

Electrawinds Seeland (Pty) Ltd

**ST HELENA WATERCOURSE CROSSING
FINAL BASIC ASSESSMENT REPORT**

December 2012

J30212

DEA Reference: 14/12/16/3/3/1/652

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environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
11. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? YES NO

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail¹:

Electrawinds Seeland Pty Ltd. (the Applicant) proposes the optimisation of an existing access road across a non-perennial drainage line (Appendix A) on Farm Langeklip (Erf 47) near St Helena Bay within the Saldanha Bay Municipality in the Western Cape Province (to be known as the **St Helena Watercourse Crossing – DEA Ref: 14/12/16/3/3/1/652**). The modification of the existing access road is required as supporting infrastructure to an approved wind farm development known as St Helena wind farm (DEA Reference Number: 12/12/20/2157). The proposed modification involves the enlargement and hardening of the access road which triggers listed activity 11 and 18 of Listing Notice 1 in Government Notice Regulation 544 promulgated in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) [NEMA] as outlined below:

11) *The construction of:*

(i) *canals;*

(ii) *channels;*

(iii) bridges;

(iv) *dams;*

(v) *weirs;*

(vi) *bulk storm water outlet structures;*

(vii) *marinas;*

(viii) *jetties exceeding 50 square metres in size;*

(ix) *slipways exceeding 50 square metres in size;*

(x) *buildings exceeding 50 square metres in size; or*

(xi) infrastructure or structures covering 50 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.

¹ Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

18) *The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:*

(i) a watercourse;

(ii) the sea;

(iii) the seashore;

(iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high – water mark of the sea or an estuary, whichever distance is the greater-

but excluding where such infilling, depositing, dredging, excavation, removal or moving;

(a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or

(b) occurs behind the development setback line.

This Basic Assessment (BA) is being undertaken due to the abovementioned listed activities not being included in the environmental authorisation obtained for the approved St Helena Wind Farm. As per the Department of Environmental Affairs comments (attached as Appendix H), the impacts of the infrastructural modifications associated with watercourse crossings were assessed within the Wind Farm EIA Report, although the listed activity was not specifically applied for. Thus this BA is as a result of this omission and now specifically states that an existing access road crosses a non – perennial watercourse, and that it will be widened, hardened and electrical cables will be laid down in the modified section of the existing road.

The purpose of access roads within wind farms, in general, is to ensure access to various sections of the wind farm; to connect the turbines within the site and to connect the turbines to the sub-station, and ultimately the national grid. The layout of access roads as part of a wind energy farm are determined by the arrangement of the wind turbines, which in turn is determined by leading international wind experts, as well as by applicable legislation and requirements of relevant state departments. The design of access roads is defined by the dimensions and locations of the turbines.

This report focuses on the expansion of that section of the existing access road which in the approved wind farm connects Turbine 2 with the rest of the wind farm and spans over a non-perennial drainage line of approximately 2.4 meters in width (perpendicular to the drainage line). The length of the access road as a whole is approximately 1.6km, and the non – perennial drainage line is crossed at 32° 50' 25" S and 18° 03' 11" E.

The existing farm road is a narrow track of approximately 3m in width, which

would be widened and compacted to a width of 5m with additional vegetation clearance of up to 1.5m on either side for electrical cabling (connecting Turbine 2) to be laid down. The affected length of the access road triggered by the listed activity (currently not approved), is approximately 66.4 meters. The section of the access road that will directly affect the drainage line due to the construction of the box culvert is approximately 10 meters (Appendix C). The volume of material that will be removed for the installation of the box culvert and the electrical cabling is approximately 108 m³ (conservatively). All spoil that cannot be used for the modifications will be disposed of at a registered landfill site.

Once the cables have been laid down the vegetation will be allowed to re-establish by reintroduction of topsoil. The access road will remain gravel in nature and will remain the property of the land owner and as such will still be used for existing farming related activities. A pre-cast concrete box culvert will be used to cross the drainage line to allow for the controlled movement of water (with limited impediment) via its natural course and limit the amount of erosion that occurs.

A new Water Use License application has been submitted to the Department of Water Affairs (DWA) for the crossing of the non – perennial stream.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

PREFERRED ACCESS ROAD ALTERNATIVE – S1

The existing access road that will be widened and compacted crossing the non-perennial drainage line at approximately 32°50'25"S and 18° 03'11"E (Appendix A and C).

This alignment was assessed by the specialist studies conducted for the wind farm and was deemed to be of a low sensitivity. Additionally, this alignment was discussed with the Western Cape Department of Agriculture in a meeting on the 4th of July 2012 (refer to Appendix G) where it was agreed that this would be the preferred alignment as it conforms to their requirements for Consent Use and Long Term Leasing on agricultural land. Other locations can only be found in Critical Biodiversity Area's (CBA's). Thus no other site alternatives will be discussed as they are not feasible.

Refer to Appendix A for the proposed access road route.

TECHNOLOGY ALTERNATIVE – A1: GRAVEL INFILL

The infill material to be used in the widening and compaction of the existing farm road will be gravel in nature and commercial sourced local material (minimal quantities will be used). By using gravel as the infill material, the access road will remain semi – natural and will not contrast with the surrounding landscape.

TECHNOLOGY ALTERNATIVE – A2: CONCRETING THE ACCESS ROAD

An alternative to the gravel road is to concrete the existing farm road. Material required for the concreting of the access road will be commercially sourced. Concreting the access road will reduce the frequency of maintenance required.

NO – GO ALTERNATIVE

It should be noted that the no – go alternative is informed by the current status quo of the site, and should the DEA approve the no – go alternative the section of the existing farm road currently not approved will not be modified. This implies that the access to Turbine 2 would no longer be optimised (and modified) for transport during construction.

It should be noted that should the no – go alternative be approved, the modifications to the 66.4m of the existing access road, will not be carried out as this section is the only section that is currently not approved.

The modifications to the existing farm road will result in a more cost and time effective transport for the approved community based St Helena wind project (DEA Reference Number: 12/12/20/2157). With this precautionary measure, transport will be facilitated and costs will be reduced significantly. The St Helena community Trust

(which owns 40% of the shares of the project) will gain more contributing to the significant socioeconomic chances that will be available to them.

With regards to this local community, the income generated from the Wind Farm will be provided to the community for the development of various farming activities and other job provision activities. Currently the residents of Laingville are experiencing higher levels of unemployment due to the decline in fishing activities within the area, and it is the intention of the Seeland Development Trust to provide alternative means and income to develop other employment opportunities within the study area.

The community will own 40% of the wind farm, a shareholding which, when combined with the lease income which the community will also receive, should generate community revenues over the lifetime of the project. This income will go directly into a community trust to be strictly managed in an accountable, equitable and transparent manner on behalf of the community and its income invested in projects, which will be assessed to provide significant socioeconomic benefit and growth potential for the lowest income sections of the local population. The farm itself has relatively low agricultural potential, which means that there are not a great number of economic alternatives for this community. This project is critical to the economic future of this community and that it is vital that they do have the option to most benefit from the wind farm.

Choosing for the no-go alternative would not maximise the revenues of the project although they are critical to the future development of the local community

Therefore the no – go alternative is not feasible nor preferred.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

	Latitude (S):		Longitude (E):	
Alternative: Alternative S1 ² (preferred alternative) (66.4m length – stream crossing point)	32°	50.417'	18°	03.183'
Alternative S2 (if any)	NA	NA	NA	NA

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

² "Alternative S.." refer to site alternatives.

or, for linear activities:

Alternative S1:

	Length of the activity: m
Alternative A1 (preferred technology alternative – gravel road)	Approximately 66.4m
Alternative A2 (alternative technology - concrete road)	Approximately 66.4m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

	Size of the site/servitude:
Alternative A1 (preferred technology alternative – gravel road)	Approximately 0.053 ha
Alternative A2 (alternative technology - tar road)	Approximately 0.053 ha

5. SITE ACCESS

Does ready access to the site exist?

YES	
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If NO, what is the distance over which a new access road will be built

m

Describe the type of access road planned:

As previously stated, there is an existing farm road that is currently in use. This road will be widened and compacted, and a larger stream crossing structure will be constructed to allow for optimised transportation of the turbine components as part of the approved wind farm. Thus access to the site does exist.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;

- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

This information is based on the permitted St Helena Bay Wind Farm and is indicative.

What is the expected capital value of the activity on completion?	R570.000.000
What is the expected yearly income that will be generated by or as a result of the activity?	R40.000.000
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	YES
How many new employment opportunities will be created in the development phase of the activity?	300
What is the expected value of the employment opportunities during the development phase?	R
What percentage of this will accrue to previously disadvantaged individuals?	25%
How many permanent new employment opportunities will be created during the operational phase of the activity?	20
What is the expected current value of the employment opportunities during the first 10 years?	R
What percentage of this will accrue to previously disadvantaged individuals?	60%

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

NEED (OF AN ACCESS ROAD)

As previously stated the purpose of the optimisation of the existing access road is to construct and connect Turbine 2 with the rest of the wind farm in a more cost and time effective way. Underground electrical cables connecting Turbine 2 with the rest of the Wind Farm will then be laid in the modified section of the existing access road. The section of the existing access road (that is currently not approved) will need to be upgraded to accommodate the efficient transportation of the Wind Turbine components.

The modifications to the existing farm road will result in a more cost and time effective transport during the construction of Turbine 2 of the approved community based St Helena wind project. With this precautionary measure, transport will be facilitated and costs will be reduced significantly.

It is an Eskom requirement that electrical cables cannot be laid down in Eskom's servitude (which is 22m wide), therefore to cross the Eskom 66kV line on site the electrical cable connecting Turbine 2 to the rest of the Wind Farm, needs to be underground. Changing the position from underground to overhead is very costly and will negatively add to the visual impact on the site.

The Seeland community Trust which owns 40% of the shares of the project will benefit from socioeconomic upliftment. As the farm itself has relatively low agricultural potential, not a great number of economic alternatives are available for this community and also unemployment due to the decline in fishing activities within the area is very high. Thus maximising the revenues of the project are critical to the future development of the local community.

1.	Was the relevant provincial planning department involved in the application?	YES	
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES	
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation: N/A		

DESIRABILITY (OF THE ACCESS ROAD):

1.	Does the proposed land use / development fit the surrounding area? There are several existing farm roads within the greater area.	YES	
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	
3.	Will the benefits of the proposed land use / development outweigh the	YES	

	negative impacts of it?		
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation: N/A		
5.	Will the proposed land use / development impact on the sense of place?		NO
6.	Will the proposed land use / development set a precedent?		NO
7.	Will any person's rights be affected by the proposed land use / development?		NO
8.	Will the proposed land use / development compromise the "urban edge"?		NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation. N/A		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES	
2.	<p>Explain:</p> <p>The proposed access road forms part of the supporting infrastructure to the St. Helena Wind Farm Development. The use and development of Renewable Energy contributes to:</p> <ul style="list-style-type: none"> • Increased energy security; • Resource saving; • Exploitation of South Africa's significant renewable energy resource; • Pollution reduction; • Climate friendly development; • Support for international agreements and enhanced status within the international community; • Employment creation; • Acceptability to society; and • Support to a new industry sector. 		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
4.	<p>Explain:</p> <p>The optimisation and modification to the access road forms part of the supporting infrastructure to the St. Helena wind farm. With this precautionary measure, transport to turbine 2 will be facilitated and costs will be reduced significantly.</p> <p>The maximisation of the final revenues of the project is critical to the future development of the local Seeland community Trust.</p> <p>With regards to the local community, the income generated from the wind farm will be provided to the community for the development of various farming activities and other job provision activities. Currently the residents of Laingville are experiencing higher levels are unemployment due to the decline in fishing activities within the area, and it is the intention of the Seeland Development Trust to provide</p>		

	<p>alternative means and income to develop other employment opportunities within the study area.</p> <p>The community will own 40% of the wind farm, a shareholding which, when combined with the lease income which the community will also receive, should generate community revenues in excess of 200 million rand over the lifetime of the project. This income will go directly into a community trust to be strictly managed in an accountable, equitable and transparent manner on behalf of the community and its income invested in projects, which will be assessed to provide significant socioeconomic benefit and growth potential for the lowest income sections of the local population. The farm itself has relatively low agricultural potential, which means that there are not a great number of economic alternatives for this community. This project is critical to the economic future of this community and that it is vital that they do have the option to benefit from the wind farm.</p>
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10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
The National Environmental Management Act, 1998 (Act No. 107 of 1998).	Department of Environmental Affairs.	1998
The Constitution of the Republic of South Africa	The Government of South Africa.	1996
National Energy Act, 2008 (Act No. 34 of 2008).	Department of Energy.	2008
The Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000).	Department of Justice and Constitutional Development.	2000
Promotion of Access to Information Act, 2000 (Act No. 2 of 2000).	Department of Justice and Constitutional Development.	2000
National Heritage Resources Act 1999, (Act No. 25 of 1999)	South African Resources Agency.	1999
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).	Department of Environmental Affairs.	2004
National Environmental Management: Air Quality Act, 2004 (Act No 39 of 2004).	Department of Environmental Affairs.	2004
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).	Department of Agriculture	1983
National Water Act, 1998 (Act No 36 of 1998).	Department of Water Affairs	1998
Aviation Act, 1962 (Act No 74 of 1962).	Department of Transport	1962
National Environmental Management:	Department of Environmental Affairs.	2008

Waste Act, 2008 (Act No 59 of 2008)		
National Forests Act, 1998 (Act No. 84 of 1998)	Department of Environmental Affairs.	1998
The Land Use Planning Ordinance, 1985 (Ordinance No. 15 of 1985)	Department of Local government and Traditional affairs, Eastern Cape	1985
Subdivision Of Agricultural Land Act, 1970 (Act No. 70 of 1970)	Department of Agriculture	1970

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT IN TERMS OF THE ACCESS ROAD

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

	NO
--	-----------

If yes, what estimated quantity will be produced per month?

m ³

How will the construction solid waste be disposed of (describe)?

--

Where will the construction solid waste be disposed of (describe)?

--

Will the activity produce solid waste during its operational phase?

	NO
--	-----------

If yes, what estimated quantity will be produced per month?

m ³

How will the solid waste be disposed of (describe)?

--

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

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If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

	NO
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If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

	NO
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If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

	NO
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If yes, what estimated quantity will be produced per month?

m ³

Will the activity produce any effluent that will be treated and/or disposed of on site?

	NO
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

	NO
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If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

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11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO
	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

Some dust will be generated by construction activities, but is not considered to be significant.

11(d) Generation of noise

Will the activity generate noise?

YES	
	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Noise will only be generated during the modification works to the access road and road traffic noise from the transportation of equipment and goods to the site required for the access road (*viz.* gravel).

The proposed wind farm site is situated in a rural area, where little vehicular traffic is anticipated along the local road network. The Velddrif Road (R399) and the St Helena Main Road are close to the site and, together with human activities, are expected to dominate the local noise environment. Based on the South African Bureau of Standards (SABS) 10103 of 2008, the guidelines for typical outdoor noise levels of a rural area are 45 dB(A) during the day and 35 dB(A) at night.

The construction activities associated with the access road is envisaged to occur over a limited period and as such it is not anticipated that the ambient noise levels will be significantly affected.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Municipal	water board	groundwater	river, stream, dam or lake	Other (Grey water)	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

Not applicable, only Municipal Grey Water effluent from the Laingville Sewage Treatment Works will be used. Approximately 24 kL of water will be required for the construction. Refer to Appendix I for confirmation of water availability from the Saldanha Bay Municipality (for the greater Wind Farm).

the volume that will be extracted per month:

litres
NO

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

A new Water Use License application has been submitted to the Department of Water Affairs for the crossing of the non – perennial drainage line (submitted on 10/12/2012).

There is a municipal potable water supply along the gravel Provincial Road OP7675 serving local farmsteads. This water main will remain intact and will only be used for human consumption during the construction stage of the Wind Farm and grey water (from Laingville Sewage Waste Water Treatment Works) will be used for all other construction related activities for the approved Wind Farm. The widening and hardening of the existing access road will feed off these services.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

The developer has opted to widen and hardened an existing farm road as this will be less energy intensive that compared to construction of a completely new road.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

Material for the enlargement and hardening of the existing farm road will be commercially locally sourced thus decreasing the carbon footprint of the expansion.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No.
(e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

	NO
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Specialists were consulted during the Scoping/EIA process for the St Helena Wind Farm (which an Environmental Authorisation was granted by the DEA in March 2012 - DEA Reference Number: 12/12/20/2157). The impact of the activities to which this Basic Assessment refer to, were investigated by the specialists within the EIA process of the Wind Farm.

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:

Langeklip Farm (Erf 47), Saldanha Bay Municipality, Western Cape Province.
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(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

Town / District:

Saldanha Bay Municipality

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

The farm is currently zoned as agricultural

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?
Must a building plan be submitted to the local authority?

YES	
YES	

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20					
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/ mountain**
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain**
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

Alternative S1:

Shallow water table (less than 1.5m deep)		NO	
Dolomite, sinkhole or doline areas		NO	
Seasonally wet soils (often close to water bodies)	YES		

Unstable rocky slopes or steep slopes with loose soil	NO
Dispersive soils (soils that dissolve in water)	NO
Soils with high clay content (clay fraction more than 40%)	NO
Any other unstable soil or geological feature	NO
An area sensitive to erosion	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUND COVER

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil (existing farm road)

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise. **REFER TO APPENDIX D FOR THE ECOLOGICAL STUDY**

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area	5.22 Train station or shunting yard ^N
5.2 Low density residential	5.23 Railway line ^N
5.3 Medium density residential	5.24 Major road (4 lanes or more) ^N
5.4 High density residential	5.25 Airport ^N
5.5 Informal residential ^A	5.26 Harbour
5.6 Retail commercial & warehousing	5.27 Sport facilities
5.7 Light industrial	5.28 Golf course
5.8 Medium industrial ^{AN}	5.29 Polo fields
5.9 Heavy industrial ^{AN}	5.30 Filling station ^H
5.10 Power station	5.31 Landfill or waste treatment site

5.11 Office/consulting room	5.32 Plantation
5.12 Military or police base/station/compound	5.33 Agriculture
5.13 Spoil heap or slimes dam ^A	5.34 River, stream or wetland (non – perennial drainage line)
5.14 Quarry, sand or borrow pit	5.35 Nature conservation area
5.15 Dam or reservoir	5.36 Mountain, koppie or ridge
5.16 Hospital/medical centre	5.37 Museum
5.17 School	5.38 Historical building
5.18 Tertiary education facility	5.39 Protected Area
5.19 Church	5.40 Graveyard
5.20 Old age home	5.41 Archaeological site
5.21 Sewage treatment plant ^A	5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity?

NA

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain:

If YES, specify:

NA

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

NA

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or palaeontological sites, on or close (within 20m) to the site?

	NO
NO	

If YES, explain:

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

The road that will be widened and hardened is an existing farm road.

Will any building or structure older than 60 years be affected in any way?

	NO
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Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

	NO
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If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—

- (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
- (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
- (iii) the nature and location of the activity to which the application relates;
- (iv) where further information on the application or activity can be obtained; and
- (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

List of authorities informed:

Refer to the I&AP Stakeholder Database attached in Appendix E. This database is from the I&AP database of the authorised St Helena Wind Farm EIA to which the activities described in this Basic Assessment Report will contribute.

List of authorities from whom comments have been received:

- Western Cape Department of Environmental Affairs and Development Planning;
- Department of Water Affairs;
- Cape Nature;
- Saldanha Bay Municipality; and
- Western Cape Department of Transport and Public Works.

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable.

YES	
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Has any comment been received from stakeholders?

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Comments received from stakeholders were regarding the nature of the development and clarity on alternatives provided. Many comments received were not appropriate in terms of the nature and scale (i.e the context) of the development. Concerns were raised regarding proof of public consultation and clarification on the EMP.

Concerns were raised as to why this project was not included in the original Environmental Authorisation (EA) obtained and the town planning process that must occur post this Basic Assessment process. The need for a new Water Use License is outlined in the Comment and Response Report

Refer to the Comment and Response Report attached in Appendix E for detailed comments received.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

- Concerns were raised around the following categories:
- Nature of the development;
- Alternatives available to the development;
- Proof of public consultation;
- Why this activity was not included in the original EA; and
- The need for a Water Use License (WUL).

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

The triggered listed activity (11 and 18 of GN 544) was not included in the original EA due to an omission on the application form. Based on consultation with the DEA and the fact the EA was issued, it was determined that a new process had to be followed for the omitted activity (Appendix H). Thus this implied that approximately 66.4 m of existing access road could not be upgraded until an EA was obtained for listed activity 11 and 18 of GN 544. Based on this, the location and nature of the activity and that the widening and hardening of the access road is required as supporting infrastructure to the approved Wind Farm, the only feasible alternatives are technological in nature.

Please refer to Appendix E for proof of public consultation and please note that a new WUL application has been lodged with the Department of Water Affairs on 10/12/2012.

Refer to the comment and response report (Appendix E) for detailed responses to all queries raised.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Assessment Criteria of impacts

Direct, indirect, and cumulative impacts of the issues identified through the scoping study, as well as all other issues identified in the EIA phase were assessed in terms of the following criteria:

The nature, which includes a description of what causes the effect, what will be affected and how it will be affected.

The extent, wherein it is indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 was assigned as appropriate (with 1 being low and 5 being high):

The duration, wherein it was indicated whether:

- the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1;
- the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
- medium-term (5–15 years) – assigned a score of 3;
- long term (> 15 years) - assigned a score of 4; or
- permanent - assigned a score of 5;

The magnitude, quantified on a scale from 0-10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.

The probability of occurrence, which describes the likelihood of the impact actually occurring. Probability was estimated on a scale of 1–5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).

The significance, was determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and

The status, which was described as positive, negative or neutral.

The degree to which the impact can be reversed. The degree to which the impact may cause irreplaceable loss of resources, and the degree to which the impact can be mitigated.

The significance was calculated by combining the criteria in the following formula:

$$S=(E+D+M)P$$

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The significance weightings for each potential impact are as follows:

< 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),

30-60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),

> 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

**Adapted from the Ecological Assessment*

Alternative S1, A1: Gravel access road

Access Roads in General

Turbines in a wind farm development are linked by a network of internal access roads, which is also relates to the planned position of the underground cables linking the turbines to one another and to the internal substation. The layout of the internal access roads of the St Helena wind farm is shown in Appendix A and C.

Impact 1: Loss of Habitat for Threatened Fauna

Natural habitat on site potentially provides habitat for a number of threatened or near threatened species. Internal access roads affect natural habitat primarily near turbines 4 and 5 as well as along the main entrance road up to turbine 1. **This therefore not applicable to the stretch of access road linking Turbine 2** (refer to the Ecological Assessment conducted for the Wind Farm).

Impact 2: Impacts on Threatened Plants

There are 52 Red List plant species that have a geographic distribution that includes the site and which have a chance of occurring there. Internal access roads affect natural habitat primarily near turbines 4 and 5 as well as along the main entrance road up to turbine 1. **This is therefore not applicable to the stretch of access road linking Turbine 2.**

Impact 3: Damage to Wetlands/Watercourses

Internal access roads affect a watercourse near turbine 2 as well as near the homestead on site. Construction of a wide road may cause erosion impacts that cause degradation to these areas to some extent. The nature of the impact was assessed as follows:

Table 1: Impact Assessment for Damage to Wetlands / Watercourses

Nature: Damage to wetlands / watercourses		
	Without mitigation	With mitigation
Extent	local and surroundings (2)	local and surroundings (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	moderate (6)	low (4)
Probability	definite (5)	Highly probable (4)
Significance	medium (60)	medium (40)
Status (positive or negative)	negative	negative
Reversibility	Reversible to some degree	Reversible to some degree
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	To some degree	
Mitigation:		
<ul style="list-style-type: none"> • Cross watercourses perpendicularly, where possible, to minimize the construction footprint. 		

<ul style="list-style-type: none"> • Adequate culvert and/or bridge structures are required at crossings. • Construction must not cause the width of the watercourse to be narrowed. • Disturbed areas must be rehabilitated as quickly as possible after construction. Revegetation of disturbed areas must make use of species indigenous to the site. • A stormwater management plan and erosion management plan is required to ensure that no damage to wetlands / watercourses takes place. This management plan/s must indicate how overland flow is managed, surface water velocities attenuated, and how water is returned to natural watercourses without causing canalization or erosion.
Cumulative impacts: none.
Residual Impacts: None expected.

Impact 4: Establishment and Spread of Declared Weeds and Alien Invader Plants

Access roads will create areas of disturbance, but this is within an already disturbed landscape in which alien species have already invaded to some extent. It is therefore expected that conditions favouring the establishment and spread of alien invasive plants will be enhanced to some degree.

Table 2: Impact Assessment for Establishment and Spread of Declared Weeds and Alien Invader Plants

Nature: Establishment and spread of declared weeds and alien invader plants		
	Without mitigation	With mitigation
Extent	Site & surroundings (2)	Site & surroundings (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	medium (6)	minor (2)
Probability	probable (3)	improbable (2)
Significance	medium (36)	low (16)
Status (positive or negative)	negative	negative
Reversibility	Reversible to some degree	Reversible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	To some degree	
Mitigation:		
<ul style="list-style-type: none"> • Keep disturbance of indigenous vegetation to a minimum. • Rehabilitate disturbed areas as quickly as possible. • Do not translocate soil stockpiles from areas with alien plants. • Control any alien plants, especially within wetlands and watercourses (as instructed by the ECO). • Establish an ongoing monitoring programme to detect and quantify any aliens that may become established. 		
Cumulative impacts:		

Soil erosion, habitat loss, damage to wetlands may all lead to additional impacts that will exacerbate this impact.

Residual Impacts:

Will probably be very low if control measures are effectively applied

Underground Cables between Turbines

Underground cables linking the turbines to one another are mostly adjacent to the proposed internal access roads.

Impact 1: Loss of Habitat for Threatened Fauna

Underground cables affect natural habitat primarily near turbines 4 and 5 as well as along the main entrance road up to turbine 1. In all cases, this underground cable will be situated adjacent to the internal access roads. The potentially affected area is small in comparison to the amount of available habitat on site thus this impact is **not considered to be significant.**

Impact 2: Impacts on Threatened Plants

There are 52 Red List plant species that have a geographic distribution that includes the site and which have a chance of occurring there. Underground cables affect natural habitat primarily near turbines 4 and 5. The potentially affected area is small compared to the amount of available habitat on site. **Thus the impact of the underground cable connecting turbine 2 in the stretch of access road crossing the drainage canal is not significantly sensitive.**

Impact 3: Loss of Individuals of Protected Tree Species

Sideroxylon inerme subspecies. *inerme* (white milkwood) may occur within thicket in drainage lines on site. Underground cables affect a watercourse near turbine 2 where protected trees could potentially occur.

Table 3: Impact Assessment for Loss of Individuals of Threatened Tree Species

Nature: Loss of individuals of protected trees		
	Without mitigation	With mitigation
Extent	Local (1)	Local (1)
Duration	Permanent (5)	Permanent (5)
Magnitude	Minor (2)	Minor (1)
Probability	Improbable (2)	Improbable (2)
Significance	Low (16)	low (14)
Status (positive or negative)	Negative	Negative
Reversibility	Reversible	Reversible
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	Yes	
Mitigation:		
<ul style="list-style-type: none"> Undertake a walkthrough survey of the affected section of the watercourse near turbine 2, in order to determine the exact 		

<p>number of individuals that will be affected, if any.</p> <ul style="list-style-type: none"> If necessary, trees can be planted to replace lost individuals. Milkwoods are grown easily by nurseries and are readily available as juveniles (where approved by the DWA).
<p>Cumulative impacts: Impacts due to alien invasions and damage to watercourses may possibly cause damage to habitat where protected trees could grow that may exacerbate this impact.</p>
<p>Residual Impacts: None likely</p>

Impact 4: Loss or Fragmentation of Indigenous Natural Vegetation

The remaining natural vegetation on site is classified as Endangered. The site falls within the Cape Floristic Region and also affects areas classified as important corridors or habitats in the Saldanha Bay Municipality Critical Biodiversity Areas (CBAs) map. Underground cables affect natural habitat primarily near turbines 4 and 5. The potentially affected area is small compared to the amount of available habitat on site. **Thus the impact of the underground cable connecting turbine 2 in the affected stretch of the access road does not significantly contribute to habitat fragmentation.**

Impact 5: Damage to Wetlands/Watercourses

Underground cables may affect a watercourse near Turbine 2. Construction of a relatively narrow trench may cause erosion impacts that cause degradation to these areas to some extent.

Table 4: Impact Assessment for Damage to Wetlands / Watercourses

Nature: Damage to wetlands / watercourses		
	Without mitigation	With mitigation
Extent	local and surroundings (2)	local and surroundings (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	low (4)	low (3)
Probability	definite (5)	Highly probable (4)
Significance	medium (50)	medium (36)
Status (positive or negative)	negative	negative
Reversibility	Reversible to some degree	Reversible to some degree
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	To some degree	
<p>Mitigation:</p> <ul style="list-style-type: none"> Cross watercourses perpendicularly, where possible, to minimize the construction footprint. Adequate culvert and/or bridge structures are required at crossings. Construction must not cause the width of the watercourse to be narrowed. Disturbed areas must be rehabilitated as quickly as possible after 		

<p>construction. Revegetation of disturbed areas must make use of species indigenous to the site.</p> <ul style="list-style-type: none"> • A stormwater management plan and erosion management plan should be compiled (if directed by the ECO) to ensure that no damage to wetlands / watercourses takes place. • The underground cabling should be pipe – jacked to the access road when it crosses over the non – perennial drainage line.
<p>Cumulative impacts: none.</p>
<p>Residual Impacts: None expected.</p>

Impact 6: Establishment and Spread of Declared Weeds and Alien Invader Plants

Underground cables between turbines will not create significant areas of disturbance as they are within an already disturbed landscape in which aliens have already invaded to some extent. It is therefore expected that conditions favouring the establishment and spread of alien invasive plants will be enhanced to some degree. However this is expected to be insignificant in relation to the affected portion of the access road (66.4m).

Table 5: Impact Assessment for Establishment and Spread of Declared Weeds and Alien Invader Species

<i>Nature: Establishment and spread of declared weeds and alien invader plants</i>		
	Without mitigation	With mitigation
Extent	Site & surroundings (2)	Site & surroundings (2)
Duration	Long-term (4)	Long-term (4)
Magnitude	medium (6)	minor (2)
Probability	probable (3)	improbable (2)
Significance	medium (36)	low (16)
Status (positive or negative)	negative	negative
Reversibility	Reversible to some degree	Reversible
Irreplaceable loss of resources?	Yes	Yes
Can impacts be mitigated?	To some degree	
<p>Mitigation:</p> <ul style="list-style-type: none"> • Keep disturbance of indigenous vegetation to a minimum. • Rehabilitate disturbed areas as quickly as possible. • Do not translocate soil stockpiles from areas with alien plants. • Control any alien plants, especially within wetlands and watercourses (as instructed by the ECO). 		
<p>Cumulative impacts: Soil erosion, habitat loss, damage to wetlands may all lead to additional impacts that will exacerbate this impact.</p>		
<p>Residual Impacts: Will probably be very low if control measures are effectively applied</p>		

Noise impacts

Construction Phase

Noise associated with construction activities related to the widening and hardening of the access road is not envisaged to be significant due to the short duration, limited intensity and surrounding receptors.

Alternative S1, A2: Concrete access road

The impacts anticipated for alternative S1 and A2 are similar to those outlined above for alternative S1 and A1, with the exception that the impacts with concreting the road are less reversible (due to the permanent nature of concrete) and thus have a greater environmental impact (such as increased surface run-off, and associated erosional impacts).

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

ALTERNATIVE S1, A1

As outlined in Section 2 above – the impacts associated with the widening and hardening of 66.4m of the existing access road (with the addition of underground cabling) and maintaining the gravel nature of the road could be as follows:

Construction Impacts

- Loss of habitat for threatened fauna;
- Impacts on Threatened Plants;
- Damage to Wetlands/Watercourses;
- Establishment and Spread of Declared Weeds and Alien Invader Plants;
- Loss of Individuals of Protected Tree Species;
- Loss or Fragmentation of Indigenous Natural Vegetation; and
- Noise impacts.

Operational Impacts

No operational phase impacts are expected in terms of the access roads and the electrical cabling will be encased in sleeves for easy maintenance.

In weighing up the construction impacts after mitigation it appears the positive local, regional, and national impacts outweigh the negative impacts and that when, taking all the impacts into account, there is a positive bias. When weighing up the fact that most negative biophysical impacts can be adequately mitigated, juxtaposed with the fact that there is a pressing need for investment, expenditure and employment in the area, it is concluded that the high positive social impacts which address these social issues outweigh the residual (after mitigation) medium to low negative biophysical impacts.

Thus Alternative S1, A1 is the preferred alternative.

ALTERNATIVE S1, A2

As outlined in Section 2 above, the impacts anticipated for alternative S1, A2 are similar to those anticipated for alternative S1, A1, with the exception that the impacts with concreting the road are less reversible (due to the permanent nature of concrete) and thus have a greater environmental impact (such as increased surface run-off and associated erosional impacts).

Therefore alternative S1, A2 is not preferred.

No-go alternative (compulsory)

It should be noted that the no – go alternative is informed by the current status quo of the site, and should the DEA approve the no – go alternative the section of the existing farm road currently not approved will not be modified. This implies that the access to Turbine 2 would no longer be optimised for transport during construction.

It should be noted that should the no – go alternative be approved, the modifications to the 66.4m of the existing access road, will not be carried out as this section is the only section that is currently not approved.

The transport of Turbine 2 during the construction phase would be far less cost effective which does not benefit the Seeland community Trust which owns 40% of the shares of the Wind Farm.

With regards to this local community, the income generated from the Wind Farm will also be provided to the community for the development of various farming activities and other job provision activities. Currently the residents of Laingville are experiencing higher levels of unemployment due to the decline in fishing activities within the area, and it is the intention of the Seeland Development Trust to provide alternative means and income to develop other employment opportunities within the study area.

The community will own 40% of the wind farm, a shareholding which, when combined with the lease income which the community will also receive, should generate community revenues over the lifetime of the project. This income will go directly into a community trust to be strictly managed in an accountable, equitable and transparent manner on behalf of the community and its income invested in projects, which will be assessed to provide significant socioeconomic benefit and growth potential for the lowest income sections of the local population. The farm itself has relatively low agricultural potential, which means that there are not a great number of economic alternatives for this community. This project is critical to the economic future of this community and that it is vital that they do have the option to most benefit from the wind farm. Thus the maximisation of the revenues of the project is critical to the future development of the local community.

Therefore the no – go alternative is not feasible nor preferred

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	
-----	--

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

--

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

- | |
|---|
| <ul style="list-style-type: none">• The EMPr is a legally binding document and must be implemented.• An Environmental Control Officer must be appointed.• A Water Use License must be obtained prior to construction. |
|---|

Is an EMPr attached?

The EMPr must be attached as Appendix F.

YES	
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SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (Ecological Study)

Appendix E: Public Participation

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Western Cape Department of Agriculture consent

Appendix H: Department of Environmental Affairs Comments



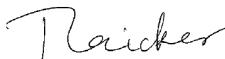
Appendix I: Confirmation of Water Availability from Saldanha Bay Municipality

DOCUMENT CONTROL

IP 180_B



CLIENT : Electrawinds Seeland (Pty) Ltd
PROJECT NAME : St Helena Watercourse Crossing **PROJECT No.** : J30212
TITLE OF DOCUMENT : St Helena Watercourse Crossing Final BAR
ELECTRONIC LOCATION : \\jhb-5\projects\3230 ENVIRONMENTAL\J30212 St Helena Windfarm EIA\ST HELENA WATERCOURSE CROSSING BA\Technical working folder\BAR\Final BAR

	Approved By	Reviewed By	Prepared By
ORIGINAL	NAME Elisabeth Nortje	NAME Elisabeth Nortje	NAME Tashriq Naicker
DATE	SIGNATURE 	SIGNATURE 	SIGNATURE 

	Approved By	Reviewed By	Prepared By
REVISION	NAME	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

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