well as issues relating to landscape character, value, sensitivity and capacity. These aspects were then balanced with technical constraining factors affecting the siting of a wind farm, including the wind resource (wind potential diminishing with distance from the coastline), land availability, accessibility and existing grid infrastructure.

Based on the siting study undertaken by ESKOM, an area (> 35km^2 in extent) located north of the Olifants River has been identified as being potentially suitable for the establishment of a wind energy facility (Figure 1.1). In terms of its specific location, the northern half of the site falls within the within the DMA of Western Cape Municipal Area 1 (WCMA01). The southern section of the site falls within the Matzikama Local Municipality (LM) area. The area is located 2 km inland from the coast and comprises the farms:

- Portion 5 of Gravewaterkop 158;
- Portion 620 of the farm Olifants Rivier Nedersetting;
- Portion 617 of the farm Olifants Rivier Nedersetting.

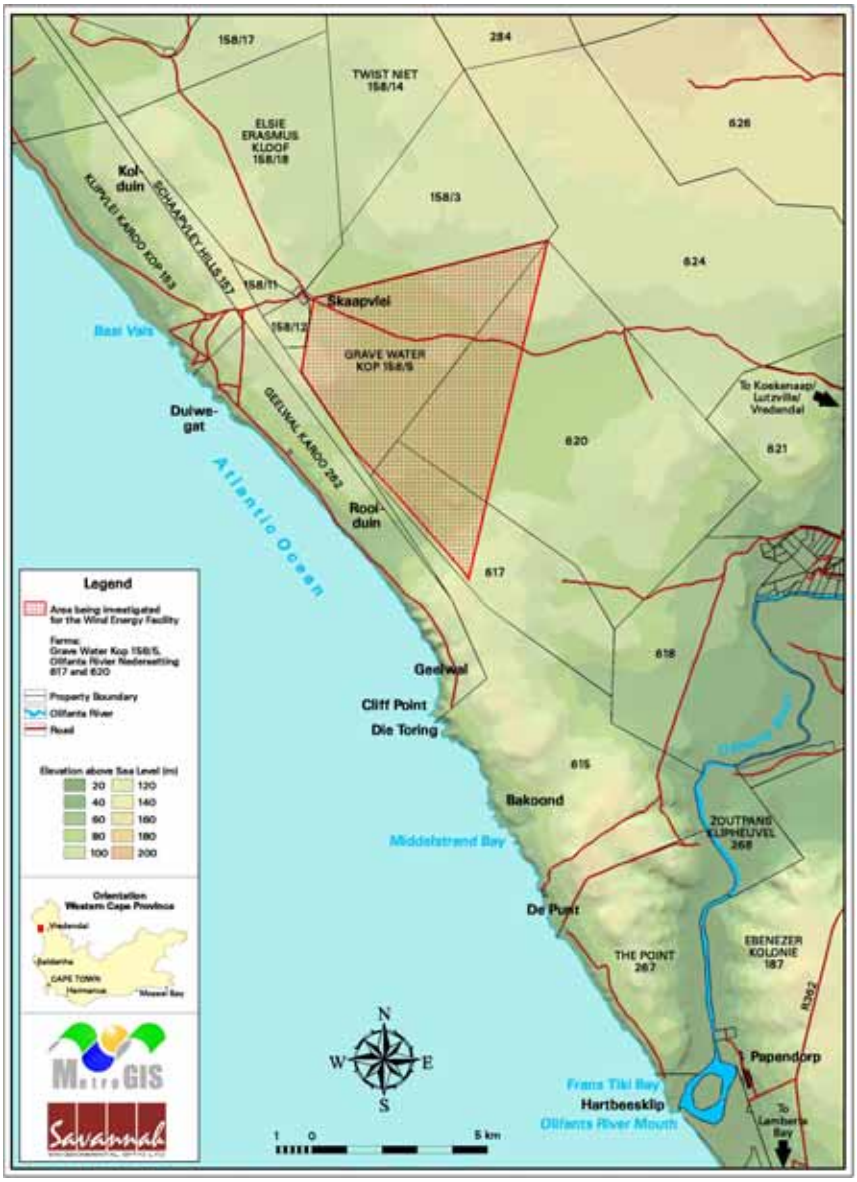
1.4 PROJECT DESCRIPTION

The proposed wind energy facility will consist of up to 100 turbines. The total capacity will be in the region of 200 MW. In comparison the three wind turbines at ESKOM's experimental wind energy facility near Klipheuwel in the Western Cape have a generation capacity of 660, 1 750 and 750 KW respectively. The largest turbine at Klipheuwel can generate sufficient energy to meet the energy demand requirements of 200 first world households and 1 000 rural households. The new wind energy facility therefore has the potential (when the wind resource is at its optimum) to meet the energy requirements of approximately 20 000 first world and 100 000 rural households respectively.

Based on Eskom's requirements, the proposed wind turbine will include:

- A tower with a hub height of 80m;
- A 90 m diameter rotor consisting of 3 x 45 m turbine blades.
- A concrete foundation of 15m x 15m for each turbine,

Figure 1.1: Site Location



In addition to the wind turbines the flowing infrastructure will also be established on the site:

- An access road to the site from the main road/s within the area;
- An internal, access road that links of the 100 wind turbines on the site. The road will be approximately 5 –6 m wide;
- A substation that will occupy an area of approximately 50m X 50m in size. The substation is likely to be centrally located and will be linked to each wind turbine via radial underground distribution cables;
- A small office building and visitors centre at the facility located at the entrance. A final decision on the need for such a centre has not been taken;
- An access road linking the site to the main road/s in the area. The nearest main road in the area, the R 363, is located approximately 20 km east of the site. .

- An overhead 132 kV distribution line that will link the wind energy facility to the electricity distribution network/grid at Koekenaap Substation or Juno Substation.

ESKOM have indicated that existing access routes would be considered as first options for providing access to the site/s, and modifications made to these where required. In addition, the preference is for the 132 kV distribution line to follow the access route where possible, which, will also allow for access to the power line and ensure consolidation of the linear infrastructure.

1.5 ASSUMPTIONS AND LIMITATIONS

1.5.1 Assumptions

Identification of area for the wind energy facility
The identification of the area where the site is located was informed by the criteria-based methodology proposed in the Strategic Environmental Assessment undertaken by the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP), as well as from information available regarding local climatic and environmental conditions within the Western Cape.

Strategic importance of the project and no-go option
The strategic importance of wind energy at a national and provincial level is confirmed by the national and provincial energy policies. The no-go option has therefore not been considered. However, the study recognises the need to ensure that due process is followed when assessing the impacts associated with the proposed assessment process.

Technical suitability
It is assumed that the proposed development site identified by ESKOM represents a viable and acceptable site, and that this site meets the technical criteria required for the establishment of a wind energy facility.

Fit with planning and policy requirements
Legislation and policies reflect societal norms and values. The legislative and policy context therefore plays an important role in identifying and assessing the potential social impacts associated with a proposed development. In this regard a key component of the SIA process is to assess the proposed development in terms of its fit with key planning and policy documents. As such, if the findings of the study indicate that the proposed development in its current format does not conform to the spatial principles and guidelines contained in the relevant legislation and planning documents, and there are no significant or unique opportunities created by the development, the development cannot be supported.

However, the study recognises the strategic importance of wind energy and the technical, spatial and land use constraints required for wind energy facilities.

Consultation with affected communities
At this stage in the process there has been limited interaction with communities that live in the area. However, the author has worked on mining related project in the area and the issues identified by communities and landowners in the area relating to mining operations are, in many instances, likely to hold for the proposed wind

energy facility. Detailed consultation will be undertaken during the SIA which will form part of the EIA phase.

1.5.2 Limitations

Demographic data
The demographic data used in the study is largely based on the 2001 Census. While this data does provide useful information on the demographic profile of the affected area it is in some cases dated. .

1.6 APPROACH TO STUDY

The approach to the study is based on the Western Cape Department of Environmental Affairs and Development Planning Guidelines for Social Impact Assessment. In this regard the study involved:

- Review of demographic data from the 2001 Census Survey;
- Review of relevant planning and policy frameworks for the area;
- Site specific information collected during the site visit to the area on 7 and 8 March 2007;
- Review of information from similar studies, including the Klipheuwel and Darling Wind Farm EIAs;
- Review of findings from other SIAs carried out in the area for mining projects;
- Identification of social issues associated with the proposed project.

The identification of potential social issues associated with proposed wind energy facility is based on observations during the project site visit, review of relevant documentation, experience with similar projects, namely the Darling Wind Farm, and work undertaken in the area for mining projects. As indicated above, the issues identified by communities and landowners in the area relating to mining operations are, in many instances, also likely to hold for the proposed wind energy facility.

1.7 SPECIALIST DETAILS

The author of this report is an independent specialist with 18 years experience in the field of environmental management. In terms of SIA experience Tony Barbour has undertaken in the region of 20 SIA's and is the author of the Guidelines for Social Impact Assessments for EIA's commissioned by the Department of Environmental Affairs and Development Planning (DEA&DP) in the Western Cape. Tony Barbour has also developed SIA Guidelines for the Department of Water Affairs and Forestry.

1.8 DECLARATION OF INDEPENDENCE

This is to confirm that Tony Barbour, the specialist consultant responsible for undertaking the study and preparing the Draft Social Assessment Report for Scoping Study, is independent and has no vested or financial interests in the proposed wind energy facility being either approved or rejected.

1.9 REPORT STUCTURE

The report is divided into three Sections, namely:

- Section 1: Introduction;
- Section 3: Description of the study area;
- Section 3: Identification of key issues.

SECTION 2: DESCRIPTION OF STUDY AREA

2.1 INTRODUCTION

The proposed wind energy facility is located in the West Coast District Municipality (WCDM) of the Western Cape Province. The WCDM is bordered by the Northern Cape Province to the north, and the Cape Metro and Cape Winelands Districts to the south and south-east. The western border is formed by the Atlantic Ocean, which forms the basis of the district's large and established fishing sector. The district includes five local municipalities, namely Matzikama, Cederberg, Bergriver, Saldanha Bay and Swartland, as well as four District Management Areas (DMAs).

In terms of its specific location, the northern half of the site falls within the within the DMA of Western Cape Municipal Area 1 (WCMA01). The southern section of the site falls within the Matzikama Local Municipality (LM) area. Vredendal, the largest town in the region, is located approximately 60 km east of the site.

The Matzikama LM is an, arid, sparsely populated area. However, it does host the life-giving arterial, namely the Olifants River. The river, with its associated canal systems, supports a flourishing agricultural sector that is largely linked to viticulture (the cultivation of grapes for wine production). A number of larger potentially affected communities are located in the Matzikama LM area to the south of the project area. The majority of these settlements are located along the Olifants River. Of these Vredendal is the largest town and functions as the administrative seat of the Matzikama LM. Other significant settlements within a 50 km radius of the proposed site include Lutzville, Koekenaap, Ebenhaeser, Papendorp, Strandfontein and Doringbaai. Lutzville and Koekenap are located on the R363 approximately 25-40 km inland from the coast. Ebenhaeser is located on the southern bank of the Olifants River and approximately 10 km inland from the mouth of the river. Papendorp is situated approximately 10 km downstream of Ebenhaeser near the mouth of the Olifants River. Strandfontein and Doringbaai and are located on the coast to approximately 25 and 40 km south of the site. The towns of Klawer and Vanrhynsdorp are also located within the Matzikama LM area.

The WCMA01 is also an arid, sparsely populated area that is predominantly rural. Unlike the Matzikama LM area, no major rivers occur in the area, and consequently its sparse population is scattered over large farms (mainly small stock-farming) and a few settlements. Of these, Nuwerus, Bitterfontein and Rietpoort are of relevance to this study. These settlements all fall within a radius of approximately 75 km of the proposed wind energy facility site, with Rietpoort at the extreme limit (approximately

100 km+ by road). The WCMA 01 is bisected by the N7 national road. Nuwerus and Bitterfontein are located on the N7. Rietpoort is a loose administrative term that is applied to a number of smaller settlements, which include Molsvlei, Put se Kloof and Stofkraal. The WCMA01 does not possess any dedicated local municipal structures of its own, and the local authority functions are carried out by the WCDM based in Moorreesburg. Large portions of the WCMA01 and Matzikama LM area fall within the demarcated boundary of the proposed Knersvlakte Biosphere Reserve area.

2.2 POLICY AND PLANNING ENVIRONMENT

For the purposes of meeting the objectives of the Scoping level assessment the following policy and planning documents were reviewed, namely:

- The White Paper on the Energy Policy of the Republic of South Africa, December 1998;
- Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape. Towards a Regional Methodology for Wind Energy Site Selection (May 2006)
- Draft Western Cape Integrated Energy Strategy. Provincial Government Western Cape Department of Environmental Affairs and Development Planning (January 2007);
- The West Coast District Municipality Spatial Development Framework (SDF) (2006);
- The Matzikama Integrated Development Plan (IDP) (2005-2006);

2.2.1 Policy for the Republic of South Africa

Investment in renewable energy initiatives, such as the proposed wind energy facility, is supported by the White Paper on Energy Policy for South Africa. In this regard the document notes:

"Government policy is based on an understanding that renewables are energy sources in their own right, are not limited to small-scale and remote applications, and have significant medium and long-term commercial potential".

"Renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future".

The support for renewable energy policy is guided by a rationale that South Africa has a very attractive range of renewable resources, particularly solar and ***wind*** and that renewable applications are in fact the least cost energy service in many cases; more so when social and environmental costs are taken into account.

Government policy on renewable energy is thus concerned with meeting the following challenges:

- Ensuring that economically feasible technologies and applications are implemented;
- Ensuring that an equitable level of national resources is invested in renewable technologies, given their potential and compared to investments in other energy supply options; and,
- Addressing constraints on the development of the renewable industry.

The White Paper also acknowledges that South Africa has neglected the development and implementation of renewable energy applications, despite the fact that the countries renewable energy resource base is extensive and many appropriate applications exist.

The White Paper also notes that renewable energy applications have specific characteristics that need to be considered. Advantages include:

- Minimal environmental impacts in operation in comparison with traditional supply technologies;
- Generally lower running costs, and high labour intensities.

Disadvantages include:

- Higher capital costs in some cases;
- Lower energy densities; and;
- Lower levels of availability, depending on specific conditions, especially with sun and wind based systems.

2.2.2 Draft Western Cape Integrated Energy Strategy

The strategy document notes that due to the recent energy crisis in the Western Cape, the process of introducing a renewable energy policy, strategy and programme of action has been fast-tracked. It is believed that this is necessary to ensure that measures to reduce energy consumption and increase the supply of clean, renewable energy can be taken as soon as possible.

The document outlines the key energy concerns and opportunities facing the Western Cape and proposes a range of policies, strategies and actions that will allow the Province to develop a sustainable portfolio of energy solutions while also reducing pollution and increasing access to energy for all citizens in the Province.

In terms of energy supply, the Western Cape buys most of its electricity from Eskom, much of which comes from coal generated energy plants elsewhere in the country (predominantly from Mpumalanga). However, a portion of the Province's electricity is generated locally, including energy from the Koeberg Nuclear Power Plant, the Acacia Gas Turbines, the Open Cycle Gas Turbines at Atlantis and Mossel Bay, the Palmiet Pumped Storage Facility and the Klipheuwel Demonstration Wind Farm. The City of Cape Town also produces a small amount of electricity through the Steenbras Pumped Storage facility and local Gas turbines. Although Eskom has line-strengthening plans in place to help secure electricity for the Western Cape, there are a range of other options that may be preferable, including diversifying the supply mix and broadening the energy generation options. The document goes on to list the potential opportunities for increasing supply, including wind energy. In this regard the document states that the wind energy potential in the Western Cape is high (3 000 MW). The potential advantages associated with wind include:

- Technology & capital costs are reducing rapidly;
- Low maintenance;
- Clean energy option;
- Can be quickly installed in areas needing new supply.

In terms of recommendations the Provincial Government of the Western Cape (PGWC) is committed to energy efficiency and renewable energy, and to reducing the Province's carbon footprint and eradicating energy poverty. In order to achieve this vision, the PGWC will:

- Support an approach to energy planning, which takes into account environmental, social and economic considerations.
- Support research and development around renewable energy and energy efficiency technologies.

2.2.3 Regional Methodology for Wind Energy Site Selection

The initial study area identified by Department of Environmental Affairs and Development Planning (DEA&DP) covers a portion of the Cape West Coast loosely congruent with the West Coast Biosphere Reserve, extending from the Diep River in the South to a line north of the Berg River.

The objective of the study commissioned by the DEA&DP in the Western Cape was to develop and establish a policy on the implementation of a methodology to be used for the identification of areas suitable for the establishment of wind energy developments. This overall objective was supported by a number of sub-objectives, including:

- 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 all 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.

The document outlines a number of assessment techniques that were reviewed as part of the study. Some of the key findings and recommendations that have a bearing on the study are summarized below.

National, Regional and Local Perspectives
It is important that at the national level (SA being signatories to the Kyoto Protocol) that positive policy is enacted to encourage wind energy (and indeed all renewable) development. A national perspective should ensure that wind resource rich provinces and regions are identified in order to ensure a co-ordinated and holistic national strategy. In this regard, it is accepted that the Cape West Coast (i.e. the DEA&DP study area and beyond to the north – indeed to the Orange River) will inevitably be attractive to wind energy developers due to the prevalence of coastal wind regimes. However, the importance of employing an effective cumulative impact model must be emphasised.

International Best Practice and Applicability to the Western Cape

- Internationally, the importance of landscapes, particularly their social and strategic value are increasingly being acknowledged, leading to the realisation that the intangible value of landscapes (and living environments) must be addressed in spatial planning;
- Designating areas of suitability for wind energy developments promotes more effective implementation of projects and enhances integration with other land-uses. Environmental and spatial issues can be addressed early in the siting process by introducing them at the strategic regional level;
- In spite of commonality of environmental concerns internationally, the thresholds developed to address them vary significantly between countries, due to differences in legal frameworks and policies, different approaches to forward planning, different geographical sizes, biophysical and cultural characteristics, and degree of landscape modification;
- A large volume of scientific and professional information already exists in most of the developed countries. Sensitive areas and scenically valuable landscapes have already been identified in leading countries, prior to the development of wind energy regional siting criteria;
- The process of identifying "sensitive" areas usually entails analysis by specialists of a defined geographical area on a broad scale, based on regional-level biological, environmental and landscape factors, to define areas of sensitive landscapes ("negative mapping") to exclude wind energy developments. A key foundation in most of the international precedent was the existence of strategic regional landscape assessments. These, often resource intensive, assessments do not generally exist in SA and DEA&DP have expressed concern that a developing country like SA cannot afford expensive studies on landscape sensitivity and capacity and have therefore initiated the investigation of a robust "regional guiding criteria" method. A key challenge to this specialist study is therefore to assess whether a regional level landscape assessment method, that is not unduly resource or time intensive, can be added to a criteria based method.

Cumulative Impact Issues

The experience in Europe is that the very high cumulative impact of wind farms has resulted due to a policy of permitting small wind energy schemes in relatively close proximity to each other (Only 2.5km in Denmark). The "dispersed" European model has clearly created high cumulative visual impact. Scottish National Heritage are now promoting a minimum distance between wind farms of 30km, especially due to the increasing size of turbines themselves, as well as the tendency to develop large wind farms with many turbines (often over 100).

As a result the study recommends that:

- Large installations should be located extremely far apart (30 – 50km), and;
- Smaller installations should be encouraged, even individual turbines, in urban / brownfield areas.

The document also notes that the issue of decision-making also needs to be further debated in terms of powers and functions in the Constitution. The political tendency will be for appropriate "concentration" zones to be designated at national and provincial level, and for district and local authorities to be expected to ensure effective implementation of projects. This needs to be reconciled however with local

interests, although local interest (potentially “not in my backyard” attitudes) should not be allowed to “trump” broader national and provincial imperatives.

Recommended Urban Focus
The document notes that South African rural and wilderness landscapes have a high aesthetic value. The generally unspoilt nature of these areas in the Western Cape is the foundation of the tourism industry, as well as a key reason why the second home market is so healthy in rural tourism and wilderness areas.

The Danish wind energy policy, after several decades of driving a “rural” model, has shifted (based on experience of creating visual “clutter” in rural landscapes) to emphasising urban and industrial locations as “first preference” for wind developments. South Africa should learn and benefit from this experience and avoid the mistake of pursing a “rural” model without also emphasising urban locations for wind energy development.

Recommended Disturbed Landscape Focus
In addition to the urban focus discussed above, the proposed methodology also departs from some of the international precedent by purposefully focussing on existing disturbed landscapes, and in particular, those rural landscapes that have already been “vertically compromised” by the location, for example, of transmission lines, railway lines, and all phone towers.

Landscape Assessment: Subjective / Qualitative
The role and value of public participation in perceptual based studies to determine landscape character and sensitivity to wind turbines has been highly questionable in overseas experience. It is accordingly recommended that a very high value should be placed on professional judgement from practitioners at the local level when assessing landscape values. This method is likely to be quicker and more effective than attempting a qualitative (GIS) based assessment technique.

Bird Migration Routes and Other Information
In Europe, a large body of knowledge exists in relation to avifauna, particularly nesting sites of many species and migration routes. This information accordingly featured prominently in spatial mapping overlays. SA and the Western Cape do not have this quality of information, but it has been found that, at the strategic level, this is not a major issue. At the local level however, it is recommended that an avifaunal study be conducted to establish whether any resident bird populations would be threatened by a wind energy project.

Protecting Rural Landscape Values (put after "Urban Emphasis)
In the assessment of suitable sites for wind turbines in Europe, a great degree of emphasis is given to quantifying views from residential locations. This policy emphasis has had the impact of effectively pushing these projects into more "remote" rural locations where a qualitative analysis can show that, in relative terms, only a small minority of people resident in a particular area will see the turbines. A specific finding of the study was that in the SA context this policy was flawed in that is had the effect of "penalising" rural areas, where it is normal to expect that residents have chosen such areas for, *inter alia*, the relative non-disturbance by urban facilities.

Site Specific Aesthetic Considerations
The document lists site-specific recommendations regarding:

- Layout
- Turbines
- Colour

2.2.4 West Coast District Municipality Spatial Development Framework

The Draft WCDM SDF is currently in the process of being finalised. The new SDF will replace the 2001 WCDM SDF documents. With regard to the new SDF, Volume 1 ("Status quo report") was finalised in 2006. Volume 2 ("Spatial objectives, strategies and actions") is currently in the process of being finalised. The public comment period with regard to the Draft document has been concluded, and a final document is currently being prepared in order to incorporate relevant comments. It is expected that Volumes 1 and 2 will be submitted together to the WCDM Council by the end of August 2007 for approval (Keuler, *pers.comm*).

The Draft SDF provides a set of spatial planning principles at a regional level. The spatial resolution is too coarse-grained to address the proposed area specifically.

With regard to identified key socio-economic issues for the WCDM region, the following points are of specific relevance:

- The regional economy is dependent on a volatile agricultural sector;
- Skills training in order to equip people for the tertiary labour market is desperately needed, especially with regard to the Coloured and Black communities;
- Economic growth derived from tourism is being threatened by inappropriate planning and lack of design control in coastal settlements, as well as by environmental degradation caused by mining and other activities.

Volume 2 identifies 4 strategic spatial development themes and 6 strategic spatial development objectives for the WCDM. The document also contains a chapter with a set of spatial plans for the WCDM area (Chapter 7).

Of specific relevance to the proposed wind energy facility are the following strategic themes, objectives and actions:

Theme 1: Promotion of sound economic growth:
- Objective 1: Alignment of growth with potential:
  - The lack of employment opportunities, the decline of towns and high dependency rates in the northern portion of the WCDM should be addressed;
  - Poor infrastructure and services impact negatively on tourism, with particular reference to transport in the northern areas, including poor maintenance of roads;
- Objective 2: Facilitate job creation:
  - It is noted that the WCDM benefits very little from development projects, due to amongst other things, the importation of labour. Education and improved local labour supply are recommended;

- It is noted that high levels of unemployment are contributed by the seasonality of agriculture, tourism, and fishing. Sustainable employment creation, based on existing economic strategies, is recommended.

In spatial terms, both the Conceptual WCSDF Composite Spatial Plan (Figure 7.4.) as well as the Detail Composite WCSDF Spatial Plan (Figure 7.5) indicates the land along the coast as "mining". This strip appears to be approximately 500m-1km wide. The area identified for the proposed wind energy facility also appears to fall within a "remnant (biodiversity) corridor area". (Figure 2.1)

2.2.5 Matzikama Integrated Development Plan

The Matzikama Integrated Development Plan (IDP) (2005-2006) identifies 22 main IDP priorities (grouped in 7 clusters). Of these clusters and priorities, the following can be linked to the proposed wind energy facility:

- Reduce poverty;
- Job creation;
- Effective use of natural resources;
- Promote and support investment in infrastructure - new and upgrades;
- Promote tourism and investment opportunities;
- Promote human resource development.

However, it should be noted that the proposed wind energy facility will not create significant employment opportunities in the area. The majority of employment opportunities are likely to occur during the construction phase of the project.

2.2.6 Knersvlakte Bioregion Spatial Development Plan (2004)

The objective of the Knersvlakte Bioregion Spatial Development Plan (KSDP) is to identify key issues and associated management actions with regard to the sustainable management of the Knersvlakte bioregion. A proposal to UNESCO in order to register the Knersvlakte bioregion Biosphere Reserve area is currently in the process of being finalised (Paulsen, *pers. comm*).

As is noted in the Draft WCDM SDF (2006), the KSDP is currently the closest available equivalent to an SDF for the WCMA01.

Of specific relevance to the proposed wind energy facility is:

- The restoration, maintenance and natural aesthetics of the planning area should be ensured in order to promote place-specific tourism;
- Tourism should be promoted as a community-based and community-driven industry with substantial potential to provide direct and indirect benefits to local communities;
- Human resource development should be ensured in order to empower all the people of the Knersvlakte region;
- A sustainable growing economic environment should be created for all the communities in the region;
- Equal opportunities for professional education and skills training should be created for the people of the bioregion.

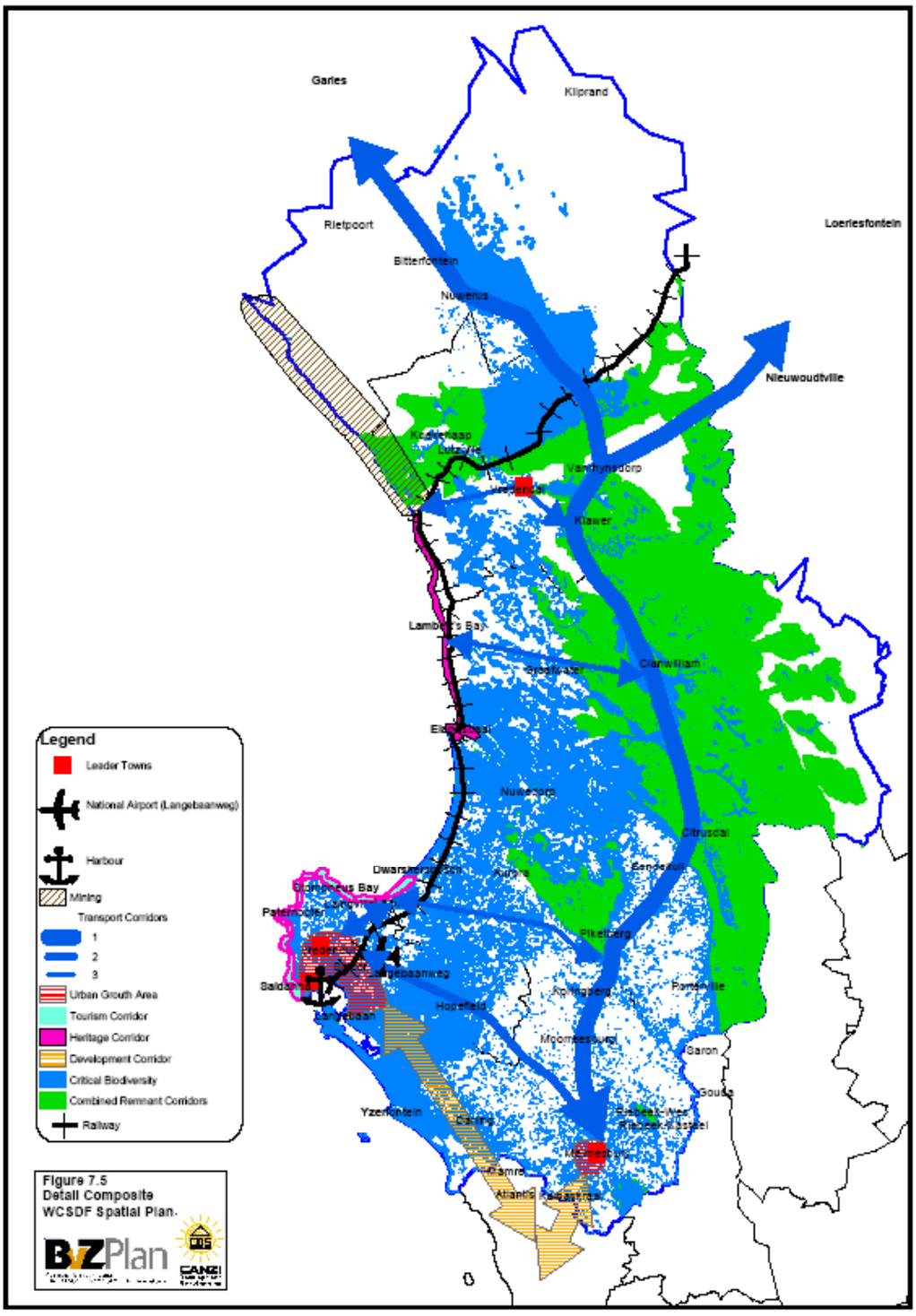


Figure 2.1: Land use map West Coast Spatial Development Framework

2.3 BASELINE SOCIO-ECONOMIC DATA

2.3.1 Population

The demographic overview presented in this section is based on data from the most recent national Census (2001). Data from the Socio-Economic Profile: West Coast District (2006) is also presented. In summary, education rates are low, poverty rates are high, and the dominance of primary sectors such as agriculture and fisheries for employment provision are linked to the high, seasonal unemployment rates during large parts of the year.

WCMA01
The area is sparsely populated with a total population of 4 255 people in 2001. Approximately 50% of the population resides in the settlements of Bitterfontein (906), Rietpoort (682) and Nuwerus (572). In terms of the remaining 50%, 40 % live on farms and 10 % in a number of smaller settlements. A large percentage of the population is therefore rural. The majority of the population is Coloured (87%), followed by Whites (11%) and Black Africans (2%) (Table 2.1). Afrikaans is the dominant language, with 98% of the population listing Afrikaans as their first language (Table 2.2).

Matzikama
With the exception of the Olifants River valley, the Matzikama LM area is also sparsely populated with an estimated population of 50 207 in 2001. Vredendal is the most significant urban settlement in the area and accounts for more than 32% of the total population. As in the case of the WCMA01 area, 40% of the population live on farms or smallholdings. The agricultural areas in and around Vredendal account for almost 30% of the remaining population. After Vredendal, Lutzville is the second most populous town, with an estimated 8.5% of the total population. The communities of Doringbaai (2%), Koekenaap (2%), and Ebenhaeser (1%) are all relatively small.

The overwhelming majority of the population is Coloured (76%), followed by White (18%) and Black Africans (6%) (Table 2.1). Afrikaans is the dominant first language in the area, with an estimated 95% being native speakers. IsiXhosa was the second most dominant (3.5%), and English third (1%) (Table 2.2).

Table 2.1: WCDMA01 and Matzikama LMA Population Numbers (2001)

	WCDMA01		Matzikama LMA	
	Number	**% of total**	**Number**	**% of total**
Black African	99	2	2825	6
Coloured	3691	87	38118	76
Indian or Asian	-	0	75	0
White	465	11	9192	18
Total	4255	100	50210	100

Source: Census 2001

Table 2.2: WCDMA01 and Matzikama LMA Language Breakdown (2001)

	WCDMA01		Matzikama LMA	
	Number	% of total	Number	% of total
Afrikaans	4174	98	47628	95
English	24	0.5	525	1
isiNdebele	-	0	3	<0.5
isiXhosa	30	0.5	1659	3.5
IsiZulu	-	0	36	<0.5
Sepedi	3	<0.5	6	<0.5
Sesotho	9	<0.5	111	<0.5
Setswana	3	<0.5	99	<0.5
SiSwati	-	-	3	<0.5
Tshivenda	-	-	18	<0.5
Xitsonga	3	<0.5	15	<0.5
Other	9	<0.5	108	<0.5
Total	4255	100	50210	100

Source: Census 2001

Between 2001 and 2006 the population increased from 50 088 to 58 840, at an annual average growth rate of 3.3%. This represents the highest growth rate in the West Coast District Municipality. Population growth is expected to slow down to an average annual rate of 2.5 % between 2006 and 2010 (Source, Socio-Economic Profile: West Coast District, 2006).

The 2006 data indicates that Coloured Group with 74 % of the population, still make up the majority of the municipality's population, followed by Whites (19%) and Black Africans (7%) (Source, Socio-Economic Profile: West Coast District, 2006).

In 2001 in-migration was projected to have dropped from 2 262 to 800 in 2005. It has, however, increased to 1 129 in 2006, but is projected to remain steady around the 1 000 mark up to 2015 (Source, Socio-Economic Profile: West Coast District, 2006). The majority of the people moving to the area are from the Coloured population group. Coloured in-migration in 2006 is projected to be in the region of 688. African in-migration (second largest) declined between 2001 (444 in-migrants) and 2005 (140 in-migrants), but is expected to increase again gradually between 2006 and 2025 (454). In-migration by Whites to the area is low (Source, Socio-Economic Profile: West Coast District, 2006).

The West Coast district's total population projection for 2006 is 320 929. Between 2001 and 2006 the district's population grew at an annual average rate of 2.38 %. Of all the local municipalities in the district, Saldanha Bay (25.3%) and Swartland (23.8%) had the largest populations in 2006 (Source: Socio-Economic Profile: West Coast District, 2006).

Gender and age

WCMA01

The population breakdown in terms of gender is roughly equal with 50.5% of the total population female and 49.5% male (Table 2.3). The 2001 census data on age indicates that approximately 59 % of the population fell within the economically

active age group of 15-65, 33% were 14 or younger and 8% 65 years or older (Table 2.4).

Matzikama

The population breakdown for the Matzikama area in terms of gender is roughly equal and is therefore similar to the WCMA01 area (Table 2.3). Approximately 65 % of the population fell within the economically active age group of 15-65, 30% were 14 or younger in 2001 and 5% 65 years or older (Table 2.4).

Table 2.3: WCDMA01 and Matzikama LMA gender breakdown (2001)

	WCDMA01		Matzikama LMA	
	Number	% of total	Number	% of total
Male	2110	49.5	24965	49.7
Female	2145	50.5	25246	50.3
Total	**4255**	**100**	**50210**	**100**

Source: Census 2001

Table 2.4: WCDMA01 and Matzikama LMA age Distribution (2001)

	WCDMA01		Matzikama LMA	
	Number	% of total	Number	% of total
0-4	436	10	4724	9.5
5-9	522	12	5152	10
10-14	478	11	4913	10
15-19	351	8	4646	9
20-24	264	6	3809	7.5
25-29	295	7	4056	8
30-34	303	7	4252	8.5
35-39	296	7	4152	8
40-44	218	5	3611	7
45-49	210	5	2855	6
50-54	168	3	2186	4
55-59	218	4	1692	3.5
60-64	154	3	1427	3
65-69	135	3	1061	2
70-74	92	2	723	1.5
75-79	61	1	483	1
80-84	42	1	297	1
85+	18	0.5	174	0.5
Total	**4262**	**100**	**50213**	**100**

Source: Census 2001

The demographic data for 2006 indicates that the population pyramid for the Matzikama LM has a broad base, which reflects a large young population with a median age of 28. The 20 to 24-year age group is much smaller, with larger population numbers between 25 and 35 years. The dependency ratio in 2006 is 0.50, down from 0.52 in 2001, and is projected to decline even further to 0,49 later in 2006 (Source: Socio-Economic Profile: West Coast District, 2006).

2.3.2 Education levels

The education levels in both areas are relatively low. Based on the 2001 data for persons over the age of 5 years, approximately 13.5% of the WCMA01 and 12% of the Matzikama populations had never received any schooling. Only 7% of the WCMA01 and 12% of the Matzikama populations had completed secondary schooling, and 3% and 4% respectively, had obtained a tertiary qualification (Table 2.5).

Table 2.5: WCDMA01 and Matzikama LMA Education levels (2001)

	WCDMA01		Matzikama LMA	
	Number (age 5 and older)	%	Number (age 5 and older)	%
No schooling	518	13.5	5485	12
Some Primary	1360	35.5	14702	32
Complete Primary	469	12	4391	10
Some Secondary	1089	28	13505	30
Complete Secondary	281	7	5518	12
Higher	109	3	1888	4
Total	3825	100	45488	100

Source: Data derived from Census 2001

2.3.3 Employment

Based on the 2001 Census data approximately 14% and 10.5 % of the WCMA01 Matzikama were unemployed respectively (Table 2.6). Compared with the estimated June 2006 national employment rate (26.5%), unemployment rates for the two municipal areas appear low. However, the actual seasonal unemployment rates may be significantly higher due to the seasonal nature of the demand for labour associated with the fruit and vegetable cropping operations along the Olifants River Valley. The unemployment rates out of season may therefore be significantly higher than the 2001 Census data indicates. In this regard a study undertaken for the WCDM in 2001 estimated that at least 50% of people employed in elementary work were effectively unemployed or underemployed. Significantly, the unemployment rate for the HD community of Aiville Park (Vredendal) was estimated at over 53%.

In the Matzikama LM, females, Africans, young people and those with lower levels of formal education — especially those with incomplete secondary education — are highly affected by unemployment. Youth unemployment is particularly high, with 70 % of the unemployed being between the ages of 15 and 34 (Source: Socio-Economic Profile: West Coast District, 2006).

Table 2.6: WCDMA01 and Matzikama LMA Employment status (2001)

	WCDMA01		Matzikama LMA	
	Number	**% of total**	**Number**	**% of total**
Employed	869	34.5	18705	57
Unemployed	349	14	3511	10.5
Not economically active	1294	51.5	10712	32.5
Total	2512		32928	100

Source: Data derived from Census 2001

2.3.4 Income levels

Based on the 2001 Census data poverty rates in both the WCMA01 and Matzikama LM areas are high. Of the total number of households, an estimated 38% of those in the WCMA01 and 30% of those in the Matzikama LM had an income of R800 or less per month in 2001 (Table 2.7). Given the seasonal nature of the agriculture and fishing industry many of the people in the area do not have access to income throughout the year.

Table 2.7: Household incomes (2001)

	WCDMA01		Matzikama LMA	
	No. of households	% of households	No. of households	% of households
No income	119	10	858	6
R1 – R4800	96	8	620	>4
R4801 – R9600	240	20	2858	20
R9601 – R19200	300	25.5	3682	25.5
R19201 – R38400	211	18	2875	20
R38401 – R76800	105	9	1742	12
R76801 – R153600	70	6	1056	7
R153601 – R307200	27	2	487	3
R307201 – R614400	3	<0.5	122	<1
R614401 – R1228800	3	<0.5	57	<0.5
R1228001 – R2457600	3	<0.5	84	0.5
R2457601 and more	-	-	21	<0.5
Total	**1178**	**100**	**14463**	**100**

Source: Census 2001

2.4 KEY ECONOMIC ACTIVITIES

The sub-regional economy in the area is traditionally based on primary sector activities such as agriculture, fishing and mining both in terms of employment provision and economic throughput. The key economic activities in the Matzikama LM are linked to Agriculture, Forestry and Fishing (18.3%), Wholesale and Retail Trade, Catering and Accommodation (17.7%), and Manufacturing (13,1%), followed by Finance and Business Services (11.7%) and General Government Services (11.2%). Together, these sectors make up 72 % of Matzikama's economic output in 2004 (Source: Socio-Economic Profile: West Coast District, 2006).

Between 1995 and 2004, the largest proportional increases were in the Community, Social and Personal Services (3.7%), Transport & Communication (3.3%) and Wholesale & Retail, Catering and Accommodation sectors (2.9%). The sectors showing the greatest proportional losses over this period were Mining (9.6%) and Agriculture, Forestry & Fishing (1.7%)(Source: Socio-Economic Profile: West Coast District, 2006).

In terms of growth, the Community, Social and Other Personal Services (8.6%), Transport and Communication (6.6%), Wholesale and Retail Trade, Catering and Accommodation (3.3%), Construction (3.2%) and Manufacturing (3%) all recorded relatively high growth rates between 1995 and 2004. Agriculture, Forestry and Fishing, the largest sector in the area in 2004, recorded growth of only 0.33 % for this period. In recent years growth has improved, with an average annual growth of 2.4 % between 2000 and 2004 and 3.8 % in 2004 (Source: Socio-Economic Profile: West Coast District, 2006).

2.4.1 Agriculture, forestry and fishing

The agriculture, forestry and fishing sector is the largest economic sector in the Matzikama LM. Its total contribution to Matzikama's GDPR in 2004 was R150.5 million or 18.3 %. Intensive farming activities, such as vineyards and tomatoes, are concentrated along the Olifants River. Many of the casual employment opportunities associated with cropping operations in the region's irrigation agriculture sub-sector are seasonal in nature. The region's reliance on the agricultural sector has been identified as a key concern by the local authorities in the area. As a result in 2001 the Vredendal Chamber of Commerce identified economic diversification as a key economic imperative for the subregion.

Two communities located in the vicinity of the site rely heavily on fishing for their economic well-being, namely Doringbaai and Ebenhaeser (including Papendorp). An estimated 200 Ebenhaeser and 51 Doringbaai households rely on harder (a local fish species) fishing as their main source of income. The harder fishery is highly seasonal, peaking over the summer months. The winter fishing off-season coincides with the agriculture off-season in the Olifants River Valley. As a result seasonal unemployment in Doringbaai and Ebenhaeser over the winter months is exacerbated.

On average, growth in the agricultural sector has been under-performing with a growth rate of only 0.3 % per annum between 1995 and 2004. Between 2000 and 2004 the average growth rate was negative (–0.6 %), indicating a decline in economic activity (Source: Socio-Economic Profile: West Coast District, 2006).

2.4.2 Wholesale and retail trade, catering & accommodation

In 2004 this sector, with a contribution of R 146 million (17.7 %) to GDPR, was the second largest contributor to economic growth in the Matzikama LM. The average annual growth for the sector over a 9 year period ending in 2004 was 3.3 %. Growth between 2000 and 2004 was relatively unchanged at 3.2 %, although growth picked up on a year-on-year basis to 4.3 % for 2003 and 6.9 % for 2004 (Source: Socio-Economic Profile: West Coast District, 2006).

2.4.3 Manufacturing

The Manufacturing sector contributed R 107.9 million (13.1%) to the GDPR in 2004 making it the third largest sector in the Matzikama LM. The sector is strongly linked to the agriculture sector, with focus on the manufacture of food and beverages. This sub-sector accounted for 67.1 % of the total manufacturing in the sector for 2004. The next largest contributing sub-sectors were Metals with 7.8 % and Transport Equipment with 7.6 %. These two sub-sectors are closely linked to the mining and agricultural sectors (Source: Socio-Economic Profile: West Coast District, 2006).

Growth in the manufacturing sector as a whole was relatively strong between 1995 and 2004 with 3% average annual growth. The average annual performance between 2000 and 2004 also remained above the 3% mark. However, year-on-year growth in this sector has been fairly erratic, with growth rates of 9.1 % in 2004 and –4.6 % in 2003 (Source: Socio-Economic Profile: West Coast District, 2006).

2.4.4 Transport and communication

The Transport and Communication sector contributed R 74.2 million (9%) to the GDPR in 2004. As a sector it plays a critical role in terms of facilitating access to markets and opportunities in the area. Between 1995 and 2004 the sector grew strongly at an average annual rate of 6.6 %, slowing down between 2000 and 2004 to 5.3 %. The sector is dominated by the Communication sub-sector that contributed 59 % of the sector total in 2004, with Transport contributing 41 % (Source: Socio-Economic Profile: West Coast District, 2006).

2.4.5 Mining

A number of mining operations are located in the area. Of these, the diamond mining operations of Trans-Hex at Die Punt (Matzikama) and the Namakwa Sands heavy minerals sand mining operations at Brand se Baai (WCMA01) are the most significant. Based on 2001 estimates the Trans Hex operations at Die Punt employ 38 permanent staff members and 44 contractors. The contractors employ in the region of 300-350 workers. The estimated annual turnover in 2000 for the Trans Hex operations at De Punt was in the region of R50 million.

The Namakwa Sands operations at Brand se Baai and associated processing activities near Koekenaap currently employ approximately 700 people. The minimum qualification for the Namakwa Sands personnel is Grade 10 and approximately 80% of the employees are from the WCDM area. Namakwa Sands also creates indirect employment opportunities for a large number of sub-contractors including cleaning, security and rehabilitation companies. In this regard the service and engineering sectors in Vredendal and Lutzville have benefited significantly from the mining industry in the area.

2.5 MUNICIPAL SERVICE LEVELS

Information on current levels of municipal service provision was obtained from relevant planning officials in the WCDM and Matzikama LM. Information on policing was obtained from the Institute for Security Studies' website and from interviews with relevant SAPS officials for the potentially affected communities.

2.5.1 Housing

The current estimates for RDP housing backlogs in the WCMA01 are 300-350 units for Rietpoort, 50-60 for Bitterfontein, and 20-30 for Nuwerus. Included in these estimates is the conversion from informal to formal structures.

In 2001 the Matzikama municipality had 14 090 households under its jurisdiction, of which 39.3 % were rural. This is higher than the average for the West Coast District, namely, 30.1 %. The number of households in the Matzikama area that live in informal structures is estimated at 1 500. This number appears to be increasing on a monthly basis. Informal settlements and housing backlogs for other potentially affected communities appear to have been largely eradicated, with the exception of Lutzville. By the beginning of 2006 almost all of the families that had been living in informal settlements in Lutzville had been relocated to RDP houses. However, a new informal community of approximately 100 households has recently developed in the town. With the exception of Vredendal and Lutzville, housing backlogs for the rest of the area are small, with 7-8 for Lutzville (West), 10 for Koekenaap and none for Ebenhaeser or Doringbaai.

2.5.2 Potable water

The area in the vicinity of the site is arid. The majority of the potable water for urban use in the Matzikama LM is derived from the Olifants River and associated Clanwilliam Dam. Supplies in the area are supplemented by groundwater sources.

According to relevant local authority representatives all potentially affected communities have been provided with basic access to treated potable water. Koekenaap is currently experiencing some problems with the storage of sufficient water supplies. This is mainly the result of the community's conversion to flush toilets. The Matzikama LM is currently investigating a range of solutions for addressing this problem.

2.5.3 Electricity

All of the surrounding communities in the vicinity of the proposed area have access to ESKOM power. However, this does not imply that at the households in the area are connected.

2.5.4 Health care

The only hospital in the sub-region is situated in Vredendal. The facility has approximately 60-70 beds and a staff compliment of 15 doctors. A maternity ward forms part of the facility. The sub-region is also serviced by 9 satellite clinics and 4 mobile clinics with a focus on primary, preventative and pediatric care.

In terms of health related issues TB is poses a significant health threat. Reported incidences of HIV/AIDS are currently relatively scarce, however, they are on the increase. Injuries associated with assault are common.

2.5.5 Policing

Four police stations are located in the area (Doringbaai, Lutzville, Vredendal and Nuwerus). Crime profiles differ between communities that live in the Olifants River Valley (Vredendal, Lutzville) and those that are located outside of the valley (Doringbaai, Nuwerus). The communities that live in the Olifants River Valley (Vredendal, Lutzville) display clear seasonal trends with regard to the prevalence of assault (common and with the intent to cause grievous bodily harm) during the agricultural harvesting season (summer), and economic crimes (theft, burglary) during agricultural off-season (associated with unemployment). The crime statistics in Doringbaai and Nuwerus do not display this seasonal trend linked to the agricultural sector.

However, in all four communities assault and theft are the most common categories of serious (that is excluding misdemeanors) crime over the past decade. In all four communities a clear link between crime and alcohol abuse exists. This is especially true for assault, where approximately 80 % of all assaults are linked to alcohol abuse. Alcohol abuse appears to be an endemic social problem in the sub-region, and is also linked to a high prevalence of domestic violence. Very serious crimes such as murder, rape and armed robbery appear to be relatively infrequent within the relevant communities.

2.6 GROWTH POTENTIAL OF THE AREA

The Western Cape Growth Potential of Towns Study (2004) reveals that the towns in Matzikama area have a mix of low and high development potential. Of the eight towns in the Matzikama LM, Vredendal and Strandfontein were identified as having high development potential. The other towns in the area that have tourist potential are Doringbaai, Koekenaap, Ebenhaeser, Klawer, Lutzville and Vanrhynsdorp. The type of tourist potential is not clearly defined in the study.

SECTION 3: IDENTIFICATION OF KEY ISSUES

3.1 INTRODUCTION

Section 3 identifies the key social issues associated with the proposed project that will need to be assessed by the SIA specialist study in the EIA phase. In identifying the key issues the following assumptions are made:

- The area identified for the proposed wind energy facility meets the technical wind criteria required for such facilities;
- The selection of the area for the establishment of the proposed wind energy facility has been informed by the Regional Guidelines for wind farms prepared by the Department of Environmental Affairs and Development Planning (DEA&DP) in the Western Cape; and,
- A number of the issues raised by stakeholders interviewed during an SIA for a mining project in the area are likely to hold for the proposed wind energy facility. These issues are largely linked to the farmers in the area and will be confirmed during the assessment phase of the SIA.

3.2 IDENTIFICATION OF KEY SOCIAL ISSUES

The identification of key social issues that need to be assessed during the EIA phase of the study include:

- The policy and planning related issues;
- Local, site-specific issues.

3.2.1 Policy and planning issues

As indicated in Section 1.6, legislative and policy context plays an important role in identifying and assessing the potential social impacts associated with a proposed development. In this regard a key component of the SIA process is to assess the proposed development in terms of its fit with key planning and policy documents.

The review of the relevant planning and policy documents has been undertaken as a part of the Scoping Study assessment. The key documents reviewed included:

- The White Paper on the Energy Policy of the Republic of South Africa, December 1998;
- Strategic Initiative to Introduce Commercial Land Based Wind Energy Development to the Western Cape. Towards a Regional Methodology for Wind Energy Site Selection (May 2006)
- Draft Western Cape Integrated Energy Strategy. Provincial Government Western Cape Department of Environmental Affairs and Development Planning (January 2007);

The findings of the review indicated that wind energy was strongly supported at both a national and provincial level.

At a national level the While Paper on Energy Policy (1998) notes:

- Renewable resources generally operate from an unlimited resource base and, as such, can increasingly contribute towards a long-term sustainable energy future;
- The support for renewable energy policy is guided by a rationale that South Africa has a very attractive range of renewable resources, particularly solar and ***wind*** and that renewable applications are in fact the least cost energy service in many cases; more so when social and environmental costs are taken into account.

At a provincial level the Draft Western Cape Integrated Energy Strategy (January 2007) notes:

- Wind energy potential in the Western Cape is high (3 000 MW). The potential advantages associated with wind include:
  - Technology & capital costs are reducing rapidly.
  - Low maintenance.
  - Clean option.
  - Can be quickly installed in areas needing new supply

- The Provincial Government of the Western Cape is committed to energy efficiency and renewable energy, and to reducing the Province's carbon footprint and eradicating energy poverty. In order to achieve this vision, the PGWC will:
  - Support an approach to energy planning, which takes into account environmental, social and economic considerations.
  - Support research and development around renewable energy and energy efficiency technologies.

3.2.2. Regional Methodology for Wind Energy Site Selection

The Regional Methodology for Wind Energy Site Selection (May, 2006) undertaken by DEA&DP notes:

- It is important that at the national level (SA being signatories to the Kyoto Protocol) that positive policy is enacted to encourage wind energy (and indeed all renewable) development. A national perspective should ensure that wind resource rich provinces and regions are identified in order to ensure a co-ordinated and holistic national strategy. ***In this regard, it is accepted that the Cape West Coast (the study area and beyond to the north – indeed to the Orange River) will inevitably be attractive to wind energy developers due to the prevalence of coastal wind regimes.*** However, the importance of employing an effective cumulative impact model must be emphasised.

The findings of the review of the relevant policies and documents pertaining to the energy sector indicate that wind energy and the establishment of wind energy facilities are supported at both the national and provincial level. At a provincial level the wind energy potential along the west of the coast of the Western Cape Province is recognised. The proposed ESKOM wind energy facility is therefore supported by

national and provincial energy policies and is located in an area that has been identified as having high wind energy potential. The fit with national and provincial policies and planning guidelines therefore supports the proposed site for the establishment of the wind energy facility.

3.2.3. Local and site specific issues

Based on review of information relating to wind farms, experience with the Darling Wind Farm EIA, the baseline socio-economic data for the area and the findings from the site visit, the most important issues that will need to be assessed during the EIA include:

- Potential up and down-stream economic opportunities for the local, regional and national economy;
- Job and business creation opportunities during the construction phase;
- Job and business creation opportunities during the operational phase;
- Creation of potential opportunities to support local communities, including education and training and community based projects and programmes.
- Impact on tourism;
- Impact on farming activities;
- Impact on property prices;
- Influx of job seekers into the area during the construction phase. The influx of job seekers may result in an increase in sexually transmitted diseases, including HIV/AIDS; increase in prostitution; increase in alcohol and drug related incidents; increase in crime; and creation of tension and conflict in the community.
- Impact on rural sense of place (this will be closely linked to the visual impacts).
- Impacts on people residing in close proximity to the site;
- Potential impact on the local tourism industry (positive and negative);
- Potential implications for Eskom's alternative energy programme and people perceptions about alternative energy.

In terms of potential impacts on the farmers in the area the following issues will need to be assessed:

- Impact on farming activities and farm property values;
- Impact on rural, undeveloped, open "sense of place";
- Threat to farm safety due to increased number of people in the area and construction workers;
- Stock losses (during the construction and operational phase);
- Damage to water pipes and other farm infrastructure (during the construction and operational phase);
- Damage to roads by heavy equipment and increased traffic volumes (during the construction and operational phase);
- Impact on farming operations (during the construction and operational phase).
- Impacts of noise of surrounding landowners

In addition to the proposed wind energy facility there are also likely to be social impacts associated with the access road and 132kV powerline that connects the proposed wind energy facility. The existing access route to the site via Koekenaap would be considered as the first option for providing access to the site, and modifications made to the route where required. In addition, the preference is for the powerline to follow the access route as closely as possible, which will also allow

for access to the powerline and ensure consolidation of the linear infrastructure. The actual point of connection to the grid has, however, not been finalised.

The issues that will need to be addressed during the assessment phase include:

- Impact on farming activities and farm property values;
- Impact on farming infrastructure;
- Visual impacts;
- Impacts during the construction phase, such as stock thefts, safety and security issues, dust and noise;
- Damage to roads caused by heavy vehicles.

In terms of extent, the majority of potential social impacts associated with the proposed wind energy facility are likely to be local. However, the potential impact on the local tourism industry may also have regional and national implications. The potential implications for Eskom's alternative energy programme and people's perceptions about alternative energy are also likely to have national implications.

An assessment of the significance of these issues will only be possible once the assessment phase has been completed.

3.3 POTENTIAL RED FLAGS

Based on the experience from other wind energy facilities, the visual impact is likely to represent the impact with the most potential to be regarded as a "Red Flag". However, as indicated above, the establishment of wind energy facility is supported by both national and provincial policies. In this regard the EIA should identify and assess if the potential visual impacts associated with the wind energy facility can be effectively mitigated. This aspect should be addressed by the visual impact assessment. The SIA will assess the communities perceptions about the potential visual impacts and the potential impact on the current, rural sense of place and open landscape.

3.4 APPROACH TO ASSESSING IMPACTS

The identification and assessment of social impacts will be guided by the specialist SIA Guidelines adopted by DEA&DP in the Western Cape. As indicated above, the detailed public consultation process will be undertaken during the EIA phase of the project. The consultation process for the SIA will be separate to the consultation process for the EIA. In this regard the consultation process for the SIA will focus on one-on-one interviews with key stakeholders and, where necessary, workshops and meetings with community representatives.