

Start

End

3rd October

Already on SAHRIS
case ID: 1661

08 September 2011

South African Heritage Resources Agency
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Attention: Ms. Mariagrazia Galimberti



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Dear Ms. Galimberti

**EIA FOR THE PROPOSED UNIVERSAL WIND ENERGY PROJECT IN ZONE 12 OF THE
COEGA IDZ (Dept of Environmental Affairs EIA reference: 12/12/20/2106)**

FINAL SCOPING REPORT

Attached please find a copy of the Final Scoping Report (FSR) for the proposed Universal Wind Energy Project situated within Zone 12 of the Coega IDZ. The Environmental Impact Assessment being conducted is for the establishment of a wind energy project comprising of approximately 20 wind turbines with a generation capacity of approximately 2 to 4 megawatts (MW) each, and a combined generation capacity of up to 80 megawatts (MW).

The Final Scoping Report is being released to key Interested and Affected Parties (I&AP's) for a 21 day comment period, which ends on Monday **3rd October 2011**. Following the closure of the comment period, a comments and response report containing all comments received will be prepared and submitted to the national Department of Environmental Affairs.

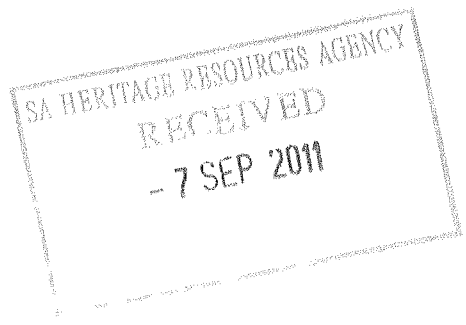
Should you wish to comment on the Final Scoping Report please ensure that your comments reach us no later than **3rd October 2011** at the following contact details:

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Yours sincerely

Ismail Banoo
CSIR Project Leader



**Environmental Impact Assessment for the proposed
Universal Wind Energy Project in Zone 12 of the
Coega Industrial Development Zone (IDZ):**

FINAL SCOPING REPORT



Prepared for:
Universal Wind
Kalendegatan 25
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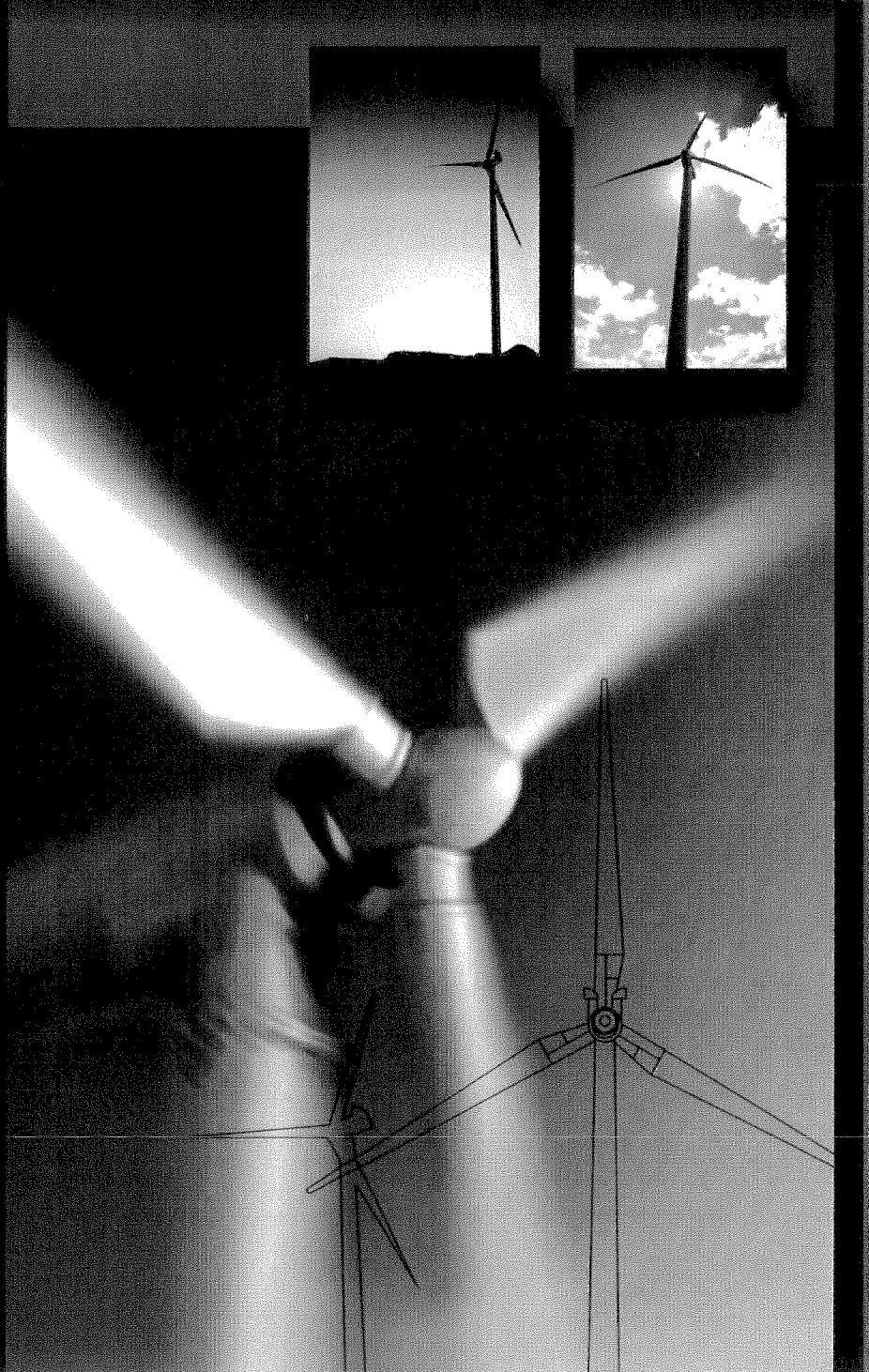
Lead Authors:
Ismail Banoo, Paul Lochner,
Sarah Watson and Sandy Wren

SEPTEMBER 2011

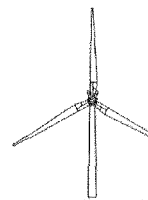


Public Process Consultants
Environmental Impact Assessment and
Public Participation Management

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FINAL SCOPING REPORT

Report details

Title: Environmental Impact Assessment for the proposed Universal Wind Energy Project in Zone 12 of the Coega Industrial Development Zone (IDZ): FINAL SCOPING REPORT

Purpose of this report:

This Final Scoping Report forms part of a series of reports and information sources that are being provided during the Environmental Impact Assessment (EIA) process for the proposed Universal Wind Energy Project in Zone 12 of the Coega IDZ. In accordance with the EIA Regulations, the purpose of the Scoping Report is to:

- *Provide a description of the proposed project, including a sufficient level of detail to enable stakeholders to identify relevant issues and concerns;*
- *Describe the local environmental and development context within which the project is proposed, to assist further in identifying issues and concerns;*
- *Provide an overview of the process being followed in the Scoping Phase, in particular the public participation process, as well as present the draft Plan of Study for EIA that would be followed in the subsequent EIA phase;*
- *Present the issues and concerns identified to date from the stakeholder engagement process, together with an explanation of how these issues will be addressed through the EIA process.*

This Final Scoping Report is being made available to registered Interested and Affected Parties for a 21 day review period, with comments to reach Public Process Consultants by 03 October 2011. Comments received will be incorporated into a comments and response trail which will be submitted to the Department of Environmental Affairs.

Prepared for: Universal Wind
Contact Person: Mia Bergström

Prepared by: CSIR, P.O. Box 17001 Congella, Durban, 4013, South Africa
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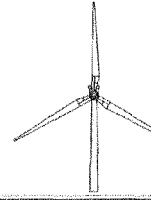
Authors: Ismail Banoo, Paul Lochner, Sarah Watson and Sandy Wren

CSIR Report Number: CSIR/CAS/EMS/ER/2011/0003/B
CSIR Project Number: CASKG81

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Date: September 2011

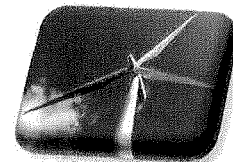
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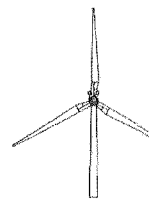


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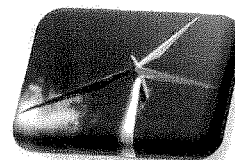


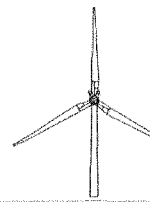


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Summary

Project overview

Universal Wind is a Swedish-based company specialising in the production of renewable and sustainable energy projects. Since its inception, Universal Wind has become a formidable wind energy company in Sweden and is now in the process of exploring opportunities to expand its operations into Southern Africa, particularly South Africa. As part of one of its initial projects Universal Wind is proposing the establishment of a commercial wind energy project comprising of 20 wind turbines of approximately 2 to 4 megawatts (MW) each with a combined generation capacity of up to 80 megawatts (MW) in Zone 12 of the Coega Industrial Development Zone (IDZ) situated near Port Elizabeth within the Nelson Mandela Bay Metropolitan Municipality, of the Eastern Cape Province.

Need for the Project

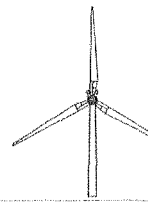
South Africa constitutes the largest emitter of greenhouse gases in Africa, accounting for as much as 42% of Africa's total greenhouse gas emissions, and is also estimated to rank amongst the top 20 largest emitters of greenhouse gases in the world, with the energy sector (energy supply and consumption) constituting the greatest contributor to greenhouse gas emissions. In 2003, South Africa developed a White Paper on Renewable Energy in which it set itself a Renewable Energy Target of 10 000GWh of energy to be produced from renewable energy sources (mainly from biomass, wind, solar and small-scale hydro) by 2013. Of the approximately 1 400 MW of electricity supplied to the Eastern Cape Province by Eskom, approximately half (600 to 700 MW) is utilised by the Nelson Mandela Metro alone. The Metro has embarked on its own renewable energy campaign, with the objective of sourcing at least 10% of its energy from renewable energy sources such as wind and solar power. The implementation of the proposed project with a combined generation capacity of up to 80 MW will therefore make a significant contribution towards meeting this objective, while also contributing on a larger scale to South Africa's National Renewable Energy Target of 10 000 GWh by 2013. All while alleviating the heavy reliance on resource intensive, pollutant emitting energy sources, and stabilising the National Grid.

Project description

The key components of the project are presented below:

Wind Turbines:

The implementation of the proposed project will result in the establishment of 20 wind turbines with an approximate capacity of between 2 and 4 MW each. The total combined generation capacity is therefore expected to be up to 80 MW. At this stage of the project planning, the exact turbine technology has not yet been



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selected. Negotiations are underway with preferred potential providers Enercon, Siemens, Vestas and Repower. Depending on the technology selected for implementation, the wind turbines will have an approximate hub height of between 80 and 125 metres while the rotor blades are expected to have a diameter of between 60 and 100 metres. Each wind turbine will be positioned a minimum distance of 400 m apart from one another, and will be situated outside of the Coega Open Space Management Plan.

Hard Standing Area:

A hard standing area will be established for each of the wind turbines. These areas will serve as crane platforms and will be used for construction and maintenance purposes. A hard standing area of approximately 20 x 40 m for each wind turbine has been proposed. Access roads will be incorporated into and form part of the hard standing area, thereby reducing the overall development footprint.

Electrical Connections:

Electricity generated by the proposed wind farm will feed into and supplement the National Grid via the Dedisa Power Station situated in the centre of the IDZ. The majority of the cabling will be routed underground, while the connection to the substation will be aboveground. Different alternatives for cable routing are being investigated. One alternative may require that the Open Space Management Plan be crossed. This will occur at the narrowest portion of the Open Space Management Plan and will be done aboveground in order to minimise any negative environmental impacts on the Open Space areas and their ecological functioning.

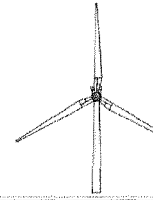
Access Roads:

Existing access roads within Zone 12 will be used as far as possible. All new access roads required for the development will have a carriageway width of 4.4 m and 5.5 m on curves. Access roads will be designed to handle an axle load of up to 12 tons and an overall weight of 120 tons.

Need for an EIA

In terms of the Environmental Impact Assessment Regulations promulgated under Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998) ("NEMA") published in GN R543, 544, 545 and 546 on 18 June 2010 and enforced on 2 August 2010, a full Scoping and Environmental Impact Assessment (EIA) process is required for the proposed project. The need for the full Scoping and EIA is triggered by, amongst others, the inclusion of the following activity listed in GN R545 (Listing Notice 2):

1. *"The construction of facilities of infrastructure for the generation of electricity where the electricity output is 20 megawatts or more."*



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Purpose of the Scoping Report

The purpose of the Scoping Phase of the EIA is to identify issues which would require assessment during the EIA process, to inform stakeholders about the proposed development, and to present an opportunity for public participation to occur at an early stage, allowing for a transparent and inclusive process. It is hoped that the outcome of the Scoping Phase would provide sufficient information to enable the authorities to reach a decision regarding the scope of issues to be addressed in the EIA process.

Within this context, the objectives of this Scoping process are to:

- Identify and inform a broad range of stakeholders about the proposed development;
- Clarify the scope and nature of the proposed activities and the alternatives being considered;
- Conduct an open, participatory and transparent approach and facilitate the inclusion of stakeholder concerns in the decision-making process;
- Identify and document the key issues to be addressed in the forthcoming Environmental Impact Reporting Phase of the EIA, through a process of broad-based consultation with stakeholders;
- Ensure due consideration of alternative options in regard to the proposed development, including the "No development" option.

The Final Scoping Report is being made available to all Registered Interested and Affected Parties for a 21 day review period, with comments to reach Public Process Consultants by **03 October 2011**.

Identification of Issues

The Final Scoping Report includes the issues identified to date from the scoping process. The project and associated EIA process was advertised in two regional newspapers and letters with personal notification regarding the EIA process were mailed to all pre-identified key stakeholders on the database, which at the time consisted of 88 I&APs. The I&AP register was updated during the scoping phase. At the time of producing this report, the database stands at 128 registered I&APs. A synthesis of these issues is provided in the Issues & Response Trail (Chapter 5), which includes an explanation of how the issues will be addressed through the EIA.

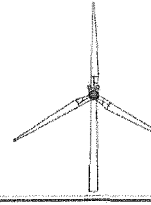
In summary, the following key issues have been identified to date:

Potential Noise Impacts:

- Noise impact of future developments in the area and the cumulative impact of all other proposed wind turbines.
- Compliance with the NMBM noise control by-laws which prevent a disturbing noise/ noise nuisance from occurring.
- Noise impact on proposed residential areas.

Potential Heritage Impacts:

- Impact on archaeology, e.g. stone age artefacts and shell middens



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- Impact of excavations during construction on palaeontology
- Impact on heritage, e.g. graves and burial sites

Potential Impact on Birds and Bats:

- Impact on larger bird species and raptors
- Cumulative impact of the wind farms on habitat use by large birds e.g. Blue Crane and Denham's Bustard
- Need for useful and uniform monitoring

Potential Visual Impacts:

- Cumulative impact of wind farms e.g. visual impacts from Addo Elephant National Park.
- Visual impact on proposed residential areas.

Impacts on the IDZ Open Space Management Plan:

- Impact of infrastructure crossings on the OSMP

Potential Impacts on Civil Aviation:

- Impact on radar systems at Port Elizabeth airport.

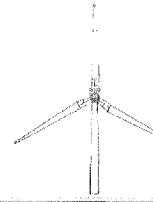
Potential Socio-Economic Impacts:

- Contribution to boosting economic development in the region.
- Creation of employment opportunities

Potential Biophysical Impacts:

- Impact of individual turbine sites on OSMP areas.

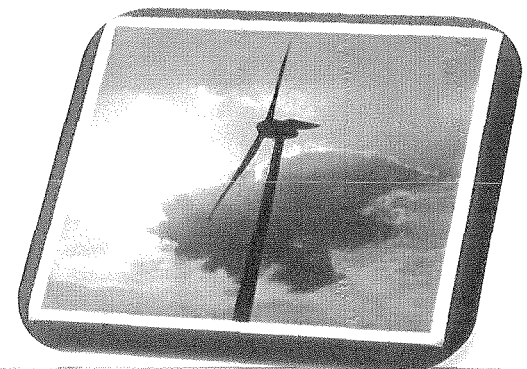
The *Plan of Study for EIA* (Chapter 6) presents the approach to the forthcoming EIA phase. This includes the Terms of Reference for the various specialist studies that are proposed to address the issues raised, where necessary.

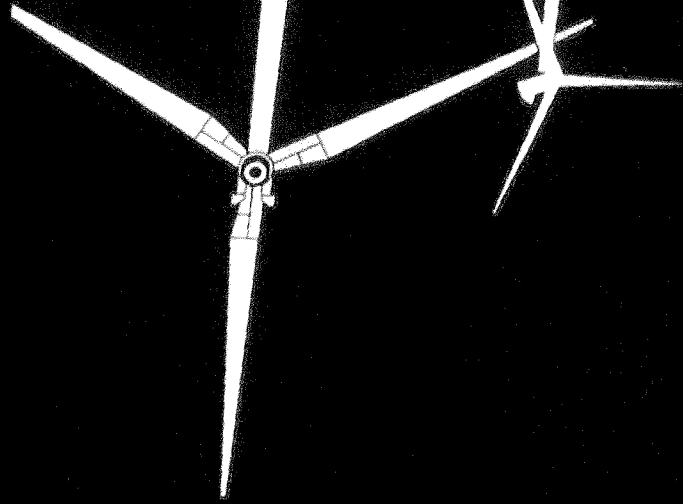


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Glossary

BID	<i>Background Information Document</i>
CDC	<i>Coega Development Corporation</i>
CSIR	<i>Council for Scientific and Industrial Research</i>
DEA	<i>National Department of Environmental Affairs</i>
FSR	<i>Final Scoping Report</i>
EAP	<i>Environmental Assessment Practitioner</i>
EIA	<i>Environmental Impact Assessment</i>
EMP	<i>Environmental Management Plan</i>
GWh	<i>Gigawatt Hour</i>
I&AP	<i>Interested and Affected Party</i>
IDP	<i>Integrated Development Plan</i>
IDZ	<i>Industrial Development Zone</i>
kWh	<i>Kilowatt Hours</i>
m/s	<i>Metres per Second</i>
MW	<i>Megawatts</i>
NEMA	<i>National Environmental Management Act (Act 107 of 1998)</i>
NHRA	<i>National Heritage Resources Act (Act 25 of 1999)</i>
NMBM	<i>Nelson Mandela Bay Municipality</i>
OSMP	<i>Open Space Management Plan</i>
PPC	<i>Public Process Consultants</i>
PSEIA	<i>Plan of Study for EIA</i>
SDF	<i>Spatial Development Framework</i>
ToR	<i>Terms of Reference</i>
WTG	<i>Wind Turbine Generator</i>





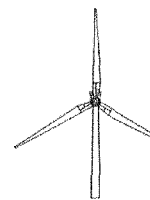
Introduction

CHAPTER 1

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1. INTRODUCTION

1.1 Background

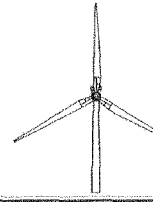
Universal Wind is a Swedish-based company specialising in the production of renewable and sustainable energy projects. The Universal Wind Group comprises of a number of “special purpose” subsidiary companies such as Universal Wind, Universal Wind Offshore and the newly established Universal Wind South Africa. Universal Wind constitutes the main operating company responsible for dealing with onshore projects and to date has been involved in approximately 8% of the total onshore wind power projects in Sweden. Universal Wind Offshore is responsible for dealing with all offshore projects and has recently obtained all the necessary approvals and permits required to commence with the building of one of the largest offshore wind farms in Europe. Universal Wind South Africa is a newly established Swedish company which owns and operates the South African company Algvist Gejervall Bergstrom Power Production (AGB Power Production).

Since its inception, Universal Wind has become a formidable wind energy company in Sweden and is now in the process of exploring opportunities to expand its operations beyond its borders into various other parts of the world, including Europe and Africa, in particular South Africa. Universal Wind South Africa was therefore established as a special purpose company under the Universal Wind Group responsible for identifying and implementing commercial wind energy projects across South Africa. As part of one of its initial projects Universal Wind South Africa is proposing the establishment of a wind energy project comprising of approximately 20 wind turbines of approximately 2 to 4 megawatts (MW) each with a combined generation capacity of up to 80 megawatts (MW) in Zone 12 of the Coega Industrial Development Zone (IDZ) situated near Port Elizabeth within the Nelson Mandela Bay Metropolitan Municipality, of the Eastern Cape Province. The regional location of the Coega IDZ is shown in Figure 1.2.

This report has been developed for Universal Wind South Africa as one of its pilot projects. For ease of reference for the remainder of this report, the name Universal Wind South Africa has been abbreviated to Universal Wind.

1.2 Need for the Project

South Africa constitutes the largest emitter of greenhouse gases in Africa, accounting for as much as 42% of Africa’s total greenhouse gas emissions and is also estimated to rank amongst the top 20 largest emitters of greenhouse gases in the world. South Africa’s status as one of the most carbon emission intensive countries in the world however, comes as a result of its energy intensive economy and subsequent high dependence on coal for primary energy. The Department of Environment Affairs and Tourism’s (DEAT) National Inventory Report - Greenhouse Gas Inventory for South Africa (May 2009) compiled under the United Nations Framework Convention on Climate Change (UNFCC)



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indicates the energy sector (energy supply and consumption) as being the greatest contributor to greenhouse gas emissions, accounting for approximately 78.3% of the country's total greenhouse gas emissions in 1994, and approximately 78.9% in 2000.

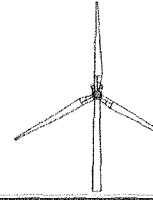
Following the global community's increasing recognition of the various adverse environmental and other impacts associated with conventional energy production methods and the finite nature of traditional power producing resources such as coal and fossil fuels, South Africa has also begun shifting its attention towards the benefits associated with the implementation and use of renewable energy sources. As a result, South Africa's National Government and the Department of Energy (DoE) has committed itself to ensuring increased use of renewable sources with regards to the generation of power and decreased atmospheric and greenhouse gas emissions as a result of conventional power generating activities such as the burning of coal. Having ratified the United Nations Framework Convention on Climate Change (1997) and the subsequent Kyoto Protocol (which South Africa acceded to in 2002), South Africa developed a White Paper on Renewable Energy in 2003 in which it set itself a Renewable Energy Target of 10 000GWh of energy to be produced from renewable energy sources (mainly from biomass, wind, solar and small-scale hydro) by 2013. Such a figure is equivalent to approximately 4% (1667 MW) of the estimated electricity demand of 41539 MW by 2013. South Africa's Renewable Energy Target is also the equivalent of replacing two 660 MW units of Eskom's combined coal fired power stations.

Once operational, the proposed project will have a combined generation capacity of up to 80 megawatts which will feed into the national electricity grid and effectively augment the national electricity supply, while positively contributing (approximately 4.8%) towards South Africa's Renewable Energy Target. In doing so, the proposed wind energy project will also assist in alleviating the heavy reliance on resource intensive, pollutant emitting energy sources.

Why the Coega IDZ?

The proposed project will be situated within Zone 12 of the Coega IDZ which is situated within the Nelson Mandela Bay Metropolitan Municipality (NMBM) of the economically disadvantaged Eastern Cape Province. Despite housing significant industrial and rural development potential including that of the Coega IDZ and the deep water Port (Ngqura) the Eastern Cape Province obtains most of its electricity supply from Eskom via the national grid, and is heavily reliant on electricity imports from other provinces. Significant losses in transmission are experienced in instances where power is transmitted across considerable distances which in turn has a negative impact on electricity supply and often results in local grid instabilities. Such a problem is complicated further by the presence of poor transmission infrastructure within the NMBM.

Of the approximately 1 400 MW supplied to the Eastern Cape Province by Eskom, approximately half (600 to 700 MW) is utilised by the Nelson Mandela Metro alone. The Coega IDZ situated within the NMBM places immense pressure on local needs due to the high electricity demands associated with industry and associated industrial processes. The Coega Development Corporation (CDC) who is responsible for the management of

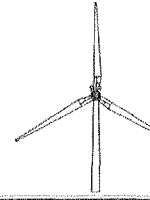


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the Coega IDZ has projected an ultimate demand of up to 5000 MW for the NMBM and IDZ which amounts to approximately three and a half times the current electricity supply provided to the Eastern Cape Province as a whole. Given this current scenario it is paramount that a solution is found to overcome the challenges of additional power supply requirements to the Coega IDZ, the NMBM and the Eastern Cape Province. The implementation of this proposed project would therefore prove beneficial in augmenting the power supply at minimal environmental and social costs and to some degree reducing the heavy reliance on electricity imports into the province. Furthermore, the location of the proposed project within Zone 12 of the Coega IDZ and within close proximity to an existing electrical substation means that optimal use can be made of the power generated by the project, as transmission losses associated with transmission over great distances will not be applicable.

Apart from the provision of a clean and renewable energy source, a number of additional benefits may accrue to the local communities and greater surrounding area as a result of the “trickle-down” effect from the proposed project. Some of these include the provision of employment opportunities during the construction and operational phases of development. Global trends in areas with a well established wind energy presence have illustrated a significant growth in jobs associated with wind energy over the past few years to the extent that the wind industry now exceeds coal mining in terms of employment figures in the United States. The creation of additional employment opportunities as a result of the proposed project will in turn contribute positively to the high unemployment rate, which is estimated to be as high as 40% within the greater NMBM, increasing to approximately 50 to 60 % within the predominantly urban areas of the metropolitan. An increase in employment opportunities will also make a positive contribution towards decreasing poverty levels, improving people’s quality of life and standard of living (approximately 39% of the total population live in conditions of poverty). The provision of employment opportunities to local communities will result in an improved economic standing and increased spending power, which could be expected to further stimulate other local businesses within the area and ultimately the local economy. In addition, the provision of a reliable and effective energy source within the Coega IDZ may overcome a hindering factor associated with energy demands and effectively present a pull factor to future industry and businesses looking to locate within the area, which would also result in a number of associated direct, indirect and trickle-down benefits.

Amidst international and national commitments to increasing use of renewable clean energy resources, while reducing carbon emissions; and as a result of national power shortages which currently face South Africa and the limited power supply to the NMBM, the Metro has embarked on its own renewable energy campaign, with the objective of sourcing at least 10% of its energy from renewable energy sources such as wind and solar power. The implementation of the proposed project with a combined generation capacity of up to 80MW will therefore make a significant contribution towards meeting this objective, while also contributing on a larger scale to South Africa’s National Renewable Energy Target of 10 000GWh by 2013.



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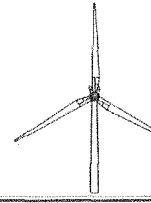
Why Wind Energy?

Wind energy is fast emerging as a viable and sustainable alternative source of energy when compared to conventional energy production methods, such as fossil fuel burning. By harvesting the kinetic energy of the wind, energy is produced by means of a renewable natural resource. Wind energy constitutes a renewable energy source, and as such has minimal environmental, health, or social impacts. It is considered “clean” energy as it is commonly associated with a significant decrease in CO₂ and other harmful emissions associated with conventional power production methods. The implementation of wind energy projects therefore allows for increased energy production opportunities which would assist in meeting rising energy demands, but at minimal environmental and other costs.

An article entitled “Birth to death analysis of the energy payback ratio and CO₂ gas emission rates from coal, fission, wind, and DT-fusion electrical power plants” (White and Kulcinski, 2000), assesses the amount of energy required across the lifetime of different energy production methods. This includes CO₂ emitted as a result of the procurement of fuels (which includes the mining and transportation thereof); the building and construction of the respective energy facilities, power plants and associated infrastructure; the operation of the power plant; and ultimately the decommissioning.

Given South Africa’s heavy reliance on coal as a primary source of energy, the CO₂ emissions associated with coal power production in particular can be compared with the CO₂ emissions associated with wind energy production.

Figure 1.1 below was recreated from White and Kulcinski’s article, and depicts the average number of tonnes of CO₂ emitted per gigawatt hour (GWh) for coal and wind respectively (White and Kulcinski, 2000). This chart is representative of a “cradle to grave” approach, and therefore takes into account fuel requirements; plant materials, construction; operation; decommissioning and waste disposal for the respective energy sources.



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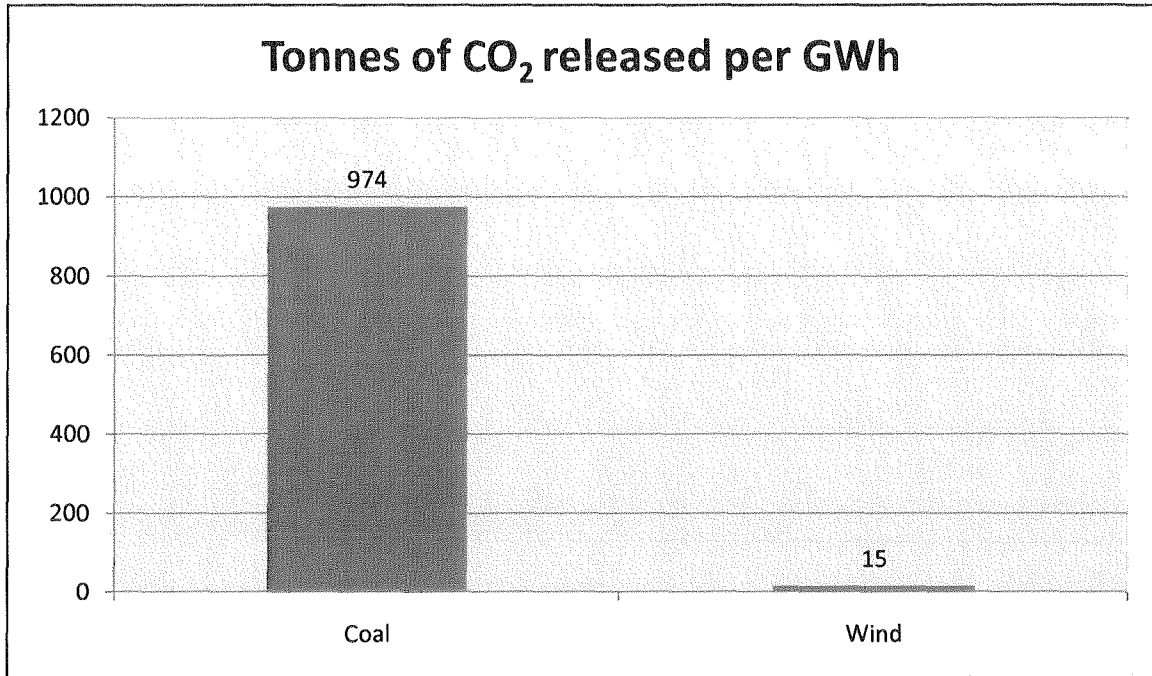


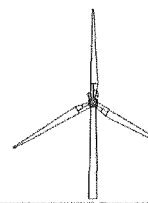
Figure 1.1: CO₂ emissions per GWh (White and Kulcinski, 2000).

From this figure it is evident that 1 GWh of energy produced by coal releases approximately 974 tonnes of CO₂, while wind energy releases only 15 tonnes of CO₂ per GWh. Wind energy as an alternative energy production method therefore releases 1.54% the amount of CO₂ when compared with conventional coal burning energy production methods.

Table 1.1 below was also extracted from White and Kulcinski's article. This table provides a breakdown of the various CO₂ emitting processes, and the number of tonnes of CO₂ that each respective process releases. The sum of these individual processes therefore amount to the total CO₂ emissions, depicted in Figure 1.1 above.

Table 1.1: Comparison of CO₂ emissions from coal and wind energy systems, by process (tonne CO₂/GWh) (White and Kulcinski, 2000).

Process	Coal	Wind
Materials (non-fuel)	0.6	8.6
Plant construction	0.7	1.6
Fuel mining	8.4	NA
Fuel preparation (cleaning, milling, enrichment, etc.)	Incl. in mining	NA
Fuel transportation	9	NA
Operation	956	4.0
Waste disposal and transportation	0.05	Not available
Decommissioning	0.1	0.4



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Land reclamation (fuel only)	0.03	Neg.
Total	974	15

From this table it is evident that the vast majority of 98% of the CO₂ emitted from coal power production methods amounting to 956 tonnes of CO₂ per GWh is released as a result of the operation of the power plant. The majority of 68% (10.2 tonnes per GWh) of the CO₂ emitted from wind power production methods is released during the manufacturing and construction processes. It should be noted however that unlike coal power production, wind power does not require any fuel input with which to operate. Wind energy therefore presents an attractive alternative with regards to power production methods. It has a number of positive benefits over conventional power production methods such as fossil fuel and coal burning and is therefore considered as an environmentally sustainable energy production source.

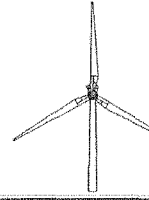
While the figures represented above are encouraging, it should be noted that the article did not take into account the negative effect of conventional resource intensive power production methods on diminishing resources such as coal reserves, or conversely the positive effect of renewable energy production methods on natural resources. It should also be noted that in the 11 year period since the publication of the article, a number of advancements have been made in the field of wind energy. Technological advancements in the manufacturing, construction and operation of wind energy projects imply that significant decreases can be expected in the figures represented above. This thereby further strengthens the favourability of renewable wind power production over other resource intensive conventional power production methods.

1.3 Requirements for an Environmental Impact Assessment EIA

In terms of the Environmental Impact Assessment Regulations promulgated under Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998) ("NEMA") published in GN R543, 544, 545 and 546 on 18 June 2010 and enforced on 2 August 2010, a full Scoping and Environmental Impact Assessment (EIA) process is required for the proposed project. The need for the full Scoping and EIA is triggered by, amongst others, the inclusion of the following activity listed in GN R545 (Listing Notice 2):

1. *"The construction of facilities of infrastructure for the generation of electricity where the electricity output is 20 megawatts or more."*

Chapter 4 of this Final Scoping Report contains the list of activities contained in GN R544, 545 and 546 which may be triggered by the various project components and thus form part of this Scoping and Environmental Impact Assessment process. These listed activities require authorisation from the relevant authority, which in this instance is the National Department of Environmental Affairs (DEA). The purpose of the Environmental Impact Assessment is to identify, assess and report on any potential impacts the

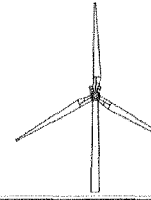


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proposed project, if implemented, may have on the receiving environment. The environmental assessment therefore needs to show the responsible authority, the DEA; and the project proponent, Universal Wind, what the consequences of their choices will be in terms of impacts on the biophysical and socio-economic environment and how such impacts can be as far as possible mitigated and managed.

1.4 EIA Team

The CSIR has been appointed by Universal Wind to undertake the Environmental Impact Assessment (EIA) required for the project. Public participation forms an integral part of the environmental assessment process and assists in identifying issues and possible alternatives to be considered during the Environmental Impact Assessment process. The CSIR has therefore appointed Public Process Consultants (PPC) in a sub-contractor capacity to manage the public participation component of the EIA. The EIA team which is involved in the Scoping and full EIA process is listed in Table 1.2. This team includes the names of a number of specialists which have either been involved to date, or are planned to provide inputs during the EIA process. No archaeological or paleontological (heritage) assessment has been included with regards to the proposed specialist studies. This is due to the fact that the Coega Development Corporation (CDC) is currently in the process of finalising an IDZ wide heritage assessment. The findings of the heritage assessment will be used to identify any potential archaeological and/or paleontological impacts which may arise as a result of the proposed project.



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Table 1.2: EIA Team

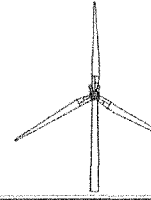
EIA PROJECT MANAGEMENT TEAM		
Paul Lochner	CSIR	Project Leader (EAPSA) Certified
Ismail Banoo	CSIR	Project Manager (EAPSA Certified)
Sarah Watson	CSIR	Project Consultant
SPECIALIST TEAM	AFFILIATION	STUDY
James Harrison	Private Consultant	Avifauna (birds)
Stephanie Dippenaar	Private Consultant	Bats
Jamie Pote	Private Consultant	Botany
Henry Holland	Mapthis	Visual impacts
Brett Williams	Safetech	Noise Impacts
CDC Study	Coega IDZ HIA	Heritage Impact Assessment
PUBLIC PARTICIPATION PROCESS		
Sandy Wren	Public Process Consultants	Public Participation Process

1.5 Details and Expertise of the Environmental Assessment Practitioners (EAP)

Over the past 30 years the CSIR has been involved in a multitude of projects across Africa and South Africa, with experience in 32 sub-Saharan African and Indian Ocean Island countries. The CSIR has been involved in the management and execution of numerous environmental projects and programmes for a range of both public and private sector clients and as a result CSIR staff offer a wealth of experience and appreciation of the environmental and social priorities and national policies and regulations in South Africa.

The Universal Wind EIA team is being led by Project Leader, Paul Lochner who will be supported by Project Manager, Ismail Banoo (See CV's in Appendix A).

Paul Lochner - Paul Lochner has 17 years experience in environmental assessment and management studies, primarily in the leadership and integration functions. This has included Strategic Environmental Assessments (SEA), EIAs and EMPs. He has been a certified Environmental Assessment Practitioner for South Africa (EAPSA) since July 2003; and has conducted several EIA processes both in South Africa and internationally. Examples include the SEA for Coega which provided the environmental framework for development within the IDZ and Port, the EIA for the Jeffreys Bay Wind Project proposed by Mainstream, the EIA for the Electrawinds Wind energy project in the Coega IDZ, the EIA for the Coega Aluminium Smelter, the EIA for the expansion of the container terminal and construction of an administration craft harbour at the Port of Ngqura for Transnet, the EIA for Thesen Island at Knysna, the EIA for Century City Wetlands in Cape Town, the EIA for a resort development on Fregate Island in the Seychelles, and the ESIA for a proposed alumina refinery at Sosnogorsk in the Komi Republic of Russia. In addition, he



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is also currently busy with the EIA for the Coega Crude Oil Refinery for PetroSA. He has also prepared various EMPs, such as the EMP for the Rietvlei Wetland Reserve (Cape Town), EMP for Century City wetlands, EMP for Eskom Wind Energy Project (Klipheuwel) and the EMP for the Coega Aluminium Smelter. He has authored several Guidelines, such as the "Overview of Integrated Environmental Management" information document for DEAT in 2004; and the "Guideline for EMPs" published in 2005 by the Western Cape government.

Ismail Banoo – Ismail Banoo has 11 years experience in environmental assessment and management studies. Ismail has been a certified environmental assessment practitioner for South Africa since January 2006. He holds a Master's degree in Environmental Science from the University of KwaZulu-Natal. His involvement in several industrial and port related Environmental Impact Assessments (EIAs) has afforded him an in-depth understanding of the sustainability issues facing development in South Africa and Africa. He was project manager for the EIA for the port expansion project at the Port of Ngqura within the Coega IDZ and is currently project manager for the EIA being conducted for a marine pipeline and servitude on behalf of the Coega Development Corporation. He has been involved in several private sector and development agency funded projects in South Africa, Botswana, Mozambique and Angola, and has participated in various international conferences and workshops. He has also facilitated numerous EIA/SEA training courses for universities as well as the private and public sector in South Africa and other African countries.

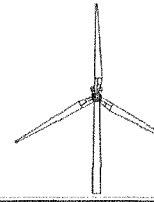
1.6 Objectives of the Final Scoping Report

The Scoping Phase of the EIA refers to the process of determining the spatial and temporal boundaries for the EIA. In broad terms, this involves three important activities:

- Confirming the process to be followed and opportunities for stakeholder engagement;
- Clarifying the project scope and alternatives to be covered; and
- Identifying the key issues to be addressed in the impact assessment phase and the approach to be followed in addressing these issues.

This is done through parallel initiatives of consulting with the lead authorities involved in the decision-making for this EIA application; consulting with the public to ensure that local issues are well understood; and consulting with the EIA specialist team to ensure that "technical" issues are identified. The scoping process is supported by a review of relevant background literature on the local area. Through this comprehensive process, the environmental assessment can identify and focus on **key issues** requiring assessment and identify **reasonable alternatives**.

The primary objective of the Final Scoping Report is to present key stakeholders (including affected organs of state) with an overview of the project and key issues that



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require assessment in the EIA Phase and allow the opportunity for the identification of additional issues that may require assessment.

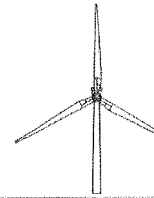
Issues raised in response to the Scoping Report have been captured in an Issues and Response Trail which is included in this Final Scoping Report and Plan of Study for EIA. These documents will be submitted to the competent authority, the DEA, for approval. This approval is planned to mark the end of the Scoping phase after which the EIA process moves into the impact assessment and reporting phase.

In terms of legal requirements, a crucial objective of the Final Scoping Report is to satisfy the requirements of Regulations 28 and 29 of the NEMA EIA Regulations. These sections regulate and prescribe the content of Scoping Reports and specify the type of supporting information that must accompany the submission of the Scoping Report to the authorities. An overview of where the requirements of Sections 28 and 29 are addressed in this Final Scoping Report is presented in Table 1.3.

Furthermore, this process is designed to satisfy the requirements of Regulations 54, 55, 56 and 57 of the NEMA EIA Regulations relating to the public participation process and, specifically, the registration of and submissions from interested and affected parties.

Table 1.3: Summary of where the various components of a Scoping Report (as defined in terms of Section 28 of the NEMA EIA Regulations) are provided in this Final Scoping Report

Section	Requirement for Scoping Report	Where this is provided in this Final Scoping Report
28 (1)(a)	Details of the EAP who prepared the report.	Chapter 1
28 (1)(b)	Description of the proposed activity	Chapter 2
28 (1)(c)	Description of any feasible and reasonable alternatives	Chapter 4
28 (1)(d)	Description of the property and the location of the activity on the property.	Chapter 1 & 2
28 (1)(e)	Description of the affected environment	Chapter 3
28 (1)(f)	Identification of all legislation and guidelines considered for the preparation of Scoping Report	Chapter 4
28 (1)(g)	Description of environmental issues and potential impacts, including cumulative impacts	Chapter 6
28(1)(h)	Details of the public participation process	Chapter 4 & 5
28(1)(h)(i)	Steps taken to notify potential interested and affected parties (I&APs) of the application	Appendix D, E, F, J, & K
28(1)(h)(ii)	Proof of notice boards, advertisements and notices notifying potential I&APs	Appendices D, E, F, J & K
28(1)(h)(iii)	List of all persons or organizations identified and registered in terms of regulation 55 as I&APs	Appendix C
28(1)(h)(iv)	Summary of issues raised by I&APs, date received and response by EAP	Chapter 5
28(1)(i)	Description of the need and desirability of the proposed	Chapter 1



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	activity	
28(1)(j)	Description of identified potential alternatives to the proposed activity	Chapter 4
28(1)(k)	Copies of representations, objections and comments received in connection with application or SR	Appendix G, H, I, L, M & N
28(1)(l)	Copies of the minutes of meetings held by the EAP with I&APs and other role players	Appendix H & M
28(1)(m)	Responses by the EAP to representations, comments and views	Chapter 5
28(1)(n)	Plan of Study for EIA setting out the proposed approach to the EIA	Chapter 6
28(1)(n)(i)	Description of tasks undertaken as part of the EIA, including specialists reports and the manner in which tasks will be undertaken	Chapter 6
28(1)(n)(ii)	Indication of stages at which competent authority will be consulted	Chapter 6
28(1)(n)(iii)	Description of proposed method for assessing environmental issues and alternatives, including no-go alternative	Chapter 6
28(1)(n)(iv)	Particulars of public participation process to be conducted during EIA	Chapter 4
28(1)(o)	Specific information required by the competent authority	No specific information was required
28(1)(p)	Any other matters required in terms of Sections 24(4)(a) and (b) of the Act.	No other matters were required
28(2)	Guidelines applicable to the kind of activity which is the subject of the application	Chapter 4
28(3)	Detailed written proof of an investigation as required by 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives as contemplated in subregulation (1)(c) exist	Chapter 4
29(a)	Copies of representations, and comments received in connection with application or SR from I&APs	Appendix G, H, I, L, M & N
29(b)	Copies of the minutes of meetings held by the EAP with I&APs and other role players which record the views of the participants	Appendix H & M
29(c)	Any responses by the EAP to those representations, comments and views	Chapter 5

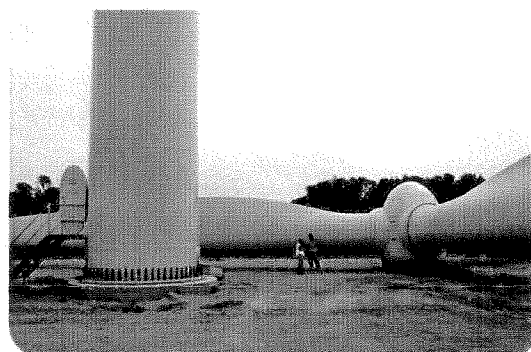
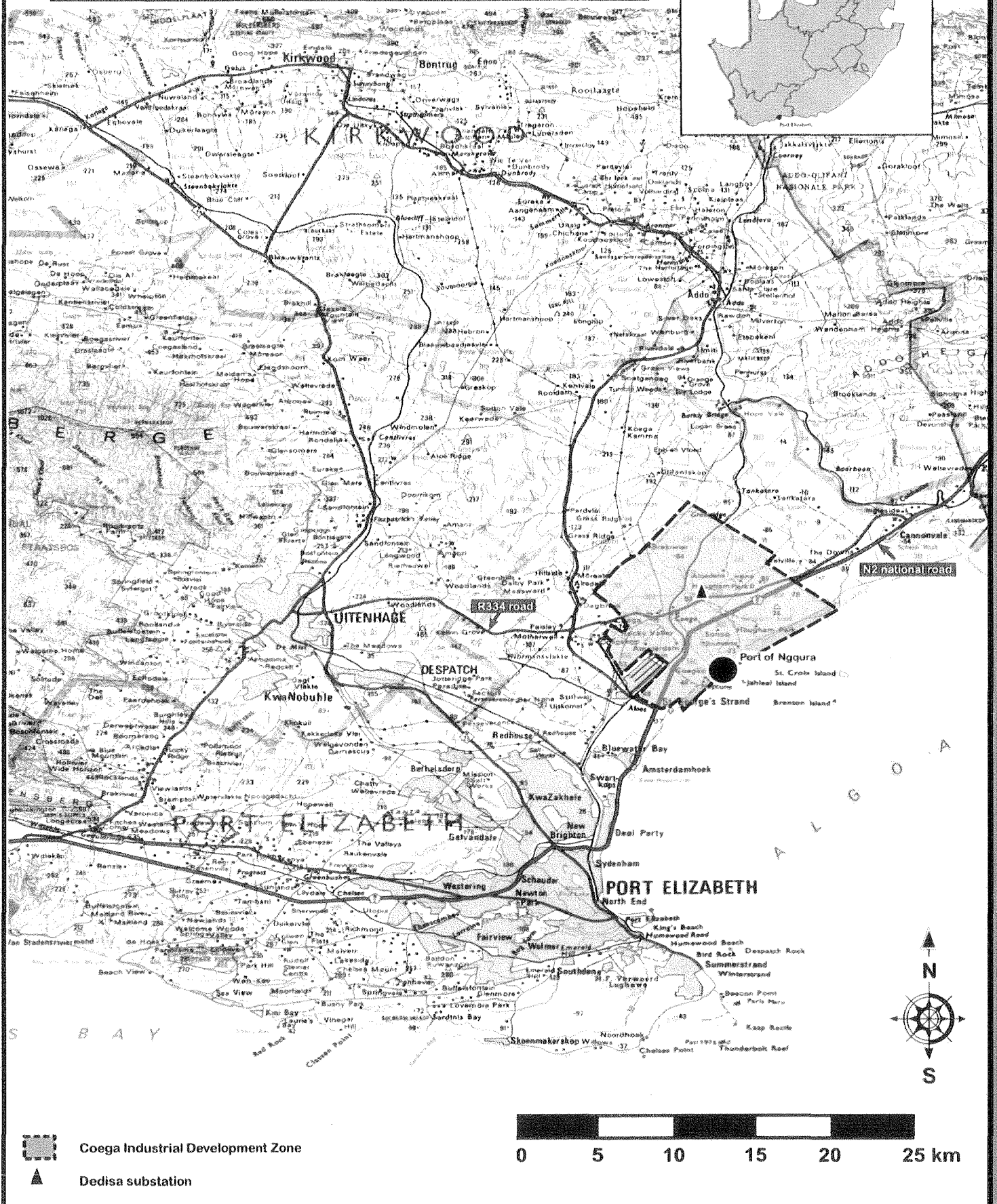
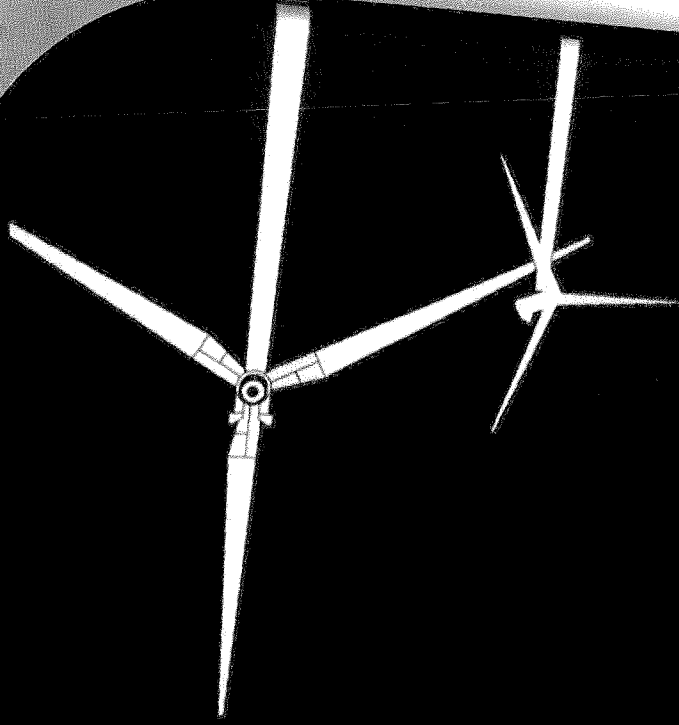


Figure 1.2 Location of the Coega IDZ outside Port Elizabeth in the Eastern Cape





Project Description

CHAPTER 2

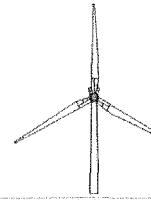
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2. PROJECT DESCRIPTION

This chapter is based on information provided by Universal Wind.

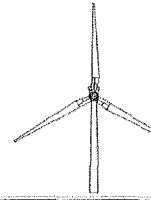
2.1 Introduction

Universal Wind is proposing the establishment of a wind energy project within Zone 12 of the Coega Industrial Development Zone (IDZ), which falls within the Nelson Mandela Bay Metropolitan Municipality (NMBMM) of the Eastern Cape Province. The wind farm will consist of 20 individual turbines which will be positioned at strategic locations outside the boundary of the Coega IDZ's Open Space Management Plan. While the exact type and generation capacity of the turbines is yet to be finalised the turbines are expected to have a generation capacity of between 2 and 4 MW each and will have a combined generation capacity of up to 80 MW.

2.2 Project conceptualization and site selection

The Coega IDZ was chosen by Universal Wind as the preferred location for the establishment of the wind farm based on the following strategic criteria:

- It is an existing industrial zone which includes masts, power lines, substations and other tall structures of a similar appearance to a wind farm;
- The wind regime in the coastal and higher lying areas of the IDZ is favourable for such a development;
- Existing infrastructure in the IDZ facilitates the establishment of a wind farm, in particular, the close proximity of the Port of Ngqura for importing large-scale components such as turbine blades and tower segments, road network to provide access to Zone 12 and proximity to the Eskom power grid and sub-stations;
- Willingness of the landowner (Coega Development Corporation) to accommodate a wind farm in the IDZ;
- Electricity created can feed into the existing Dedisa substation situated in the centre of the IDZ;
- This project has the ability to generate a significant capacity of electricity in the Eastern Cape Province as currently all electricity is imported from other provinces.
- Good wind velocity within the Port Elizabeth area makes the site ideal with regards to wind energy. Figure 2.1 was derived from a study undertaken by the NMBM and depicts the average wind profiles which can be expected within the region. From the figure it is evident that the Coega area and areas northwards i.e. Zone 12 have wind speeds of between 6 and 7.6 meters per second.
- Apart from some existing reticulation infrastructure, Zone 12 of the Coega IDZ remains largely undeveloped. The implementation of the proposed project within Zone 12 of the IDZ will therefore not impact on any existing industrial or other land uses within the area.



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- With a large portion of Zone 12 comprising of open space in terms of the Coega Open Space Management Plan (OSMP) and the proposed siting of the turbines outside the OSMP, the implementation of the proposed project within Zone 12 of the IDZ will in effect create a buffer/offset (in accordance with safety precautions) within which no development may occur, thereby effectively expanding the Open Space area, while posing minimal environmental impacts to the area surrounding the open space area.

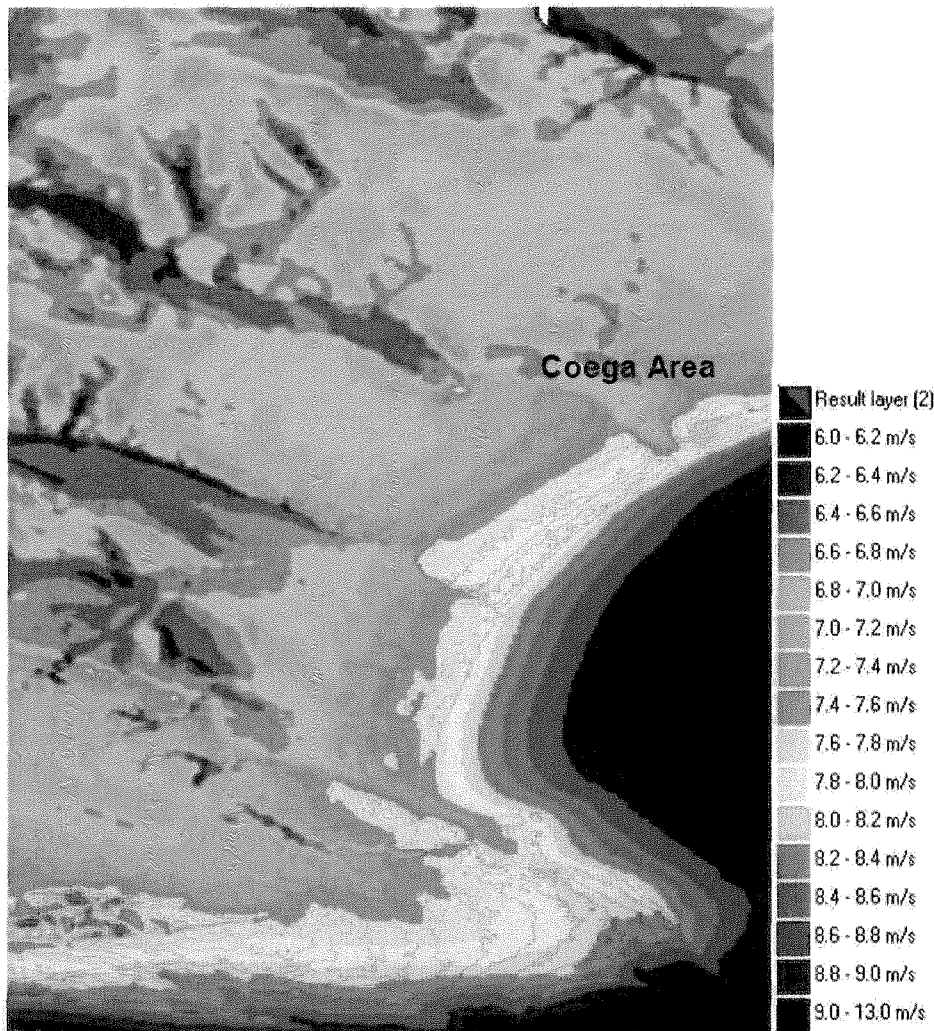
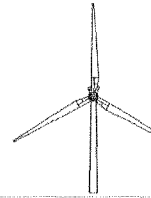


Figure 2.1: Micro-scale wind map 100 m's above ground level for the Coega region including Port Elizabeth and the Drifts and surrounds.



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Site Selection

As indicated above, the turbines have been proposed in Zone 12 of the IDZ. Figure 2.2 below depicts the various zones within the Coega IDZ. Zone 12 is situated in the northern extent of the IDZ and is bordered by undeveloped land to the north-west, north and north-east, and by Zones 14, 13 and 11 of the IDZ to the south-west, south and south-east respectively.

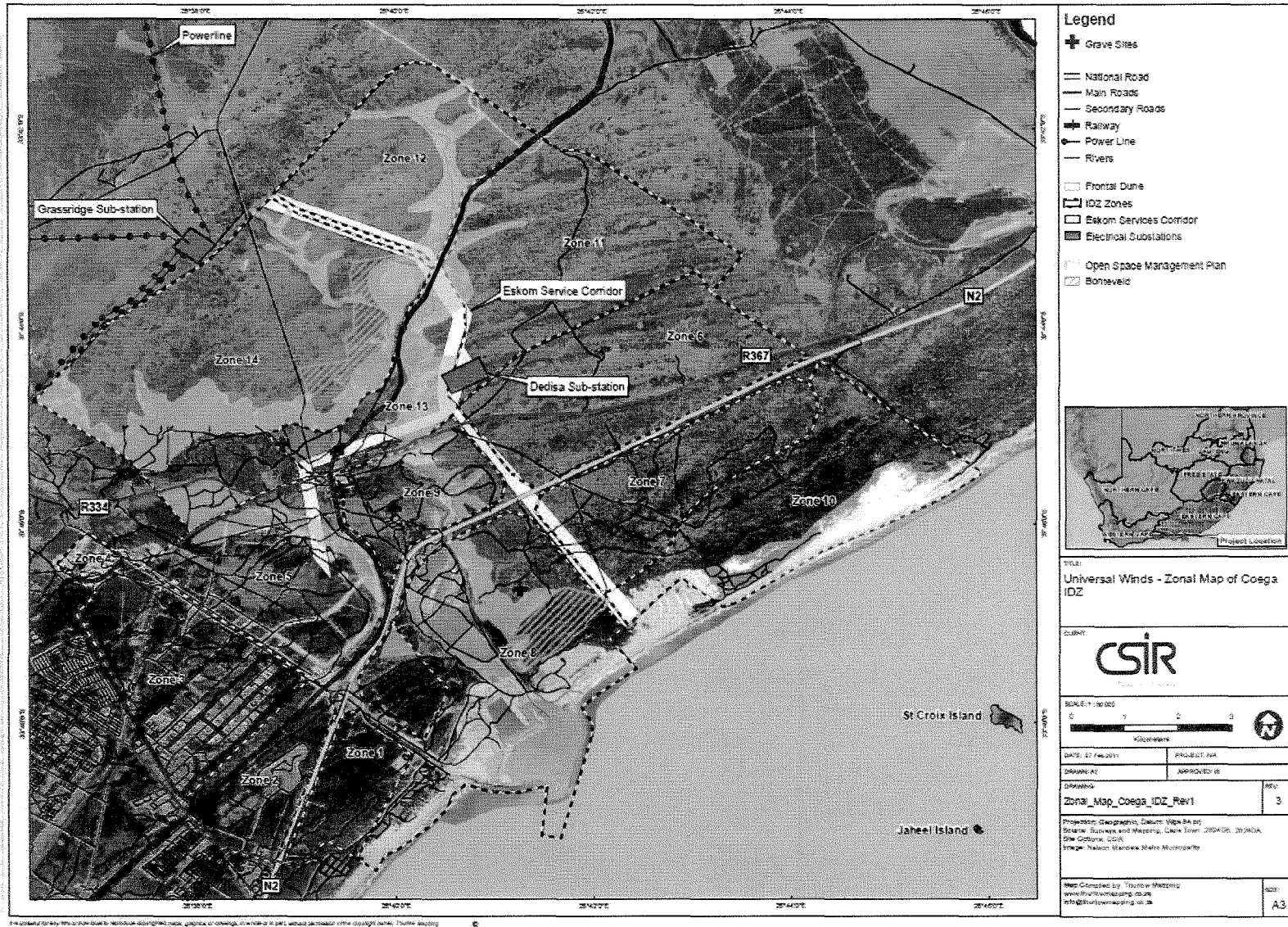
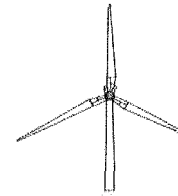


Figure 2.2: Industrial Zone's which form part of the Coega IDZ

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Preliminary Site Layout Plan

A preliminary site layout plan for the turbines has been developed by CDC in consultation with Universal Wind. Figure 2.3 below indicates the preliminary locations of the proposed wind turbines. It is expected that during the detail design phase and on completion of additional technical studies (e.g. geotechnical investigations) that minor refinements to the siting of the turbines will occur. Such changes will however be confined to within a 100 m radius of the turbine locations depicted below. The recommendation that a 100 m buffer be developed around existing turbine locations has been made to assist the process of micro-siting turbines during the site development planning process.

Provisional road and cable routings have also been depicted on the preliminary site layout plan. Proposed access roads have been routed in such a manner so as to avoid any areas of significant environmental concern, which include large patches of Bontveld vegetation. Contour lines have been utilised to an extent to ensure the gradient of the road remains as gentle as possible to allow for the successful transportation of large turbine components. This will also assist in reducing the need for heavy excavation and in-cutting, thereby further reducing the environmental impact associated with road construction.

Cabling will as far as possible be located within existing and newly proposed servitudes. Different cable routing alternatives will be assessed in detail during the impact assessment process.

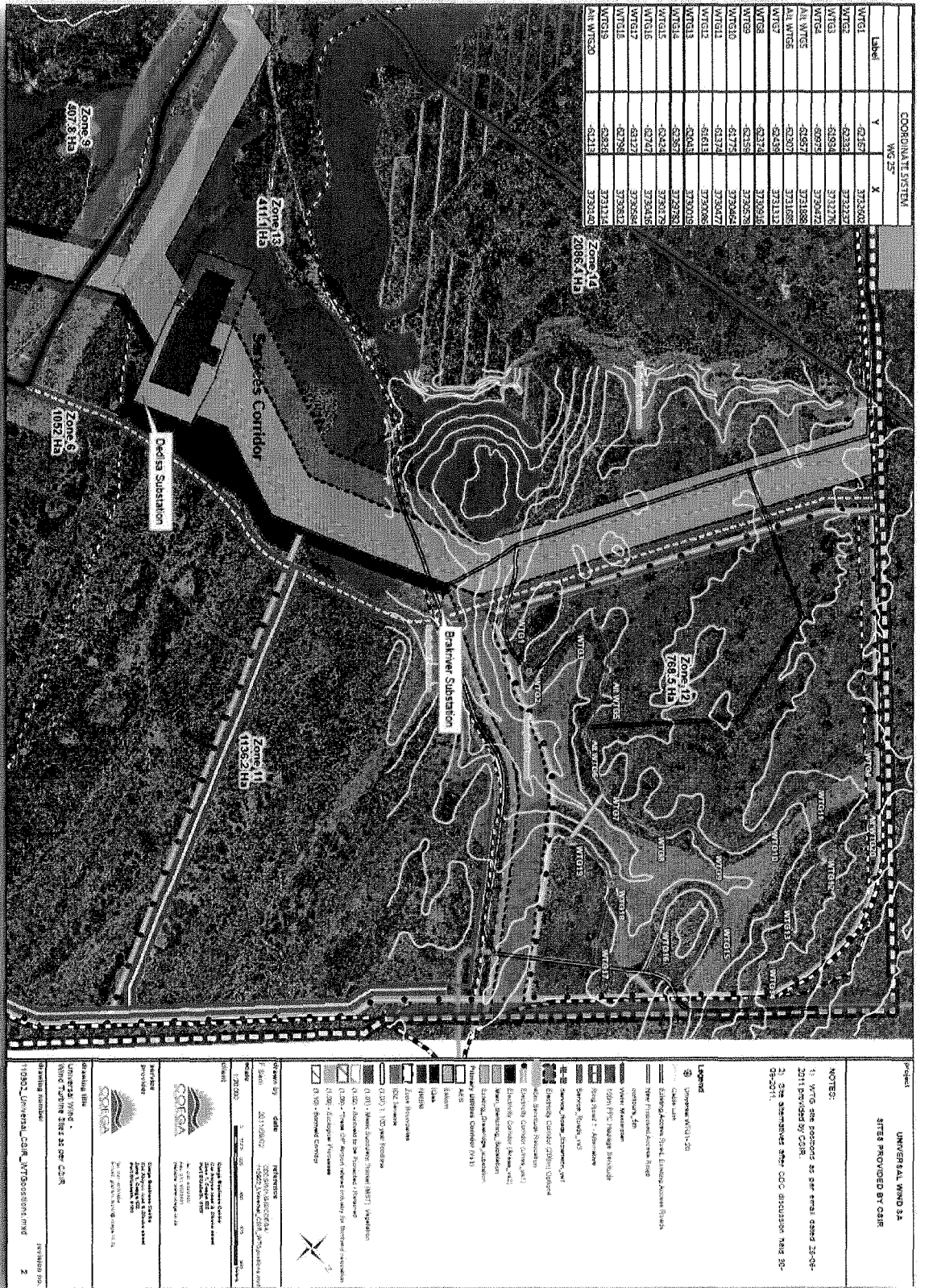
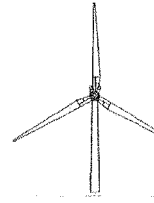


Figure 2.3: Preliminary sites locations of the Universal wind turbines within Zone 12 of the Coeega IDZ



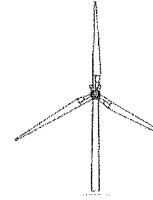
2.3 Objectives of the project

The overall intent of this project is to establish a commercial wind energy farm within Zone 12 of the Coega IDZ with a generation capacity of up to 80 MW's of additional electricity from a renewable source that will feed into the national or metropolitan grid to supplement conventional coal-based energy sources and supply.

The bulk of South Africa's electricity (approximately 90%) is generated from coal, with approximately 5% generated by nuclear energy and the remaining 5% by a combination of small scale hydro, pumped storage and biomass sources. The Eastern Cape Province has no significant electricity generation capacity. The majority of South Africa's coal-based generation capacity is situated in the Mpumalanga Province. Subsequently, the Eastern Cape Province is dependent on electricity imports from other provinces, yet houses significant industrial and rural development potential. Continued energy insecurity in the form of grid instability and capacity constraints is impeding the province's ability to stimulate economic growth and improve the quality of life of its citizens.

At a local scale, the NMBM has embarked on a renewable energy campaign to provide at least 10% of its energy from renewable sources, such as wind and solar. This campaign is principally born from the realisation that the sustainability of energy supply to the region is under threat. Projected industrial development in the Coega IDZ will further exacerbate pressure on the Metro's future energy demand.

Given the challenge of intermittent energy supply, the lack of generating capacity and the imperative of industrial and rural development in the region; a renewable energy project such as that which is proposed by Universal Wind can assist the local economy in developing a greater degree of energy security to allow for increased industrial development and associated economic growth.



2.4 Project Description:

2.4.1 Turbine technology

The implementation of the proposed project will result in the establishment of 20 wind turbines with an approximate capacity of between 2 MW and 4 MW each. The total combined generation capacity is therefore expected to be up to 80 MW. It is anticipated that the wind turbines will have an approximate hub height of between 80 and 125 metres while the rotor blades are expected to have a diameter of between 80 and 120 metres.

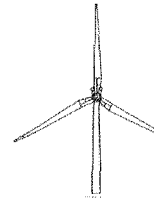
At this stage of the project planning, the exact turbine technology has not been selected. This is primarily due to the fact that the Universal Wind Group is not connected to and does not rely on any one turbine supplier but rather chooses suppliers fit for the area they propose to establish their projects in. For the Coega IDZ project, turbine suppliers Enercon, Siemens, Vestas and REpower are being considered prior to making a final decision on the preferred supplier for the proposed project (See Figure 2.4 for typical examples).

Wind turbines generate electricity by converting movement or kinetic energy provided by the wind into electricity. Different turbine technologies achieve this through slightly different means. Turbine suppliers such as Vestas and Repower for example supply conventional wind turbines fitted with gearboxes, while certain Enercon and new generation Siemens wind turbines make use of a direct drive system.

In conventional wind turbines the kinetic energy of the wind rotates the rotor blades of the wind turbine around a horizontal hub, which is connected to a shaft, gearbox and generator located in the nacelle (turbine housing). External rotor blades rotate the low speed shaft situated inside the hub, which begins to turn and in doing so turns the gearbox, which is connected to the generator. Due to its small size in comparison to the external rotor blades, the gearbox turns at a much faster speed than the external rotor blades, allowing for the generation of electricity through means of kinetic energy. In direct drive turbines however, the gearbox is absent. Kinetic energy from the wind rotates the external rotor blades of the wind turbine around a horizontal hub, which is connected to a shaft which is attached directly to a generator. The shaft in direct drive turbines therefore turns at the same speed as the external rotor blades. In order to overcome the problem associated with a slow spinning speed, the generator is fitted with magnets. These magnets spin around a coil and in doing so produce current which is induced into the coil. The faster the magnets move around the coil, the greater the energy that is produced. In direct drive wind turbines the radius of rotation for the magnets is increased, allowing for an increase in the speed at which the magnets move around the coil. In both conventional and direct drive wind turbines the kinetic energy provided by the wind allows for wind turbines to generate electricity in a non-consumptive renewable manner.

The turbines can operate at a range of wind speeds. Turbines can start producing electricity at minimum wind speeds of 2.5 to 4 metres per second (m/s) with full power output occurring at higher wind speeds of 13 to 15 m/s. During extreme winds with speeds of between 25 and 28 m/s turbines shut down to prevent possible damage.

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Even though wind turbines are relatively tall they do not require extensive land space. The comparatively small base of the turbine allows other activities to continue uninterrupted in the space underneath and around the turbine. In the case of the Coega IDZ this is of particular importance as some of the turbines are to be located close to the Coega Open Space area where natural migration paths and sensitive species may be present. The siting of wind turbines will therefore not create an impassable boundary which would interfere with the movement of local fauna while also minimizing the possibility of habitat fragmentation which would occur with conventional large scale development footprints. The operational life of the wind turbine facility is expected to be in excess of twenty five years which will be extended through regular maintenance and/or upgrades in technology.

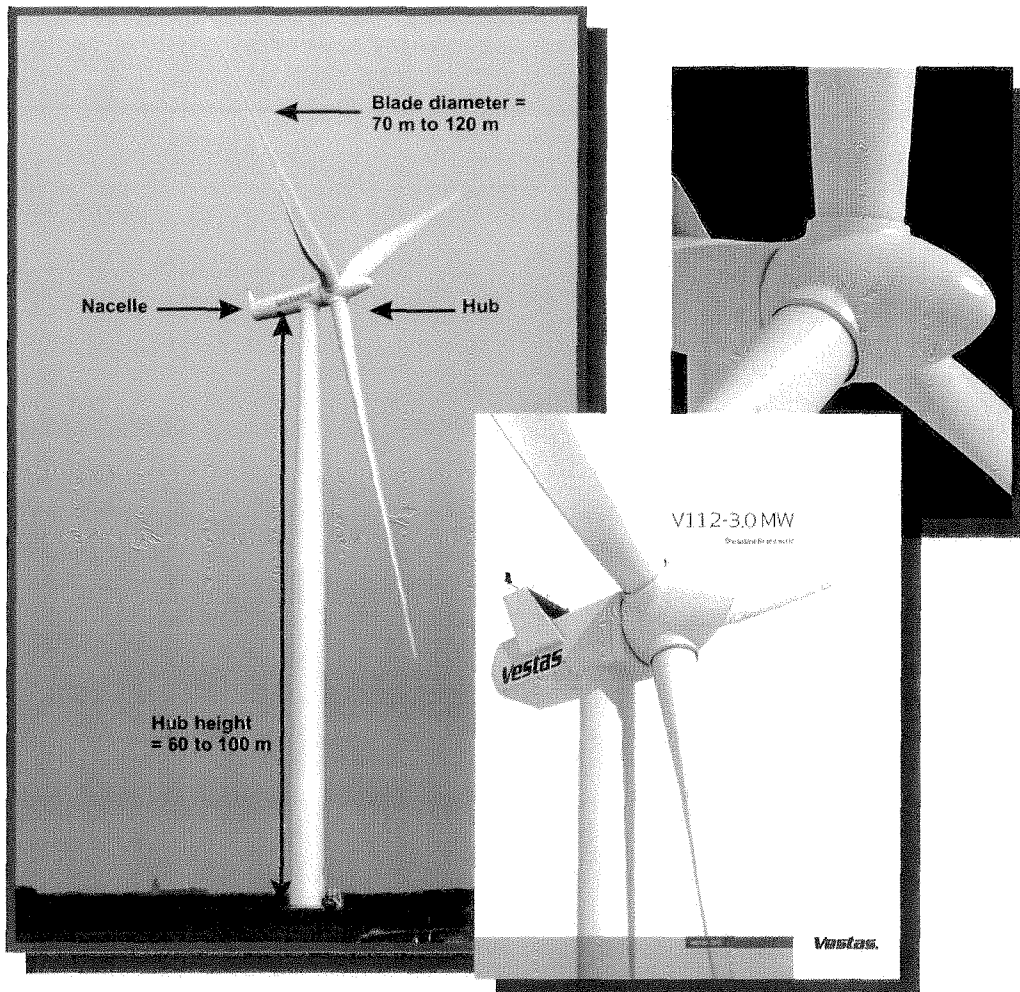
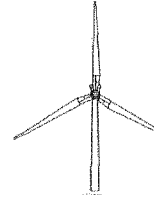


Figure 2.4: Illustration of typical wind turbines that could be used by Universal Wind

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2.4.2 Connection to the grid

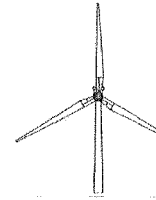
Power from the turbines will be transferred via cables to the Dedisa Substation situated in the centre of the IDZ where it will connect with the grid via one connection point. Cabling to and from wind turbines will to the largest possible extent be buried underground. This reduces the visual impact of the proposed project, and provides increased security against cable theft. Cable routing will as far as possible follow new and existing servitudes to minimise any potential adverse impacts to the receiving environment. Two alternative cable routing options have been identified and will be investigated during the impact assessment process. These include making use of one continuous series linking all 20 wind turbines together. Such an alternative would require that the OSMP be crossed over at a single point. Any crossing of the OSMP will be aimed to occur at its narrowest point, and will possibly make use of overhead cabling to reduce the negative impact associated with trenching cables on the OSMP and its ecological functioning. The second cabling alternative involves making use of two separate routings. The first will connect wind turbines located east of the OSMP, while the second routing will connect wind turbines located west and north of the OSMP. These routings will run separately of one another and will make use of existing servitudes, mitigating the need to cross the OSMP. The two cable routings will then converge at a single point situated south of the proposed project area before being routed as one cable to the Dedisa substation. These and possible other alternatives will be investigated as part of the impact assessment phase and will be reported on in the draft EIA report.

2.4.3 Road access and hard standing areas

Preliminary planning for the IDZ east of the Coega River proposed the principle of locating service corridors including access roads along the periphery of each zone; however no definite or advanced planning has been conducted for Zone 12. Proposed access roads will therefore as far as possible follow existing tracks and servitudes. Where no such tracks occur, access roads will be routed along the periphery of the OSMP. Road construction will largely follow contour lines to reduce the need for large scale extensive excavation and in-cutting, and will also as far as possible be routed around significant patches of Bontveld vegetation which may occur outside of the OSMP. The road construction should however be seen as temporary or as a "first stage" of the secondary road Infrastructure. The access roads to the various turbine sites will be gravel (with adequate pavement layer sub-structure) and equipped with the necessary stormwater infrastructure (e.g. culverts, pipes and kerbing). It is envisaged that the final secondary road infrastructure will be constructed to a higher standard as normally required for final road infrastructure. The minimum road width required is 4.4 m with roads being approximately 5.5 m wide in the corners. Access roads will be designed to handle an axle load of up to 12 tons and an overall weight of 120 tons. These figures are however subject to change based on the final design and turbines that are selected.

At each turbine site hard standing areas will be required for crane operations, turbine assembly, offloading and storage during the construction phase (these will depend on the

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size and type of crane equipment used for construction, but are expected to be approximately 20 m x 40 m). Proposed access roads may act as a portion of the hard standing area, thereby reducing the footprint of the proposed wind turbines. A schematic of a typical hard standing area and crane platform is provided in Figure 2.5 below. The hard standing areas may be removed partially or in full, however it is expected that these areas will be retained for use during maintenance activities. The total physical footprint of the project (i.e. 20 turbines and hard standing areas) is minimal in the context of the IDZ which covers approximately 10 000 hectares.

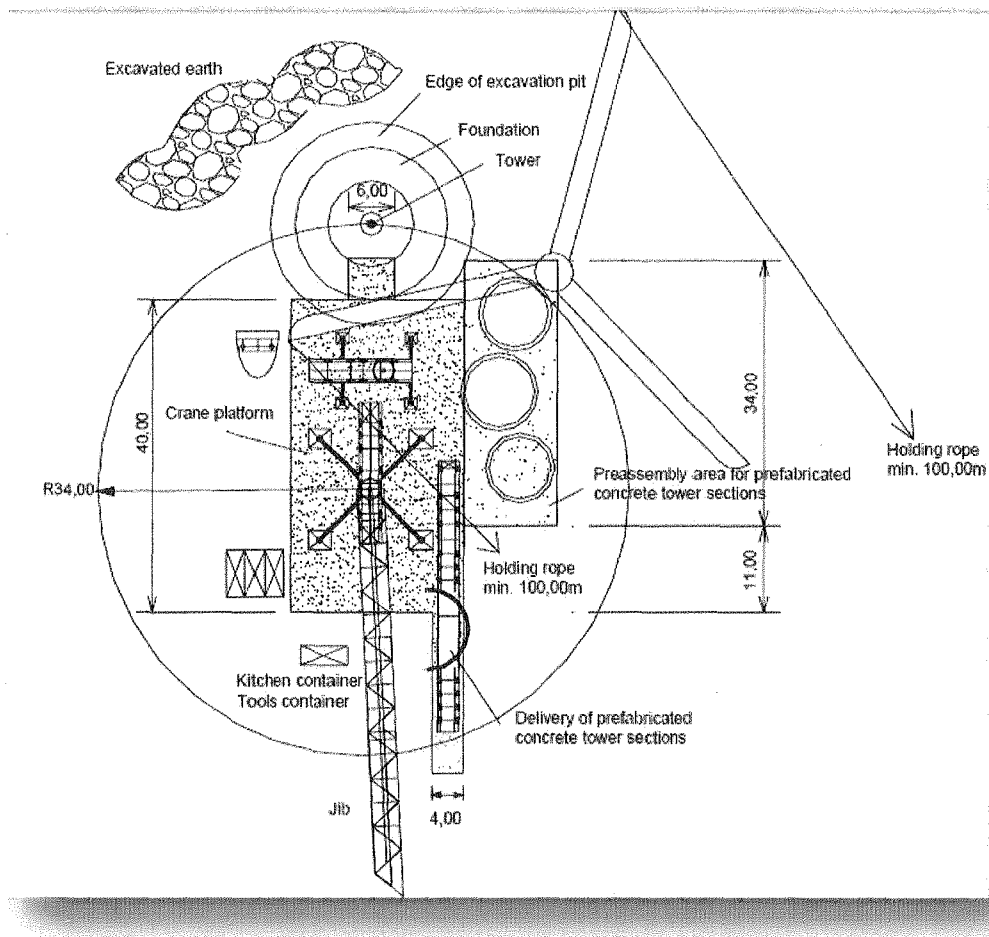
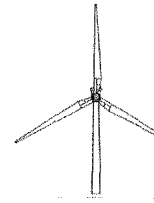


Figure 2.5: Example of a hard standing area and crane platform

2.4.4 Overview of project development cycle

Detailed planning and design:

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Various aspects of the planning and design phase of the project still need to be finalised pending the result of the Environmental Impact Assessment (EIA). Most notably, the micro-siting of each individual turbine needs to be determined. The final decision on which turbine manufacturer and what turbine capacity should be used will also be taken at a later stage and will also be dependent on availability of turbines on the international market, suitability to the South African wind climate, and service levels and experience in South Africa.

Construction phase:

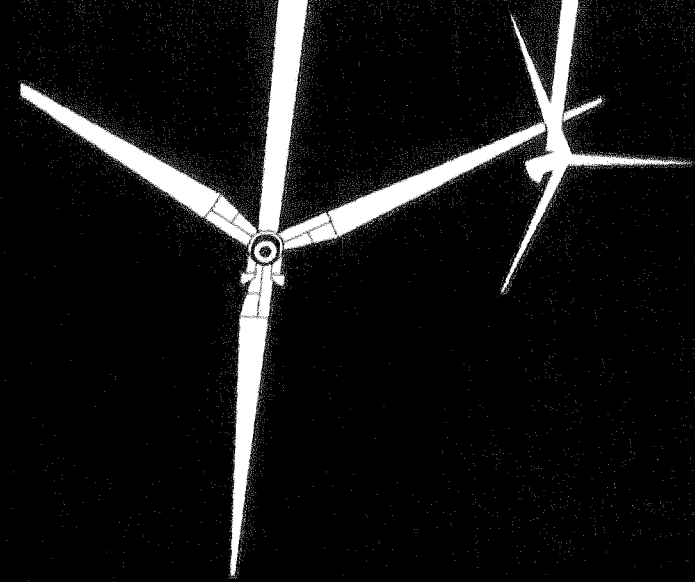
The key stages of construction are anticipated to be the connection to the local electricity grid via a network of cables, the construction of access roads and hard standing surfaces, followed finally by the construction of the wind turbines. It is anticipated that the construction and commissioning phase of the project will require approximately 8 to 12 months. During the construction phase it is expected that approximately 100 direct, temporary employment opportunities will be created. The CDC unemployment database will be utilised during employment creation.

Operations Phase:

The operational lifespan of the wind turbines is expected to be a minimum of 25 years and can be extended beyond 25 years through regular maintenance and/or upgrades in technology. The operational phase of development is expected to create approximately 5 to 8 direct employment opportunities. Scheduled maintenance will be conducted twice a year and will generally require two working days per turbine, while unscheduled maintenance is expected to average an additional 2 days per year.

Decommissioning phase:

After the operational phase, the wind turbines will be removed and the foundations will be deconstructed to a level of 2.5 metres below the surface. If pilings are used to provide additional support to the foundation slab the pilings will remain behind. The turbines may then be traded or sold as there is an active second hand market for wind turbines.



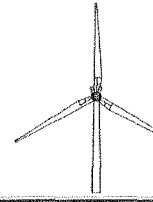
*Description of the
Affected Environment*

CHAPTER 3

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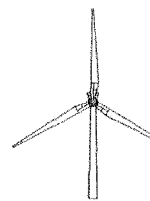
3. DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Introduction

This chapter provides an overview of the environment of the Port of Ngqura and the Coega Industrial Development Zone (IDZ) in which this Universal Wind energy project is proposed. The receiving environment is understood to include biophysical, socio-economic and heritage aspects which could be affected by the proposed development or which in turn might impact on the proposed development. The majority of information used in this chapter was sourced from studies conducted by the Coega Development Cooperation (CDC) and recent EIAs conducted in the Coega area.

3.2 Site location

The Coega IDZ is situated along the southern coast of South Africa at the mouth of the Coega River between the Sundays River in the East and the Swartkops River in the West, approximately 20 km's north-east of the town of Port Elizabeth in the Eastern Cape Province. The IDZ falls within the boundaries of the Nelson Mandela Bay Metropolitan Municipality which includes the former municipalities of Port Elizabeth, Uitenhage and Dispatch. The IDZ has been divided into a total of 12 zones, each of which has its own preferred land use relative to its specific zoning. The proposed sites for the Universal Wind project are situated within Zone 12 of the Coega IDZ which is located in the north of the IDZ and forms the northern most extent of the IDZ (see Figure 3.1), and has a land use zoning of light to medium industry. The development footprint for the 20 proposed wind turbines are all located within the property boundary of the IDZ and will therefore be managed by the CDC as the registered landowner. The relevant letter of consent has been obtained from the landowner (i.e. CDC) as directed in terms Regulation 15 (1) of the NEMA EIA Regulations, and was included with the EIA Application Form (Appendix B).



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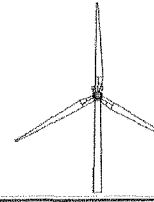


Figure 3.1: Demarcated zones within the Coega IDZ

3.3 Biophysical Environment

3.3.1 Climate

The Coega IDZ is located in a transition zone situated between the temperate southern coastal belt and the subtropical eastern coast, and subsequently enjoys warm summers and temperate winters. Rainfall is distributed throughout the year with peaks in autumn (May to June) and spring (August to September) and an annual average rainfall of approximately 400mm's (Coetzee *et al.*, 1996). The study area experiences gradient winds for the majority of the year with the wind direction varying between west to west-south-westerly (14% of the time) and easterly (15% of the time). Wind speed and duration increases during the summer months (October to February) with 55% of wind with a speed of 3.3 m/s originating from the west and west-south-westerly direction.



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Temperature at the study area ranges from an annual average maximum of 24° Celsius to an average minimum of 15° Celsius.

3.3.2 Landscape and Geology

The proposed project area has already been disturbed as a result of previous agricultural activities which took place on the land prior to the establishment of the Coega IDZ. The vegetative cover has been transformed from its original pristine state, resulting in a disturbed environment. In addition the presence of infrastructural components, particularly in the form of overhead electrical reticulation infrastructure also contributes to the disturbed character of the site. One major landscape type is distinguishable in the proposed project's zone of ecological disturbance and visual influence:

The raised coastal plain: This area comprising the main inland area of the IDZ is located 50 to 70 m above mean sea level and is characterised by costal limestone overlain by windblown calcareous sands.

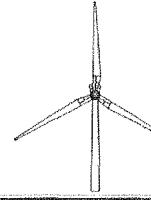
Dunes situated along the coastline and at the lower reaches of the Coega River rise up to an elevation of approximately 50 to 60 m's on the eastern side of the port. These dunes lead to the raised coastal plain as described above, and form a visual barrier, separating the coastline from the elevated inland area of the Coega IDZ and the N2 highway.

3.3.3 Vegetation

On a regional scale, the study area is located within the Subtropical Thicket Biome, known for its role in separating northern (summer rainfall) and southern (winter rainfall) floral regions. The Terrestrial Ecology Research Unit (TERU) estimates this biome to include in excess of 1558 plant species of which 322 are endemic (Vlok & Euston-Brown, 2002). This biome extends from Mossel Bay in the West to Buffalo City in the East and reaches inland for roughly 100 to 200 km from the coast. On a local scale, two vegetation types can be identified in the study area:

Coastal and inland vegetation type: Vegetation along the coastal band includes Algoa Dune Thicket and Colchester Strandveld, while inland vegetation consists of Grassy Ridge Bontveld, Sunday Valley Thicket, Motherwell Karroid Thicket and Sundays Doringveld Thicket. Of these vegetation types Colchester Strandveld and Motherwell Karroid Thicket are classified as endangered while all the other mentioned vegetation types are classified as vulnerable. Inland vegetation in an undisturbed state tends to form dense thickets in low-lying areas and valleys, while flat and ridged areas are characterised by grassland, fynbos and/or Karroid species interspersed with clumps of thicket species (Eyethu Engineers, 2006).

Dune vegetation type: Dune vegetation can be classed into three units common to the Eastern Cape coast, namely; Foredues and Hummocks, Dune Woodlands and Dune



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Grasslands. Dune vegetation tends to be highly invaded by Rooikrans (*Acacia cyclops*) with only a few remaining pockets of indigenous vegetation remaining (Eyethu Engineers, 2006).

3.3.4 Fauna

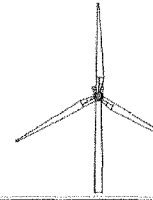
Birds - The coastal birds and seabirds of Algoa Bay rely on the scattered special habitats provided by estuaries and river mouths, rocky shores, dunefields, reefs and the offshore islands. The Algoa Bay Island Nature Reserve consists of the Bird and St Croix (St Croix, Jahleel, Seal and Brenton island) Island groups, each of which has been declared an Important Bird Area as they are inhabited by threatened and endangered species (Barnes, 1998). The islands support globally significant populations of Cape gannets (*Morus capensis*), African Penguins (*Spheniscus demersus*) and Roseate Terns (*Sterna dougallii*). The largest gannet colony in the world is at Bird Island, the largest African Penguin colony in southern Africa is at St Croix, and the only confirmed sites where Roseate Terns breed in South Africa are at Bird and St Croix Islands, with a further possible breeding site being Jahleel Island.

Bats – 12 bat species are likely to occur in the study area, with at least 6 of these species having a conservation status of Near Threatened (Friedman & Daly, 2004). Species most at risk due to wind turbine development are aerial insectivores (e.g. Egyptian Freetailed Bat), due to its elevated foraging patterns, and long-range migratory species (e.g. Scribe's Long-fingered Bat) which might cross proposed wind turbine locations during winter and summer roost migration.

Reptiles - The reptile fauna of the Coega area is particularly diverse, with 56 species of lizards, chameleons, snakes, tortoises and sea turtles represented. Of these, 22 species are either Red Data taxa, listed under the Convention on the Illegal Trade in Endangered Species (CITES), or are endemic to the area or peripheral to the usual range of the species (CES, 2001). These include eight lizards, two monitors, one gecko, one chameleon, three snakes, three tortoises and the four globally endangered sea turtle species. The species with the most restricted range is the Albany dwarf adder (*Bitis albanica*), recently described from the Coega area (Branch, 1999).

Invertebrates - Information on the invertebrate fauna, apart from butterflies, is scarce. One endemic grasshopper and three butterflies of interest have been recorded from the Coega area. The grasshopper, *Acrotylos hirtus*, is endemic to the dunefields of Algoa Bay. Three Lycaenid butterflies (coppers and blues) have been identified as rare or have very restricted distributions in the Coega area. These are *Aloeides clarki* and *Peocillimitis pyroeis* (small coppers) and *Lepidochrysops bacchus* (a small blue).

Amphibians - Amphibians are an important and often neglected component of terrestrial vertebrate faunas. They are well represented in sub-Saharan Africa, from which approximately 600 species have been recorded (Frost 1985). Currently amphibians are of increasing scientific concern as global reports of declining amphibian populations continue to appear (Phillips 1994). Although there is no consensus on a single cause for



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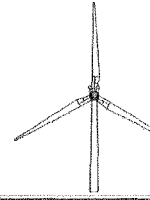
this phenomenon there is general agreement that the declines in many areas even in pristine protected parks are significant and do not represent simple cyclic events. Frogs have been aptly called bio-indicator species, whose abundance and diversity is a poignant reflection of the general health and well-being of aquatic ecosystems. They are important components of wetland systems, particularly ephemeral systems from which fish are either excluded or of minor importance. In these habitats, they are dominant predators of invertebrates, many of which may impact significantly on humans (e.g. as vectors of disease).

Terrestrial mammals - Only two mammal species are endemic to the wider Coega area: Duthie's golden mole (*Chlorotalpa duthiae*) and the pygmy hairy-footed gerbil (*Gerbillurus paeba exilis*), which occur in dune thicket (CES, 2001). Both of these species are protected in terms of the conditions attached to the Rezoning EIA and the Port of Ngqura EIA. The remaining 13 Red Data listed mammal species are widespread species not restricted to the Coega area. Despite the emphasis placed on large mammals in the conservation literature they make up less than 15 percent of the total mammal diversity in South Africa. The majority of mammals are small or medium-sized, with rodents being the most successful of all living mammals. Swanepoel (1988) noted that of 292 terrestrial mammal species in southern Africa, 128 (44%) were recorded from the Eastern Cape. Although these figures are now out of date they do demonstrate the mammalian diversity of the Province. Few of the large and medium-sized mammal fauna that previously occurred in the region now occur naturally in the wild. Most are locally extinct or occur in small, fragmented populations usually in forest reserves or in protected areas. Species that have been extirpated within historical times in the Eastern Cape include the cheetah, hunting dog, hippopotamus, lion, red hartebeest and warthog. Most have been extensively re-introduced into provincial and private game reserves, whilst the latter has escaped from many reserves and threatens to become a problem animal in some areas. Among the medium- to large-sized mammals, buffalo are restricted to reserves, whilst reedbeek, brown hyena, spotted hyena, leopard and Serval are extremely rare in the wild.

3.4 Heritage Resources

A heritage study covering the entire IDZ has been commissioned by CDC, with Dr John Almond providing the paleontological input and Dr Johann Binneman providing the archaeological component. The results from this heritage study will be incorporated into the Universal Wind EIA and EMP reports. This heritage study is intended to provide a basis for project-specific EIAs in the IDZ and to provide heritage information that can be included proactively in the early planning for the location and implementation of projects in the IDZ. A summary of the draft results of the studies is provided below.

The area contained in the Coega IDZ has variable significance in terms of heritage resources, with evidence of Stone and Iron Age sites. Although the broader Eastern Cape region has historic significance due to its frontier location acting as an interface between hunter-gatherers, pastoralists and European settlers, it is expected that the Universal Wind sites in the IDZ will have had low historical/cultural activity in the past.



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With regards to palaeontology, the Coega IDZ is underlain by sedimentary rocks that range in age from c. 470 million years ago to the present and are assigned to ten rock successions within the Palaeozoic Table Mountain Group, the Mesozoic Uitenhage Group and the Caenozoic Algoa Group. Most of these rock units contain fossil heritage of some sort but in most cases this is very limited. The notable exceptions are three marine successions, i.e. the Sundays River Formation, the Alexandria Formation, and coastal Salnova Formation. Important but rare fossils of dinosaurs and plants are also known from the Early Cretaceous Kirkwood Formation, but so far only outside the IDZ area. Levels of bedrock exposure within the Coega IDZ are generally very low due to extensive cover by superficial drift (e.g. soil, alluvium, in situ weathering products) as well as by surface calcrete (pedogenic limestone) and dense vegetation. Man-made excavations such as road and railway cuttings, stormwater drainage channels, reservoirs and quarries, of which there are a considerable number here, often provide the best opportunities to examine and sample fresh, potentially fossiliferous bedrock.

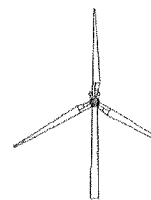
The archaeological component (Binneman, 2010) of the IDZ heritage study reports that archaeological sites and materials have been recorded throughout the Coega IDZ. Shell middens, Later and Middle Stone Age stone tools have been found along the coast and adjacent sand dunes. Occasional Earlier, Middle and Later Stone Age stone tools were found in all of the inland zones. In general these stone tools were in secondary context and not associated with any other remains. Although the stone tools appear to be of low cultural sensitivity, other archaeological sites/materials may be exposed when the vegetation and top soil are removed (for example human remains). Binneman notes that although the IDZ area was occupied extensively in the past (judging from the large quantity of flaked stone randomly scattered throughout the area), it would appear that the area is relatively poor in large and important archaeological sites. However, many sites/materials and human remains may be covered by soil and vegetation.

3.5 Socio-Economic

3.5.1 Demographics and human development

According to the 2002 census, the NMBM has a population of approximately 1 million people. This figure comprises 60.4% black, 22.6% coloured, 16.1% white and 0.9% Indian or Asian citizens, with a corresponding language breakdown of 57.3% isiXhosa, 29.7% Afrikaans and 12.1% English. The NMBM covers a total surface area of approximately 1845 km² with a population density of 570 people per km².

Unemployment in the greater NMBM is estimated to be as high as 40% (CES, 2001), this figure however increases in the predominantly urban areas to approximately 50% to 60% (MPM Environmental, 2004). Subsequently, about 39% of the total population lives in conditions of poverty. The prevalence of high levels of poverty and unemployment (42.9%) in the Eastern Cape Province is likely to fuel in-migration into the Coega IDZ



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area, with preliminary assessments suggesting a 4.5% per annum increase in Motherwell's population (CES, 2001).

3.5.2 Initiatives to promote economic development

In order to reverse the above trends and stimulate and support socio-economic development, a number of initiatives are currently underway in the NMBM and surrounding areas. Key amongst these are the establishment of the Coega IDZ and the development of the Port of Ngqura, support services for the development of small-medium and micro-enterprises (SMMEs), and corporate social investment programmes. In addition, the expansion of the Addo Elephant National Park and the growth of the ecotourism sector in the Eastern Cape are being promoted for conservation value as well as for the contribution that tourism and conservation initiatives can make to employment creation.

3.6 Coega Open Space Management Plan

Within the Coega IDZ, an open space management plan (OSMP) has been developed and formally approved by the national Department of Environmental Affairs (DEA) as part of the conditions of environmental authorisation granted for the IDZ. The OSMP incorporates areas of highest ecological value within the IDZ (e.g. areas of Mesic Succulent Thicket and Bontveld vegetation). This plan has been updated several times over the past 8 years, and the current version is Revision 10 as shown in Figure 3.2.

The intention of creating open spaces within the IDZ is to protect cultural and ecologically sensitive areas while stimulating passive and active recreation in the IDZ. Accordingly, the objective of the OSMP is to create an effective management system for open spaces in the IDZ and to provide specific management guidelines, based on sound ecological principles, for the management of ecological and cultural resources present within the IDZ. The Open Space area in Zone 12 in particular acts as an extension to the primary core OSMP network, and was delineated to support ecological processes by forming a corridor area.

The key implication of the OSMP is that wind turbines should not be located in any of the identified open spaces. It is practical however, to locate turbines just outside the OSMP in areas where the OSMP boundary is perpendicular to the dominant wind directions. Such an arrangement will ensure optimal use of land, while also ensuring the protection of cultural and ecologically sensitive areas. Furthermore due to the fact that each of the wind turbines are established as a single standing entity the impact associated with locating such a development along the boundary of the open space system significantly reduces adverse impacts associated with developments with a large development footprint, which result in habitat fragmentation and the creation of an "island effect". Open spaces used as corridors for local fauna species may still be used and permeated easily.

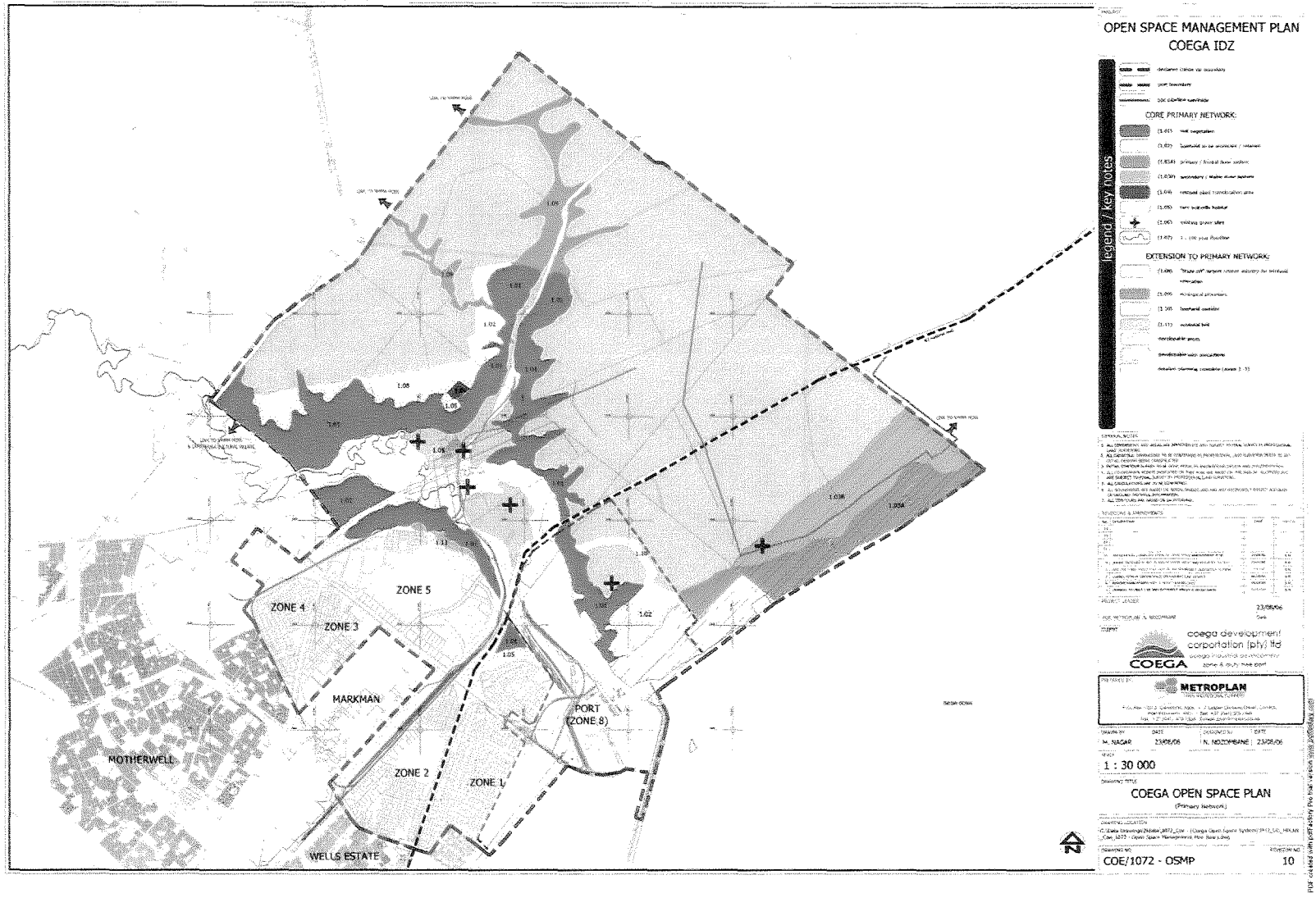
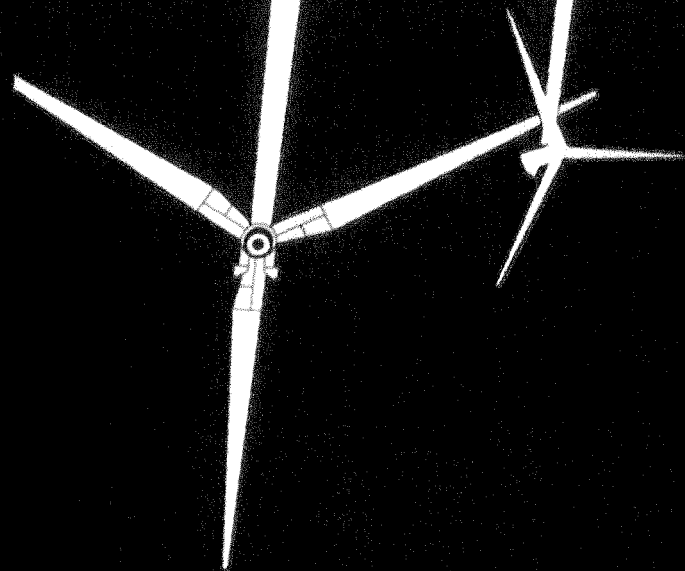


Figure 3.2 Coega Open Space Management Plan



**Approach to EIA Process
and Public Participation**

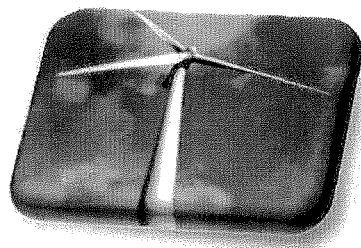
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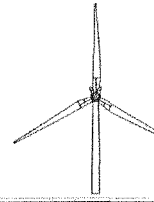
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4. APPROACH TO EIA PROCESS AND PUBLIC PARTICIPATION

This chapter presents the EIA process to be conducted for the proposed development and gives particular attention to the steps in the Scoping and public participation component of the EIA.

4.1 Legal context for this EIA

Section 24(1) of NEMA states:

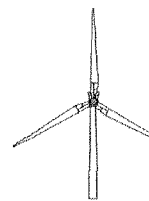
"In order to give effect to the general objectives of integrated environmental management laid down in this Chapter, the potential impact on the environment of listed activities must be considered, investigated, assessed and reported to the competent authority charged by this Act with granting the relevant environmental authorization."

The reference to "listed activities" in section 24 of NEMA relates to the regulations promulgated respectively in Government Notices R 544, R 545 and R 546 in Government Gazette 33306, dated 18 June 2010, which Government Notices came into effect on 2 August 2010. The relevant Government Notices published in terms of NEMA that comprise collectively the NEMA EIA Regulations list activities that require either a Basic Assessment, or Scoping and Environmental Impact Assessment (that is a "full EIA") be conducted. The Universal Wind project requires a full EIA, in particular because it includes, inter alia, the following activities listed under Activity Number 1 in GN R 545 in Government Gazette No 33306 of June 2010:

1. *The construction of facilities or infrastructure for the generation of electricity where the electricity output is 20 megawatts or more.*

All the listed activities potentially forming part of this proposed development and therefore requiring environmental authorization are included in the application form prepared and submitted to the Department of Environmental Affairs (DEA) and which is attached as Appendix B of this report. The listed activities are indicated in Table 4.1 below.

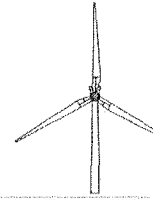
It should be noted that a precautionary approach was followed when identifying listed activities in the application form, i.e. if the activity potentially forms part of the project, it is listed. However, the final project proposal will be shaped by the findings of the EIA process and certain activities may be added or removed from the project proposal. The DEA will be informed in writing of such amendments and I&APS will also be informed accordingly.



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Table 4.1: Listed activities in GN R544, R545 and R546 that potentially form part of the proposed Universal Wind Energy Project

Government Notice R544 Activity No(s):	Description of the relevant Basic Assessment Activity
10	The construction of facilities or infrastructure for the transmission and distribution of electricity – outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.
22	The construction of a road, outside urban areas, with a reserve wider than 13,5 metres or, where no reserve exists where the road is wider than 8 metres, or for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010.
23(ii)	The transformation of undeveloped, vacant or derelict land to – residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; - except where such transformation takes place for linear activities.
24	The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or had an equivalent zoning.
Government Notice R545 Activity No(s):	Description the relevant Scoping and EIA Activity
1	The construction of facilities or infrastructure for the generation of electricity where the electricity output is 20 megawatts or more.
Government Notice R546 Activity No(s):	Description the relevant Basic Assessment Activity
4 (a) (ii) (ee) (gg)	The construction of a road wider than 4 metres with a reserve less than 13,5 metres. In Eastern Cape...: Outside urban areas, in: Critical biodiversity areas (Type 1) as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or biosphere reserve.
13 (a) [(c)(ii)(ff)]	The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for: Critical biodiversity areas and ecological support areas as identified in systematic biodiversity plans adopted by the competent authority. In Eastern Cape...: Outside urban areas, in: Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;
14 (a) (i)	The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:



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	In Eastern Cape...: All areas outside urban areas;
16 (iv)	The construction of: Infrastructure covering 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.
19 (a) (ii) (gg)	The widening of a road by more than 4 metres, or the lengthening of road by more than 1 kilometre. In Eastern Cape...: Outside urban areas, in: Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of biosphere reserve.

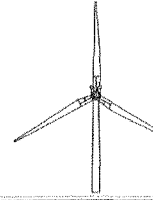
The EIA process is a planning, design and decision making tool used to demonstrate the positive and negative biophysical, social and economic impacts and consequences of the proposed project in order to facilitate informed decision-making. Furthermore, the EIA process is also a future-directed practice which recommends management actions with which to mitigate potential negative impacts and maximise the benefits associated with the project.

4.2 Legislation and Guidelines Pertinent to this EIA

The scope and content of this Final Scoping Report has been informed by the following legislation, guidelines and information series documents:

4.2.1 National Legislation

- National Environmental Management Act (NEMA) (Act 107 of 1998);
- EIA Regulations published under Chapter 5 of the NEMA on 18 June 2010 (GN R543, GN R544, GN R545 and GN R546 in Government Gazette 33306);
- Guidelines published in terms of the NEMA EIA Regulations, in particular:
 - Guideline on Transitional Arrangements (August 2010)
 - Guideline on Alternatives (August 2010)
 - Guideline on Public Participation (August 2010)
 - Guideline on Exemptions (August 2010)
 - Guideline on Need and Desirability (August 2010)
 - Guideline on Appeals (August 2010)
 - Information Document on Generic Terms of Reference for EAP's and Project Schedules (August 2010)
- National Environmental Management: Biodiversity Act (NEMBA) (Act 10 of 2004);
- National Heritage Resources Act (NHRA) (Act 25 of 1999);
- Electricity Act (Act 41 of 1987);



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- Integrated Environmental Management Information Series (Booklets 0 to 23) published by DEA over the period 2002 to 2005;
- Promotion of Administrative Justice Act (Act 2 of 2000);
- Civil Aviation Act (Act 13 of 2009) and Civil Aviation Regulations (CAR) of 1997;
- Civil Aviation Authority Act (Act 40 of 1998)
- Records of Decision issued by national DEA and/or the provincial DEAE&T for activities in the Port of Ngqura and Coega IDZ.

Other Acts, standards and/or guidelines which may also be applicable will be reviewed in more detail as part of the specialist studies to be conducted for the EIA.

4.3 Principles for Scoping and Public Participation

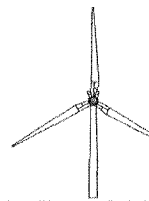
The public participation process for this Scoping and EIA process is being driven by a stakeholder engagement process that will include inputs from authorities, interested and affected parties (I&APs), technical specialists and the project proponent. Guideline 4 on "Public Participation in support of the EIA Regulations" published by DEAT in May 2006, states that public participation is one of the most important aspects of the environmental authorisation process. This stems from the requirement that people have a right to be informed about potential decisions that may affect them and that they must be afforded an opportunity to influence those decisions. Effective public participation also improves the ability of the competent authority to make informed decisions and results in improved decision-making as the view of all parties are considered.

An effective public participation process could therefore result in stakeholders working together to produce better decisions than if they had worked independently. The DEAT (2006) Guideline on Public Participation further notes that:

"The public participation process:

- Provides an opportunity for interested and affected parties (I&APs) to obtain clear, accurate and comprehensive information about the proposed activity, its alternatives or the decision and the environmental impacts thereof;
- Provides I&APs with an opportunity to indicate their viewpoints, issues and concerns regarding the activity, alternatives and /or the decision;
- Provides I&APs with the opportunity of suggesting ways of avoiding, reducing or mitigating negative impacts of an activity and for enhancing positive impacts;
- Enables the applicant to incorporate the needs, preferences and values of affected parties into the activity;
- Provides opportunities to avoid and resolve disputes and reconcile conflicting interests; and
- Enhances transparency and accountability in decision making."

To the above, one can add the following universally recognised principles for public participation:



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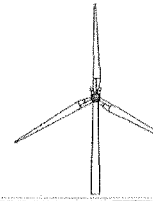
- Inclusive consultation that enables all sectors of society to participate in the consultation and assessment processes;
- Provision of accurate and easily accessible information in a language that is clear and sufficiently non-technical for I&APs to understand, and that is sufficient to enable meaningful participation;
- Active empowerment of grassroots people to understand concepts and information with a view to active and meaningful participation;
- Use of a variety of methods for information dissemination in order to improve accessibility, for example, by way of discussion documents, meetings, workshops, focus group discussions, and the printed and broadcast media;
- Affording I&APs sufficient time to study material, to exchange information, and to make contributions at various stages during the assessment process;
- Provision of opportunities for I&APs to provide their inputs via a range of methods, for example, via briefing sessions, public meetings, written submissions or direct contact with members of the Environmental Impact Assessment (EIA) Team.
- Public participation is a process and vehicle to provide sufficient and accessible information to I&APs in an objective manner to assist I&APs to identify issues of concern, to identify alternatives, to suggest opportunities to reduce potentially negative or enhance potentially positive impacts, and to verify that issues and/or inputs have been captured and addressed during the assessment process.

At the outset it is important to highlight two key aspects of public participation:

- There are practical and financial limitations to the involvement of all individuals within a public participation programme (PPP). Hence, public participation aims to generate issues that are representative of societal sectors, not each individual. Hence, the PPP will be designed to be inclusive of a broad range of sectors relevant to the proposed project.
- The PPP will aim to raise a diversity of perspectives and will not be designed to force consensus amongst I&APs. Indeed, diversity of opinion rather than consensus building is likely to enrich ultimate decision making. Therefore, where possible, the public participation process will aim to obtain an indication of trade-offs that all stakeholders (i.e. I&APs, technical specialists, the authorities and the development proponent) are willing to accept with regard to the ecological sustainability, social equity and economic growth associated with the project.

4.4 Objectives of the Scoping Process

This Scoping process is being planned and conducted in a manner that is intended to provide sufficient information to enable the authorities to reach a decision regarding the scope of issues to be addressed in this EIA process, and in particular to convey the range of specialist studies that will be included as part of the Environmental Impact Reporting Phase of the EIA, as well as the approach to these specialist studies.



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Within this context, the objectives of this Scoping process are to:

- Identify and inform a broad range of stakeholders about the proposed development;
- Clarify the scope and nature of the proposed activities and the alternatives being considered;
- Conduct an open, participatory and transparent approach and facilitate the inclusion of stakeholder concerns in the decision-making process;
- Identify and document the key issues to be addressed in the forthcoming Environmental Impact Reporting Phase of the EIA, through a process of broad-based consultation with stakeholders;
- Ensure due consideration of alternative options in regard to the proposed development, including the “No development” option.

4.5 Tasks in the Scoping Phase

This section provides an overview of the tasks being undertaken in the Scoping Phase, with a particular emphasis on providing a clear record of the public participation process followed.

Task 1: I&AP identification, registration and the creation of an electronic database

Prior to advertising the EIA process in the local and regional print media an initial database of I&APs was developed for the Scoping process. This was supplemented with input from the EIA Project Managers, CSIR, the Coega Development Corporation and the Project Applicant, Universal Wind. A total of **88 I&APs** were included on the project database in this manner. Appendix C contains the current I&AP database, which has been updated to include requests to register their interest in the project, comments received and participation at meetings held. At the time of producing this report, the database stands at **128 registered I&APs**.

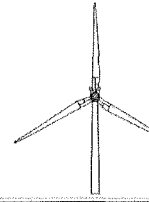
While I&APs have been encouraged to register their interest in the project from the start of the process, following the public announcements (see Task 2), the identification and registration of I&APs has been ongoing for the duration of the study. Stakeholders from a variety of sectors, geographical locations and/or interest groups can be expected to show an interest in the development proposal, for example:

- Provincial and Local Government Departments
- Local interest groups, for example, Councillors and Rate Payers associations
- IDZ tenants and surrounding landowners
- Environmental Groups and NGO's
- Grassroots communities and structures

TASK 1:

I&AP

***identification,
registration and
the creation of
an electronic
database***



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Subsequent to the local government elections in May the I&AP database has been amended to reflect Councillors elected.

In terms of the electronic database, I&AP details are being captured and automatically updated as and when information is distributed to or received from I&APs. This ongoing and up-to-date record of communication is an important component of the public participation process.

It must be noted that while not required by the regulations, those I&APs proactively identified at the outset of the Scoping Process will remain on the project database throughout the EIA process and will be kept informed of all opportunities to comment and will only be removed from the database by request.

TASK 2: *Announcement of the Scoping process*

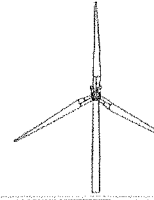
Task 2: Announcement of the Scoping process

In order to notify and inform the public of the proposed project and invite I&APs to register on the project database, the project and EIA process was advertised in one local and one regional newspaper, as shown in Table 4.2 below. Copies of the advertisements placed are contained in Appendix E of this report. Included in the media announcement was information on the website address where information available on the project could be downloaded, namely, www.publicprocess.co.za

Table 4.2: Media announcements of the commencement of this EIA process

Newspaper	Area of distribution	Language	Date placed
EP Herald	Regional (distribution beyond the Kouga Municipal Area)	English	13 January 2011
Burger Oos-Kaap	Regional (distribution beyond the Kouga Municipal Area)	Afrikaans	13 January 2011

In addition to the newspaper advertisements, letters with personal notification regarding the EIA process were mailed to all pre-identified key stakeholders on the database, which at the time consisted of 88 I&APs (Letter 1). This letter, dated 13 January 2011, provided I&APs with a 30 day period to register their interest on the project database. The registration period concluded on the 11 February 2011. Appendix F contains copies of correspondence and information distributed to I&APs prior to the release of the Draft Scoping Report. Letter 1 to I&APs included the Background Information Document (BID) developed for the project as well as a comment form. The purpose of the BID is to inform the public of the proposed project, the EIA process and provide an overview of the opportunities and mechanisms for public participation.



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The EIA Regulations require that a notice board providing information on the project and EIA process is placed at the site. As the Coega Industrial Development Zone is a restricted area a notice board was not placed at the site but on an electronic notice board at the reception area of the Coega Development Corporation offices. A copy of the e-notice board is included in Appendix D.

TASK 3:

Ongoing Communication and Capacity Building

Task 3: Ongoing Communication and Capacity Building

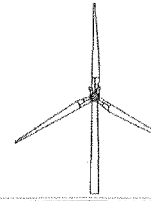
In accordance with the principles of bodies such as the International Association for Public Participation (IAP2), the process for this EIA aims to ensure that people are involved from the outset, that we proactively solicit the involvement of stakeholders representing all three dimensions of sustainability (i.e. biophysical, social and economic dimensions), and that we provide them with sufficient and accessible information to contribute meaningfully to the process. In this manner, the public participation process aims to build the capacity of stakeholders to participate.

Within the context of the EIA process, capacity building is not viewed as a “once off” event, but rather a series of events and/or information sharing which provides information on a continuous basis thereby building the capacity and knowledge of I&APs to effectively participate in the EIA process and raise issues of concern.

One of the challenges facing the participation process is the diversity of South African society. Public participation by its very nature is a dynamic process with various sectors of society having varying needs, values and interests. The core question for public participation is “How can I, the interested and affected party, meaningfully participate in the process?” This varies according to the needs of I&APs. The public participation process should be inclusive of all I&APs, and afford them the opportunity to raise their issues and concerns in a manner that suites them. Coupled with this South African society is characterized by varying socio-economic, literacy and language levels all of which need to be considered in the participation process. For example, certain I&APs may want to receive documentation only and not attend meetings, some I&APs may want to only attend meetings, other I&APs may not want to attend meetings and send their comments in writing, and some I&APs may want to be actively involved throughout the process.

In order to accommodate the varying needs of I&APs and develop their capacity to participate in the process, information sharing forms an integral and ongoing component of the EIA process to ensure effective public participation. The following provides an overview of information sharing throughout the EIA process in order to develop the capacity of I&APs to effectively engage in the public participation process:

- **Website** – placing EIA related project information on the website www.publicprocess.co.za
- **Language** – encouraging I&APs to use the language of their choice at meetings and providing translations at meetings in English, Afrikaans and Xhosa, when required;



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- **Background Information Document** (January 2011) – which contains information on the project, EIA and public participation process;
- **Newspaper Advertisements** placed requesting I&APs to register their interest in the project, raise issues of concern or notifying I&APs of public meetings to be held;
- **Letters to I&APs** notifying them of the various stages of the EIA process, availability of reports for comment and inviting them to attend public meetings to be held;
- **Report Distribution** – providing hard copies of the Scoping and EIA reports at local libraries for viewing by I&APs as well as providing key I&APs with copies of the report;
- **Public Meetings** – where representatives of the project applicant and EIA team are present to interact and engage with members of the public;
- **Focus Group Meetings** – to target key I&AP groups (Councillors, community organisations, environmental organisations) and proactively invite them to attend a meeting where they are provided with an overview of the project and EIA process.

Documents are posted onto the website as and when they become available and I&APs are notified accordingly.

Task 4: Consultation with authorities

All public participation documentation will reach the lead authority (National DEA) as well as other relevant authorities included on the I&AP database. Additionally, consultation with relevant authorities on a one-on-one basis will be effected where necessary.

Given the project location in the Coega IDZ a key approach to authority consultation will be to communicate via the Coega Environmental Liaison Committee, which meets quarterly and includes all authorities from national, provincial and local government involved in environmental decision-making regarding projects in the IDZ. The approach to the EIA process and key issues identified at this stage, were presented to the Coega ELC at a meeting on 25th November 2010 in Port Elizabeth. In addition, the Draft Scoping Report was presented to the ELC on the 26 May 2011.

During the course of the EIA process, the EIA project leaders, CSIR, will seek to hold meetings as necessary with the key authorities at various milestones throughout the process.

Task 5: Technical Scoping with project proponent and EIA team

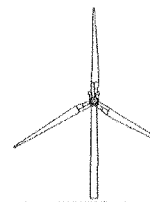
The Scoping process has been designed to incorporate two complementary components: a stakeholder engagement process that includes the relevant authorities and wider interested and affected parties

TASK 4:

***Consultation
with authorities***

TASK 5:

***Technical
Scoping with
project
proponent and
EIA team***



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(I&APs); and a technical process involving the EIA team, the project proponent (Universal Wind), and the landowner (CDC).

The purpose of the technical Scoping process is to draw on the past experience of the EIA team and the project proponent to identify environmental issues and concerns related to the proposed project, and confirm that the necessary specialist studies have been identified. The specialist team has worked with the CSIR on several other wind projects, including wind projects in the Eastern Cape, as well as having experience from EIAs for other projects in the Coega IDZ. The specialists were therefore able to identify issues to be addressed in the EIA based on their experience and knowledge of the Coega area. Their inputs have informed the scope and Terms of Reference for the specialist studies. Based on the experience of the EIA team working on several similar projects, combined with the experience of the project proponent and their technical team, the specialist studies are being initiated in parallel with the Scoping process. This enables the specialists to analyse baseline information and conduct field work that will assist the EIA team in understanding the key issues raised during the public Scoping phase. The findings of the Scoping process with the public and the authorities will inform the specialist studies, which will only be completed after the public Scoping process has been finalised.

Task 6: Consultation with wider I&APs (public) to identify issues and concerns

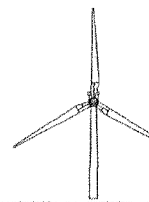
In order to accommodate the varying needs of I&APs as well as capture their views, issues and concerns regarding the project, a 30 day comment and registration period extending from the 13 January 2011 to the 11 February 2011 was provided prior to the review of the Draft Scoping Report. A 40 day comment period was provided for the review of the Draft Scoping Report which extended from the 19 April 2011 to the 6 June 2011. The comment period took into account public holidays which fell during the comment period. I&APs were notified of the comment period on the Draft Scoping Report via Letter 2. Included with this correspondence were a comment form and an Executive Summary as well as details of the Public Meeting which was held during the review period. Appendix K Contains copies of the correspondence sent to I&APs.

The comments received from I&APs, via fax or email and through meetings held have been captured in the Issues and Responses Trail contained in Chapter 5 of this report. The comments trail includes comments received from affected authorities in response to the first notification distributed on the project. Appendix L contains copies of all the comments received.

Various opportunities have been provided for I&APs to have their issues noted prior to the release of the Draft Scoping Report and for inclusion in the Final Scoping Report. These include:

TASK 6:

***Consultation
with wider
I&APs (public) to
identify issues
and concerns***



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- Letter 1 to I&APs (dated 13 January 2011) notifying them of the initiation of the Scoping process and providing them with a Background Information Document (BID) to inform them about the project and a comment form;
- Newspaper advertisements placed requesting I&APs to register their interest in the project and raise issues of concern for inclusion in the Final Scoping Report;
- E-notice board;
- Project information made available through the Website www.publicproces.co.za; and
- Written, faxed or email correspondence.
- Letter 2 to I&APs (dated 19 April 2011) notifying them of the comment period on the Draft Scoping Report which included an executive summary of the report as well as a comment form. This correspondence included notification of the Public Meeting held during the review of the Draft Scoping Report.
- Public Meeting held on the 12 May 2011, to which all I&APs were invited via Letter 2 and through the placement of newspaper advertisements.
- Placement of the Draft Scoping Report at the Govan Mbeki Avenue Main Library as well as the Motherwell Library
- Focus Group Meetings held prior to the release of the Draft Scoping Report and during the review of the Draft Scoping Report. These meetings are aimed particularly at Councillors and community based organisations where information on the project can be provided in the language of choice of the participant.

Appendix G, H, L and M of this report contains copies of the correspondence received from I&APs and notes from the focus group meetings as well as public meetings held.

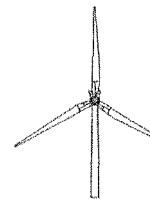
TASK 7:

Focus Group Meetings

Task 7: Focus Group Meetings

One-on-one focus group meetings have been held with key stakeholders (predominantly community based organisations) prior to the release of the Draft Scoping Report. The purpose of these meetings has been to provide these I&APs with information on the project and EIA process in the language of their choice. In addition the issues raised at these meetings have been recorded and are included in the Issues and Responses Trail in Chapter 5 of this Report. It is further intended for these meetings to develop their capacity to participate in the process as well as identify issues for inclusion in the Draft and Final Scoping Report and later phases of the EIA process. Appendix H contains the notes from the meetings and Appendix I copies of the registration forms.

The following table provides an overview of Focus Group Meetings held prior to the release of the Draft Scoping Report.



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Table 4.3: Meetings held with key I&APs

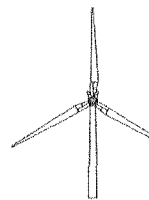
Organisation	Date of Meeting	No of Participants
SA National Civics Organisation, Regional	08 February 2011	1
SA National Civics Organisation, Nelson Mandela Region	08 February 2011	1
Motherwell Councillors Forum	07 February 2011	1
SACP District Office	07 February 2011	1
ANC Metro Region	10 February 2011	1
Total Participants		5

A total of 5 I&APs participated in the focus group meetings that were held prior to the release of the Draft Scoping Report.

The aim of the meetings held during the review of the Draft Scoping Report was to, amongst others target the newly appointed Councillors for the area in order to provide them with information on the project and note issues of concern for inclusion in the Final Scoping Report. The table below provides an overview of the meetings held during the review of the Draft Scoping Report.

Organisation	Date of Meeting	No of Participants
SA National Civics Organisation, Regional	20 June 2011	1
SA National Civics Organisation, Nelson Mandela Region	31 May 2011	1
Nelson Mandela Bay Councillor, Ward 56, IDZ Boundary	1 June 2011	1
Nelson Mandela Bay Councillor, Ward 60 Wells Estate, IDZ Boundary	26 May 2011	3
ANC Metro Region	5 June 2011	1
COPE Regional Office	2 June 2011	1
Total Participants		8

The issues raised from the meeting held have been captured in Chapter 5 of this report and the notes from the meetings held as well as the registration forms are contained in Appendix M and N respectively. These meetings will continue to play a key role in communicating the findings of the Draft EIA and the identification of comments for inclusion in the Final EIA.



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Task 8: Identification of Issues and Concerns

Issues and concerns raised by I&APs have been synthesized in the Issues and Responses Trail (Chapter 5). The issues and concerns were identified through the following mechanisms:

- Written submissions in response to advertisements and communications with I&APs; and
- Issues raised through written correspondence received from I&APs (fax, email and mail).
- Issues raised through the focus group meetings held
- Issues raised at the Public Meeting held during the review of the Draft Scoping Report

The Issues Trail (Chapter 5) also includes responses from the EIA Team (and, in some cases, the project proponent) to the issues raised. In general, the responses indicate how the issues will be addressed in the EIA process. In some cases, immediate responses and clarification were provided. Where issues were raised that the EIA team considers beyond the scope and purpose of this EIA process, clear reasoning for this view is provided.

The Scoping process is currently at this stage, when I&APs are invited to submit comments on the Final Scoping Report directly to the decision making authority. The next section provides an overview of the process for the review of the Draft Scoping Report.

Task 9: Review of the Draft Scoping Report

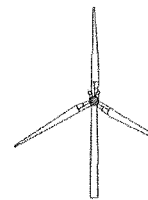
This stage in the process entailed the release of the Draft Scoping Report for a 40-day I&AP review period, which extended from the 19 April 2011 to the 6 June 2011. All I&APs on the project database were notified in writing, via Letter 2, of the release of the Draft Scoping Report for review and were invited to attend the public meeting that was held during the review period.

The following mechanisms and opportunities were utilised to notify I&APs of the release of the Draft Scoping Report for comment:

- Letter 2: to notify I&APs of the release of the Draft Scoping Report, the comment period which included an executive summary of the report, a comment form and notification of the public meeting;

TASK 8: *Identification of Issues and Concerns*

TASK 9: *Review of the Draft Scoping Report (current stage)*



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- Placement of the Draft Scoping Report on the project website (www.publicprocess.co.za);
- Placement of the Draft Scoping Report at the Govan Mbeki Avenue Main Library and the Motherwell Library;
- A public meeting, held on the 12 May 2011, to which all I&APs on the project database were invited via Letter2;
- Newspaper advertisements placed in Die Burger and the Herald on the 19 April 2011 notifying I&APs of the review period for the Draft Scoping Report, the availability of project information and providing details of the Public Meeting to be held; and
- One-on-one focus group meetings with I&AP groups.

Copies of the newspaper advertisements placed are included in Appendix J of this report. All issues and concerns identified through the review of the Draft Scoping Report have been captured in the updated Issues and Responses Trail, which is included in the Final Scoping Report for submission to DEA for decision making.

TASK 10: FINAL SCOPING REPORT

Task 10: Final Scoping Report (current stage in the process)

Letter 3 to I&APs will include notification of the submission of the Final Scoping Report to DEA for their decision making. In addition I&AP's will be informed of any material changes in the final report. I&APs will be given a reasonable period to comment on the changes to the Final Scoping Report. Comments will be sent directly to the competent authority.

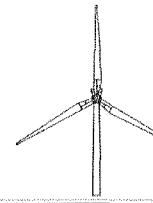
To ensure ongoing access to information copies of the Final Scoping Report will be placed in Municipal Libraries and on the project website (www.publicprocess.co.za).

This step marks the end of the public participation process for the Scoping Phase. The public participation programme for the subsequent Environmental Impact Reporting Phase is presented in the Plan of Study for EIA (Chapter 6).

4.6 Approach to the Assessment of Alternatives

The EIA Regulations require that alternatives to a proposed activity be considered. Alternatives are different means of meeting the general purpose and need of a proposed activity. This may include the assessment of site alternatives, activity alternatives, process or technology alternatives, temporal alternatives and/or the no-go alternative.

The EIA Regulations indicate that alternatives that are considered in an assessment process be reasonable and feasible. I&APs must also be provided with an opportunity of providing inputs into the process of formulating alternatives. The assessment of alternatives should, as a minimum, include the following:



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- The consideration of the no-go alternative as a baseline scenario;
- A comparison of selected alternatives; and
- The provision of reasons for the elimination of an alternative.

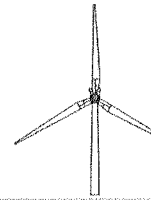
When considering alternatives, it is important to present the strategic-level evaluation that was conducted by Universal Wind during the pre-feasibility stage of the project which led to Zone 12 of the Coega IDZ being selected as the location for the proposed project. As highlighted in Chapter 1 of this report Universal Wind is a leading wind energy company operating predominantly in the European market. In 2009/2010 Universal Wind decided to diversify by investigating potential development projects in Africa. Subsequently Universal Wind identified a number of potential opportunities for wind energy projects in Southern Africa. One of these opportunities was for a potential project in South Africa. An investigation was conducted to review potential sites, which led to the Coega IDZ being selected as a suitable location, based on the following criteria:

- It is an industrial zone, which includes power lines, substations, cranes in the port and other tall structures (i.e. it has an industrial character which is compatible with wind turbines);
- The wind regime in the coastal and higher lying areas of the IDZ is favourable for such a development;
- Existing power lines and high voltage substations are located in the IDZ in close proximity to the turbines, thus reducing grid connection costs
- The electricity created could feed into the national (Eskom) or Metro electricity grid which would contribute towards the IDZ power requirements as well as the Metro's target of 10% renewable energy usage.

Areas within the IDZ that are potentially available for the establishment of wind turbines were then identified following consultation with the Coega Development Corporation, taking into consideration factors such as the local wind regime, current land use zoning, existing development proposals, existing and planned infrastructure (such as roads and power lines), and the Coega Open Space Management Plan. The planning approach has adopted the principle of placing wind turbines on land bordering the Open Space Management System of the IDZ or within areas where the Open Space Management System can be enhanced and / or complimented by the wind turbines. The proposed location of approximately 20 wind turbines within Zone 12 of the Coega IDZ is shown in Figure 2.1 in Chapter 2. These locations will be changed during the EIA process and this could lead to minor refinements in the location and scale of the turbines.

4.7 No-go alternative

The main implication of the no-go alternative is lack of additional power supply to the local area and potential delay in the metro reaching its target of 10% power from renewable



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energy. Additional power to the local grid will need to be provided via the Eskom grid, with approximately 90% coal-based power generation with associated high levels of CO₂ emissions and water consumption. In addition, the no-go alternative would have localised socio-economic implications in that there would be no new employment opportunities created as a result of the proposed project.

4.8 Land use alternative

The physical footprint of the turbines is very limited and places limited restriction on other land uses in the area particularly if the turbines are located along the edge of the Open Space Management System as proposed in consultation with CDC.

4.9 Activity and layout alternatives as part of the development

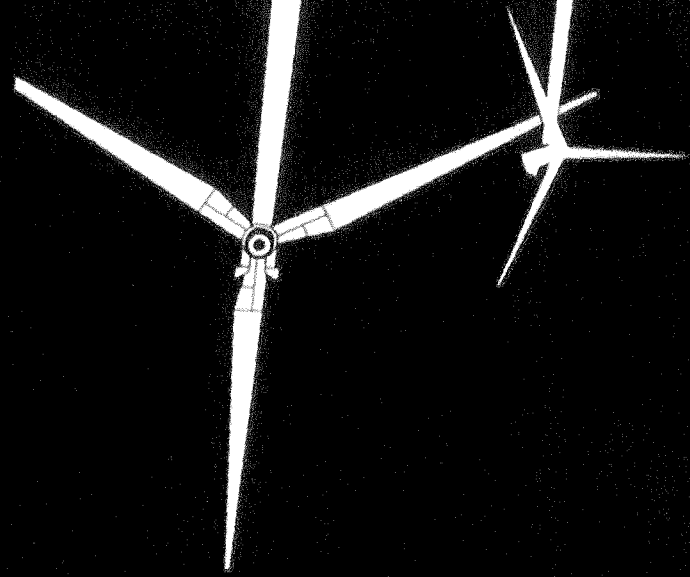
Alternative sites for the 20 turbines within the Coega IDZ were investigated. The CDC's Development Framework Plan for the Coega IDZ identified a number of different land uses which would be suited for implementation within the respective zones of the IDZ. Zone 12 of the IDZ was subsequently identified as being suitable to the implementation of energy orientated projects. Furthermore, the presence of the Coega Open Space Management Plan within Zone 12, limits the areas development potential with regards to other conventional types of industry. Given that wind energy constitutes a renewable and "clean" energy source the decision was made to site the wind turbines outside of the Open Space Management Plan. This would allow for a buffer to be created around the Open Space Area, preventing damage to the area which may have been caused by other more invasive land uses, while simultaneously allowing for optimal use to be made of the area.

4.10 Technology alternatives as part of the development

As highlighted previously in this report, different turbine technology providers are being considered by Universal Wind for this project. These include Enercon, Repower, Vestas and Siemens. When considering alternative suppliers, key factors include availability of turbines on the international market, suitability to the South African wind climate, and service levels and experience in South Africa. A final decision regarding the wind energy technology to be selected for implementation will therefore take place at a later stage

4.11 Schedule for the EIA

The proposed schedule for the EIA, based on the legislated EIA process, is presented in Table 4.4. It should be noted that this schedule might be revised during the EIA process, depending on factors such as the time required for decisions from authorities.



**Issues and
Responses Trail**

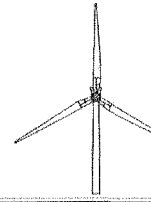
CHAPTER 5

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FIGURE 5.1: DECISION-MAKING FRAMEWORK FOR IDENTIFICATION OF KEY ISSUES FOR THE EIA 5-2





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5. ISSUES AND RESPONSES TRAIL

5.1 Identification of Issues

An important element of the Scoping process is to evaluate the issues raised through the Scoping interactions with authorities, the public, specialists on the EIA team and the project proponent. In accordance with the philosophy of Integrated Environmental Management, it is important to focus the EIA on the key issues.

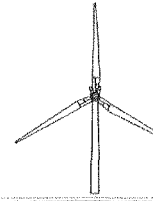
To assist in the identification of key issues, a decision-making process is applied to the issues and concerns raised, based on the following criteria (see Figure 5.1):

1. Whether or not the issue falls within the scope and responsibility of the Universal Wind EIA process;
2. Whether or not sufficient information is available to respond to the issue or concern raised without further specialist investigation.

Issues for inclusion in the Draft Scoping Report were sourced by the EIA team from the following Scoping interactions:

- Newspaper advertisements – In order to notify and inform the public of the proposed project and invite members of the public to register as I&APs, and to inform the EIA consultant about specific issues or interests in the proposed project, the project and EIA process was advertised in one local and one regional newspapers.
- Focus Group Meetings held between the Public Participation Consultant and key I&AP groups.
- Telephone – issues raised by I&APs during telephonic consultations.
- Letters and faxes – issues sent to PPC via fax or posted correspondence.
- Email – issues sent to PPC via email correspondence.
- Comment Form – issues submitted to PPC via the Comment Form that was provided at the focus group meetings and with Letter 1 and the BID mailed to I&APs.

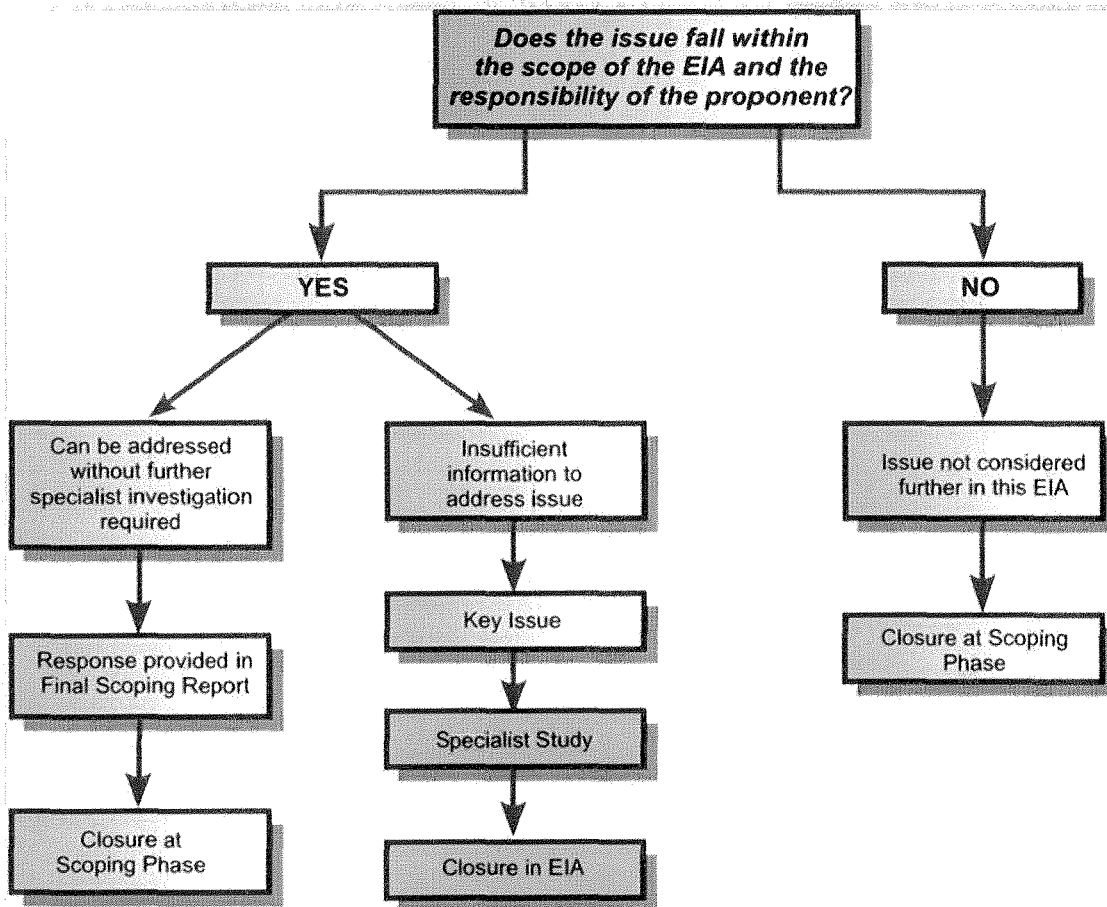
The Appendices of the Final Scoping Report contain the supporting meetings notes and detailed correspondence received, prior to the release of the Draft Scoping Report for comment. Comments received that are not relevant to, or do not form part of this EIA process have not been included in the Issues Trail below. The detailed comments received are included in Appendix G. Section 5.2 below provides a summary of the comments received prior to the release of the Draft Scoping Report. Issues are grouped according the following categories:



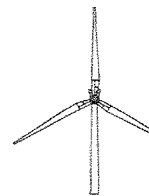
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Grouping of Issues	Number of issues raised prior to the release of the DSR	Number of issues raised in response to the DSR
1. Potential Noise Impacts	2	1
2. Potential Heritage Impacts	6	0
3. Potential Impacts on Birds and Bats	3	3
4. Potential Visual Impacts	1	1
5. Impacts on the IDZ Open Space Management Plan	0	3
6. Potential impacts on Civil Aviation	0	1
7. Potential Socio Economic Impacts	1	6
8. Potential Biophysical Impacts	1	0
9. Project Detail	0	10
10. EIA and Public Participation	2	5
11. General and Project Motivation	2	0

Figure 5.1: Decision-making framework for identification of key issues for the EIA



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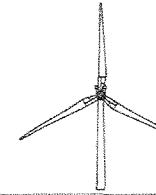


5.2 Issues and Responses Trail Prior to release of the Draft Scoping Report

The following table summarises the issues raised by I&APs prior to the release of the Draft Scoping Report for a 40 day I&AP Review period. Issues raised are summarised below, together with a response from the EIA team. A synthesis of issues to be addressed in the Specialist Studies is provided in the Plan of Study for EIA (Chapter 6). The results of the Specialist Studies will be made available to I&APs for comment as part of the Draft EIA Report. All comments received prior to the release of the Draft Scoping Report, through meetings and written correspondence are attached as Appendices to this report.

1. POTENTIAL NOISE IMPACTS

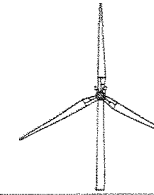
NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
1.1	A noise impact assessment study to be conducted, which takes into account future developments in the area and the cumulative impact of all other proposed wind turbines.	Kobus Slabbert, Nelson Mandela Bay Municipality, Senior Environmental Health Practitioner	11Feb2011, fax	Wind energy projects are generally more environmentally benign than traditional (coal-based) energy projects. This is primarily due to zero emissions being emitted by the wind turbines during the electricity generation process. Wind turbines do however emit noise during operation. A noise impact assessment has been proposed as part of the project. The noise specialist study in the EIA will evaluate noise generated by this project, as well as the cumulative noise impact of the two previously proposed wind energy projects in the IDZ. A cumulative noise assessment which takes into account future developments in the IDZ would be recommended for actioning to CDC as they would be regarded as the responsible entity who should be dealing with all noise generating activities within the IDZ.
1.2	To ensure compliance with the NMBM noise control by-law in preventing a disturbing noise/ noise nuisance from occurring.	Kobus Slabbert, Nelson Mandela Bay Municipality, Senior Environmental Health Practitioner	11Feb2011, fax	The noise impact specialist study in the EIA will evaluate noise generated by the proposed project, and will also ensure compliance with all relevant legislation, policies and guidelines, including the NMBM noise control by-law in preventing a disturbing noise/nuisance from occurring.



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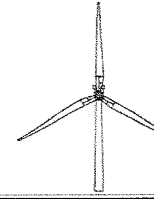
2. POTENTIAL HERITAGE IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
2.1	A full Heritage Impact Assessment for the Coega IDZ has already been received and commented upon by SAHRA. Therefore, a new Heritage Impact Assessment is not required for this project.	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted.
2.2	According to the information gathered from the HIA report, in zone 12 a series of Middle Stone Age scattered stone tools were identified in secondary context. Besides the presence of several tracks and wide strips bulldozed probably for future road construction, the visibility of most of the surface was hampered by the presence of dense grass, bush and thicket vegetation. SAHRA therefore recommends that: <ul style="list-style-type: none"> an archaeologist be present on site during vegetation clearing allowing for documentation and/or rescue of any new discoveries. 	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted. The recommendation for engaging an archaeologist during site clearance will be incorporated in the project environmental management plan.
2.3	High volume excavations of the Sundays River and Kirkwood formations must be examined and sampled by a professional palaeontologist WHILE fresh bedrock is still exposed.	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted. The recommendation for engaging a professional palaeontologist for examining and sampling excavations of the Sundays River will be incorporated in the project environmental management plan.



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		Agency		
2.4	No graves have been identified yet in zone 12. However, if new burials are recognized, they must be protected and conserved. Vegetation clearing is necessary where graves are overgrown, the extent of all graveyards, where missing, must be inspected and properly identified. A specialist must be employed for this. A proper fence, where not existent, must be built around them including entry gates to allow visits by the family and community. The fence must be placed at least two meters away from the perimeter of the graves. No development is allowed within 15m from the fence line surrounding the graves,	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted. Recommendations for protecting and conserving grave sites will be incorporated into the project environmental management plan where applicable.
2.5	Alternatively, if the area where the burials are located falls within the development footprint, then provisions stipulated in section 36 of the National Heritage Resources Act (Act No. 25 of 1999) are applicable, and relocation of these might proceed provided that a full public consultation process is followed.	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted.
2.6	If any evidence of archaeological sites or remains (e.g., shell middens, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during mining activities, SAHRA APM Unit (Mariagrazia Galimberti/Nonofho Ndobochani 021 462 4502) must be alerted immediately, and an accredited professional archaeologist must be contacted as soon as possible to inspect the findings. If the newly discovered	Mariagrazia Galimberti (PhD) APM Impact Assessor South African Heritage Resources Agency	18Feb2011, email & letter	Comment noted. Any mining, earthmoving, or excavation operations which expose archaeological and/or historical residues (including graves) will cease immediately pending an evaluation by the Heritage Authority. This provision will be included in the Environmental Management Plan for the project.

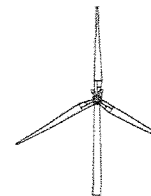


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heritage resources prove to be of archaeological or palaeontological significance a Phase 2 rescue operation might be necessary.

3. POTENTIAL IMPACTS ON BIRDS AND BATS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
3.1	While the harnessing of natural and renewable energy is necessary, BirdLife is concerned that inappropriately sited turbines can have a serious effect on birds, particularly the larger ones and raptors. We would like to be involved in a solution to minimize this impact.	Ross Zietsman, Birdlife Eastern Cape	10Feb2011, email	Comment noted. A bird impact specialist study will be conducted as part of the EIA. Furthermore, some preliminary monitoring has also been proposed in accordance with the recommendations of the recent " <i>Best practice guidelines for avian monitoring and impact mitigation at proposed wind energy development sites in southern Africa</i> ". Birdlife Eastern Cape as a registered I&AP will be invited to provide comment on the findings of the report as contained in the Draft EIAR.
3.2	At this early stage my comments would be that the cumulative impact of the wind farms proposed for the area need to be taken into account (e.g. the effect on the habitat use by large birds such as Blue Crane, Denham's Bustard that are expected to avoid the areas).	Dr Paul Martin, Environmental Professional	30Jan2011, email	Comment noted. The specialist study on birds will address the cumulative impact of the proposed project as well as the two previously proposed wind energy projects on birds.
3.3	Applicable monitoring projects (e.g. bats, birds) should ideally be designed to look at the wind farms as a whole.	Dr Paul Martin, Environmental Professional	30Jan2011, email	Some preliminary monitoring has been proposed in accordance with the recommendations of the recent " <i>Best practice guidelines for avian monitoring and impact mitigation at proposed wind energy development sites in southern Africa</i> ". The proposed monitoring is also uniform to and aligned with the monitoring programmes developed for the two previous wind energy projects in the IDZ. This will allow for a better understanding of the cumulative impacts of wind projects on birds. The bird impact assessment will however also take into account the cumulative impact of the wind farms proposed for development within the Coega IDZ, and will recommend mitigation



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and management measures with which to minimize the negative impacts on birds across all three projects.

4. POTENTIAL VISUAL IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
4.1	At this early stage my comments would be that the cumulative impact of the wind farms proposed for the area need to be taken into account (e.g. visual impacts from Addo ENP).	Dr Paul Martin, Environmental Professional	30Jan2011, email	The visual impact assessment will take into account the cumulative impact of the wind energy projects proposed for development in the Coega IDZ. This assessment will take into consideration sensitive visual receptors which may be impacted upon, which include for example, the Addo Elephant National Park.

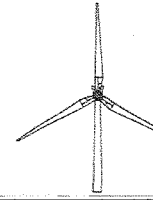
5. POTENTIAL SOCIO ECONOMIC IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
5.1	We encourage the development and are happy as it will play a role in boosting economic development in the region.	Cllr Frans, SANGOCO Region	08Feb2011, net mtg	Comment noted.

6. POTENTIAL BIOPHYSICAL IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
6.1	Individual turbine sites need to avoid OSMP areas (as per the revised plan currently being finalised).	Dr Paul Martin, Environmental	30Jan2011, email	The Coega Open Space Management Plan (OSMP) has been included in the project layout as a "no-go" area within which no wind turbine development may occur. The CDC have indicated that the revised OSMP is still being finalised and therefore the latest version

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Professional

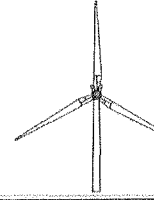
of the OSMP (Revision 10) should be made use. In order to overcome any negative impacts associated with turbine sites, a constraints map has also been developed. This map will inform the turbine siting process and will ensure that turbines are located outside of any sensitive areas.

7. EIA AND PUBLIC PARTICIPATION

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
7.1	The existing CDC RoDs and EMP need to be taken cognisance of.	Dr Paul Martin, Environmental Professional	30Jan2011, email	Comment noted. The project will take cognisance of the existing RoD and EMP to ensure a uniform approach. The proposed project will build onto such documentation, while providing recommendations which are specific to wind energy projects in particular.
7.2	Any further comments will be made when a draft report is available.	Kiki Dyini, SANCO Region	8Feb2011, net mtg	Comment noted. All registered I&AP's will be notified and informed accordingly of the availability of the Draft Scoping Report for comment and review.

8. GENERAL AND PROJECT MOTIVATION

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
8.1	We welcome and appreciate the development as it seeks to address the electricity challenges currently being experienced in the area	Kiki Dyini, SANCO Region	08Feb2011, net mtg	Comment noted.
8.2	We are happy and support the development as it has no health risks and is a clean energy development.	Cllr. Ndlovu, ANC Region		Comment noted.



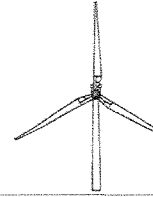
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5.3 Issues and Responses Trail (Draft Scoping Report)

Issues for inclusion in the Final Scoping Report were sourced from the following interactions during the review of the Draft Scoping Report:

- Newspaper advertisements – In order to notify and inform the public of the review of the Draft Scoping Report and invite them to attend a public meeting which was held during the review period, the review period and public meeting was advertised in one local and one regional newspaper
- Public Meeting – all I&APs on the project database were invited, via Letter 2, to attend a public meeting where they were provided with the opportunity to raise issues of concern for inclusion in the Final Scoping Report.
- Focus Group Meetings held between the Public Participation Consultant and key I&AP groups.
- Telephone – issues raised by I&APs during telephonic consultations.
- Letters and faxes – issues sent to PPC via fax or posted correspondence.
- Email – issues sent to PPC via email correspondence.
- Comment Form – issues submitted to PPC via the Comment Form that was provided at focus group meetings and with Letter 2 as well as at the public meeting.

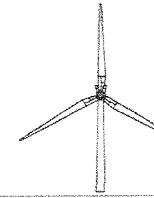
Appendices of the Final Scoping Report contain the supporting meetings notes and detailed correspondence received during the review of the Draft Scoping Report. Comments received that are not relevant to or do not form part of this EIA process have not been included in the Issues Trail below, the detailed comments received are included in Appendix L. The section below provides a summary of the comments received during the review of the Draft Scoping Report.



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1. POTENTIAL IMPACTS ON BIRDS AND BATS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
1.1	Will there be any negative impact on birds as they may want to search for places to build nests on the turbines?	Mongameli Peter, SANGOCO Region	31 May 2011, Focus Group Meeting	Wind turbine technology has been designed in such a way to largely prevent bird species from nesting on top of turbine hubs. The possibility of this occurring and the potential associated impacts will however be investigated as part of the projects Bird Impact Assessment. The findings of the bird impact assessment will be presented in the Draft EIAR which will be made available for review and comment.
1.2	A few bat mortalities have been noted at the single Electrawinds turbine. It is therefore very important that the cumulative impacts / mortalities on bats of the three wind farms proposed for the Coega area be assessed and then monitored during the operational phase to increase our understanding of bat/turbine interactions in the S African context and come up with further mitigating measures if these are warranted.	Dr Paul Martin, Private	21 April 2011, email	Comment noted. A Bat Impact Assessment will be conducted as part of the EIA. This assessment will take into account the combined cumulative impact of all 3 wind energy projects proposed for implementation in the Coega IDZ. The bat impact assessment will also provide recommendations for any future bat monitoring (i.e. during the operational phase). These recommendations will be included in the EIA report, as well as the Environmental Management Plan for the project.
1.3	The Electrawinds (consultant - CSIR) and Innowinds (consultant - CES) wind farms in the Coega area propose a bat and bird monitoring programme. A useful, uniform and practical monitoring programme is required covering all 3 wind farms and the Universal EIA needs to take cognisance of the recommendations in the other wind farm EIAs.	Dr Paul Martin, Private	21 April 2011, email	Comment noted. The recommendations of the other wind farm EIA's will be included into the Universal Wind EIA's monitoring programme, ensuring that the projects monitoring is in line with that currently being conducted in the IDZ. This will allow for a uniform approach to monitoring to be implemented across the IDZ which would greatly strengthen the results and efficacy of such a programme.



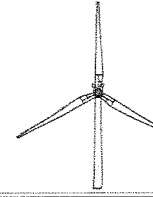
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2. POTENTIAL VISUAL IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
2.1	<p>We allowed for a 500m buffer strip adjacent to zone 12 where our higher density residential units are to be sited.</p> <p>The potential siting of turbines close to a residential development of this nature will have obvious consequences – they should if at all, be sited at least 1.2 kms from the boundaries of the PPC haul road demarcation i.e. an overall distance of at least 1.8km plus from our residential sites – the suitability of this distance (if sufficient?) is still undetermined.</p>	Peter & Gordon Lake, Tankatara Eco & Residential Estate	4 May 2011, comment form and email	<p>The Coega IDZ's RoD requires that adequate buffer zones must be provided between any form of residential area and the IDZ. The recommendation is that there should be buffer zones of 1000 m around heavy industry and 500 m around light to medium industry in which no residential development may occur. Zone 12 of the Coega IDZ constitutes a light to medium industrial zone, and therefore requires a 500 m buffer within which no residential development may occur.</p> <p>A visual impact assessment will be conducted as part of the Environmental Impact Assessment. This specialist study will assess the visual impact on surrounding visual receptors and will recommend mitigation measures and appropriate buffers based on international best practice. The findings of the report will be contained in the Draft EIR which will be made available for comment and review.</p>

3. POTENTIAL NOISE IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
3.1	<p>We allowed for a 500m buffer strip adjacent to zone 12 where our higher density of residential units are to be sited.</p> <p>The potential siting of turbines close to a residential development of this nature will have obvious consequences – they should if at all, be sited at least 1.2 kms from the boundaries of the PPC haul road demarcation i.e. an overall</p>	Peter & Gordon Lake, Tankatara Eco & Residential Estate	4 May 2011, comment form and email	<p>As stated in the Coega IDZ's RoD, adequate buffer zones must be provided between any form of residential area and the IDZ. The recommendation of implementing buffer zones of 1000 m around heavy industry and 500 m around light to medium industry in which no residential development will occur provides mitigation for air pollution, as well as noise and visual impacts. Zone 12 of the Coega IDZ constitutes a light to medium industrial zone, and therefore requires a 500 m buffer within which no residential development may occur.</p>



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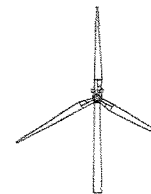
distance of at least 1.8km plus from our residential sites – the suitability of this distance (if sufficient?) is still undetermined.

As a general rule (based on international experience and guidelines), noise impacts from turbines become insignificant if the turbines are located 500 m or further away from sensitive receptors, such as dwellings (places of residence). It should be borne in mind that, as the wind speed increases, the noise impacts of the turbine are masked by the noise of the prevailing wind. Given the location of the turbines in the Coega IDZ, more than 500m from residential areas, it is extremely unlikely that the turbines will have any noise impact on residential sites.

A noise impact assessment will be conducted as part of the Environmental Impact Assessment. This specialist study will assess the noise impact on surrounding receptors, and will recommend mitigation measures and appropriate buffers based on international best practice. The findings of the report will be contained in the Draft EIR which will be made available for comment and review.

4. IMPACTS ON THE IDZ OPEN SPACE MANAGEMENT PLAN

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
4.1	The idea of placing the turbines around the boundaries of the OSMP area is supported. However, the routing of access routes and electrical infrastructure through the OSMP areas must be avoided (unless along existing identified servitudes and then only with major mitigation factors). All OSMP boundaries in the vicinity of turbines and associated infrastructure (e.g. roads, powerlines) must be clearly and permanently marked before any construction or geotech investigations start to prevent accidental incursions into the OSMP areas (as per CDC's RoD). Note that a further revision of the OSMP is near completion and micro-siting of the turbines should take this into account if and when it is	Dr Paul Martin, Private	21 April 2011, email	<p>Comment noted. Crossing of the OSMP will as far as possible be avoided. However should the need arise such crossings will be as minimal as possible and will only occur as a last resort if deemed absolutely necessary. Furthermore, crossings will as far as possible follow existing servitudes where these exist, and mitigation measures will be provided. These measures will also be reflected in the Environmental Management Plan. Recommendations for marking the OSMP prior to the commencement of any construction or geotech activities will also be incorporated into the project's Environmental Management Plan.</p> <p>The latest revision of the OSMP was requested from CDC for inclusion in the EIA, however this is still under review. The CDC therefore recommended that the current version (Revision 10) be</p>

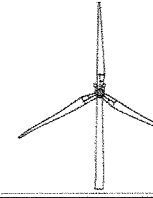


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	approved.			made use of for the purposes of the project. To allow for additional protection of sensitive environmental features within Zone 12 a constraints map has been compiled which depicts additional “no-go” areas.
4.2	What is the light green space on the map in the presentation which indicates the proposed siting for the turbines, are these no-go areas? Will the traverse any of these areas by creating new roads to access the turbines?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011	The light green area depicted on the map represents Coega’s Open Space Management Plan (OSMP). This area constitutes a “no-go” area due to its conservation value. While no wind turbines have been proposed within the OSMP the possibility does exist that some supporting infrastructure may have to cross this area. However should the need to cross the OSMP arise such crossings will as far as possible follow existing servitudes and mitigation measures will be provided. These measures will be reflected in the Environmental Management Plan.
4.3	Have you done sensitivity mapping of the vegetation in zone 12? Is there any master planning that has been done for zone 12 of the IDZ? Will the principle apply in zone 12 that as big a space a possible should remain open within this zone?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011	No sensitivity mapping of the vegetation has been done in Zone 12 to date. A preliminary constraints map indicating no-go areas from a vegetation perspective has been conducted and this will inform the micro siting process. A Master Plan does exist for the entire Coega IDZ however Zone 12 is currently excluded from the plan as this zone is furthest north and was not regarded as a priority development zone. The principle of conserving as large an uninterrupted portion of land as possible for within Zone 12 is applicable. For this reason the wind turbines have been located as close to the OSMP area as possible with view to maintaining its ecological importance (please see Figure 2.3, Ch 2, pg 8).

5. POTENTIAL CIVIL AVIATION IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
5.1	After evaluating the application ATNS wishes to record its position as:	Matthys Horak, Air Traffic Navigation Services	9 May 2011, email & letter	Comment noted.



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From the perspective of Communication and Navigation the establishment of a proposed wind farm conforming to the specifications provided, and located at the site identified will have no negative impact on ATNS operations

Although the proposed wind farm is located slightly further than the proposed wind farm in Zone 9 the same concerns regarding its impact on ATNS primary radar at Port Elizabeth exists. The application is NOT supported as the wind farm is in close proximity to the primary radar, in direct line of sight of the radar and the orientation of the turbines is unknown. The wind farm will be "seen" by the radar, but without dimensions and cross sectional area of the masts, hub and rotor the amount of reflection cannot currently be determined.

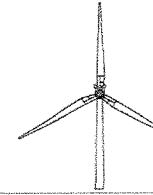
Considering the aforementioned it is clear that the establishment of a wind farm conforming to the specifications provided, and located at the site identified will negatively impact on ATS service delivery

A copy of this Letter will be provided to the South African Civil Aviation Authority (SACAA).

Universal Wind have been corresponding with the South African Civil Aviation Authority, regarding this issue. While no technical aviation study has been proposed the need for one may still arise. Universal Wind understands its responsibility in this regard, and a solution which is deemed acceptable to both the CAA and ATNS will therefore be reached at a later stage.

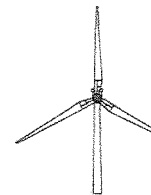
6. POTENTIAL SOCIO-ECONOMIC IMPACTS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
6.1	We encourage wind energy as it will positively contribute towards the current electricity crisis and may be cheaper	Cllr Gana, Ward 60, Wells Estate	26 May 2011, Focus Group	Comment noted.



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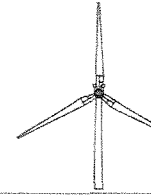
			Meeting	
	when compared to coal fired energy.			
6.2	Will the project create any job opportunities for the community?	Nontando Nlkani, Cllr's Assistant Ward 60, Wells Estate	26 May 2011, Focus Group Meeting	Employment opportunities may be generated during the construction and operational phases of the project. Employment generated during the construction phase will be of a temporary nature, while the operational phase would require permanent employment. Permanent employment would however be limited. It is anticipated that 100 direct, temporary employment opportunities will be created during the construction phase, while approximately 5 to 8 direct employment opportunities will be created during the operational phase.
6.3	We encourage the developer to create job opportunities and use of people from the local area, as well as SMME's during the construction phase of the project.	Cllr Kwitsana, Ward 56, NMBM, IDZ Boundary	1 June 2011, Focus Group Meeting	Comment noted. The Coega Development Corporation's unemployment data base will be made use of to the largest possible extent during the construction phase of the wind farm.
6.4	We are happy with the project and support the development as it will sustain and boost the Metro's economy.	Mlamli Tsotsik, COPE Region	2 June 2011, Focus Group Meeting	Comment noted.
6.5	We encourage the applicant to create job opportunities during the construction phase of the project.	Cllr Ndlovu, ANC Region	5 June 2011, Focus Group Meeting	Comment noted. The Coega Development Corporation's unemployment data base will be made use of to the largest possible extent during the construction phase of the wind farm.
6.6	It is noted that the intention is to import the turbine tower sections. Surely with all the proposed turbines planned for the E Cape there is an opportunity to manufacture at least the tower sections locally (ideally in the Coega IDZ).	Dr Paul Martin, Private	21 April 2011, email	Given the fact that wind turbine technology is still fairly new to the South African context, the manufacture of turbine technology in South Africa has not yet been explored. Following predicted future growth and expansion of the wind energy sector in South Africa, the possibility of manufacturing turbines locally for future projects does exist. This project however proposes making use of the latest turbine technology to be imported from overseas. Selection of the exact wind turbine supplier will be based on availability and suitability to the South African operating environment.



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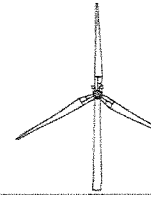
7. PROJECT DETAILS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
7.1	<p>Please be informed that the following Eskom Transmission (Tx) services will be affected by your proposed Universal wind enegy project.</p> <ul style="list-style-type: none"> a. Eskom Tx's Dedisa-Poseidon 1 400kV powerline b. Eskom Tx's Dedisa-Grassridge 1 400kV powerline c. Eskom Tx's Dedisa-Posseidon 220kV powerline d. Eskom Tx's Dedisa substation e. Eskom Tx's proposed Southern Corridor from Thyspunt to PE substation f. Eskom Tx's proposed Southern Corridor from Uitenhage to Grassridge. <p>Eskom Tx will raise no objection to the proposed environmental impact assessment provided Eskom Tx's rights and services are acknowledged and respected at all times.</p> <p>Please note that before any construction work commences in the vicinity of Eskom Tx's services a formal application must be submitted for Eskom Tx's response and direct reply.</p>	Lungile Motsisi, Eskom Land Management	31 January 2011, letter	<p>Comment noted. An agreement between the client, CDC and Eskom regarding the proposed project will be developed, and a formal application will be submitted to Eskom Transmission prior to the commencement of any construction activities if any powerlines are to be affected.</p>
7.2	<p>Will the wind turbines generate energy even during summer days when there is not enough wind?</p>	Kiki Dyini, SA National Civics Organisation,	20 May 2011, Focus Group	<p>Yes. Wind turbines start producing electricity at a wind speed of 3-4 m/s at hub height. Even if the wind speed is not high enough to produce energy at full capacity, wind turbines can still generate</p>



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	Regional	Meeting	
			electricity. In general, wind turbines produce electricity during 85% of the time, although not always at full load.
7.3	When there is not enough wind how will this impact on electricity supply?	Nontando Nikani, Cllr's Assistant Ward 60, Wells Estate	26 May 2011, Focus Group Meeting
			Please see response to 7.2 above. In the event that no wind occurs electricity supply will not be significantly impacted. This is due to the fact that electricity from the proposed project will feed into and supplement the national grid. Electricity will therefore still be available from the National Grid in instances when the proposed project is not generating electricity.
7.4	When there is not enough wind will there be a negative impact on the supply of electricity to businesses?	Mongameli Peter, SANGOCO Region	31 May 2011, Focus Group Meeting
			No. Electricity generated by the proposed project will be fed into and supplement the national grid. Businesses will obtain their electricity from the National Grid and not directly from the turbines themselves.
7.5	What is the generation capacity of the project?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011
			The exact turbine technology for the proposed project has not been selected. It is proposed however that each of the 20 turbines have an approximate capacity of between 2 MW and 4 MW each. Therefore should the project make use of the larger 4 MW turbines, the total combined generation capacity is expected to be up to 80 MW.
7.6	Have you started negotiation with turbine suppliers and what is their availability to supply turbines to SA?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011
			Yes, Universal Wind has started negotiations with the different wind turbine suppliers in order to determine which of the preferred suppliers will be supplying the South African market.
7.7	Do you have any wind data available for the area and do you have a wind mast in place?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011
			No. Wind data will be obtained for the proposed project area. One possible option of obtaining such data would involve the establishment of a wind measurement mast; however no decision has been made as yet.
7.8	Have you made an application to the civil aviation authority and do you have any response from them yet?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011
			The client is in the process of applying to the CAA. The CAA and ATNS have however been included as I&APs for the proposed project and comments regarding the proposed project have been incorporated during the Scoping process.
7.9	How will the electrical connection between the turbines and to the substation be laid out, will you bring all the connections to one substation with one line to link into the grid or will there be two lines linking into the grid?	Stephen Schutte, Afri Coast Engineers	Public Meeting, 12 May 2011
			Given the location of the Coega Open Space Management Plan (OSMP) in relation to the turbine locations, it is expected that two separate lines will be required i.e. wind turbines located east of the OSMP will be routed together, and those located west of the OSMP will be routed together. These lines will then converge in Eskom's service corridor before being routed to the Dedisa substation where they will be connected. It is proposed that all the turbines be linked to one another, allowing for only one connection to the substation.



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Is there a closer substation or mini substation to the site than the Dedisa substation?

No. Dedisa is the closest substation to the site, and has therefore been selected for the proposed project.

7.10 "As owner and co-Director of Tankatara Farm 643 and co-developer of TANKATARA RESIDENTIAL AND ECO-RESIDENTIAL DEVELOPMENT:

Peter & Gordon
Lake, Tankatara Eco
& Residential Estate

4 May 2011,
comment form
and email

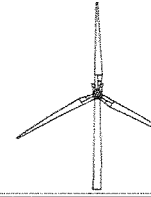
As stated in the Coega IDZ's RoD, adequate buffer zones must be provided between any form of residential area and the IDZ. The recommendation of implementing buffer zones of 1000 m around heavy industry and 500 m around light to medium industry in which no residential development will occur provides mitigation for air pollution, as well as noise and visual impacts. Zone 12 of the Coega IDZ constitutes a light to medium industrial zone, and therefore required a 500 m buffer within which no residential development may occur.

The Coega IDZ insisted/requested a buffer strip of 1km residential free area into our property adjacent to Zone 6 & 11 because of the nature of industry intended to be established in these zones. This was allowed for in our project planning/scoping. (EC06/387/M/10.18)

Further we allowed for a 500m buffer strip adjacent to zone 12 where our higher density of residential units are to be sited.

The potential siting of turbines close to a residential development of this nature will have obvious consequences – they should if at all, be sited at least 1.2 kms from the boundaries of the PPC haul road demarcation ie an overall distance of at least 1.8km plus from our residential sites – the suitability of this distance (if sufficient?) is still undetermined."

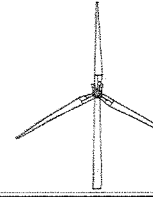
The impact of the wind turbines will be assessed accordingly through a series of Specialist Impact Assessments. Appropriate buffers with which to mitigate any negative impacts will also be determined based on international best practice and will be incorporated into the Draft Environmental Impact Assessment Report which will be released for comment and review.



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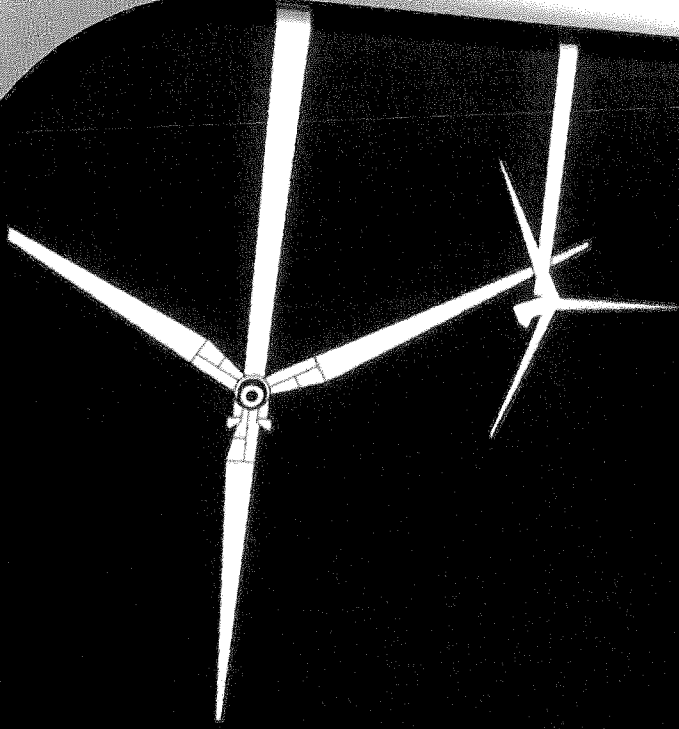
8. EIA AND PUBLIC PARTICIPATION PROCESS

NO	ISSUES RAISED	COMMENTATOR	DATE	RESPONSE
8.1	Other rare invertebrates that occur in the IDZ in addition to those mentioned in the DSR include the Addo Flightless Dung Beetle and a primitive dung beetle <i>Ichneostoma albomaculata fuscipennis</i> Holm Family: Scarabaeidae Sub-family: Cetoniinae recently found in the IDZ by Ernest Pringle. However, I would not expect the wind farm to have an impact on these species.	Dr Paul Martin, Private	21 April 2011, email	Comment noted. A terrestrial ecology assessment is being conducted as part of the Environmental Impact Assessment. The findings of the study will determine the need for any conservation of sensitive species.
8.2	The EMP to be developed needs to take cognisance of CDC's existing Construction EMP, Standard Environmental Specifications, Rehabilitation Specifications, etc - if there is conflict this needs to be motivated to ensure no confusion as to which EMP is applicable. Ideally all requirements of CDC's standard SHE documents should apply with additional requirements specific for the wind farm stated in the Universal EMP. The EMP also needs to take cognisance of the Electrawinds and Innowinds EMPs to ensure uniformity and consistency. The EMP also needs to set out the role of the various stakeholders, including the role of CDC, especially in terms of SHE monitoring and reporting during the construction and operational phases. It is suggested that Environmental reports / audits be copied to CDC / CDC's ECO so that pertinent information can be provided to the quarterly meetings of the Coega / Ngqura Environmental Monitoring Committee.	Dr Paul Martin, Private	21 April 2011, email	Comment noted. The proposed project will take cognisance of the CDC's existing environmental documents as well as any other supporting documentation. The recommendations and mitigation measures of the CDC's, Electrawinds and InnoWinds EMP's will be incorporated into the proposed projects EMP as far as reasonably possible.
8.3	The information will be communicated to all members of the	Cllr Ndlovu, ANC Region	5 June 2011, Focus Group	Comment noted.



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Regional committee.		Meeting		
8.4	We are happy with the process and the studies that are being undertaken	Kiki Dyini, SA National Civics Organisation, Regional	20 May 2011, Focus Group Meeting	Comment noted.
8.5	Who will be responsible to prevent grass fires sweeping through this zone? Experience is that since cessation of livestock farming in this area (1990's) there have occurred at least two serious brush fires driven by strong westerly winds caused by matted moribund grass growth catching alight, which was never previously a factor.	Peter & Gordon Lake, Tankatara Eco & Residential Estate	4 May 2011, comment form and email	The CDC as part of its environmental authorisation process was required to develop a Fire Contingency and Management Plan for the IDZ. This plan provides measures with which to manage and deal with fires in the area. A basic Fire Management Plan will also be implemented as part of the proposed projects Environmental Management Plan (EMP). Furthermore, in the event of a fire in the area, wind turbines (which are controlled remotely) can be switched off to prevent any further impacts of the fire, and roads and hard standing areas could essentially act as fire breaks.

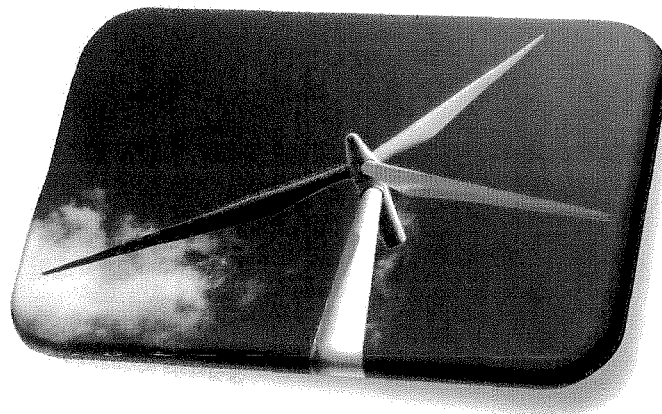


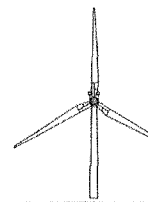
**Plan of Study
for EIA**

CHAPTER 6

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6. PLAN OF STUDY FOR EIA

6.1 Identification of Issues

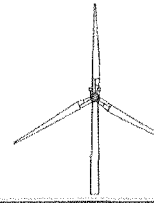
The Plan of Study for EIA (PSEIA) sets out the process to be followed in the EIA phase and is shaped by the findings of the Scoping process. The EIA phase consists of three parallel and overlapping processes:

- Central assessment process involving the authorities where inputs are integrated and presented in documents that are submitted for approval by authorities (Sections 6.2 and 6.4)
- Public participation process whereby findings of the EIA phase are communicated and discussed with I&APs and responses are documented (Section 6.3)
- Specialist studies that provide additional information required to address the issues raised in the Scoping phase (Sections 6.5 and 6.6).

6.2 Overview of approach to preparing the EIA Report and EMP

The results of the specialist studies and other relevant project information will be summarized and integrated into the Draft EIA Report. The Draft EIA Report will be released for a 40 day I&AP and authority review period, as outlined in Sections 6.3 and 6.4. All I&APs on the project database will be notified in writing of the release of the Draft EIA for review. It is proposed that during this review period a public meeting is held as well as focus group meetings with key I&APs. The purpose of these meetings will be to provide an overview of the outcome and recommendations from the specialist studies, as well as provide opportunity for comment. Comments raised, through written correspondence (emails, comments, forms) and at meetings (public meeting and focus group meetings) will be captured in a Comments and Responses Trail for inclusion in the Final EIA Report. Comments raised will be responded to by the EIA team and/or the applicant. These responses will indicate how the issue has been dealt with in the EIA process. Should the comment received fall beyond the scope of this EIA, clear reasoning will be provided. All comments received will be attached as an appendix to the Final EIA Report.

The Draft EIA Report will include a draft Environmental Management Plan (EMP), which will be prepared in compliance with the relevant regulations. This EMP will be based broadly on the environmental management philosophy presented in the ISO 14001 standard, which embodies an approach of continual improvement. Actions in the EMP will be drawn primarily from the management actions in the specialist studies for the construction and operational phases of the project. If the project components are decommissioned or re-developed, this will need to be done in accordance with the relevant environmental standards and clean-up/remediation requirements applicable at the time.



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6.3 Public Participation Process

The key steps in the public participation process for the EIA phase are described below. This approach will be confirmed with the DEA through their review of the PSEIA. The participation process for the Scoping Process is described in Chapter 4 of this report.

Task 1: Review of Draft EIA Report and EMP

The first stage in the process will entail the release of a Draft EIA Report for a 40 day public and authority review period. Relevant organs of state and I&APs will be informed of the review process in the following manner:

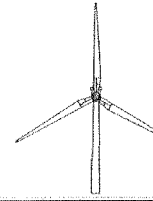
- Advertisements placed in one local and one regional newspaper,
- Letter 4 to all I&APs (including authorities), with notification of the 40 day public review period for the Draft EIA and invitation to attend the public meeting (this letter will include the summary of the Draft EIA Report and a Comment Form);
- Public Meeting on the Draft EIA Report, where key findings of the EIA report will be communicated and I&APs will have the opportunity to provide comments and engage with the EIA team and project proponent;
- Focus Group Meeting(s) with I&APs, if requested;
- Meeting(s) with key authorities involved in decision-making for this EIA.

The Draft EIA Report and EMP will be made available and distributed through the following mechanisms to ensure access to information on the project and to communicate the outcomes of the specialist studies:

- Copies of the report will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library;
- Relevant organs of state and key I&APs will be provided with a hard copy or CD version of the report;
- Report to be placed on PPC's project website: www.publicprocess.co.za

TASK 1:

***Review of Draft
EIA Report and
EMP***



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Task 2: Comments and Responses Trail

A key component of the EIA process is documenting and responding to the comments received from I&APs and the authorities. The following comments on the Draft EIA Report and EMP will be documented:

- Written and email comments (e.g. letters and completed comment forms)
- Comments made at public meetings
- Comments made at focus group meetings
- Telephonic communication with CSIR contact person
- One on one meetings with key authorities and/or I&APs.

The comments received will be compiled into a Comments and Responses Trail for inclusion in the Final EIA Report. The Comments and Responses trail will indicate the nature of the comment, as well as when and who raised the comment. The comments received will be considered by the EIA team and appropriate responses provided by the relevant member of the team and/or specialist. The response provided will indicate how the comment received has been considered in the Final EIA Report, in the project design or EMP for the project.

Task 3: Compilation of Final EIA Report for submission to Authorities

The Final EIA Report, including the Comments and Responses Trail and EMP, will be submitted to the authorities for decision making. Letter 5 will be sent to all I&APs on the project database notifying them of the submission of the final report. I&APs will be given a reasonable period to comment on the changes to the Draft EIA Report. These comments will be sent directly to the competent authority.

The Final EIA Report will be distributed as follows:

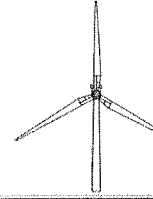
- Copies of the report will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library;
- Relevant organs of state and key I&APs will be provided with a hard copy or CD version of the report;
- Report to be placed on PPC's project website: www.publicprocess.co.za

TASK 2:

Comments and Responses Trail

TASK 3:

Compilation of Final EIA Report for submission to Authorities



FINAL SCOPING REPORT

Task 4: Environmental Authorisation and Appeal Period

All I&APs on the project database will be notified of the issuing of Environmental Authorisation and the Appeal period. The following process will be followed for the distribution of Environmental Authorisation and notification of appeal period:

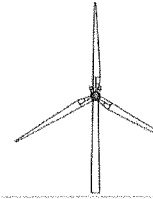
- Copies of the Environmental Authorisation will be placed at the main library in Port Elizabeth (Govan Mbeki Ave) and in the Motherwell library.
- Letter 6 to be sent to all I&APs (including organs of state), with a copy of the Environmental Authorisation and information on the Appeal Period.
- Report to be placed on PPC's project website: www.publicprocess.co.za

All I&APs on the project database will be notified of the outcome of the appeal period, this notification will be included in Letter 7 to I&APs.

6.4 Authority Consultation during the EIA phase

Authority consultation is integrated into the public consultation process, with additional one-on-one meetings held with the lead authorities where necessary. It is proposed that the competent authority (DEA) as well as other lead authorities be consulted at various stages during the EIA process. This consultation will primarily take place through the quarterly meetings of the Coega Environmental Liaison Committee (ELC), which includes the lead authorities mandated to issue environmental authorisations and licences/permits. The authority consultation process for the Scoping Process is outlined in Chapter 4 of this report. The Table below indicates the proposed consultation schedule for the EIA phase.

TASK 4: *Environmental Authorisation and Appeal Period*



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Table 6.1: Authority consultation schedule for the EIA phase

Stage in EIA Phase	Form of Consultation (including provisional dates)
SCOPING PHASE	CSIR presented DSR to authorities at the Coega ELC meeting of 26 May 2011 for comment.
REVIEW OF DRAFT EIA REPORT AND DRAFT EMP	<p>Review of draft reports: Authorities, together with other stakeholders, will have the opportunity to review the Draft EIA and EMP reports during the 40 day review period and to attend the public meeting proposed for October 2011. If requested, CSIR can present the Draft EIA and EMP reports to the authorities at a dedicated authority meeting during this review period.</p> <p>Site visit: Offer a site visit for authorities, as and when required. We suggest that, if required, this take place at the same time of the public meeting for the Draft EIA and EMP reports (i.e. October 2011).</p>
FINAL EIA REPORT PHASE	CSIR to present Final EIA Report to the Coega ELC meeting of 24 Nov 2011 and discuss any queries. Meetings with dedicated departments, if requested by DEA, with jurisdiction over particular aspects of the project (e.g. Local Authority) and potentially including relevant specialists.

6.5 Approach to Specialist Studies and Impact Assessment

This section outlines the assessment methodology and legal context for specialist studies.

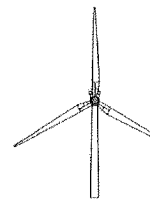
6.5.1.1 Generic Terms of Reference for the assessment of impacts

The identification of potential impacts should include impacts that may occur during the construction and operational phases of the activity. The assessment of impacts is to include direct, indirect as well as cumulative impacts.

In order to identify potential impacts (both positive and negative) it is important that the nature of the proposed activity is well understood so that the impacts associated with the activity can be understood. The process of identification and assessment of impacts will include:

- Determine the current environmental conditions in sufficient detail so that there is a baseline against which impacts can be identified and measured.
- Determine future changes to the environment that will occur if the activity does not proceed.
- An understanding of the activity in sufficient detail to understand its consequences; and
- The identification of significant impacts which are likely to occur if the activity is undertaken.

As per DEA *Guideline 5: Assessment of Alternatives and Impacts* the following methodology is to be applied to the predication and assessment of impacts. Potential impacts should be rated in terms of the direct, indirect and cumulative:



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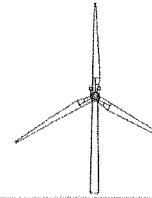
- **Direct impacts** are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.
- **Indirect impacts** of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not manifest immediately when the activity is undertaken or which occur at a different place as a result of the activity.
- **Cumulative impacts** are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
- **Spatial extent** – The size of the area that will be affected by the impact:
 - Site specific
 - Local (<2 km from site)
 - Regional (within 30 km of site)
 - National.
- **Intensity** –The anticipated severity of the impact:
 - High (severe alteration of natural systems, patterns or processes)
 - Medium (notable alteration of natural systems, patterns or processes)
 - Low (negligible alteration of natural systems, patterns or processes).
- **Duration** –The timeframe during which the impact will be experienced:
 - Temporary (less than 1 year)
 - Short term (1 to 6 years)
 - Medium term (6 to 15 years)
 - Long term (the impact will cease after the operational life of the activity)
 - Permanent (mitigation will not occur in such a way or in such a time span that the impact can be considered transient).

Using the criteria above, the impacts will further be assessed in terms of the following:

Probability –The probability of the impact occurring:

- Improbable (little or no chance of occurring)
- Probable (<50% chance of occurring)
- Highly probable (50 – 90% chance of occurring)
- Definite (>90% chance of occurring).

Significance – Will the impact cause a notable alteration of the environment?



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- Low to very low (the impact may result in minor alterations of the environment and can be easily avoided by implementing appropriate mitigation measures, and will not have an influence on decision-making)
- Medium (the impact will result in moderate alteration of the environment and can be reduced or avoided by implementing the appropriate mitigation measures, and will only have an influence on the decision-making if not mitigated)
- High (the impacts will result in major alteration to the environment even with the implementation on the appropriate mitigation measures and will have an influence on decision-making).

Status - Whether the impact on the overall environment will be:

- positive - environment overall will benefit from the impact
- negative - environment overall will be adversely affected by the impact
- neutral - environment overall not be affected.

Confidence – The degree of confidence in predictions based on available information and specialist knowledge:

- Low
 - Medium
 - High.
- Management Actions and Monitoring of the Impacts (EMP)
 - Where negative impacts are identified, mitigatory measures will be identified to avoid or reduce negative impacts. Where no mitigatory measures are possible this will be stated
 - Where positive impacts are identified, augmentation measures will be identified to potentially enhance positive impacts
 - Quantifiable standards for measuring and monitoring mitigatory measures and enhancements will be set. This will include a programme for monitoring and reviewing the recommendations to ensure their ongoing effectiveness.

The Table below is to be used by specialists for the rating of impacts.

Table 6.2: Table for rating of impacts

Direct Impacts							
Mitigation	Spatial Extent	Intensity	Duration	Probability	Significance & Status		Confidence
					Without Mitigation	With Mitigation	
Avifauna: Impact of the turbine blades on bird mortality							
Include best practice in blade visibility as well as deterring mechanisms for birds.	Site	Medium	Permanent	High	Medium	Low	High

Other aspects to be taken into consideration in the assessment of impact significance are:

- Impacts will be evaluated for the construction and operation phases of the development. The assessment of impacts for the decommissioning phase will be brief, as there is