

1 INTRODUCTION

1.1 OVERVIEW

G7 Renewable Energies (Pty) Ltd, hereafter referred to as G7, appointed Environmental Resources Management Southern Africa (Pty) Ltd, hereafter referred to as ERM, as independent environmental consultants to undertake the Environmental Impact Assessment (EIA) process for the proposed development of a wind energy facility at the Roggeveld site, in the Western and Northern Cape (Central Karoo and Namakwa Districts respectively) (see *Figure 1.1*). The proposed facility would utilise wind turbines to generate electricity that will be fed into the National Power Grid. The facility will have an energy generation capacity of up to 750 MW.

This Environmental Impact Report (EIR) has been compiled as part of the EIA process in accordance with regulatory requirements stipulated in the EIA Regulations promulgated in terms of Section 24(5) of the National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended.

1.2 PURPOSE OF THE REPORT

The information contained in the EIR along with comments and inputs received from stakeholders and commenting authorities will assist the competent authority, the National Department of Environmental Affairs (DEA) in deciding whether or not to grant environmental authorisation and inform the conditions associated with authorisation.

Fundamental to an environmental assessment is the identification, prediction and evaluation of the actual and potential environmental consequences of an activity and the options for mitigation of negative impacts and enhancement of positive impacts (DEAT, 2003). It is often possible to introduce measures to avoid, mitigate or compensate for many of the negative environmental impacts of a particular development provided that these potential impacts are identified early in the planning process. At the same time it would be important to also look at opportunities for enhancement of positive impacts or benefits.

The objectives of this document are to:

- communicate the results of the EIA process for the proposed development;
- ensure that the impacts identified during the EIA process are adequately addressed;
- show the proponents response to the environmental concerns raised, and efforts taken by the proponent towards mitigating/ enhancing the impacts/ benefits;

- provide a record of comments and responses received from Interested and Affected Parties (I&APs) during the process; and
- facilitate informed, transparent and accountable decision-making process by the relevant authorities.

1.3

THE PROJECT PROPONENT

The applicant for this EIA is Roggeveld Wind Power (Pty) Ltd, a wholly owned subsidiary of G7 Renewable Energies (Pty) Ltd. G7 is a South African company specialising in wind energy project developments. G7 Renewable Energies (Pty) Ltd is a South African company specialising in wind energy project developments. Established in 2007, G7 is geared to manage industrial wind energy generation projects from the feasibility stage, to the installation stage which includes the commissioning and operating of productive wind farms. G7 has a portfolio of potential developments in the Western and Northern Cape, with the combined capacity to generate several hundred MW. The projects are designed to support the South African Government's ambition of contributing 20 percent of wind energy to the national electric grid by 2020.

G7's scientific background has enabled it to create highly specialised wind measurement and analysis tools. These include a mesoscale wind atlas, which can be used to calculate wind speed and consistency across a large area at high-resolution enabling G7 to locate and validate optimum sites for wind farm development. This enables G7 to reduce the market risk by ensuring that the sites they have earmarked for development are more likely to lead to commercially viable projects.

G7 Vision:

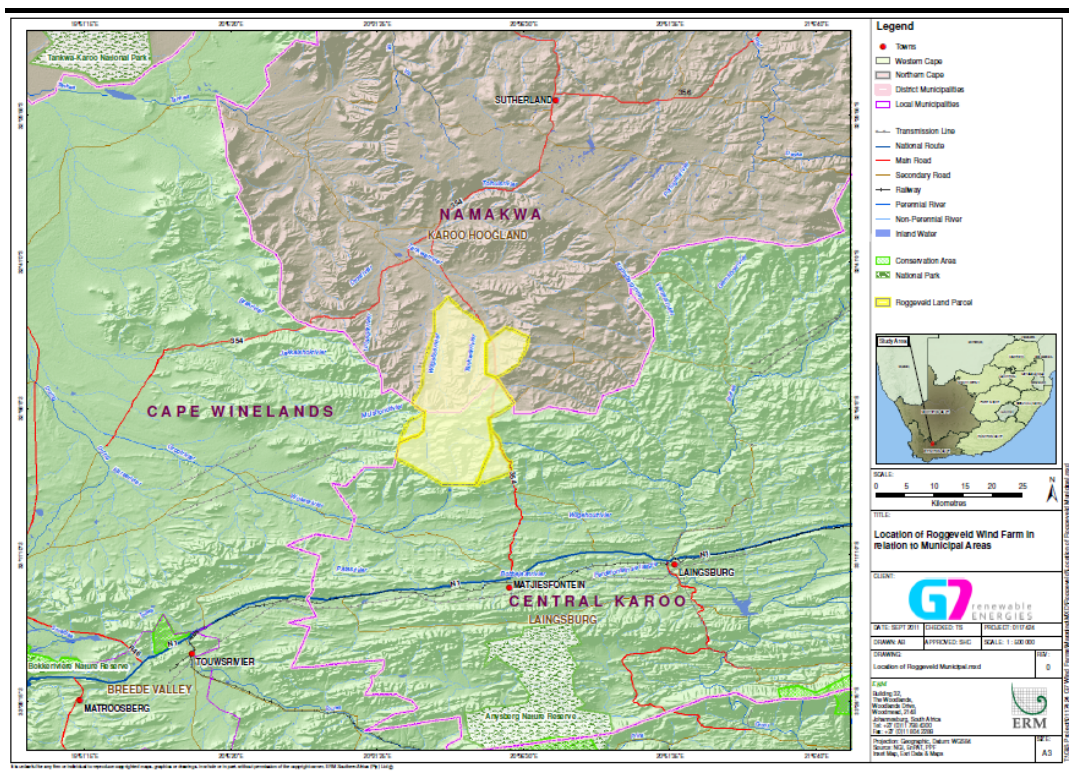
To become the leader in Renewable Energy in South Africa and to contribute to satisfying 100% of energy demand through Renewable Energy by 2050.

G7 Mission:

G7 aim to achieve their vision and ensure long term viability through:

- Maintaining the highest standards and professionalism in all the work we do;
- Questioning the status quo and finding new ways to achieve excellence and increase efficiency;
- Creating mutually beneficial partnerships and cooperation's to ensure benefits for everyone; and
- Minimising our footprint while contributing to global environmental sustainability

Figure 1.1 Location of the Proposed Roggeveld Wind Farm



1.4 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

1.4.1 ERM Southern Africa

ERM was appointed by G7 to undertake the EIA for the proposed Roggeveld Wind Farm. ERM and the specialists appointed by ERM during the course of this EIA have no financial ties to, nor are they a subsidiary, legally or financially, of G7. Remuneration for the services by the Applicant (G7) in relation to this EIA is not linked to approval by any decision-making authority and ERM has no secondary or downstream interest in the development.

ERM is a global environmental consulting organisation employing over 3500 professionals in over 145 offices in more than 41 countries. Founded in 1971, ERM has built an organisation based on the supply of a full range of environmental and social policy, scientific, technical, and regulatory expertise. Our primary focus is to provide quality work and service to our clients in these areas.

From a regional perspective ERM has been involved in numerous projects in Africa over the past 30 years and in 2003 established a permanent presence in Southern Africa to meet the growing needs of our clients. The Southern African ERM offices are based in Cape Town, Johannesburg, Pretoria and Durban. The Southern African Operating Company has a staff complement of over 120 dedicated environmental professionals offering expert skills in EIA, EMP, EMS, risk assessment, EHS management and auditing, corporate social

responsibility and socio-economic impact assessment, climate change services, specialist groundwater services as well as contaminated site management.

ERM Southern Africa has undertaken or is in the process of compiling thirteen EIAs of wind farm facilities in South Africa for various developers.

1.4.2 *Project Team*

The project team for the Roggeveld Wind Farm EIA includes ERM consultants and support staff and external specialists. Details of ERM’s core project team are provided in *Table 1.1* below.

Table 1.1 *ERM Core Project Team*

| | |
|--|---|
| Partner in Charge | Stuart Heather-Clark BSc Civil Eng (Hons), MPhil Environmental and Geographical Science, Registered EAPSA Practitioner |
| Team Lead, Facilitator and Reviewer | Muller Coetzee Practical Techniques in Environmental Impact Assessment, MSc (Geography) University of South Africa and NDT (Civil Engineering) |
| Project Manager | Tania Swanepoel BSc Hons (Engineering & Environmental Geology), University of Pretoria and BSc Hons (Geology and Geohydrology), University of the Western Cape |
| Project Consultant | Junaid Moosajee BSc (Hons), Environmental Management, University of the Cape t |

The Partner in Charge, Stuart Heather-Clark, is a certified environmental assessment practitioner and the project has been conducted in terms of the code of ethics promulgated by the Certification Board for Environmental Assessment Practitioners of South Africa (EAPSA), which includes a requirement for independence. Stuart has overall responsibility for the team and delivery of the EIA study. Stuart has more than 15 years experience in the field of Impact Assessment in South Africa, and is the Practice Leader for Impact Assessment and Planning Team in ERM Southern Africa.

Muller Coetzee is a Technical Director with ERM and has more than 30 years experience in Integrated Environmental Assessment and Management and acts as the Project Facilitator and Reviewer. The Project Manager, Tania Swanepoel, has over 13 years experience in environmental and engineering geology consulting with particular experience in undertaking impact assessments in the renewable energy sector in South Africa. Tania is supported by Project Consultant, Junaid Moosajee, who has over five years experience as an EIA practitioner in South Africa, including extensive experience of renewable energy EIAs in South Africa.

The structure of this Draft Environmental Impact Report is as follows:

Table 1.2 *Report structure*

| Section | Contents |
|---|---|
| Section 1 Introduction | Contains a brief description of the proposed activity and an outline of the report structure. |
| Section 2 Regulatory Framework | Outlines the legislative, policy and administrative requirements applicable to the proposed development. |
| Section 3 Approach and Methodology | Outlines the approach to the EIA study and summarises the process undertaken for the project to date. |
| Section 4 Project Description | Includes a detailed description of the proposed activities and the alternatives. |
| Section 5 Biophysical Baseline | Describes the receiving biophysical baseline environment. |
| Section 6 Social Baseline | Describes the receiving socio-economic baseline environment |
| Section 7 Impacts on Ecology and Biodiversity (Flora and Fauna) | Describes and assesses the potential impacts of the proposed development on flora and fauna. Mitigation measures are also recommended. |
| Section 8 Impacts on Birds | Describes and assesses the potential impacts of the proposed development on birds and describes relevant mitigation measures. |
| Section 9 Impacts on Bats | Describes and assesses the potential impacts of the proposed development on bats and describes relevant mitigation measures. |
| Section 10 Impacts on soils, surface and groundwater | Describes and assesses the potential impacts of the proposed development on soils, surface and groundwater. Mitigation measures are also recommended. |
| Section 11 Noise Impacts | Describes and assesses the potential noise impacts of the proposed development and describes relevant mitigation measures. |
| Section 12 Visual Impacts | Describes and assesses the potential visual impacts of the proposed development and describes relevant mitigation measures. |
| Section 13 Impacts on Archaeology, Palaeontology and Cultural Heritage | Describes and assesses the potential impacts of the proposed development on cultural heritage aspects and describes relevant mitigation measures. |
| Section 14 Socio-Economic Impacts | Describes and assesses the potential socio-economic impacts of the proposed development and describes relevant mitigation measures. |
| Section 15 Other Impacts | Describes and assesses other potential impacts of the proposed development and describes relevant mitigation measures. |
| Section 16 Cumulative Impacts | Qualitatively assesses potential cumulative impacts. |
| Section 17 Decommissioning | Indicates that decommissioning impacts would be similar to construction impacts. |
| Section 18 Conclusions and Recommendations | Summarises the key findings of the EIA and provides recommendations for the mitigation of potential impacts and the management of the proposed project. |
| Section 19 References | Contains a list of references used in compiling the report and specialist studies. |

In addition, the report includes the following annexes:

- Annex A:* Legislative Framework
- Annex B:* Site Photolog
- Annex C:* Public Participation Documentation
- Annex D:* DEA Acceptance of Scoping
- Annex E:* Ecological and Biodiversity Specialist Report
- Annex F:* Bird Specialist Report
- Annex G:* Bat Specialist Report
- Annex H:* Noise Specialist Report
- Annex I:* Visual Specialist Report
- Annex J:* Archaeological, Heritage and Paleontological Specialist Report
- Annex K:* Socio-economic Specialist Declaration
- Annex L:* Environmental Management Programme (EMP)

1.6

OPPORTUNITY TO COMMENT ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

I&APs and authorities will be provided with an opportunity to comment on any aspect of the proposed activity and the Draft Environmental Impact Report (EIR). A hardcopy of the Draft EIR will be available at the Laingsburg and Sutherland Libraries and an electronic copy is available on the project's website, http://www.erm.com/G7_Renewable_Energies. A notification will be sent to all registered and identified I&APs to inform them of the release of the Draft EIR and where the report could be reviewed.

Comments can be provided to ERM at the address, tel. /fax numbers or e-mail address shown below. All comments should reach ERM no later than the **28 November 2011**

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