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SOCIAL STATEMENT

PART II AMENDMENT APPLICATION, FINAL LAYOUT & EMPR APPROVAL

KARREEBOSCH WIND ENERGY FACILITY

JULY 2022

By

Tony Barbour

1. INTRODUCTION AND BACKGROUND

Karreebosch Wind Farm RF (Pty) Ltd (the Applicant) applied for Environmental Authorisation (EA) for the proposed Karreebosch wind energy facility (WEF) in 2015. The original Environmental Impact Assessment (EIA) was undertaken by Savannah Environmental (Pty) Ltd in 2015 for up to 71 wind turbines with a hub height of up to 100m and a rotor diameter of up to 140m including associated infrastructure. Tony Barbour undertook the Social Impact Assessment (SIA) as part of the EIA process (Barbour and van der Merwe, 2015).

An EA for 65 turbines was granted on 29 January 2016 (EA Ref: 14/12/16/3/3/2/807). The project underwent subsequent amendments (EA Ref: 14/12/16/3/3/2/807/AM1, 14/12/16/3/3/2/807/AM2, 14/12/16/3/3/2/807/AM3) which included increases in the hub height (up to 125m), rotor diameter (up to 160m), blade length (up to 80m), and minor amendments to the wording of certain conditions of the authorisation, as well as an extension of the validity of the EA to 2026.

WSP have been appointed by Karreebosch Wind Farm RF (Pty) Ltd to manage a Part II Amendment application process (and final layout and EMP approval process) to address revised changes that include changes in the wind turbine specifications, including a reduction in the number of wind turbines (Table 1).

2. PROJECT DESCRIPTION

The Karreebosch WEF is located approximately 40km north and 40km south of the small settlements of Matjiesfontein and Sutherland respectively. The site falls within the Karoo Hoogland Local Municipality (KHLM) of the Namakwa District Municipality (NDM) within the Northern Cape Province as well as the Laingsburg Local Municipality (LLM) of the Central Karoo District Municipality (CKDM) and the Witzenberg Local Municipality (WLM) of the Cape Winelands District Municipality within the Western Cape Province.

Karreebosch Wind Farm RF (Pty) Ltd intend to follow a Part II Amendment Application process due to the change of scope of the existing authorisation for the Karreebosch WEF. As indicated above, based on the original EIA undertaken in September of 2015, EA was granted for 65 turbines¹. Based on subsequent amendments² changes were made to the hub height (up to 125m), rotor diameter (up to 160m), blade length (up to 80m).

The current proposed amendments are aimed at increasing the efficiency of the Karreebosch WEF and include following changes:

- A reduction in the number of wind turbines from 65 to up to 40.
- Increase in turbine generation capacity from 5.5 MW up to 7.5 MW each.
- Increase in turbine hub height from 125m to up to 140m.
- Increase in rotor diameter from 160m up to up to 170mm.
- Increase in blade length from 80m to ~85m.

Other changes include an increase in the length of internal access roads (new) from 40km to 77km, and a reduction in the number of transformer stations / substations from two to one (Table 1).

The material changes to the authorised Karreebosch WEF and associated amendments therefore involve a reduction in the number of wind turbines from 65 to 40, changes in hub height and rotor diameter and an increase in the total length of internal access roads. The location of the turbines remain essentially the same as the components assessed by

¹ (EA Ref: 14/12/16/3/3/2/807).

² (EA Ref: 14/12/16/3/3/2/807/AM1, 14/12/16/3/3/2/807/AM2, 14/12/16/3/3/2/807/AM3).

the Social Impact Assessment (SIA) undertaken in 2015 (Barbour and van der Merwe, 2015) as part of the EIA process managed by Savannah Environmental (Pty) Ltd.

Table 1: Summary of authorised components and proposed amendments

ASPECT TO BE AMENDED	AUTHORISED	PROPOSED AMENDMENT
Number of Turbines	Up to 65 with a foundation of 25m in diameter and 4m in depth	Up to 40 turbines with a foundation of 30m in diameter and 5m in depth
Turbine generating capacity	Up to 5.5 MW	up to 7.5 MW in capacity each
Turbine Hub Height	A range up to and including 125m	All turbines up to 140m
Rotor Diameter	A range up to and including 160m	All turbines up to 170m
Blade length	~80m	~85m
Area occupied by transformer stations/ substation	<ul style="list-style-type: none"> Two 33/132kV Substation 100m x 200m Extension of the existing 400kV substation at Komsberg Transformer at each turbine: total area <1500m² (2 m² per turbine up to 10m² at some locations) 	<ul style="list-style-type: none"> One 33/132kV substation 150m x 200m (3ha) Extension of the existing 400kV substation at Komsberg Transformer at each turbine: 6m x 3m= 720m² total area <0.4ha (up to 10mX10m at some locations)
Capacity of on-site substation	132kV	33/132kV
Areas occupied by construction camp	300 x 300m = 90 000m ²	Areas occupied by construction camp and laydown areas up to 14ha
Area occupied by laydown areas	Operation: (70 x 50) x 71 =248 500m ²	
Areas occupied by buildings	~10 000m ²	~10 000m ² and will be located within the construction camp for use during the operational phase
Length of (new) internal access roads	~40 km	~77 km of new internal access roads and up to ~14 km of 4x4 access tracks. ~30km of existing access roads which are 4m wide will be widened by up to 9m.
Width of internal roads	Up to 12m	Internal Access roads up to 12m wide (turns will have a radius of up to 55m) with additional yet associated servitudes/ reserve for above/underground cabling installation and maintenance where needed. 200m wide road corridor along the internal access roads for micro-siting during construction. Internal 4x4 tracks associated with the 33kV and 132kV OHPLs will be up to 4m wide and substation access roads of up to 9m.
Height of fencing	Up to 3m	Up to 4m

3. APPROACH TO PREPARING SOCIAL STATEMENT

As of February 2021, there are no sensitivity layers on the DFFE Screening Tool for Socio-economic- features, therefore this report is not required to comply with the Assessment Protocols published on 20 March 2020, in Government Gazette 43110, GN 320. This specifically includes Part A, which provides the Site Sensitivity Verification Requirements where a Specialist Assessment is required but no Specific Assessment Protocol has been prescribed. Part A has therefore not been compiled for this assessment.

The Social Statement comments on the implications of the proposed Part II changes to the authorised Karreebosch WEF and the proposed final layout and the EMPr adequacy with regards to social impacts. The approach to preparing the Social Statement for the Part II amendment is based on the Western Cape Department of Environmental Affairs and Development Planning Guidelines for Social Impact Assessment (DEADP, 2007). These guidelines are based on international best practice. The approach to preparing the Social Statement included:

- A review of the findings of the Social Impact Assessment (SIA) undertaken in 2015 as part of the original EIA (Barbour and van der Merwe, 2015).
- Review of the components associated with the proposed Part II amendments, including adequacy of the EMPr with regard to addressing social issues.
- Review of the latest policy and planning documents for the study area.

The following documents were reviewed.

- Karoo Hoogland Local Municipality Integrated Development Plan (2017-22).
- Laingsburg Municipality Integrated Development Plan (2017-22).
- Laingsburg Municipality Spatial Development Framework (SDF) (2017).
- Witzenberg Municipality Integrated Development Plan (2017-2022).
- Witzenberg Municipality Spatial Development Framework (SDF) (2018).

Of relevance to the Part II amendment, the Karreebosch WEF is located within the Komsberg Renewable Energy Development Zone (REDZ), which was formally gazetted in 2018³. The area has therefore been identified as suitable for the establishment of renewable energy facilities and associated infrastructure. The EIA and associated SIA, and the subsequent EA (29 January 2016), predate the gazetting of REDZs in South Africa, including the Komsberg REDZ.

4. ASSUMPTIONS AND LIMITATIONS

4.1 Assumptions

Findings of SIA (2015)

Assumed that the key findings of the SIA undertaken in 2015 remain valid. The overall conclusion of the 2015 SIA noted:

“The findings of the SIA indicate that the development of the proposed Karreebosch WEF will create employment and business opportunities for locals during both the construction and operational phase of the project. The establishment of a Community Trust will also benefit the local community. The enhancement measures listed in the report should be implemented in order to maximise the potential benefits. The proposed development also represents an investment in clean, renewable energy infrastructure, which, given the challenges created by climate change, represents a positive social benefit for society as a whole. In addition, the majority of the potential negative impacts can be effectively mitigated. It is therefore recommended that the Karreebosch WEF be supported, subject

³ GN114 of 2018

to the implementation of the recommended mitigation measures and management actions contained in the report. The placement of turbines should be informed by the findings of the other specialist studies, specifically the Visual Impact Assessment (VIA) and agricultural assessment”.

4.2 Limitations

Limitations

Based on the experience of the consultant, there are no limitations that have a material bearing on the preparation of the Social Statement.

5. SPECIALIST DETAILS

Tony Barbour is an independent specialist with 28 years’ experience in the field of environmental management. In terms of SIA experience Tony Barbour has undertaken in the region of 260 SIAs and is the author of the Guidelines for Social Impact Assessments for EIA’s adopted by the Department of Environmental Affairs and Development Planning (DEA&DP) in the Western Cape in 2007. Annexure A contains a copy of Mr Barbour’s CV.

6. DECLARATION OF INDEPENDENCE

This confirms that Tony Barbour, the specialist consultant responsible for undertaking the study and preparing the Social Statement, is independent and does not have any vested or financial interests in the proposed WEF being either approved or rejected. A signed declaration is contained in Annexure B.

7. SOCIAL STATEMENT

The proposed amendments to the Karreebosch WEF are aimed at improving the efficiency and involve:

- A reduction in the number of wind turbines from 65 to up to 40.
- Increase in turbine generation capacity from 5.5 MW up to 7.5 MW each.
- Increase in turbine hub height from 125m to up to 140m.
- Increase in rotor diameter from 160m up to up to 170mm.
- Increase in blade length from 80m to ~85m.

Table 1 lists the amendments. However, from a social perspective, the amendments associated with the wind turbines, internal access roads, substations and construction camp and laydown areas are of relevance. In this regard the length of internal access roads (new) increases from 40km to 77km, the number of transformer stations / substations is reduced from two to one, and the area occupied by construction camp and laydown areas is up to 14ha.

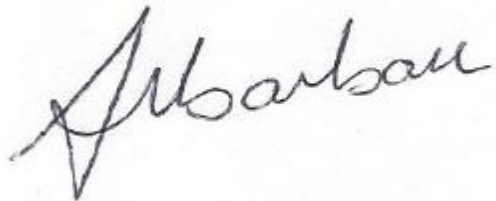
Based on a review of the changes associated with the Part II Amendment there are no changes to the significance ratings reflected in the Karreebosch WEF SIA (2015). In this regard the:

- The final layout and reduction on the number of wind turbines from 65 to 40 and the increase in hub height and rotor diameter of the wind turbines associated with the Part II Amendment will not change the nature or significance of any of the social impacts previously assessed as part of the SIA (2015) for the Karreebosch WEF. The reduction in the number of turbines also has the potential to reduce the visual impact on the areas sense of place.

- The potential social impacts associated with the increase in the length of internal access roads from 40km to 77km will be negligible and does not have a bearing on the findings of the 2015 SIA.
- The reduction in the number of transformer stations / substations from two to one will not have a bearing on the findings of the 2015 SIA.
- The location of the construction camp and laydown areas and associated 14ha area that is affected will not have a bearing on the findings of the 2015 SIA.
- The mitigation measures for the construction and operational phase of the Karreebosch WEF listed in the SIA (2015) remain appropriate for the Part II Amendment. No additional management outcomes or mitigation measures in terms of social impacts are therefore required.

The findings of the SIA undertaken in 2015 and associated enhancement and mitigation measures therefore remain valid and no further mitigation measures are required for the EMPr. In addition, as indicated above, the Karreebosch WEF is located within the Komsberg REDZ. The area has therefore been identified as suitable for the establishment of renewable energy facilities and associated infrastructure.

The Part II Amendment and final layout of the Karreebosch WEF is therefore supported.

A handwritten signature in black ink, appearing to read 'Tony Barbour', is written in a cursive style.

Tony Barbour
Tony Barbour Environmental Consulting and Research
28 July 2022

ANNEXURE A

Tony Barbour

ENVIRONMENTAL CONSULTING AND RESEARCH

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Tony Barbour's experience as an environmental consultant includes working for ten years as a consultant in the private sector followed by four years at the University of Cape Town's Environmental Evaluation Unit. He has worked as an independent consultant since 2004, with a key focus on Social Impact Assessment. His other areas of interest include Strategic Environmental Assessment and review work.

EDUCATION

- BSc (Geology and Economics) Rhodes (1984);
- B Economics (Honours) Rhodes (1985);
- MSc (Environmental Science), University of Cape Town (1992)

EMPLOYMENT RECORD

- Independent Consultant: November 2004 – current;
- University of Cape Town: August 1996-October 2004: Environmental Evaluation Unit (EEU), University of Cape Town. Senior Environmental Consultant and Researcher;
- Private sector: 1991-August 2000: 1991-1996: Ninham Shand Consulting (Now Aurecon, Cape Town). Senior Environmental Scientist; 1996-August 2000: Steffen, Robertson and Kirsten (SRK Consulting) – Associate Director, Manager Environmental Section, SRK Cape Town.

LECTURING

- University of Cape Town: Resource Economics; SEA and EIA (1991-2004);
- University of Cape Town: Social Impact Assessment (2004-current);
- Cape Technikon: Resource Economics and Waste Management (1994-1998);
- Peninsula Technikon: Resource Economics and Waste Management (1996-1998).

RELEVANT EXPERIENCE AND EXPERTISE

Tony Barbour has undertaken in the region of 260 SIA's, including SIA's for renewable energy developments, infrastructure projects, dams, pipelines, and roads. In addition, he is the author of the Guidelines for undertaking SIA's as part of the EIA process commissioned by the Western Cape Provincial Environmental Authorities in 2007. These guidelines have been used throughout South Africa.

Tony was also the project manager for a study commissioned in 2005 by the then South African Department of Water Affairs and Forestry for the development of a Social Assessment and Development Framework. The aim of the framework was to enable the Department of Water Affairs and Forestry to identify, assess and manage social impacts associated with large infrastructure projects, such as dams. The study also included the development of guidelines for Social Impact Assessment, Conflict Management, Relocation and Resettlement and Monitoring and Evaluation.

Countries with work experience include South Africa, Namibia, Angola, Botswana, Zambia, Lesotho, Swaziland, Ghana, Nigeria, Senegal, Mozambique, Mauritius, Kenya, Ethiopia, Oman, South Sudan, Sudan, Senegal, and Armenia.

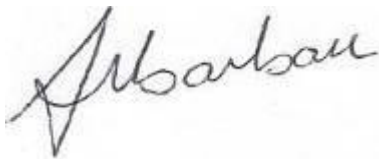
ANNEXURE B

The specialist declaration of independence in terms of the Regulations_

I, Tony Barbour _____, declare that --

General declaration:

I act as the independent specialist in this application;
I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
I declare that there are no circumstances that may compromise my objectivity in performing such work;
I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
I will comply with the Act, Regulations and all other applicable legislation;
I have no, and will not engage in, conflicting interests in the undertaking of the activity;
I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
all the particulars furnished by me in this form are true and correct; and
I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.



Signature of the specialist:

Tony Barbour Environmental Consulting and Research

Name of company (if applicable):

28 July 2022

Date: