

BRANDVALLEY WIND FARM (RF) (PTY) LTD

BRANDVALLEY WIND ENERGY FACILITY

PART 2 AMENDMENT OF EXISTING
ENVIRONMENTAL AUTHORISATION: DEA
14/12/16/3/3/1/900

DRAFT AMENDMENT REPORT

19 MAY 2022

DRAFT





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ENERGY FACILITY
PART 2 AMENDMENT OF
EXISTING
ENVIRONMENTAL
AUTHORISATION: DEA
14/12/16/3/3/1/900**

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DRAFT AMENDMENT REPORT

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SIGNATURES

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This Draft Amendment Report (Report) has been prepared by WSP Group Africa Proprietary Limited (WSP) on behalf and at the request of Brandvalley Wind Farm (RF) (Pty) Ltd (Client), to provide the Client and all interested and affected parties with an understanding of the impacts associated with the proposed amendments to their Environmental Authorisation (Ref: 14/12/16/3/3/1/900).

Unless otherwise agreed by us in writing, we do not accept responsibility or legal liability to any person other than the Client for the contents of, or any omissions from, this Report.

To prepare this Report, we have reviewed only the documents and information provided to us by the Client or any third parties directed to provide information and documents to us by the Client. We have not reviewed any other documents in relation to this Report, except where otherwise indicated in the Report

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ACRONYMS AND ABBREVIATIONS

CBA	Critical Biodiversity Area
DEA	Department of Environmental Affairs
DEA&DP	Department of Environmental Affairs and Development Planning
DFFE	Department of Forestry, Fisheries and the Environment
DM	District Municipality
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMPr	Environmental Management Programme
FEIAR	Final Environmental Impact Assessment Report
GNR	Government Notice Regulations
Ha	Hectare
I&APs	Interested and Affected Parties
LM	Local Municipality
MW	Megawatt
NDP	National Development Plan
NEMA	National Environmental Management Act
NPAES	National Protected Areas Expansion Strategy
REDZ	Renewable Energy Development Zone
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
S&EIA	Scoping and Environmental Impact Assessment
SANBI	South African National Biodiversity Institute
SCC	Species of Conservation Concern
SDF	Spatial Development Frameworks
SDG's	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SIBIS	SANBI's Integrated Biodiversity Information System
WC-BSP	Western Cape Biodiversity Spatial Plan
WEF	Wind Energy Facility
WSP	WSP Group Africa (Pty) Ltd

CONTENT OF THIS REPORT

As per the Environmental Impact Assessment (EIA) Regulations 2014, as amended, Regulation 32 of Government Notice Regulation (GNR) 982 (as amended) identifies the legislated requirements, which must be contained within an Amendment Assessment Report for the competent authority to consider and come to a decision on the amendment application. **Table A** below details where the required information is located within this draft Amendment Assessment Report (this report).

Table A: Legal Requirements as detailed in Regulation 32 of GNR 982, as amended

Regulation 32 of GNR 982, as amended	DESCRIPTION	RELEVANT REPORT SECTION
1	The applicant must within 90 days of receipt by the competent authority of the application made in terms of regulation 31, submit to the competent authority:	The final Amendment Report will be submitted to DFFE as per requirement
(a)	A report reflecting:	
	(i) An assessment of all impacts related to the proposed change;	Section 5
	(ii) Advantages and disadvantages associated with the proposed change; and	Section 4.1
	(iii) Measures to ensure avoidance, management and mitigation of impacts associated with such proposed change; and	Section 6 Appendix O
	(iv) Any changes to the EMPR:	Section 6 Appendix O
	Which report:	
(i) Had been subjected to a public participation process, which had been agreed to by the competent authority, and which was appropriate to bring the proposed change to the attention of potential and registered interested and affected parties, including organs of state, which have jurisdiction in respect of any aspect of the relevant activity, and the competent authority; and	Section 7. Proof of PPP to be included in the Final Report.	
(ii) Reflects the incorporation of comments received, including any comments of the competent authority	To be included in the Final Report.	
(b)	A notification in writing that the report will be submitted within 140 days of receipt of application by the competent authority, as significant changes have been made or significant new information has been added to the report, which changes or information was contained in the report consulted on during the initial public participation process contemplated in subregulation 1(a) and that the revised report will be subjected to another public participation process of at least 30 days.	Not Applicable
2	In the event where subregulation (1)(b) applies, the report, which reflects the incorporation of comments received, including any comments of the competent authority, must be submitted to the competent authority within 140 days of receipt of the application by the competent authority	Not Applicable

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1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

Brandvalley Wind Farm (RF) (Pty) Ltd (Brandvalley) proposes to develop the 140 megawatt (MW) Brandvalley Wind Energy Facility (WEF), located near Laingsburg, in the Western Cape Province, South Africa. The proposed project formed part of the Fifth Bid Window submissions under the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). **The Brandvalley WEF has been confirmed a Round 5 Preferred Bidder Project and is a confirmed Strategic Infrastructure Project in terms of the Infrastructure Development Act 9 (Act No.23 of 2014).**

In 2016, Brandvalley Wind Farm (Pty) Ltd (Brandvalley) appointed EOH Coastal and Environmental Services (Pty) Ltd (EOH) to facilitate the Scoping and Environmental Impact Assessment (S&EIA) process for the construction and operation of the 140MW Brandvalley WEF. In November 2016, the Department of Environmental Affairs (DEA) (now known as the Department of Forestry, Fisheries and the Environment – DFFE) issued the Environmental Authorisation (EA) (DEA Ref: 14/12/16/3/3/1/900). The EA authorised 58 wind turbines of a maximum generating capacity of 140MW in total, with a hub height of 120m and the rotor diameter of 140m.

Appeals on the EA were received in December 2016 and January 2017, however, in a decision letter dated 28 July 2017 the appeals were dismissed and the issued EA upheld

Subsequently, the EA was amended on 14 February 2019 (DEA Ref: 14/12/16/3/3/2/900/AM1). The amendments included:

- Administrative changes with regards to the contact details for the Holder of EA
- Changes to the technical specifications of the turbines, including:
 - Increasing the Rotor diameter to up to 160m
 - Increasing the Hub height from ground level to up to 125m
 - Increasing the Generation capacity per Turbine to up to 5.5MW
- Amendment of the wording for the technical specifications of the wind measuring mast; and.
- The micro-siting of a single turbine (number 58) within the development layout.

The original EA was due to expire on 23 November 2021 and thus a Part 1 Amendment application was submitted to the DFFE on 14 September 2021, to extend the validity period for an additional 5-years. This was approved by the DFFE on the 11 October 2021 and amended EA with the extended validity period was released for the legislated 20-day notification of appeal period. During this appeal notification period, KarooPlan on behalf of the following appellants:

- Stephan Pienaar, Farm Aasvoegelbos, Laingsburg
- Steve Swanepoel, Farms Paalfontein & Keurkloof, Laingsburg
- Frans Hattingh, Farm De Rante, Laingsburg
- Gail Louw, Keurkloof Farm and Guest House, Laingsburg

The Appellants appealed on the following grounds:

- No approved EMPr in the original Environmental Authorization
- The sensitivity of the receiving environment has not been adequately considered: Cumulative impacts of surrounding activities (recently constructed wind turbines) on wildlife and farming communities.

A responding statement was issued by Richard Summer Inc, on behalf of the IPP, Brandvalley Wind farm (Pty) Ltd. The Appeal was dismissed by the DFFE on 04 February 2022 and the amended EA was therefore withheld.

Outside of the Appeal, Brandvalley Wind Farm, through their Legal Representative, engaged with the Appellants so as to and better understand their concerns, and to advise how these concerns would be avoided or mitigated. The Appellants representative, KarooPlan, advised that they were yet to be provided with an opportunity to review the Final EMPr, and its mitigations and plans pertaining to their concerns. Further, they voiced their dissatisfaction

regarding the cumulative visual impact of the wind turbines in the area. Through this AM Report and the appended Final EMPr, these concerns have been taken into account and addressed as best possible, and the visual specialist confirms that the cumulative impact remains the same as per the previous amendments and EIA.

There have been numerous advances in wind turbine technology since the authorisation of the Brandvalley WEF. As such Brandvalley wishes to again amend the EA to update the turbine specification and overall capacity of the facility as well as some respective administrative changes. This Draft Amendment Report (DAR) documents the process and findings of the Brandvalley's application for amendment of the EA.

Due to the fact that the amendments result in a change of scope, a Part 2 Amendment Process in terms of Regulation 31 of the Environmental Impact Assessment (EIA) Regulations of 2014 (as amended) is applicable and required to be followed.

2 PROJECT DESCRIPTION

2.1 EIA PROCESS HISTORY

In 2016, Brandvalley Wind Farm (Pty) Ltd (Brandvalley) appointed EOH Coastal and Environmental Services (Pty) Ltd (EOH) to facilitate the Scoping and Environmental Impact Assessment (S&EIA) process for the construction and operation of the 140MW Brandvalley WEF. In November 2016, the Department of Environmental Affairs (DEA) (now known as the Department of Forestry, Fisheries and the Environment – DFFE) issued the Environmental Authorisation (EA) (DEA Ref: 14/12/16/3/3/1/900). The EA authorised 58 wind turbines of a maximum generating capacity of 140MW in total, with a hub height of 120m and the rotor diameter of 140m.

Appeals on the EA were received in December 2016 and January 2017, however, in a decision letter dated 28 July 2017 the appeals were dismissed and the issued EA upheld.

Subsequently, the EA was amended on 14 February 2019 (DEA Ref: 14/12/16/3/3/2/900/AM1). The amendments included:

- Administrative changes with regards to the contact details for the Holder of EA
- Changes to the technical specifications of the turbines, including:
 - Increasing the Rotor diameter to up to 160m
 - Increasing the Hub height from ground level to up to 125m
 - Increasing the Generation capacity per Turbine to up to 5.5MW
- Amendment of the wording for the technical specifications of the wind measuring mast; and.
- The micro-siting of a single turbine (number 58) within the development layout).

An appeal was again received on 07 March 2019, however, this appeal was dismissed in a decision document dated 07 August 2019, and the issued EA amendment upheld.

As of the February 2019 EA amendment the following is authorised for the Brandvalley WEF:

- 58 wind turbines with a maximum generating capacity of 140MW in total;
- Concrete foundations approximately 25m in diameter and 4m deep per turbine;
- 690V/33kV transformer of 10m x 10m per hard standing area per turbine;
- Laydown areas of approximately 70m x 50m per turbine (total 20.3ha);
- Construction camp of 10ha and onsite batching plant of 1ha;
- 200m access road corridor to accommodate slight shift in alignments that are fully informed by the final detailed design of access road Alternative 1 and internal road network, up to 9m in width;
- Buildings;
- Overhead 33kV powerlines and underground cabling;
- Low voltage yard of the 33/132kV onsite substation Position Number 4. The total footprint of the 33/132kV onsite substation (including both high voltage (Eskom yard) and low voltage yards (IPP yard)) will be up to 200m x 200m;
- Lighting system;
- Fencing of the site construction camp; and
- 4x125 m tall wind measuring lattice masts strategically placed within the wind farm development footprint to collect data on wind conditions during the operational phase (final height shall be the same as the hub height).

Subsequently, a further amendment was issued in October 2021 (Ref No: 14/12/16/3/3/2/900/AM2) with regards to the extension of the EA validity period. During this appeal notification KarooPlan on behalf of the following appellants:

- Stephan Pienaar, Farm Aasvoegelbos, Laingsburg

- Steve Swanepoel, Farms Paalfontein & Keurkloof, Laingsburg
- Frans Hattingh, Farm De Rante, Laingsburg
- Gail Louw, Keurkloof Farm and Guest House, Laingsburg

The Appellants appealed on the following grounds:

- No approved EMPr in the original Environmental Authorization
- The sensitivity of the receiving environment has not been adequately considered: Cumulative impacts of surrounding activities (recently constructed wind turbines) on wildlife and farming communities.

A responding statement was issued by Richard Summer Inc, on behalf of the IPP, Brandvalley Wind farm (Pty) Ltd. The Appeal was dismissed by the DFFE on 04 February 2022 and the amended EA was therefore withheld.

Outside of the Appeal, Brandvalley Wind Farm, through their Legal Representative, engaged with the Appellants so as to and better understand their concerns, and to advise how these concerns would be avoided or mitigated. The Appellants representative, KarooPlan, advised that they were yet to be provided with an opportunity to review the Final EMPr, and its mitigations and plans pertaining to their concerns. Further, they voiced their dissatisfaction regarding the cumulative visual impact of the wind turbines in the area. Through this AM Report and the appended Final EMPr, these concerns have been taken into account and addressed as best possible, and the visual specialist confirms that the cumulative impact remains the same as per the previous amendments and EIA.

The authorised infrastructure is outlined in **Table 2-1**.

Table 2-1: Authorised infrastructure in terms of the February 2019 EA

COMPONENT	DESCRIPTION / DIMENSIONS
Location of the site	~ 30km north of the town of Matjiesfontein along the R354
Farm Names and SG Codes	<ul style="list-style-type: none"> – The Remainder of Barendskraal 76: (00430000000007600000) – Portion 1 of Barendskraal 76: (00430000000007600001) – The Remainder of Brandvalley 75: (004300000000007500000) – Portion 1 of Brandvalley 75: (004300000000007500001) – The Remainder of Fortuin 74: (004300000000007400000) – Portion 3 Fortuin 74: (004300000000007400003) – The Remainder of Kabeltouw 160: (C01900000000016000000) – The Remainder of Muishond Rivier 161: (001900000000016100000) – Portion 1 of Muishond Rivier161: (001900000000016100001) – Portion 1 of Fortuin 74 (Cu Mure): (004300000000007400001) – The Farm Rietfontein 197: (007200000000019700000)
Site access	<ul style="list-style-type: none"> – Access road alternative 1 (including internal access roads) to connect the facility with the R354 – 200m access road corridor to accommodate slight shift in alignments that are fully informed by the final detailed design
Export capacity	Up to 140MW
Proposed technology	Wind turbines
Number of Turbines	58
Foundations	Concrete foundations approximately 25m in diameter and 4m deep per turbine
Hub height from ground level	Up to 125m

COMPONENT	DESCRIPTION / DIMENSIONS
Rotor diameter	Up to 160m
Width and length of internal roads	<ul style="list-style-type: none"> – Internal roads width: Up to 9m wide – Internal roads length: Approximately 92km of which approximately 34km are existing roads that would be upgraded
Construction Camp and Laydown Areas	<ul style="list-style-type: none"> – Construction camp of 10ha and onsite batching plant of 1ha – Laydown areas of approximately 70m x 50m per turbine (total 20.3ha)
Electricity infrastructure	<ul style="list-style-type: none"> – 690V/133kV transformer of 10m x 10m per hard standing area per turbine – Overhead 33kV powerlines and underground cabling; – - Low voltage yard of the 33/132kV onsite substation Position Number 4. The total footprint of the 33/132kV onsite substation (including both high voltage (Eskom yard) and low voltage yards (LPP yard)) will be up to 200m x 200m;
General infrastructure	<ul style="list-style-type: none"> – Buildings – Lighting system; – Fencing of the site construction camp; and – 4 x 120m tall wind measuring lattice masts strategically placed within the wind farm development footprint to collect data on wind conditions during the operational phase.

2.2 PROJECT AREA

The Brandvalley WEF falls within the Laingsburg, Witzenburg, and Karoo Hoogland Local Municipalities which are located in the Central Karoo, Winelands and Namakwa District Municipalities respectively. The closest town within the Western Cape Province is Matjiesfontein, situated approximately 30km south of the project area (**Figure 2-1**). Laingsburg is a further 30km east of Matjiesfontein, along the N1 national road in the Western Cape Province. The R354 is the main arterial road providing access to the project area, where there are a number of existing local, untarred roads providing access within the project area.

The Brandvalley WEF is currently authorised over 11 properties described in **Table 2-2** below. These land portions, collectively referred to as the project area for the Brandvalley WEF, are currently used for animal husbandry, game farming and agriculture, including grazing of sheep. It should be noted that some of the properties for the Brandvalley WEF overlap with the Rietkloof WEF properties (**Figure 2-2**). The project area can be accessed via the R354 that connects to the N1 between Matjiesfontein and Laingsburg.

Table 2-2: Farm portions on which the Brandvalley WEF is located

FARM NAME AND NUMBER	21 DIGIT SG CODE	MUNICIPALITY/PROVINCE	FARM SIZE (HA)
The Remainder of Barendskraal 76	C04300000000007600000	Laingsburg LM/ Central Karoo DM/ Western Cape	1,523.7
Portion 1 of Barendskraal 76	C04300000000007600001	Laingsburg LM / Central Karoo DM / Western Cape	2,828.6
The Remainder of Brandvalley 75	C04300000000007500000	Laingsburg LM / Central Karoo DM / Western Cape	1,981.9

Portion 1 of Brandvalley 75	C0430000000007500001	Laingsburg LM / Central Karoo DM / Western Cape	56.3
The Remainder of Fortuin 74	C0430000000007400000	Laingsburg LM / Central Karoo DM / Western Cape	2,454.98
Portion 3 Fortuin 74	C0430000000007400003	Laingsburg LM / Central Karoo DM / Western Cape	1,868.4
The Remainder of Kabeltouw 160	C0190000000001600000	Witzenberg (Ceres) LM/ Cape Winelands DM/ Western Cape	1,082.8
The Remainder of Muishond Rivier 161	C01900000000016100000	Witzenberg (Ceres) LM/ Cape Winelands DM/ Western Cape	4,051.8
Portion 1 of Muishond Rivier 161	C01900000000016100001	Witzenberg (Ceres) LM/ Cape Winelands DM/ Western Cape	3391
Portion 1 of Fortuin 74 (Ou Mure)	C0430000000007400001	Laingsburg LM / Central Karoo DM / Western Cape	408.9
The Farm Rietfontein 197	C07200000000019700000	Karoo Hoogland LM/ Namakwa DM/ Northern Cape	5,873.6
Total hectares			25,521.98

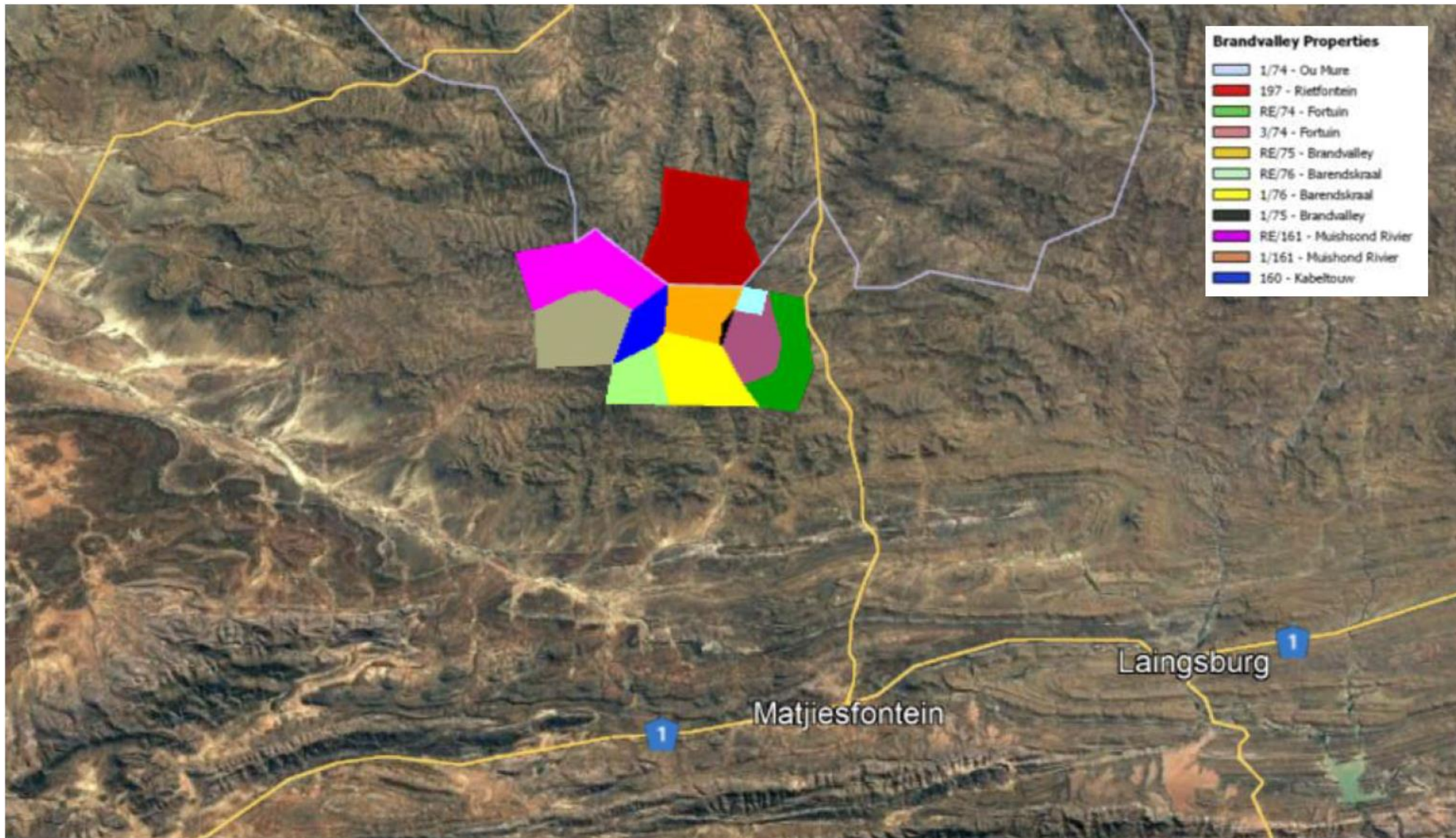


Figure 2-1: Location of the Brandvalley WEF

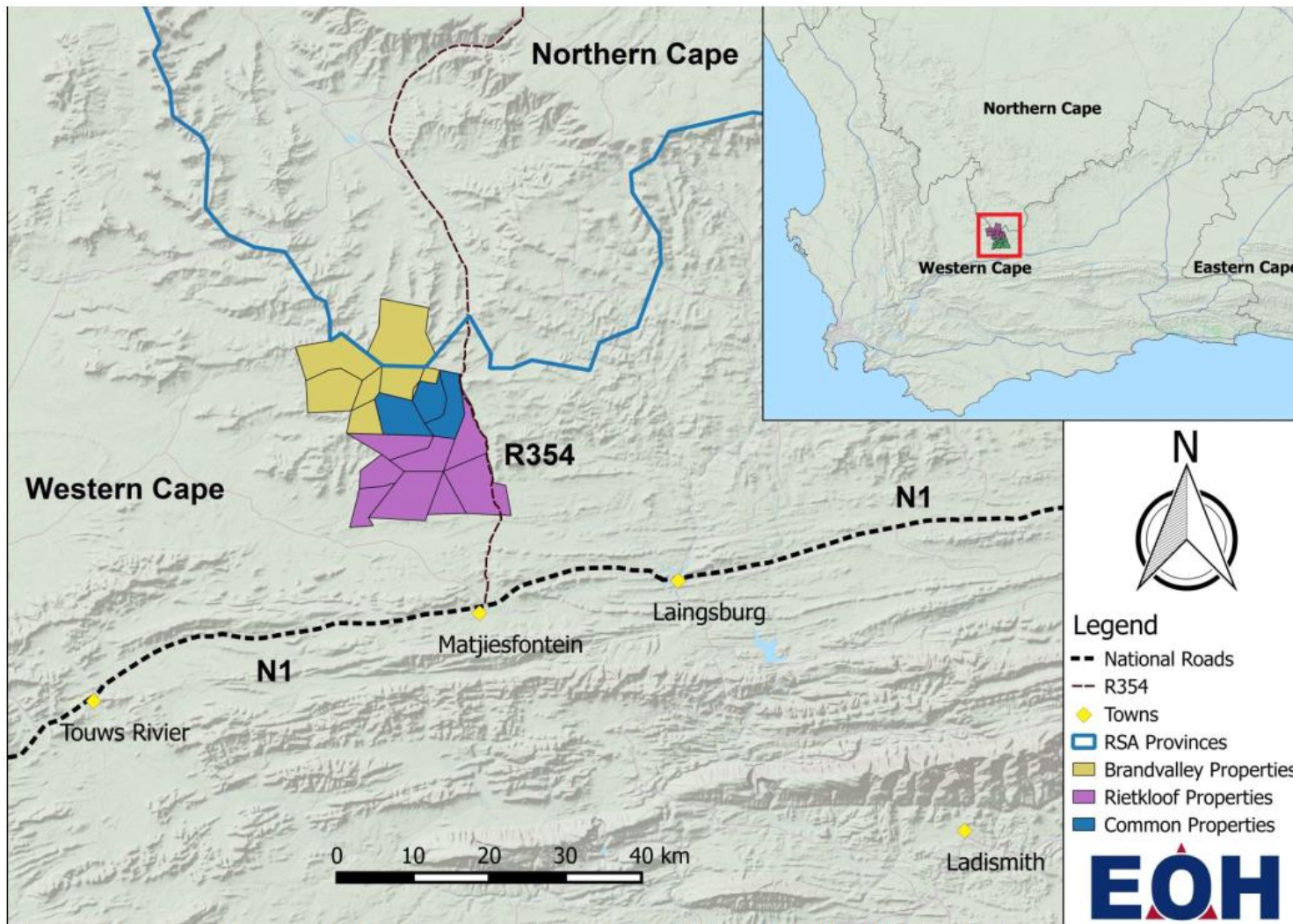


Figure 2-2: Locality of the Brandvalley WEF (showing the overlapping properties between the Brandvalley and Rietkloof WEFs (Source: EOH Final EIR, 2016)

2.3 NEED AND DESIRABILITY OF BRANDVALLEY WEF

The general need and desirability of the activity has already been motivated for and agreed to by the DEA (now DFFE) through the EA issued for the project on 23 November 2016 and the subsequent amendments. A summary as extracted from the EIA report (Courtesy of EOH Environmental, September 2016) is provided below for ease of reference:

- The project site has high wind resources as confirmed by onsite wind monitoring campaigns. The economic viability of a WEF and success in the REIPPPP directly depend on the strength of the wind resource, amongst other key factors. ***This has been confirmed with the Brandvalley WEF being awarded Round 5 Preferred Bidder Status in October 2021.***
- Proximity to grid connectivity via the Komsberg Substation.
- The national need for establishment of additional generation capacity through renewable energy resources.
- The local need for community upliftment through additional employment opportunities to be potentially created within the project area and economic development contributions to be committed in terms of the REIPPPP.
- Site extent and the option for the current land use namely agriculture to be retained.
- Landowner support for wind farm development.
- Being located within one of the areas earmarked for renewable energy development through the SEA Development, *namely the Komsberg REDZ.*
- Ease of grid connection as supported by being within an area identified in the Electricity Grid Infrastructure SEA.
- The proximity to the N1 and secondary roads for access during the construction and operation phases for the transportation of material and components.

The motivation above addresses the broader need and desirability for a WEF in the area and the proposed amendment does not change the context of the above and therefore the motivation remains as is.

2.4 SURROUNDING AREA

The surrounding area of Brandvalley WEF is predominantly used for agricultural purposes. The surrounding rural landscape is interrupted by the existing road network, which amongst others includes the access road and two 400kV and one 765kV Eskom overhead powerlines.

The project area and surrounding areas have been earmarked for renewable energy development. The South African government gazetted² eight (8) areas earmarked for renewable energy development in South Africa. These areas are known as Renewable Energy Development Zones (REDZ) and this project falls within the Komsberg REDZ as indicated in **Figure 2-3**. The purpose of the REDZ is to cluster development of renewable energy facilities in order to streamline the grid expansion for South Africa i.e. connect zones to one another as opposed to a wide scatter of projects. It is therefore not surprising that there are a number of environmental authorisations (EA) issued for wind energy facilities (either issued or in process) in the area surrounding the proposed project site. It is important to note that the existence of an approved EA does not directly equate to actual 'development'.

The surrounding projects, except for the Preferred Bidders, are still subject to the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) bidding process or subject to securing an off taker of electricity through an alternative process. Some of the surrounding proposed WEF's secured EA's several years ago but have not obtained Preferred Bidder status and as such have not been developed. Seeing that the project is located within the Komsberg REDZ, the decision-making timeframe can be reduced from 107 day to 57 days in line with GN 114.

These existing surrounding projects of varying approval status have been detailed in **Table 2-3** and illustrated in **Figure 2-4**. **Table 2-3** includes projects that have received an EA, those that are in the process of applying for an EA as well as those projects that have obtained REIPPPP preferred bidder status. Given the site's location within

² Government notice 114 of 16 February 2018.

the Komberg REDZ, it is considered to be located within the renewable energy hub that is developing in this focus area. All specialists considered the cumulative impact of these projects in their statements / assessments prepared to inform this assessment, which is detailed in section 5.4 below.

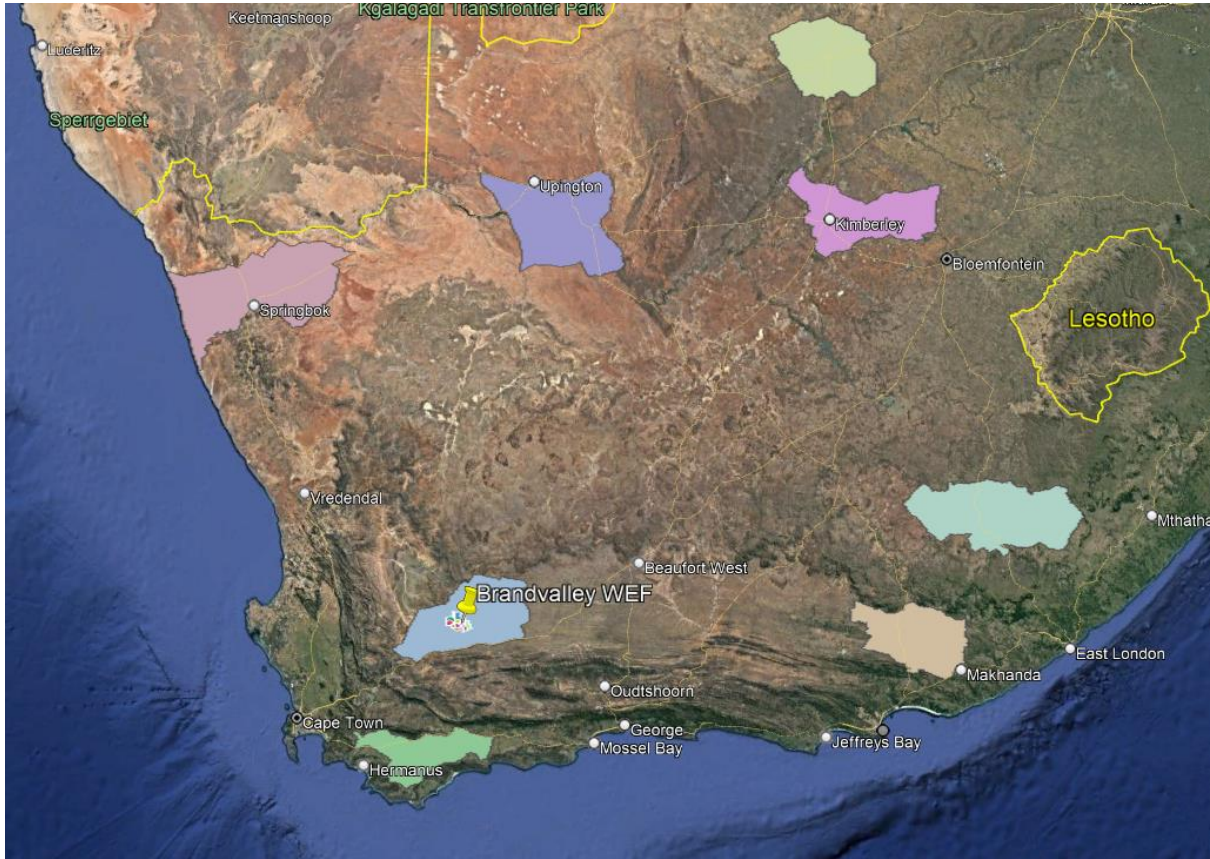


Figure 2-3: Project Location in relation to the Komsberg REDZ

Table 2-3: Surrounding projects approval status within 30 km of Brandvalley WEF

DFFE REFERENCE NUMBER	EIA PROCESS	APPLICANT	PROJECT TITLE	EAP	TECHNOLOGY	MEGAWATT	PROJECT STATUS
14/12/16/3/3/2/826	S&EIR	Gunstfontein Wind Farm (Pty) Ltd	Proposed 280 MW Gunstfontein Wind Energy Project	Savannah Environmental Consultants (Pty) Ltd	Onshore Wind	200 MW	Approved
12/12/20/2370/2 12/12/20/2370/1 12/12/20/2370/3	S&EIR	Hidden Valley Wind-African Clean Energy Developments (Pty) Ltd	Proposed Hidden Valley Wind Energy Facility (Karusa, Soetwater and Great Karoo), Northern Cape	Environmental Resource Management (Pty) Ltd	Onshore Wind	140 MW each	<u>Karusa</u> Approved Preferred bidder <u>Soetwater</u> Approved Preferred bidder Great Karoo - Approved but not preferred bidder
12/12/20/1988/1/AM1	S&EIR	Roggeveld Wind Power (Pty) Ltd	140MW Roggeveld Wind Farm Northern Cape and Western Cape Provinces	Environmental Resource Management (Pty) Ltd	Onshore Wind	140 MW	Approved; Preferred bidder
12/12/20/1966/AM7	S&EIR	Witberg Wind Power (Pty) Ltd	Proposed establishment of the Witberg wind energy facility, Western cape	Environmental Resource Management (Pty) Ltd	Onshore Wind	80MW	Approved
12/12/20/1783/2/AM1	S&EIR	South Africa Mainstream Renewable Power Development	Proposed development of a renewable Energy facility at Perdekraal, Western Cape	Environmental Resource Management (Pty) Ltd	Onshore Wind	140MW	Approved; Preferred Bidder

DFFE REFERENCE NUMBER	EIA PROCESS	APPLICANT	PROJECT TITLE	EAP	TECHNOLOGY	MEGAWATT	PROJECT STATUS
14/12/16/3/3/2/856	S&EIR	Komsberg West Wind Farm (Pty) Ltd	Komsberg West Wind Energy Facility	Arcus Consultancy Services	Onshore Wind	275MW	Approved
14/12/16/3/3/2/967	S&EIA	BioTherm Energy (Pty) Ltd	Esizayo Wind Energy Facility, Western Cape Province	WSP Environmental	Onshore Wind	140MW	Approved
14/12/16/3/3/2/899 14/12/16/3/3/1/1977 14/12/16/3/3/2/1977/AM1	S&EIA	Rietkloof Wind Farm (Pty) Ltd	Rietkloof Wind Farm, Northern and Western Cape Provinces	EOH CES / WSP	Onshore Wind	183MW	Approved Preferred bidder (Round 5)
14/12/16/3/3/1/2/807 14/12/16/3/3/1/2/807/AM1 14/12/16/3/3/1/2/807/AM2	S&EIA	Karreebosch Wind Farm (Pty) Ltd	Karreebosch Wind Farm, Northern and Western Cape Provinces	Savannah Environmental	Onshore Wind	140MW	Approved
14/12/16/3/3/2/962 14/12/16/3/3/2/963	S&EIA	BioTherm Energy (Pty) Ltd	Maralla East and West Wind Farms, Northern and Western Cape Provinces	WSP Environmental	Onshore Wind	140MW each	Approved
14/12/16/3/3/2/1984	BA	Genesis Tooverberg Wind Farm (Pty) Ltd	Tooverberg Wind Energy Project	CSIR	Onshore Wind	264	Approved
12/12/20/1787	EIA	Mainstream Renewable Power Konstabel (Pty) Ltd	Konstabel Solar projects	ERM	Solar	50MW	Approved
14/12/16/3/3/1/1976	BA	Kudusberg Wind farm (Pty) Ltd	Kudusberg Wind Energy Facility and associated infrastructure, between Matjiesfontein and	CSIR	Wind	325MW	Approved

DFFE REFERENCE NUMBER	EIA PROCESS	APPLICANT	PROJECT TITLE	EAP	TECHNOLOGY	MEGAWATT	PROJECT STATUS
			Sutherland in the Western and Northern Cape Provinces				
14/12/16/3/3/2/2009	BA	Oya Energy (Pty) Ltd	The proposed development of 301MW Oya energy facility and associated infrastructure near Matjiesfontein , Western Cape	SiVEST SA (Pty) Ltd	Solar PV	301MW	Approved Preferred Bidder (Risk Mitigation Round)
14/12/16/3/3/2/1115	EIA	Rondekop Wind Farm (Pty) Ltd	Rondekop Wind Energy Facility between Matjiesfontein and Sutherland, Northern Cape Province	SiVEST	Wind	325MW	Approved
12/12/20/1782/3/AM2	BA	Mainstream renewable Power Developments (Pty) Ltd	Sutherland Wind Energy Facility, Northern and Western Cape Provinces	CSIR	Wind	140MW	Approved

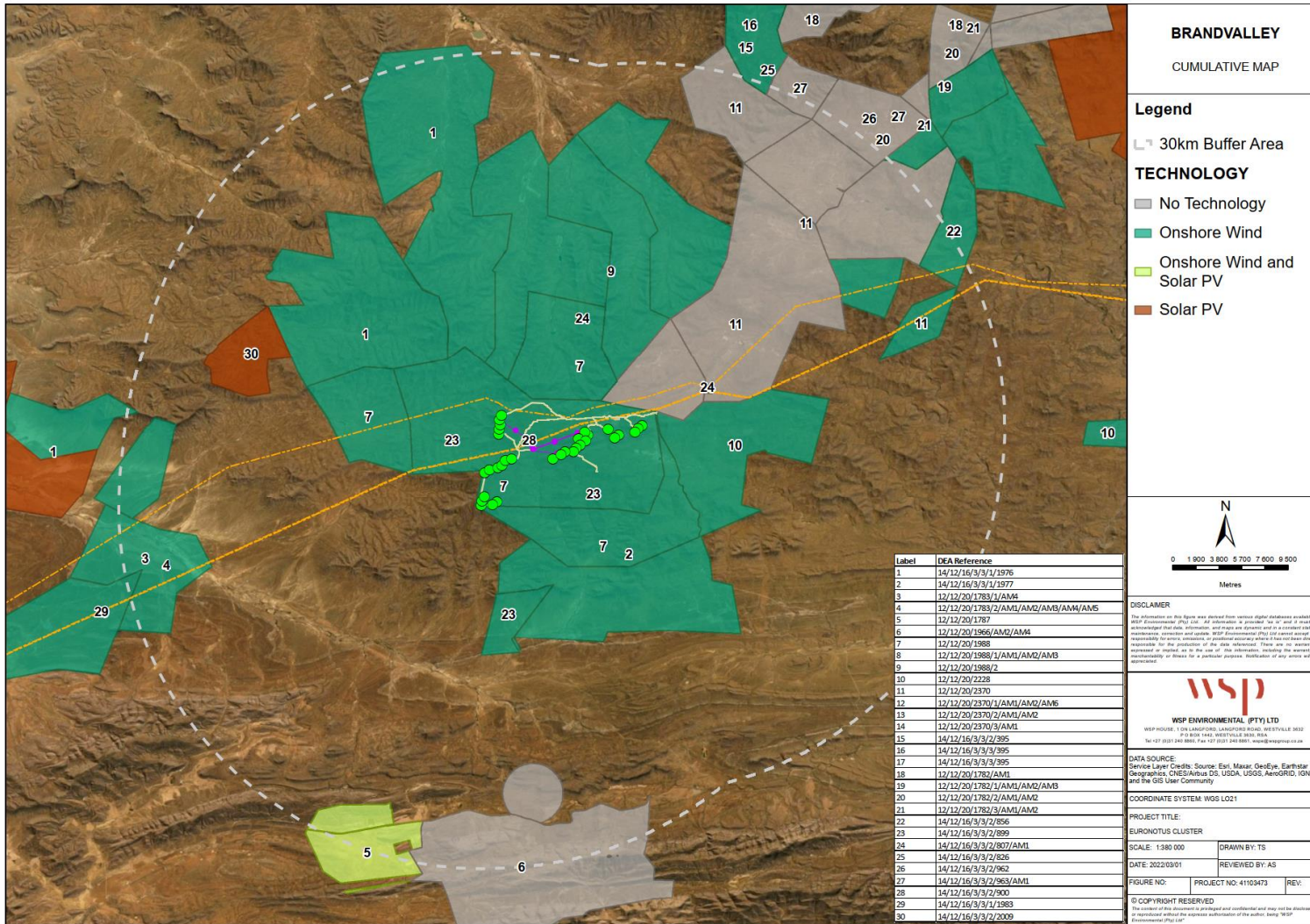


Figure 2-4: Existing surrounding projects in of relation the Brandvalley WEF

BRANDVALLEY WIND ENERGY FACILITY
 Project No. 41103473
 BRANDVALLEY WIND FARM (RF) (PTY) LTD

WSP
 May 2022
 Page 14

3 OVERVIEW OF PART 2 AMENDMENT PROCESS

3.1 TERMS OF REFERENCE

WSP Group Africa (Pty) Ltd (WSP) was appointed to undertake the amendment process in terms of Regulation 31 and 32 of the EIA Regulations (2014), as amended.

The amendment application process followed to date is summarised below:

- Payment of the prescribed application fee for the application for the variation of the EA was made on **13 April**.
- The application for the amendment of the EA was submitted to the DFFE on **19 May 2022**.

Section 32 of the EIA Regulations (2014), as amended requires that the DAR be subject to a public participation process prior to submission to the DFFE. WSP facilitated the following public participation process on behalf of Brandvalley:

- Provision of the Draft Amendment Report for a 30-day comment period as per the requirements of Section 32 (1).
- All interested and affected parties (I&APs) (as per the existing Brandvalley database) were notified by WSP of the availability of the DAR for comment. Copies were made available at the Matjiesfontein Community Centre (Matjiesfontein) and Laingsburg Library (Van Riebeeck Street), as well as on the WSP webpage (<https://www.wsp.com/en-ZA/services/public-documents>) for ease of access.
- Two newspaper adverts in a provincial (The Cape Times – **19 May 2022**) and local newspaper (Die Courier – **20 May 2022**) introducing the project and requesting public input.
- Site notices have been placed along the boundary fence of the project site and at various locations in Laingsburg and Matjiesfontein.

The Final Amendment Report will include copies of all public participation records and this will be submitted to DFFE for decision-making purposes. All I&APs will thereafter be notified of the DFFE’s decision.

3.1.1 ENVIRONMENTAL ASSESSMENT PRACTITIONER

WSP was appointed in the role of Independent EAP to undertake the Part 2 Amendment processes. The CV of the EAP is available in **Appendix A**. The EAP declaration of interest and undertaking is included in **Appendix B**. **Table 3-1** details the relevant contact details of the EAP.

Table 3-1: Details of the EAP

EAP	WSP GROUP AFRICA (PTY) LTD
Contact Person:	Ashlea Strong
Physical Address:	Building C, Knightsbridge, 33 Sloane Street, Bryanston, Johannesburg
Postal Address:	P.O. Box 98867, Sloane Park 2151, Johannesburg
Telephone:	011 361 1392
Fax:	011 361 1301
Email:	Ashlea.Strong@wsp.com

STATEMENT OF INDEPENDENCE

Neither WSP nor any of the authors of this Report have any material present or contingent interest in the outcome of this Report, nor do they have any business, financial, personal or other interest that could be reasonably regarded as being capable of affecting their independence. WSP has no beneficial interest in the outcome of the assessment

3.2 LEGAL FRAMEWORK

On the 7th April 2017 the Minister of Environmental Affairs promulgated amendments to the EIA Regulations (2014), as amended (GNR 982) in terms of Chapter 5 of the National Environmental Management Act (No. 107 of 1998), as amended (NEMA). Regulations 31 and 32 of the EIA Regulations (2014), as amended, details the process for a Part 2 (Substantive) amendment of an environmental authorisation where a change of scope occurs, but a listed activity is not triggered.

The proposed amendments detailed in section 4, below do not trigger any new listed activities in terms of the EIA Regulations (2014), as amended. Furthermore, no additional properties will be affected by the amendments that were not originally assessed. However, part of the amendments applied for were not originally assessed as part of the original EIA process and therefore the potential in impacts is assessed as part of this report.

A variety of administrative changes are being applied for as well as some substantive amendments. The details of all amendments are dealt with in section 4 below.

4 PROPOSED AMENDMENTS TO THE EA

Brandvalley now proposes to follow a Part 2 Amendment Process for the amendment of the September 2019 EA (DFFE Ref: 14/12/16/3/3/1/900). **Table 4-1** below outlines the amendments proposed to the existing EA. **Figure 4-1** shows the original 58 turbine layout. **Figure 4-2** illustrates the Final 32 turbine layout.

Table 4-1: Proposed amendments to the Brandvalley EA (DFFE Ref: 14/12/16/3/3/1/1977/AM1)

ASPECT TO BE AMENDED	AUTHORISED	PROPOSED AMENDMENT	EA REFERENCE
Technical Aspects			
Number of Turbines	58 wind turbines with a maximum generating capacity of 140MW in total	Up to 32 wind turbines with a maximum generating capacity of 140MW in total of up to 7MW capacity each	<ul style="list-style-type: none"> • Page 7 of EA (page 19 in full document) <ul style="list-style-type: none"> ○ First bullet of the list outlining the infrastructure associated with the facility
Generation capacity per turbine	1 – 5.5 MW	Up to 7MW	<ul style="list-style-type: none"> • Page 2 and the first Amendment
Area Occupied by Each Turbine and hard standing area	Laydown areas of approximately 70m x 50m per turbine (total 20.3ha);	laydown area of approximately 0.45ha per turbine	<ul style="list-style-type: none"> • Page 7 of EA (page 9 in full document) <ul style="list-style-type: none"> ○ Fourth bullet of the list outlining the infrastructure associated with the facility
Turbine Hub Height	<ul style="list-style-type: none"> • 120m 	up to 125m	<ul style="list-style-type: none"> • Page 8 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 7 of the table outlining the technical details of the proposed facility
Rotor Diameter	<ul style="list-style-type: none"> • 140m 	up to 180m	<ul style="list-style-type: none"> • Page 8 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 8 of the table outlining the technical details of the proposed facility
Width of Internal Roads	Internal Roads width: up to 9m wide	Internal Roads width: up to 12m wide	<ul style="list-style-type: none"> • Page 9 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 9 of the table outlining the technical details of the proposed facility
Construction Camp	Construction camp of 10ha and onsite batching plant of 1ha	The existing Roggeveld Wind Project construction camp will be retained for use by Brandvalley WEF.	<ul style="list-style-type: none"> • Page 8 of EA (page 10 in full document) <ul style="list-style-type: none"> ○ Fifth bullet of the list outlining the infrastructure associated with the facility
Construction Camp Co-ordinates	32°57'09.78"S 20°32'41.52"E	32°57'20.14"S 20°30'50.60"E	<ul style="list-style-type: none"> • Page 7 of EA (page 9 in full document) <ul style="list-style-type: none"> ○ Sixth row of the table outlining the facility co-ordinates

ASPECT TO BE AMENDED	AUTHORISED	PROPOSED AMENDMENT	EA REFERENCE
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Administrative Aspects			
Amend the Holder of the EA	Brandvalley Wind Farm (Pty) Ltd	Brandvalley Wind Farm (RF) (Pty) Ltd	<ul style="list-style-type: none"> • Page 1 – Contact Details • Page 2 and 3 of EA (Page 4 and 5 of full document) – Contact Details

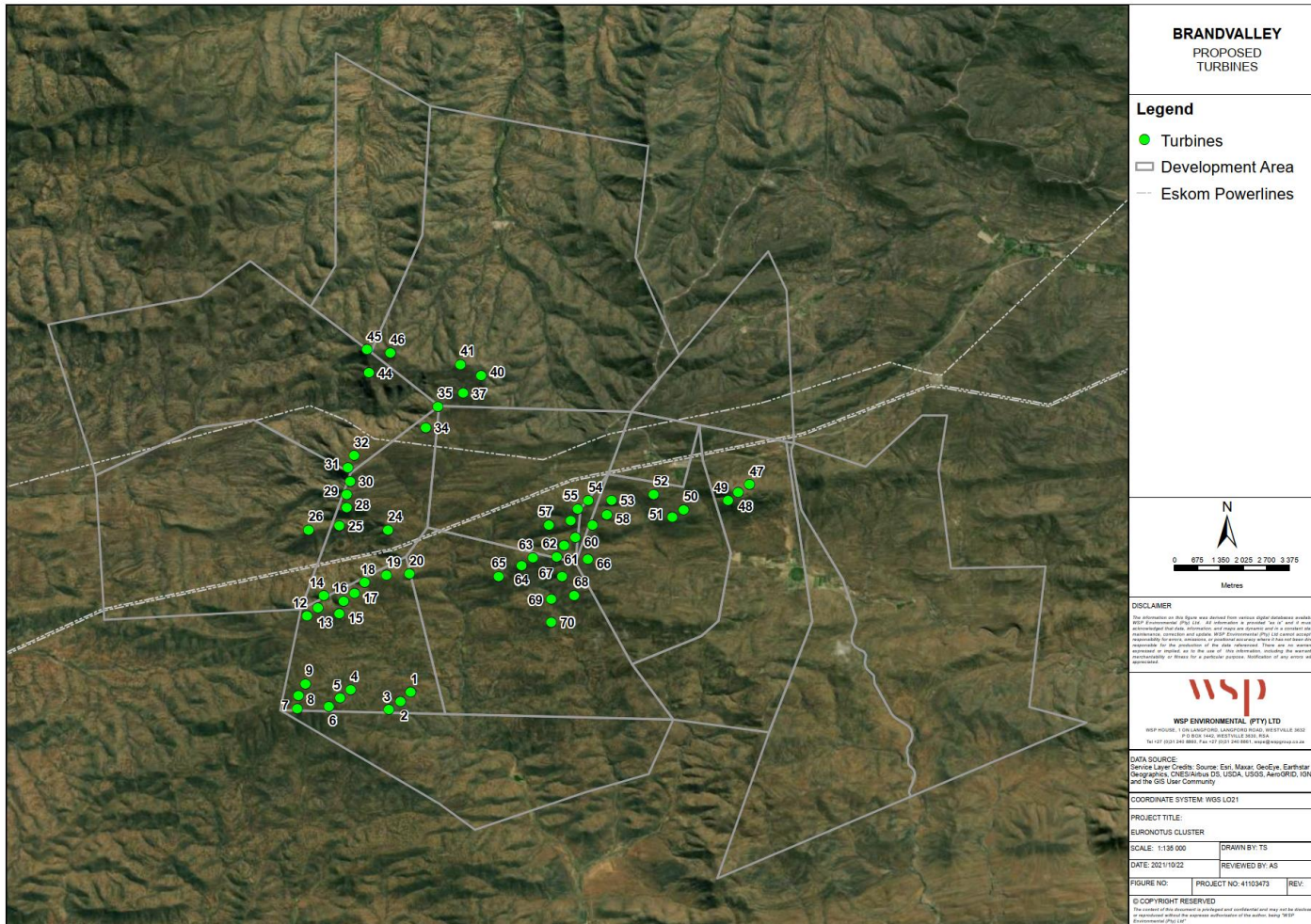


Figure 4-1: Position of the 58 Turbines which formed the Original Layout relevant to the November 2016 EA

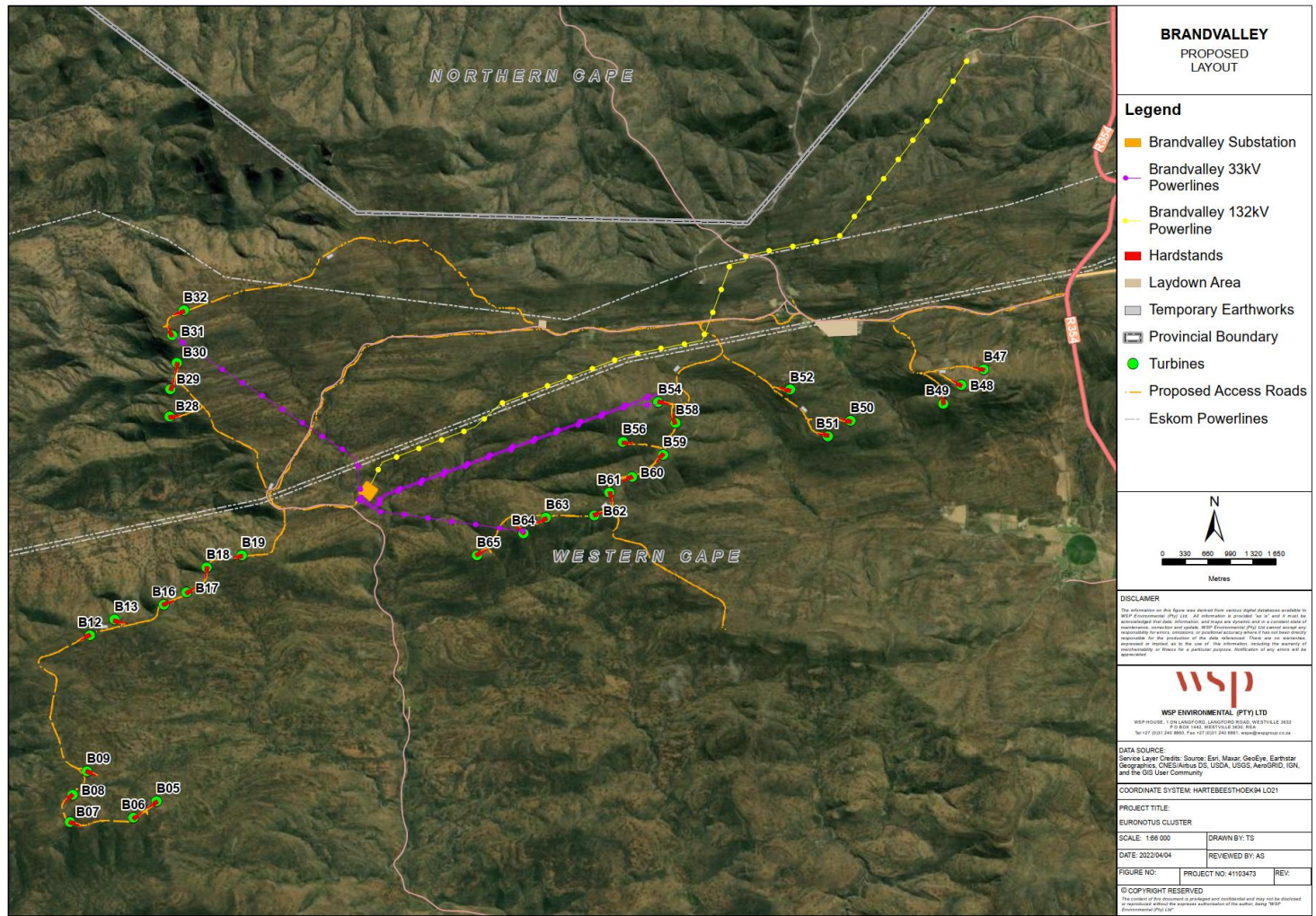


Figure 4-2: Final layout, including the 32 turbine positions for the Brandvalley WEF

4.1 ADVANTAGES AND DISADVANTAGES

The advantages and disadvantages for the proposed amendments are outlined in **Table 4-2**.

Table 4-2: Advantages and Disadvantages of the Proposed Amendments

ASPECT TO BE AMENDED	PROPOSED AMENDMENT	ADVANTAGES/ DISADVANTAGES
Technical Aspects		
Number of Turbines	Up to 32 wind turbines with a maximum generating capacity of 140MW in total of up to 7MW capacity each	Wind turbine generators are constantly under development to increase the potential energy output per wind turbine. These amendments are proposed in order to increase the efficiency of the facility and consequently the economic competitiveness thereof, in turn reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large.
Generation capacity per turbine	Up to 7MW	The increase in generation capacity per turbine to a maximum of up to 7MW is as a result of the advances in turbine technology. As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of generation capacity per turbine. The benefit of increasing the generation capacity of each turbine results in the need to utilise fewer turbine positions than original authorised.
Area Occupied by Each Turbine and hard standing area	laydown area of approximately 0.45ha per turbine	The increase in generation capacity per turbine to a maximum of up to 7MW will result in a reduced number of turbine positions being utilised on site. The exact orientation, position and dimensions of the hardstands will be subject to minor change pending the final selection of the TSA. The increased maximum allowable size of the hard standing will allow for these changes should they be required.
Turbine Hub Height	up to 125m	Wind shear refers to the variation in wind speed over vertical distances. Installing wind turbine generators with a higher hub height will increase the overall performance of the WEF. This amendment will increase the economic competitiveness of the WEF, in turn reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large. As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of the turbine hub height.
Rotor Diameter	up to 180m	The power output of a wind turbine is directly related to the swept area of the blades. The larger the diameter of swept area / rotor diameter of the blades, the more power it is capable of extracting from the wind. By potentially installing wind turbine generators with a larger rotor diameter, it will increase the energy output per turbine. This will result in increasing the overall performance of the WEF. This amendment will increase the economic competitiveness of the WEF, in turn

ASPECT TO BE AMENDED	PROPOSED AMENDMENT	ADVANTAGES/ DISADVANTAGES
		<p>reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large.</p> <p>As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of the rotor diameter</p>
Width of Internal Roads	Internal Roads width: up to 12m wide	<p>The final layout makes provision for roads with a maximum width of between 9 and 12m to ensure suitable access to site for all required vehicles and equipment.</p> <p>As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of increasing the maximum allowable road width.</p>
Construction Camp	The existing Roggeveld Wind Project construction camp will be retained for use by Brandvalley.	The construction camp has been shifted to the existing construction camp previously utilised by the Roggeveld WEF. The new location has been included in the final layout.
Construction ordinates	Co- 32°57'20.14"S 20°30'50.60"E	<p>The location of construction camp, was identified by considering the following aspects:</p> <ul style="list-style-type: none"> — Landowner preference and support; — Ease of access to R354; — Selecting a flat area requiring little to no blasting; — An area where the site is currently disturbed, thus limiting the need for additional vegetation clearance — The approved construction camp traversed a watercourse and therefore the relocation of the construction camp to the existing Roggeveld site will eliminate the potential negative impact on this watercourse. <p>As confirmed by the EAP, there are no disadvantages associated with the amendment of the EA in terms of moving the construction camp.</p>
Administrative Aspects		
Amend the name of the Holder of the EA	Brandvalley Wind Farm (RF) (Pty) Ltd	We request to amend the name of the Holder of the EA. This amendment request is administrative in nature and therefore no disadvantages are foreseen.

5 IMPACT ASSESSMENT

5.1 IMPACT ASSESSMENT METHODOLOGY

To ensure a direct comparison between various specialist studies, a standard rating scale has been defined and was used to assess and quantify the identified impacts. This is necessary since impacts have a number of parameters that need to be assessed. Four (4) factors need to be considered when assessing the significance of impacts, namely:

- Relationship of the impact to temporal scales - the temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.
- Relationship of the impact to spatial scales - the spatial scale defines the physical extent of the impact.
- The severity of the impact - the severity/beneficial scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected system (for ecological impacts) or a particular affected party. The severity of impacts can be evaluated with and without mitigation in order to demonstrate how serious the impact is when nothing is done about it. The word ‘mitigation’ means not just ‘compensation’, but also the ideas of containment and remedy. For beneficial impacts, optimization means anything that can enhance the benefits. However, mitigation or optimization must be practical, technically feasible and economically viable.
- The likelihood of the impact occurring - the likelihood of impacts taking place as a result of project actions differs between potential impacts. There is no doubt that some impacts would occur (e.g. loss of vegetation), but other impacts are not as likely to occur (e.g. vehicle accident) and may or may not result from the proposed development. Although some impacts may have a severe effect, the likelihood of them occurring may affect their overall significance.

Each criterion is ranked with scores assigned as presented in **Table 5-1** to determine the overall significance of an activity. The criterion is then considered in two categories, viz. effect of the activity and the likelihood of the impact. The total score recorded for the effect is cross referenced against the score for the likelihood and are then read off the matrix presented in **Table 5-2**, to determine the overall significance of the impact (**Table 5-3**).

The overall significance is either negative or positive. The environmental significance scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. The evaluation of the significance of an impact relies heavily on the values of the person making the judgment. For this reason, impacts of especially a social nature need to reflect the values of the affected society.

Negative impacts that are ranked as being of “**VERY HIGH**” and “**HIGH**” significance will be investigated further to determine how the impact can be minimised or what alternative activities or mitigation measures can be implemented. For impacts identified as having a negative impact of “**MODERATE**” significance, it is standard practice to investigate alternate activities and/or mitigation measures. The most effective and practical mitigations measures will then be proposed. For impacts ranked as “**LOW**” significance, no investigations or alternatives will be considered. Possible management measures will be investigated to ensure that the impacts remain of low significance.

Please note that this impact assessment methodology was utilised for the 2016 EOH Final EIA Report and has been utilised again for this amendment process in instances where the proposed amendment results in a change in the original impacts.

Table 5-1: Criterion used to rate the significance of an impact.

Effect	Temporal Scale			
	Short term	Less than 5 years	1	
	Medium term	Between 5 and 20 years	2	
	Long Term	Between 20 and 40 years (a generation) and from a human perspective almost permanent.	3	
	Permanent	Over 40 years and resulting in a permanent and lasting change that will always be there.	4	
	Spatial Scale			
	Localised	At localised scale and a few hectares in extent	1	
	Project Area	The proposed site and its immediate environs	2	
	Regional	District and Provincial level	3	
	National	Country	3	
	International	Internationally	4	
	Severity	Impact (Negative)	Benefit (Positive)	
	Slight / Slightly Beneficial	Slight impacts on the affected system(s) or party (ies)	Slightly beneficial to the affected system(s) or party (ies)	1
	Moderate / Moderately Beneficial	Moderate impacts on the affected system(s) or party(ies)	An impact of real benefit to the affected system(s) or party (ies)	2
Severe / Beneficial	Severe impacts on the affected system(s) or party (ies)	A substantial benefit to the affected system(s) or party (ies)	4	
Very Severe / Very Beneficial	Very severe change to the affected system(s) or party(ies)	A very substantial benefit to the affected system(s) or party (ies)	8	
Likelihood	Likelihood			
	Unlikely	The likelihood of these impacts occurring is slight	1	
	May Occur	The likelihood of these impacts occurring is possible	2	
	Probable	The likelihood of these impacts occurring is probable	3	
	Definite	The likelihood is that this impact will definitely occur	4	

Table 5-2: The Significance Matrix

LIKELIHOOD		Effect													
		3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
2	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
3	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
4	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

Table 5-3: The Significance Rating Table

SIGNIFICANCE	DESCRIPTION
Low	Acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the development being approved.

SIGNIFICANCE	DESCRIPTION
	These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.
Moderate	An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment.
High	A serious impact, if not mitigated, may prevent the implementation of the project (if it is a negative impact). These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &/or social) environment and result in severe effects or beneficial effects.
Very High	A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe effects, or very beneficial effects. However, this is very specific to each specialist study and does not necessarily mean no-go.

5.2 2016 IMPACT SUMMARY³

The following Independent Specialist Studies, amongst others, were undertaken during the original S&EIA process for the establishment of the 140MW Brandvalley WEF located within the Karoo Hoogland, Witzenberg and Laingsburg Local Municipalities in the Northern and Western Cape Provinces, which was originally authorised by the DEA, now known as the DFFE, on 23 November 2016:

- Archaeological & Heritage Impact Assessment
- Agricultural Impact Assessment
- Aquatic Impact Assessment
- Avifaunal Impact Assessment
- Bat Impact Assessment
- Ecological Impact Assessment
- Noise Impact Assessment
- Paleontological Impact Assessment
- Social Impact Assessment
- Visual Assessment
- Traffic impact assessment

Table 5-4 provides a summary of the impacts identified during the 2016 S&EIA undertaken for the original 58 Turbine WEF.

³ The full 2016 specialist reports can be made available on request.

Table 5-4: 2016 Impact Assessment Summary

DESCRIPTION OF IMPACT	OVERALL SIGNIFICANCE	
	WITHOUT MITIGATION	WITH MITIGATION
PLANNING AND DESIGN		
Agricultural Impacts		
Increase in erosion potential	Moderate -	Low -
Increase in renewable energy development in the local area on land use	Moderate -	Low -
Socio-economic Impacts		
Increase in renewable energy development in the local area	Low -	Low -
CONSTRUCTION PHASE		
Terrestrial Flora Impacts		
Impact on vegetation and listed plant species due to transformation within the development footprint.	High -	Moderate -
Soil erosion risk as a result of clearing and disturbance within the development footprint and adjacent affected areas	Moderate -	Low -
Terrestrial Fauna Impacts		
Direct faunal impacts due to the construction phase noise and physical	Moderate -	Moderate -
Agricultural Impacts		
Management of hazardous chemicals	Moderate -	Low -
Increased risk of fires from construction activities	High -	Low -
Loss of agricultural potential due to poor management of the soil stockpile	Moderate -	Low -
Soil profile disturbance and resultant decrease in soil agricultural capability	Very High -	Low -
Establishment of renewable energy infrastructure on agricultural land	Moderate -	Low -
Increase in erosion potential	Moderate -	Low -
Avifaunal Impacts		
Habitat loss associated with the construction phase	Low -	Low -
Disturbance and displacement associated with the construction phase	Low -	Low -
Bats Impacts		

OVERALL SIGNIFICANCE

DESCRIPTION OF IMPACT	WITHOUT MITIGATION	WITH MITIGATION
Destruction of bat roosts due to earthworks and blasting	Moderate -	Low -
Loss of foraging habitat	Moderate -	Low -
Aquatic Impacts		
Loss of riparian systems and disturbance to alluvial water courses	Moderate -	Low -
Loss of wetlands and wetland function in the construction phase	Moderate -	Low -
Increase in sedimentation and erosion in the construction, operational and decommissioning phases	Moderate -	Low -
Impact on localised surface water quality	Moderate -	Low -
Impact on localised aquatic systems due to the storage of hazardous substances	Moderate -	Low -
Visual Impacts		
Visual impact of construction activity	Moderate -	Moderate -
Construction camp alternatives 1, 2 and 3	Low -	Low -
Noise Impacts		
Impact of construction increase in ambient noise levels	Low -	Low -
Palaeontology Impacts		
Disturbance, damage or destruction of fossil heritage within development footprint during the construction phase	Low -	Low -
Potential improved palaeontological database	Low +	High +
Heritage Impacts		
Destruction of precolonial / stone age material	Very High -	Moderate -
Destruction of Stone Walling Features and associated Historical Artefact Scatters	Very High -	Moderate -
Destruction of Graves (formal and informal burials)	Very High -	Moderate -
The Destruction of Homesteads / Farmhouse Complexes	Very High -	Moderate -
The impact of the construction of the proposed Brandvalley WEF on the cultural landscape	Very High -	Moderate -
Socio-economic Impacts		
Creation of employment and business opportunities during the construction phase	Low +	Moderate +

OVERALL SIGNIFICANCE

DESCRIPTION OF IMPACT	WITHOUT MITIGATION	WITH MITIGATION
Technical advice for local farmers and municipalities	N/A	Moderate +
Impact of construction workers on local communities	Moderate -	Low -
Influx of job seekers	Low -	Low -
Risk to safety, livestock and farm infrastructure	Moderate -	Low -
Increased risk of grass fires	Moderate -	Low -
Impacts associated with construction vehicles	Moderate -	Low -
Impacts associated with loss of farmland	Moderate -	Low -
Potential impact on tourism	Low -	Low -
Traffic Impacts		
Traffic impact as a result of transportation of Concrete Towers	Low -	Low -
Traffic impact as a result of transportation of Steel Towers	Low -	Low -
OPERATIONAL PHASE		
Terrestrial Flora Impacts		
Following construction, the site will be highly vulnerable to soil erosion	Moderate -	Low -
Following construction, the site will be highly vulnerable to alien plant invasion	Moderate -	Low -
Terrestrial Fauna Impacts		
Faunal impacts due to operational activities of the wind farm such as noise, and human presence during maintenance activities.	Moderate -	Moderate -
Agricultural Impacts		
Increase in erosion potential	Moderate -	Low -
Establishment of renewable energy infrastructure on agricultural land	Moderate -	Low -
Establishment of new access roads	High +	High +
Avifaunal Impacts		
Activities and/or presence of intrusive structures cause birds to permanently move away from infrastructure	Moderate -	Moderate -
Turbine collision mortality	Low -	Low -
Powerline collision mortality associated with the placement of 33kV Powerlines throughout the project site	Moderate -	Moderate -

OVERALL SIGNIFICANCE

DESCRIPTION OF IMPACT	WITHOUT MITIGATION	WITH MITIGATION
Bat Impacts		
Bat mortalities due to direct blade impact or barotrauma during foraging activities (not migration)	High -	Moderate -
Aquatic Impacts		
Impact on riparian systems through the possible increase in surface water runoff on riparian form and function during the operational and decommissioning phases	Moderate -	Low -
Visual Impacts		
Impact of the layout on sensitive visual receptors	High -	High -
The access road, including alternatives 1 and 2	Moderate -	Moderate -
Visual impact of the on-site substation	Moderate -	Moderate -
Shadow flicker	No impact	
Noise Impacts		
Impact of the operational noise on the surrounding environment	Low -	Low -
Palaeontology Impacts		
None		
Heritage Impacts		
None		
Socio-economic Impacts		
Creation of employment and business opportunities associated with the operational phase	Low +	Moderate +
Creation of an alternative income source for farmers, which in turn can assist to reduce and or prevent job losses in the farming sector	Low +	Low +
Benefits associated with the establishment of a Community Trust	Moderate +	High +
Promotion of clean, renewable energy	Moderate -	Moderate +
Visual impact associated with the proposed WEF and the potential impact on the areas rural sense of place	Moderate -	Moderate -
Potential impact of the WEF on local tourism	Low -	Low -
Potential visual impacts associated with access roads and construction camps (all alternative locations)	Low -	Low -

OVERALL SIGNIFICANCE

DESCRIPTION OF IMPACT	WITHOUT MITIGATION	WITH MITIGATION
Traffic Impacts		
Traffic impact as a result of Operations	Low -	Low -
Traffic impact as a result of Maintenance	Low -	Low -
DECOMMISSIONING PHASE		
Terrestrial Flora Impacts		
Soil Erosion Risk Following Decommissioning will be high	Moderate -	Low -
Alien plant invasion will be highly likely within disturbed areas following decommissioning	Moderate -	Low -
Terrestrial Fauna Impacts		
Faunal Impacts due to Decommissioning Phase activities such as noise and disturbance due to the presence of construction staff and the operation of heavy machinery	Moderate -	Low -
Agricultural Impacts		
Decommissioning and removal of renewable energy infrastructure on agricultural land	Moderate +	Moderate +
Bat Impacts		
Loss of foraging habitat	Low -	Low -
Aquatic Impacts		
Loss of riparian systems and disturbance to alluvial water courses	Moderate -	Low -
Increase in sedimentation and erosion in the construction, operational and decommissioning phases	Moderate -	Low -
Impact on localised surface water quality	Moderate -	Low -
Impact on riparian systems through the possible increase in surface water runoff on riparian form and function during the operational and decommissioning phases	Moderate -	Low -
Visual Impacts		
Visual impact of decommissioning activity	Moderate -	Moderate -
Noise Impacts		
Impact of decommissioning increase in ambient noise levels	Low -	Low -
Palaeontology Impacts		

DESCRIPTION OF IMPACT	OVERALL SIGNIFICANCE	
	WITHOUT MITIGATION	WITH MITIGATION
None		
Heritage Impacts		
None		
Socio-Economic Impacts		
Social impacts associated with the decommissioning phase are linked to the loss of jobs and associated income	Low -	Low -
Traffic Impacts		
Traffic impact as a result of transportation of Concrete Towers	Low -	Low -
Traffic impact as a result of transportation of Steel Towers	Low -	Low -

5.3 2018 AMENDMENT SUMMARY

In 2018, the above-mentioned Specialists were consulted again as part of the previous amendment process in order to ascertain if the proposed amendments to the WEF would result in additional impacts on the site and its surroundings.

The Specialists all provided statements/revisions advising that the proposed changes will not affect/change the impacts already identified in the already authorised EIR Report dated September 2016, therefore no additional assessments are required to supplement the Amendment Report at that time.

The investigation of potential environmental impacts associated with the proposed amendments in 2018 indicated that the overall impacts identified during the EIA Phase of the Project would remain the same, with no additional impacts/changes identified with exception of the micro-siting of Turbine #58. on recommendation of the bat specialist.

The amendments were authorised on 14 February 2019.

The original EA was due to expire on 23 November 2021 and thus a Part 1 Amendment application was submitted to the DFFE on 14 September 2021, to extend the validity period for an additional 5-years. This was approved by the DFFE on the 11 October 2021 and amended EA with the extended validity period was released for the legislated 20-day notification of appeal. During this appeal notification KarooPlan on behalf of the following appellants:

- Stephan Pienaar, Farm Aasvoegelbos, Laingsburg
- Steve Swanepoel, Farms Paalfontein & Keurkloof, Laingsburg
- Frans Hattingh, Farm De Rante, Laingsburg
- Gail Louw, Keurkloof Farm and Guest House, Laingsburg

The Appellants appealed on the following grounds:

- No approved EMPr in the original Environmental Authorization
- The sensitivity of the receiving environment has not been adequately considered: Cumulative impacts of surrounding activities (recently constructed wind turbines) on wildlife and farming communities.

A responding statement was issued by Richard Summer Inc, on behalf of the IPP, Brandvalley Wind farm (Pty) Ltd. The Appeal was dismissed by the DFFE on 04 February 2022 and the amended EA was therefore withheld.

Outside of the Appeal, Brandvalley Wind Farm, through their Legal Representative, engaged with the Appellants so as to and better understand their concerns, and to advise how these concerns would be avoided or mitigated. The Appellants representative, KarooPlan, advised that they were yet to be provided with an opportunity to review the Final EMPr, and its mitigations and plans pertaining to their concerns. Further, they voiced their dissatisfaction regarding the cumulative visual impact of the wind turbines in the area. Through this AM Report and the appended Final EMPr, these concerns have been taken into account and addressed as best possible, and the visual specialist confirms that the cumulative impact remains the same as per the previous amendments and EIA.

A summary of the issues raised in the appeal and the responses provided in the responding statement are outlined in **Table 5-5**.

Table 5-5: Summary of Appeal Issues and Responses Provided

ISSUES RAISED BY APPELLANTS, TO BE ADDRESSED IN EMPr:	APPELLANT ISSUES:	BRANDVALLEY WIND FARM (RF) (PTY) LTD RESPONSE:	SECTION ADDRESSED OR MITIGATED IN:
Property access	<ul style="list-style-type: none"> - Unauthorised access to neighbouring properties. - No access to the development to be gained over neighbouring property which do not form part of the Project. - Measures to be implemented by the Holder of the EA to prevent any 'accidental' access to land, uninformed or otherwise, by anyone associated with the Holder of the EA and/or the Project. - Any transgressions in this regard to be addressed by the Holder of the EA without delay. 	<p>Should any persons or contractors associated with the Project be found to be using roads that are not approved, they will be fined accordingly, unless justified by the parties in question. A fine system will be strictly adhered to and implemented as a serious deterrent mechanism through the EMPr, which is also an enforceable document. If contractors, or any other parties associated with the Project, are found to be using unauthorised access roads or if the road network used for the Project is damaged, then this needs to be reported immediately through the formal grievance mechanism procedures.</p>	<p>Updated EMPr: Appendix Q - External Stakeholder Grievance Mechanism; and Updated EMPr: Appendix P - Community Health, Safety and Security Plan</p>
Roads	<ul style="list-style-type: none"> - Damage to roads due to additional traffic and heavy vehicles. - Road management and repairs when the Project is done. 	<p>Any roads that are assigned and approved to be used by the Project are required to be maintained by the Project Company to a certain specification and condition in terms of the suite of approvals applicable to the Project and the EMPr in particular. Detailed road management also forms part of the EMPr requirements. In doing so the Project Company also needs to seek approval from the relevant provincial Departments to ensure that their specifications are met and adhered to, this is obviously applicable to regional, provincial, and proclaimed roads.</p> <p>If contractors, or any persons associated with the Project, are found to be using unauthorised access roads or if the road network used for the Project is damaged, then this needs to be reported immediately through the formal grievance mechanism procedures.</p>	<p>For approved access roads: Updated EMPr: Section 7.2 Construction Phase Mitigation Measures No. 50: Roads and road maintenance; and Updated EMPr: Section 7.3 Operational Phase Mitigation Measures No. 67: Roads and road maintenance.</p> <p>For unapproved road use: Updated EMPr: Appendix Q - External Stakeholder Grievance Mechanism</p>

ISSUES RAISED BY APPELLANTS, TO BE ADDRESSED IN EMPr:

APPELLANT ISSUES:

BRANDVALLEY WIND FARM (RF) (PTY) LTD RESPONSE:

SECTION ADDRESSED OR MITIGATED IN:

<p>Security</p>	<ul style="list-style-type: none"> - Security of farmers properties and livestock. - Personal security and safety, compromising of farmers well-being. - Security issues resulting from influx of outsourced labour/no locals. 	<p>If the personal safety or security of the community or specific landowners is threatened by the contractors and/or any persons working on this Project, they are encouraged to report this immediately to the Project Company via the grievance mechanism procedures described above so that corrective action can be taken quickly and effectively.</p> <p>The Project Company is required to adhere to strict IFC and other requirements to ensure that any labour that is outsourced is accommodated in areas that would have minimal impact on the local community. Any security related issues that arise during construction and operation of the Project can be addressed through the grievance mechanism procedures.</p>	<p>EMPr: Section 8.14 – Security Policy; Updated EMPr: Appendix Q - External Stakeholder Grievance Mechanism; and Updated EMPr: Appendix P - Community Health, Safety and Security Plan</p>
<p>Theft</p>	<ul style="list-style-type: none"> - Property, equipment, and livestock theft & damages. - Equipment theft (solar panels etc.). - Stock theft. - Any damages/theft of livestock must be immediately addressed by the Holder of the EA. - Measures be put in place to facilitate addressing any damaging incidents that occur on farmers’ properties or regarding livestock. 	<p>Any stock or equipment theft attributed to the Project will be addressed and resolved through the formal grievance mechanism procedures which will be implemented on site. These procedures form a mandatory component that the Project Company, as the Holder of the EA, is required by law to implement. The grievance mechanisms and detailed complaint procedures are provided for in the Project EMPr. The EMPr includes all the necessary details and all the relevant contact details of key personnel and procedures to be followed and for such stock / equipment theft complaints to be resolved. In addition, the Project Company is also preparing a Stakeholder Engagement Plan so as to inform all I&APs of the Project construction plan and to inform them of the grievance mechanism and associated procedures. In addition to the formal grievance mechanism procedures and specifically in order to ensure that your clients – and other affected landowners - have a direct point of contact with the Holder of the EA, the Holder of the EA will ensure that once construction commences there will be a dedicated contact point on the Project website through which grievances can be addressed.</p>	<p>Updated EMPr: Section 8.14 – Security Policy; Updated EMPr: Appendix Q - External Stakeholder Grievance Mechanism; and Updated EMPr: Appendix P - Community Health, Safety and Security Plan</p>

ISSUES RAISED BY APPELLANTS, TO BE ADDRESSED IN EMPr:

APPELLANT ISSUES:

BRANDVALLEY WIND FARM (RF) (PTY) LTD RESPONSE:

SECTION ADDRESSED OR MITIGATED IN:

Groundwater resources	<ul style="list-style-type: none"> - Groundwater resources supply on neighbouring properties put pressure on the scarce water resources. - Assurances be given that the neighbouring farmers' properties groundwater supply would not be detrimentally affected by the Project or other operations. 	<p>The Project is required to obtain a Water Use Licence or General Authorisation in terms of the National Water Act for any water uses associated with the Project and its associated infrastructure. We can confirm that specialist pump tests have been conducted and that the Project Company has applied for less m³/annum water usage than what the borehole/s on the site yield. During the operation of the project the water usage will also significantly be reduced. The Project Company also has a nonbinding confirmation of water availability from the DWS confirming that there is sufficient water available for us to use in this catchment area for the Project's reasonable water use requirements. The DWS would not have provided such confirmation of water use allocation for the Project if there was insufficient water for the purposes of the project's water use requirements. Further, the actual water use by the Project during construction and operation will be monitored strictly on site to ensure that the Project does not impact on the water resource or any other water use rights in the area.</p>	<p>Updated EMPr: Section 7.2 Construction Phase Mitigation Measures No. 34: Dust; Updated EMPr: Section 8.8 – Protection of Hydrological Features and Sensitive Areas; and Conditions of Water Use Licence or General Authorisation</p>
Visual	<ul style="list-style-type: none"> - Unsightly views/scenery and degradation of the pristine Karoo landscape. - It is questioned whether the cumulative visual impact of the wind turbines in the area was assessed and taken into consideration by DFFE. Since the approval of the original EIA, numerous new wind turbines were constructed in vicinity to the Project. 	<p>The increase in the Rotor Diameter, Hub Height, and turbines MW size do not give rise to any additional impacts or exacerbate the impacts previously identified in the Visual Impact Assessment for the Project. No additional mitigation measures or specialist input into the EMPr are deemed necessary and the site layout is deemed acceptable from a visual perspective.</p>	<p>This Report: Section 5.6.7 – Visual; and This Report: Appendix J – Visual Statement</p>

5.4 CUMULATIVE IMPACTS

During the 2016 EIA and 2018 Amendment processes all specialists assessed the cumulative impacts that would result from the existing projects within a 30km radius of the site. The surrounding projects have been detailed in **Table 2-3** and illustrated in **Figure 2-4** above. The following projects within a 30km radius were taken into account:

- Kudusberg Wind Project;
- Konstabel Solar Project;
- Roggeveld Wind Project (**Preferred Bidder**, currently under construction);
- Karreebosch Wind Project;
- Rondekop Wind Project;
- Komsberg East and Komsberg West Wind Projects;
- Perdekraal Wind Project (**Preferred Bidder**, currently under construction);
- Witberg Wind Project;
- Sutherland Wind and Solar Project;
- Hidden Valley Wind Project (Karusa and Soetwater wind farms (**Preferred Bidder**, currently under construction));
- Gunstfontein Wind Project;
- Maralla East and West Wind Projects;
- Rietkloof Wind Project (**Preferred Bidder**, to be constructed in due course);
- Esizayo Wind Project; and
- Tooverberg Wind Project.

Table 5-6 provides a summary of the cumulative impacts identified during the 2016 EIA undertaken for the original 58 Turbine WEF. During the 2018 Amendment process it was noted that the cumulative impacts would remain unchanged for all studies, except Bats.

The Bat specialist noted that several other wind farm developments had been proposed and/or approved since the 2016 study, in the vicinity of the Brandvalley site. The high sensitivity valley areas were noted to be demarcated as sensitive on most of the facilities and would therefore serve as commuting corridors for bats in the larger area, potentially lowering the cumulative effects of several WEF's in an area, if all facilities adhere to their sensitivity maps.

Subsequent to the 2016 and 2018 studies, the Oya Solar project was approved. The Kudusberg Wind project was also split into two projects, one of which (together with the Oya Solar project) has been identified as a preferred bidder under the Risk Mitigation Round, and is due to be constructed in due course.

Table 5-6: 2016 Cumulative Impact Assessment Summary

DESCRIPTION OF IMPACT	OVERALL SIGNIFICANCE	
	Without Mitigation	With Mitigation
Terrestrial Flora and Fauna Impacts		
Impact on CBAs and Broad-Scale Ecological Processes due habitat loss and the presence and operation of the facility	High -	Moderate -
Agricultural Impacts		
Cumulative impact of renewable energy projects in the area on local land use	Moderate -	Moderate -
Overall cumulative Impacts	Low -	Low -

Avifaunal Impacts		
The combined impacts from other renewable energy developments within close proximity to the Brandvalley wind farm	Moderate -	Moderate -
Electrocution	Low -	Low -
Habitat Destruction	Low -	Low -
Displacement	Low -	Low -
Solar Array Collision	Moderate -	Low -
Wind Turbine Collision	Low -	Low -
Powerline Collision	Moderate -	Low -
Bat Impacts		
Cumulative bat mortalities due to direct blade impact or barotrauma during foraging (resident and migrating bats affected).	High -	Moderate -
Aquatic Impacts		
Overall cumulative impact	Moderate -	Low -
Visual Impacts		
Cumulative Visual impact	High -	High -
Noise Impacts		
Noise increase due to the development of multiple WEF in the same area	Low -	Low -
Heritage Impacts		
The construction of the proposed Brandvalley WEF and cumulative impacts	Very High -	Moderate -
Palaeontology Impacts		
Disturbance, damage or destruction of fossil heritage within development footprint during the construction phase of the WEF	Low -	Low -
Potential improved palaeontological database	Low +	High +
Socio-economic Impacts		
Cumulative visual impacts associated with the establishment of a number of WEFs on the on the areas rural sense of place and character of the landscape	Moderate -	Moderate -
The establishment of a number of renewable energy facilities in the KHLM and LLM will place pressure on local services, specifically medical, education and accommodation	Moderate -	Low -
The establishment of a number of renewable energy facilities in the KHLM and LLM will create employment, skills development and training opportunities, creation of downstream business opportunities	Moderate +	High +

5.5 2021 SPECIALIST STUDIES

The specialists outlined in **Table 5-7** were appointed to undertake the necessary specialist reporting to determine and assess the potential impacts associated with the proposed amendments. Each of the specialists has reviewed the previous studies (2016 and 2018) and the proposed amendments to the projects and has provided a specialist statement as to whether the proposed amendment will change the impacts identified in the previous studies as well as to whether any additional mitigation measures will be required. The Specialist Declarations for the specialists are included in **Appendix C**. A summary of the findings of the 2021 statements are provided below in section 5.6 below.

Table 5-7: Specialists appointed to determine and assess the potential impacts

NR	ENVIRONMENTAL ASPECT	ASSESSED BY
1	Agricultural and Soil Specialist	Johan Lanz
2	Terrestrial Ecology & Biodiversity	Trusted Partners, Janie Pote and Malcome Logie
3	Aquatic Specialist	Freshwater Ecologist Network (FEN) Consulting (Pty) Ltd, Christel du Preez
4	Avifaunal Specialist	Birds and Bats Unlimited, Dr Rob Simmons
5	Bat Specialist	Animalia Consultants, Werner Marais
6	Heritage Specialist	CTS Heritage, Nicholas Wiltshire
7	Noise Specialist	SafeTech, Dr Brett Williams
8	Palaeontology Specialist	Natura Viva, Dr John Almond
9	Social Specialist	Mr Tony Barbour and Schalk van der Merwe
10	Traffic Specialist	JG Afrika, Avheani Ramawa
11	Visual Specialist	SiVEST SA, Kerry Schwartz

5.6 2021 SPECIALIST FINDINGS

5.6.1 AGRICULTURE, SOIL AND LAND USE CAPACITY

Mr Roy de Kock, an agricultural and soil specialist from EOH Coastal and Environmental Services, undertook the 2016 and 2018 agricultural assessments. Subsequently, Johann Lanz was appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix D**.

The specialist has noted the following in his Specialist Statement:

- There are no agricultural impacts related to the proposed amendment. It will not change the nature or significance of any of the agricultural impacts assessed in the original study. There are no agricultural advantages or disadvantages related to the amendment.
- No changes or additions to the mitigation measures for agricultural impacts that were recommended in the original assessment are required, and there are therefore no required changes to the EMPr.
- The agricultural impact of the amended project will therefore be identical to the impact that was assessed in the original specialist assessment report.

The agricultural impact ratings as reported above remain relevant without any change as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented

Given the above outcome, this Brandvalley Amendment is supported in terms of agricultural impacts.

5.6.2 BIODIVERSITY

Mr Simon Todd, an ecology specialist from 3Foxes Biodiversity Solutions, undertook the 2016 and 2018 ecology assessments. Subsequently, Trusted Partners was appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix E**.

The ecologist found that the proposed changes in technology/infrastructure in respect of capacity output, hub height, rotor diameter, blade length and maximum blade tip height will not result in any change in the nature of impacts, nor in the significance of direct, indirect, or cumulative impacts, of the project. As such, no further ecological assessment are required in this regard.

Given the above outcome, this Brandvalley Amendment is supported in terms of terrestrial ecology impacts.

5.6.3 AVIFAUNA

Dr. Tony Williams, an avifauna specialist from African Insights, undertook the 2016 and 2018 avifauna assessments. Subsequently, Birds and Bats Unlimited was appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix F**.

The most important findings during the reassessment of the Brandvalley site in 2021 was the discovery of a previously unrecorded Verreaux's Eagle nest in the north-western corner of the WEF, and the discovery of two previously inactive Black Harrier nests. The eagle nest was first located in May 2020 when the area was surveyed as a Control site for an adjacent wind farm (Birds & Bats Unlimited 2020).

The nesting cliff supported a well-protected eagle nest and, in May 2021, during the first drone flight a roosting adult was found perched 100-m from this nest. This indicates that the site is active and not merely a historical site.

Given that the reduction in the number of turbines (41%) is more than 3-fold higher than the increase in blade length (13%), we do not expect any increase in avian fatalities. Taller turbines and longer blades are generally associated with greater avian fatalities (Loss et al. 2013, Thaxter et al. 2020). UCT statisticians (Drs Birgit Erni and Francisco Cervantes Peralta) were requested to model the increase, using a combination of published data (kindly provide by Dr Scott Loss) and the limited South African data of fatalities from hub heights above 80-m (Ralston Paton et al. 2017).

The two graphs below indicate that (i) avian fatalities increase exponentially as hub height is increased (**Figure 5-1**); but (ii) the exponential increase flattens out when South African data are added to the USA graph (**Figure 5-2**).

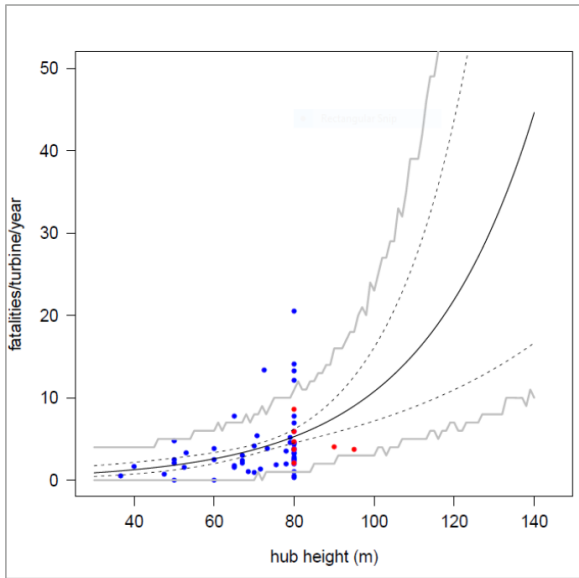


Figure 5-1: Prediction intervals from bootstrapping analyses (jagged line) based on North American hub height/fatality data (Loss et al. 2013 = blue data points) to determine if South African data (= red data points) fall within 95% confidence intervals. All 7 data points fall within the confidence intervals

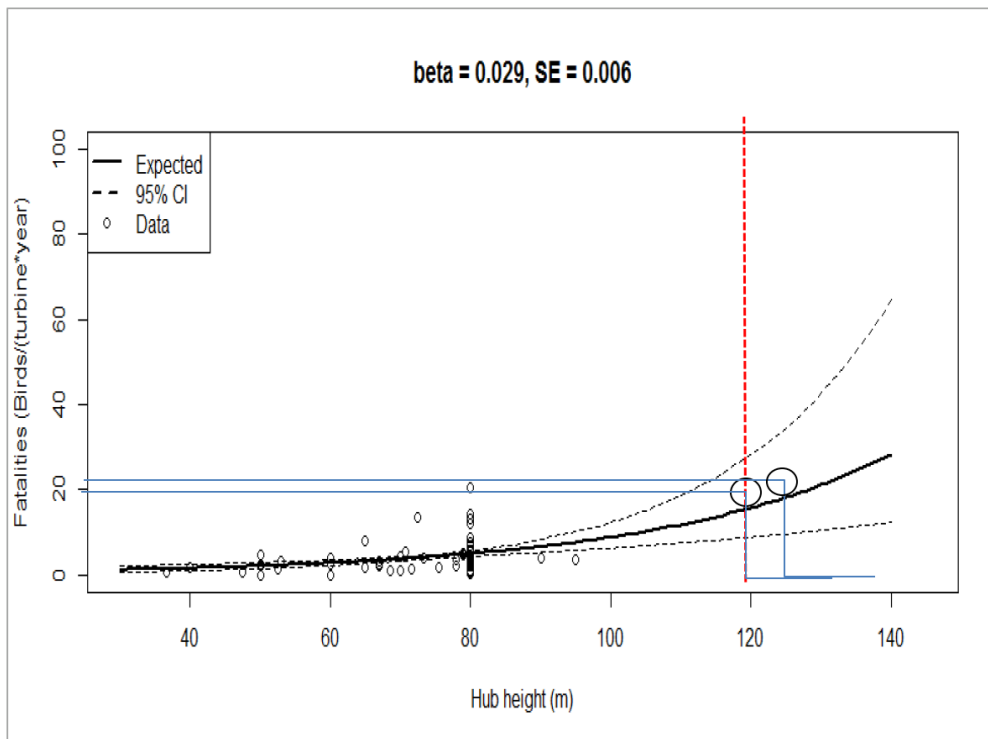


Figure 5-2: Modelled data combining avian fatalities from the USA (Loss et al. 2013) and from South Africa (Ralston-Paton et al. 2017) and their relation to hub height. The South African data (n = 7 farms) include two with hub heights of 90-m and 95-m. The combined data and 95% confidence limits predict that 16 birds (95% CI = 9, 28) will be killed on average per year for 120-m-high turbines and about 19 birds on average for 125-m-high turbines.

This means that, with a decrease in the number of turbines (from 58 to 34⁴), the following fatalities are expected:

- 58 turbines of 120-m hub height are predicated to kill 58 x 16 birds = 928 fatalities.
- 34 turbines of 125-m hub height are predicated to kill 34 x 19 birds = 661 fatalities.

Thus, the fewer, larger, turbines are expected to kill 267 fewer birds and, therefore, the Significance of the predicted impacts will be lower. The above calculation is simplified using 58 turbines of 120-m hub height. The actual number of fatalities will be lower and, thus, even fewer fatalities are predicted for the proposed authorised turbines.

The discoveries of the new Verreaux's Eagle nest as well as the newly active Black Harrier nests creates a challenge as the developers, without any previous knowledge of Red Data species, have already selected positions for turbines in this area.

- For the newly discovered Verreaux's Eagle nest the developer has already relocated all (eight) turbines due to fall within the recommended 3-km buffer. This will substantially reduce the impact within this area.
- For the Black Harrier nest, seven turbines are planned for the area within the 3-km buffer created around the central Black Harrier nest and given that the pair most often foraged to the north-west (November 2021 data) the turbines to the west may create impacts.

Birds & Bats Unlimited recommends that five turbines (B28, B29, B30, B31, B32) be repositioned away from the nest, if at all possible. It is note that the removal of these five turbines will simultaneously reduce the likelihood of Verreaux's Eagles impacting operational turbines here, as they appear to lie directly on the eagle flight lines captured in 2016.

However, in the event that these five turbines cannot be relocated, additional mitigation measures have been recommended which are outlined in section 6.3.

The overall appraisal is that the proposed amendments, will thus not alter the previous avifauna impacts as long as mitigation measures as detailed and required in the EMP_r (**Appendix O**) are implemented. Given the above outcome, the Brandvalley Amendment is supported in terms of avifauna impacts.

5.6.4 BATS

Mr Werner Marais, a bat specialist from Animalia, undertook the 2016 and 2018 bat assessment. Subsequently, the specialist has been appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix G**.

According to the verification assessment, the proposed turbine layout is in line with the bat sensitivity map as was applicable during the preconstruction guidelines that was in use during the EIA assessment and subsequent amendments. It also respects the current guideline criteria which requires turbine blade length to be outside the high sensitivity buffers, except for Turbines B20, B32, B49, B53, B58. It is noted that the larger rotor diameter (180m) effectively brings the impact zone of each turbine closer to all bat sensitivity buffers, and no part of the turbine (including the turbine blades) is allowed to intrude into high bat sensitivity buffers. The verification assessment recommends that Turbines B20, B32, B49, B53, B58 base centre points should be moved to be outside of the high bat sensitivity buffer in the event that a turbine with a 180m rotor diameter is utilised. All other turbines proposed can remain in the currently authorised positions.

A map of the bat sensitivity associated with the Brandvalley turbine layout WEF is included in **Figure 5-3**. It is important to note that the assessed final layout is acceptable from a bat sensitivity perspective if all conditions of the EA are complied with, an operational bat impact monitoring study is conducted for a minimum of 2 years, and Turbines B20, B32, B49, B53, B58 are relocated outside of the high bat sensitivity buffer (in the event that a turbine with a 180m rotor diameter is utilised).⁵

⁴ It is noted that the specialist input was undertaken on the reduction to 34 turbines, the final layout has subsequently been amended to include only 32 turbine positions

⁵ The new 32 Turbine layout has relocated the identified turbines outside of the high bat sensitivity buffer as requested

The overall appraisal is that the proposed amendments, will thus not alter the previous bat impacts as long as mitigation measures as detailed and required in the EMP (Appendix O) are implemented. Given the above outcome, the Brandvalley Amendment is supported in terms of bat impacts.

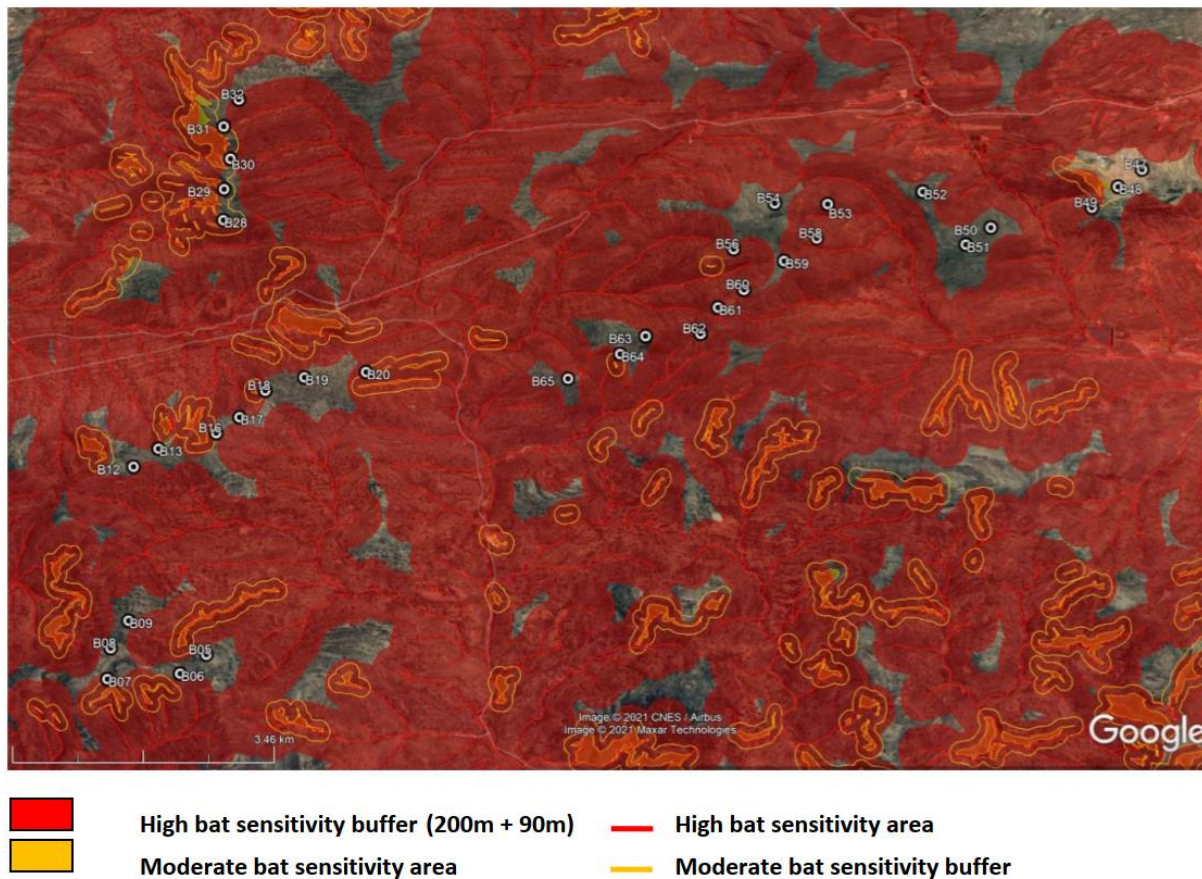


Figure 5-3: Bat sensitivity map of the Brandvalley site with proposed turbine layout (Animalia, 2021).

5.6.5 SURFACE WATER AND WETLAND

Dr Brian Colloty, an aquatic ecology specialist from Environmental and Scientific Assessment Services, undertook the 2016 and 2018 aquatic assessments. Subsequently, FEN Consulting (Pty) Ltd has been appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in Appendix H.

It can be concluded that the updated November 2021 layout of the proposed Brandvalley WEF does not pose any additional negative impacts to any watercourses, but rather will generate less impacts and pose less of a risk than the originally assessed layout to the watercourses of the region.

Only access road crossings as well as trenching of cabling within these crossings will directly impact on the watercourses. All other proposed infrastructure will be located outside of the delineated extent of the watercourses; however, some will be located within the 100 m/500 m regulated area. The proposed overhead collector powerlines will directly traverse watercourses, however, as far as feasible, all powerline support structures will be located at least 32 m from the delineated extent.

Due to the ecological sensitivity and importance of the watercourses, the upgrading of watercourse crossings and the upgrading of an extensive section of access road located adjacent to a channelled valley bottom wetland and the Groot River poses a moderate to low risk significance to the watercourses, with the application of the recommended mitigation measures. As a result, authorisation by means of a Water Use Licence Application

(WULA) in terms of Sections 21 (c) and (i) of the National Water Act, 1998 (Act No. 36 of 1998) must be obtained from the DWS for the proposed development prior to the commencement of any works. It can be noted that this application has already been submitted to the DWS.

The overall appraisal is that the proposed amendments, will thus not alter the previous surface water impacts as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented. Given the above outcome, this Brandvalley Amendment is supported in terms of aquatic impacts.

5.6.6 NOISE

Dr Brett Williams, a noise specialist from SafeTech, undertook the original 2016 and 2018 noise assessments. Subsequently, the specialist has been appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix I**.

The revised turbine specification (an increase in hub height and rotor diameter) necessitated the remodelling of noise impacts of the final layout (34 turbine locations)⁶. The 29 noise sensitive areas that were identified during the 2016 noise assessment were reused in the 2021 remodelling of the noise impact.

The wind turbine generator that was modelled is described in **Table 5-8**. This turbine was chosen to represent the worst-case scenario of a wind turbine up to 7.5 MW and 125m hub height. This model of turbine was chosen as it has published noise data in the WindPro catalogue of wind turbines. Furthermore, the noise data has been tested according to the methods described in IEC 61400-11 and are thus traceable. The modelled hub height (125m). A higher hub height of 180m rotor diameter could influence the results negatively (i.e. the noise could be heard at a further distance from the source), although given the low noise impact this is unlikely.

If a lower final hub height is chosen, the noise impacts could be reduced. Furthermore, if the final turbine that is chosen has a maximum sound power level that is similar or lower than the turbine modelled as part of the 2021 Specialist Statement, it can be assumed that the noise impacts will be similar or lower, irrespective of the turbine manufacturer.

Table 5-8: Turbine Specifications Used in the Noise Model

Manufacturer	ENERCON*
Type / Version	E-126
Rated Power	7.5MW
Rotor Diameter	180m
Tower	Tubular
Grid Connection	50 Hz
Maximum Sound Power Level	108.5dB
Hub Height	125m
*Sound Power Level dB(A) reference to 1pW from WindPro 3.2 Catalogue	
*The specifications of this turbine model were used as the data is available in WindPro. This does not bind the applicant to this specific model, and any turbine model with similar turbine specifications. An equal or lower maximum sound power level would be acceptable for the site.	

The sound power levels at lower and higher wind speeds as stated above were interpolated from the published data. **The actual sound power levels may thus be less than those stated when the final turbine is selected. The levels used in the re-modelling are thus a worst-case scenario.**

The masking effect of the wind noise will mitigate the impact. The results are based on NO wind noise masking, which in reality rarely occurs. The maximum noise rating limit as per SANS 10103:2008 is 35dB(A) at night and 45 dB(A) for day/night i.e., 24 hours. The cumulative effect of developing both the Brandvalley and Rietkloof Wind Energy Projects was modelled using the ENERCON E-126 7500. The maximum noise rating limit as per the DFFE EA (dated 23 November 2016 and DEA Ref: 14/12/16/3/3/2/89) is 45 dB(A).

⁶ It is noted that the remodelling was undertaken on 34 turbines, however the final layout will be 32 turbines

The modelling results (outlined in Table 5 of the Noise Specialist Statement included in **Appendix J**) indicate that the EA Limit of 45 dB(A) will **not be exceeded at any of the noise sensitive areas**. The impact rating of low (with and without mitigation) as included in the previous noise impact assessments remain valid.

The overall appraisal is that the proposed amendments, will thus not alter the previous noise impacts as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented. Given the above outcome, this Brandvalley Amendment is supported in terms of noise impacts.

5.6.7 VISUAL

Mr Michael Johnson, a visual specialist from EOH Coastal and Environmental Services, undertook the 2016 and 2018 visual assessments. Subsequently, SiVEST has been appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix J**.

The proposed new turbine specifications would allow for a hub height of 125m and a rotor diameter of 180m, resulting in a maximum height at the blade tip of 215m, between 10m and 25m higher than the height currently authorised. While an increase in the height of the turbines would increase the visibility of the WEF, a GIS-based visibility analysis has shown that, in this instance the increase in visibility would be marginal. Visual impacts resulting from the larger turbines would be greatest within a 1km to 2km radius, from where the increased height of the structure would be most noticeable. However, no potentially sensitive receptors were identified within 2km of a wind turbine placement, and the larger turbines as proposed are not expected to increase the impacts experienced by any of the identified receptors.

In addition, the change in the turbine specifications being proposed for the Brandvalley WEF has allowed for a reduction in the number of turbines required for the facility. Hence, a total of twenty-six (26) turbines have now been removed from the layout. This has in turn resulted in a slight reduction in the area from which the turbines will be visible (viewshed). In addition, with fewer turbines in evidence, there will be less visual clutter in the landscape and the cumulative impacts would be slightly reduced.

In light of this, and the limited human habitation and relatively remote location of the proposed Brandvalley WEF, the proposed changes in the turbine specifications are not expected to result in any increased visual impacts on the identified receptors, or affect any additional receptors in the surrounding area.

Although the previous VIA considered a number of other existing and proposed renewable energy and electrical infrastructure developments in close proximity to the Brandvalley WEF, it should be noted that there have been some changes in the status of some of these projects in the interim. Construction is either well under way or has been completed in respect of three of the identified projects, namely Roggeveld, Karuso and Soetwater WEFs. Hence the landscape has already undergone noticeable change.

In addition, Rietkloof and Brandvalley WEFs have both been awarded preferred bidder status and one new project in the broader area has been granted EA and awarded preferred bidder status. This project, namely Oya Energy Facility is a combined Solar PV and Fuel-based Generator Facility (FBGF), located some 15kms north-west of the proposed Brandvalley WEF. Although the different technologies are expected to have different impacts, all renewable energy developments and associated grid connection infrastructure are relevant as they contribute to the alteration of the visual character of the broader area. In this instance however, given the distance from the Brandvalley WEF and the hilly topography in the broader area which limits the visibility of the facility, it is not anticipated that this development will result in any significant increase in the cumulative impacts affecting the landscape or the visual receptors within the assessment area for the Brandvalley project.

Having considered the new information relating to renewable energy developments in the broader area, the overall significance of cumulative impacts remains as High Negative, with few mitigation measures available to reduce the impacts.

The overall appraisal is that the proposed amendments, will thus not alter the previous visual impacts as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented. Given the above outcome, this Brandvalley Amendment is supported in terms of visual impacts.

5.6.8 TRAFFIC AND TRANSPORT

Mr Hermanus Steyn, a traffic specialist from Aurecon South Africa, undertook the 2016 and 2018 traffic and transport assessments. Subsequently, JG Africa has been appointed to review the previous studies and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix K**

Due to the nature of the proposed amendments, a reassessment of the previous impacts was not deemed necessary. Therefore, the traffic and transport impact ratings previously reported remain relevant without any change as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented. As such, this Brandvalley Amendment is supported in terms of the traffic and transport impacts.

5.6.9 HERITAGE

Mrs Celeste Booth, a heritage specialist from Booth Heritage Consulting, undertook the 2016 and 2018 heritage assessments. Dr John Almond, a palaeontology specialist from Natura Viva, undertook the 2016 and 2018 palaeontology assessments. Subsequently, CTS Heritage has been appointed to review the previous studies (both heritage and palaeontological) and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix L**.

The specialist confirmed that there would be no change in the impact on the archaeological, palaeontological and other tangible heritage resources identified during the previous assessments conducted with regards to any of the proposed amendments.

As such the heritage impact ratings remain relevant without any change as long as mitigation measures as detailed and required in the EMPr (**Appendix O**) are implemented. Given the above outcome, this Brandvalley Amendment is supported in terms of heritage impacts.

5.6.10 SOCIO- ECONOMIC

Mr Tony Barbour, a social specialist from Tony Barbour Environmental Consulting and Research, undertook the 2016 and 2019 socio-economic impact assessments. Subsequently, the specialist has been appointed to review the previous studies (both heritage and palaeontological) and consider the effect of the proposed amendments on the previous impacts with reference to the final layout. The outcome of the assessment is outlined in a 2021 Specialist Statement included in **Appendix M**.

Based on a review of changes associated with the amendment there are no changes to the significance ratings reflected in the Brandvalley WEF SIA (2016). In this regard the:

- The reduction on the number of wind turbines from 58 to 32 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 (2016) for the Brandvalley WEF.
- The mitigation measures for the construction of the Brandvalley WEF listed in the SIA (2016) are appropriate for Part II Amendment. No additional management outcomes or mitigation measures in terms of social impacts are therefore required.

It can be concluded that the findings of the previous assessments therefore remain unchanged and valid subject to the implementation of the recommended mitigation measures and management actions contained in the EMPr (**Appendix O**).

Given the above outcome, this Brandvalley Amendment is supported in terms of socio-economic impacts.

5.6.11 GEOTECHNICAL INPUT

In September 2021 JG Afrika undertook a desk top geotechnical assessment for the proposed Brandvalley WEF in the Western Cape (**Appendix N**). The aim of the study was to assess the geological and geotechnical conditions across the study area, and to provide information on the topographical feasibility of the site for the proposed

project, as well identify the geological and geotechnical influences and/or constraints on the construction structures.

According to the study the slope gradient map indicates that the turbines, substation and the construction camp site are located on flat terrain. The majority of the internal access roads are characterised by flat to gentle slope along the lower lying valley areas and steep terrain characterises the slope sides.

It is however noted that based on previous investigations in the greater Roggeveld area, concave cave structures can be anticipated through erosion of the less-competent shale and mudstone bedrock beneath the hard sandstone beds when exposed to the elements. Competent, founding conditions can be anticipated in shallow, slightly weathered bedrock conditions, which will have to be assessed during the detailed investigation prior to construction.

Recommendations, in terms of foundations types for the various infrastructure associated with the project are included in report for consideration by the Developer. No fatal flaws from a preliminary geotechnical perspective were identified during the desktop study. The impact will be restricted to the removal and displacement of soil, boulders and bedrock. The potential impact of the development on the terrain and geological environment will be the increased potential for soil erosion, caused by construction activities and the removal of vegetation. Additionally, the aesthetic impact is considered significant due to the required extensive earthworks associated with the project to meet the required horizontal and vertical alignments and curvatures for roads., so the aesthetic impact is significant.

The anticipated impact of the proposed project will have negative effects from a geotechnical perspective and will require mitigation. The mitigation measures suggested in the study have been incorporated into this EMPr.

Areas with steep slope inclinations are not recommended for the energy developments due to the earthworks requirements and the potential need for advanced foundations. The proposed site is considered suitable for the proposed development, provided that the recommendations presented in the geotechnical desktop study report are adhered to and which need to be verified by more detailed geotechnical investigations during detailed design.

It can be concluded that the findings of the previous assessments in terms of geology, therefore remain unchanged and valid subject to the implementation of the recommended mitigation measures and management actions contained in the EMPr (**Appendix O**). Given the above outcome, this Brandvalley Amendment is supported in terms of socio-economic impacts.

5.7 2021 SENSITIVITY MAP

The overall environmental sensitivity of the site is show in **Figure 5-4** and **Figure 5-5** below based on the final layout.

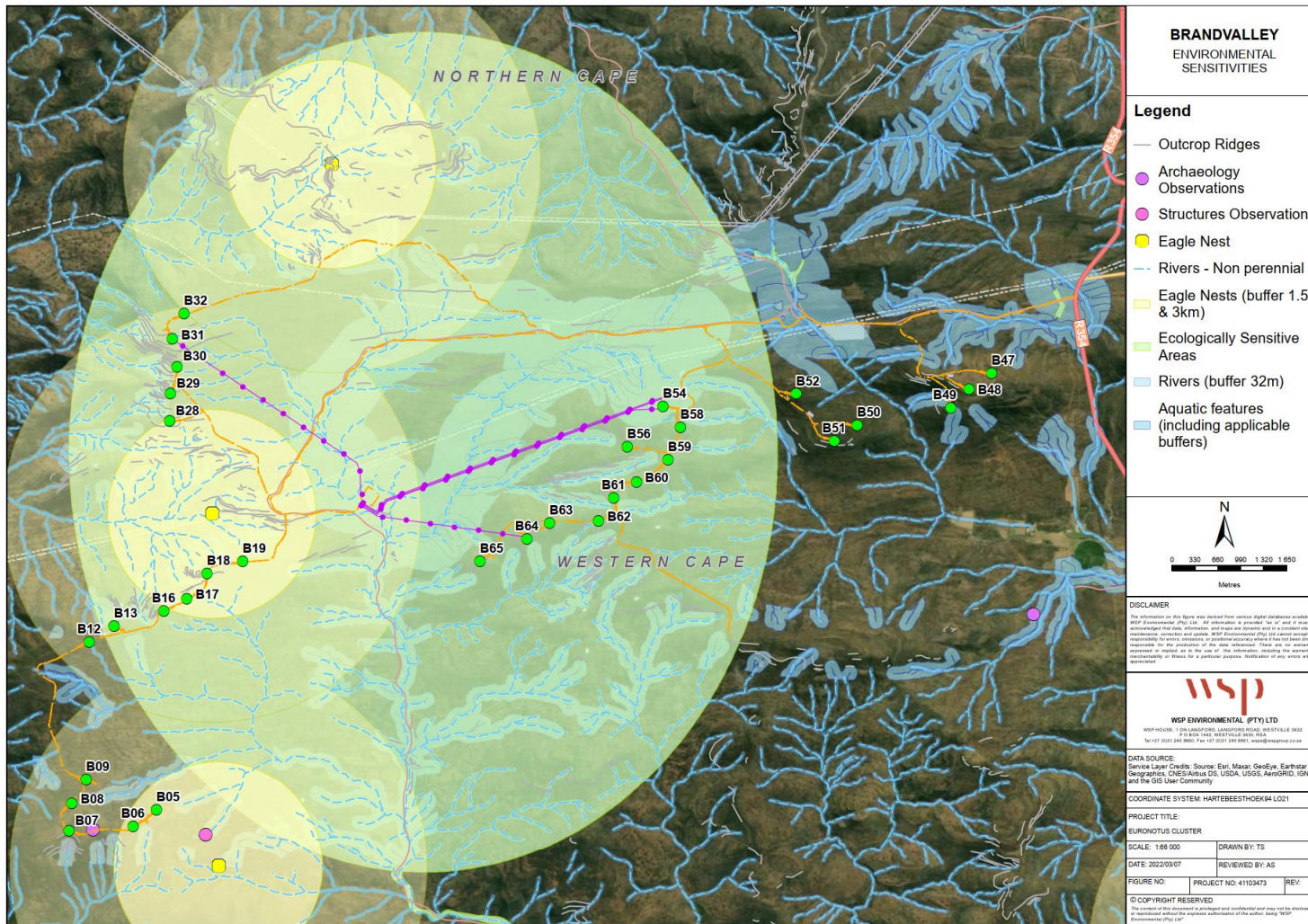


Figure 5-4: Environmental sensitivity map overlay over the Final Brandvalley WEF Layout

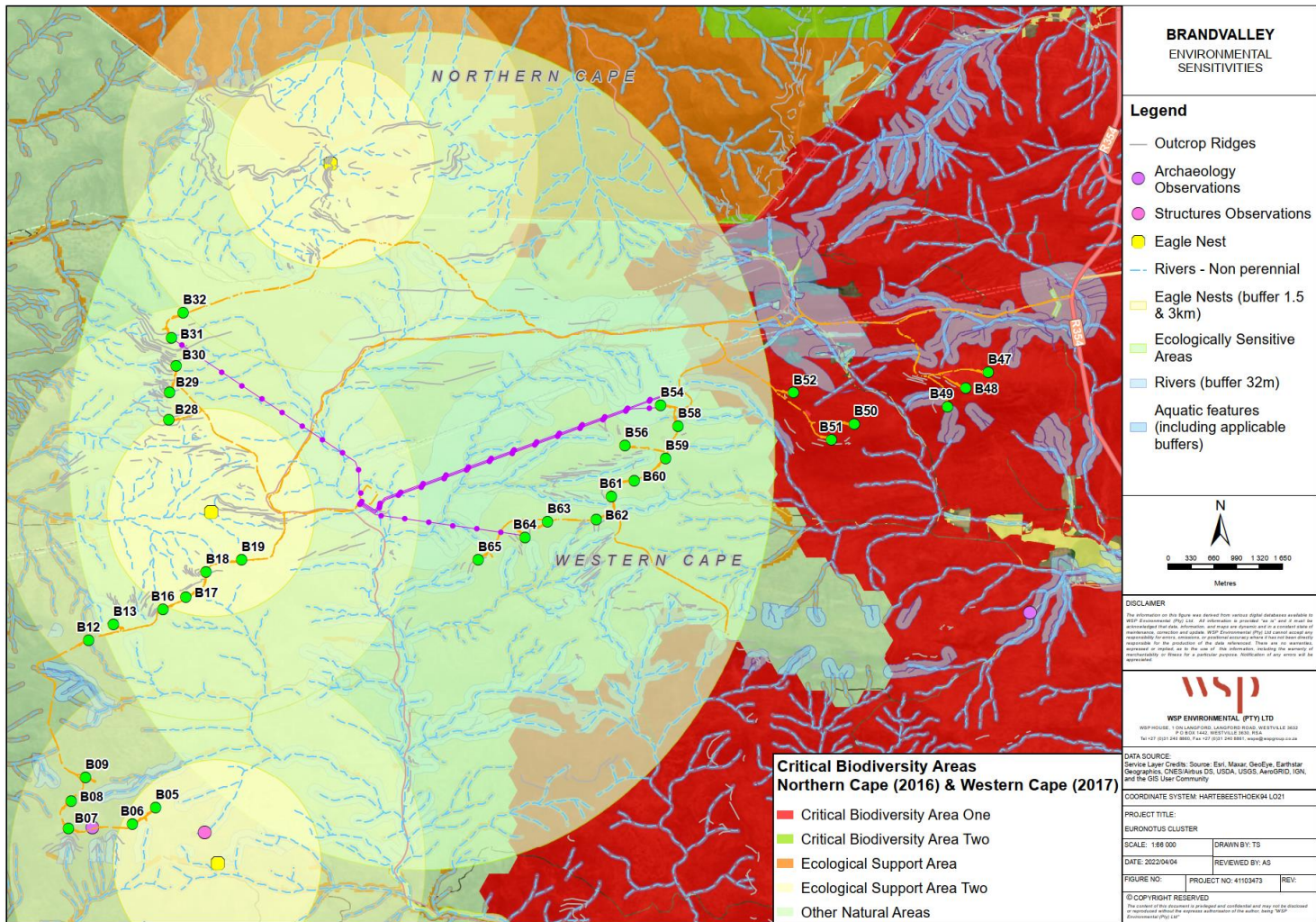


Figure 5-5: Environmental sensitivity map overlay over the Final Brandvalley WEF Layout (inclusive of CBAs)

6 ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr was originally compiled by EOH as part of the 2016 EIA. Due to the fact that no additional environmental impacts were identified during the 2018 amendment process, the original 2016 EMPr did not require any amendment.

In line with Condition 16 of the EA, the previous EMPr was not approved and required amendment. The EMPr has been amended, as required, taking the final layout and relevant specialist walkdowns into consideration and is appended to this report (**Appendix O**) for approval.

It must be noted that the outline below takes into account the limited additional mitigation measures required as a result of the proposed amendments as well as the additional mitigation measures proposed as a result of the final layout.

6.1 AGRICULTURE, SOIL AND LAND USE CAPACITY ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist. The existing mitigation measures included within the EMPr remain valid. No changes have therefore been made to the EMPr as a result of the Agriculture, Soil and Land Use 2021 findings.

6.2 BIODIVERSITY ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist with regards to the proposed amendments.

Several Species of Conservation Concern (SCC), in addition to those identified during the initial ecological assessment, were identified during the 2021 walkdown. These species are classified as either Critically rare (CR), Vulnerable (VU), Near Threatened (NT), Rare (R), or Endangered (E). The identified floral species of conservation concern include *Antimima androsacea* (CR), *Antimima loganii* (VU), *Brunsvigia josephinae* (VU), *Euryops sulcatus* (VU), *Geissorhiza karooica* (NT), *Indigofera hantamensis* (R), *Lotononis venosa* (E), *Romulea eburne* (VU), *Romulea hallii* (VU), *Romulea syringodeoflora* (NT).

Sensitive areas identified either during the initial ecological assessment and/or observed during the 2021 walkdown include the following (a summary of which is detailed in Table 9 of the Terrestrial Ecology & Biodiversity Walkdown Report (included in Appendix I of the EMPr – **Appendix O**):

- Rocky Outcrops and Ridges on slopes and mountain peaks;
- Rivers, seeps, wetlands and pans; and
- Sub-population of flagged species of conservation concern.

The applicable recommendations made based on the findings of the walkdown, have been included the amended EMPr (**Appendix O**). These recommendations include *inter alia*:

- A flora and fauna search and rescue (relocation) must be undertaken before commencement of vegetation clearing. A more comprehensive list of species for which permits will be required is provided in Appendix 1: Plant Species of Conservation Concern (Red listed) and Appendix 2: Flora Protected in Terms of Provincial of the Ordinance(s) of the Ecology & Biodiversity Walkdown Report (included in Appendix I of the EMPr)

- Turbines 13, 28, 29, 49 & 65 are located adjacent to outcrops. The outcrops should be avoided as far as possible during final surveying and pegging out.⁷
- A water transfer canal traverses proposed site camp and as such the site camp may be prone to seasonal flooding.⁸
- The north-western access road passes multiple times through and directly adjacent to an extensive and well-defined watercourse with seep areas. The access road should be realigned to minimise impact to watercourse and in shall not traverse seep areas.⁹
- The western access road passes through and along a well-defined watercourse with large *Brunsvigia josephinae* population present within the riparian vegetation and directly adjacent to the watercourse. The access road should be aligned as far from watercourse as possible and should not extend closer to watercourse than inner side of the existing access track.
- The species *Antimima androsacea* was found to occur at low densities throughout the broader project area.

6.3 AVIFAUNA ADDITIONAL OR AMENDED MITIGATION MEASURES

The final layout takes cognisance of the previous avian assessments as well as the results of the additional pre-construction monitoring. Eight turbine positions, have been removed from the original layout, to reduce environmental impacts and risk to Verreaux’s Eagles. Furthermore, this will avoid construction of significant lengths of site roads adjacent to watercourses.

To mitigate potential impacts on the Black Harrier, it is recommended that in the event the client has the opportunity to drop additional turbines from the layout in the future, that they should consider turbines B28, B29, B30, B31 and B32. If this compromises the energy yield of the wind farm, and these five turbines cannot be relocated, the following approach and mitigation hierarchy is recommended for this string of turbines:

- Erect them with striped-blade mitigation already installed (Appendix 1); and
- Automatic shut-down on demand or curtailment at certain times of day or seasons when flights are numerous.
- If these mitigations are not possible then the mitigation hierarchy suggests a suitable set-aside to help safeguard and replace the eagles that may be killed. This should be undertaken as a last resort given that the first mitigations are considered more effective.

In an effort to further mitigate any impacts to priority birds, the avian re-assessment recommends the following:

- Erecting the turbines with red-, or black-blade, mitigation (painted before installation) to increase turbine visibility for the eagles (May et al. 2020).
- The advantages of this mitigation are that:
 - raptors see best in colour;
 - ‘signal red’ is already approved by South African Civil Aviation for towers and other tall structures;
 - blade manufacturers such as Siemens and Vestas already produce painted blades in Europe; and
 - this mitigation has no running costs¹⁰.
- In addition, automatic shut-down on demand be installed with systems such as DT-Bird and Bioseco.

⁷ These turbines have been relocated where applicable in terms of buildability

⁸ This is no longer applicable as the proposed construction camp will no longer be utilised. The existing Roggeveld WEF construction camp will be utilised for the Brandvalley WEF project.

⁹ The access roads as per the provided layout are final and thus no further movements can be accommodated. However, a water use licence application has been applied for the crossing in question

¹⁰ www.engineeringnews.co.za/article/opinion-black-blade-mitigation-a-new-and-exciting-mitigation-for-wind-turbines-to-reduce-impacts-to-birds-of-prey-2020-10-09/

- The last accepted way of mitigating is to select a set-aside area to compensate for the eagles lost, by providing a safe area for breeding eagles near the wind farm, that cannot later be developed.

Mitigations during the construction phase should include avoiding the construction of roads or powerlines within 500-m of active nests of Red Data species during the early breeding season. For Verreux's Eagles this is May-July and again in August-September when small vulnerable nestlings are present (Simmons 2005). For the Endangered Black Harriers found breeding on site, construction should be avoided in August-September-October.

Given the likelihood of avian fatalities the following additional mitigation measures are recommended:

- an additional 3-months of pre-construction monitoring be undertaken around the new eagle and harrier nests to determine their success or otherwise;
- all mitigations detailed above be implemented; and
- construction-phase and post-construction phase monitoring be undertaken for a minimum of 24 months to inform the possible, and actual, impacts to the avian community.

The applicable recommendations made based on the findings of the walkdown, have been included the amended EMPr (**Appendix O**).

6.4 BAT ADDITIONAL OR AMENDED MITIGATION MEASURES

The assessed final layout is acceptable from a bat sensitivity perspective if all conditions of the EA are complied with, an operational bat impact monitoring study is conducted for a minimum of 2 years, and Turbines B20, B32, B49, B53 and B58 are relocated outside of the high bat sensitivity buffer (in the event that a turbine with a 180m rotor diameter is utilised).

This additional measure has been incorporated into the updated EMPr (**Appendix O**).

6.5 SURFACE WATER AND WETLAND ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist with regards to the proposed amendments.

The freshwater ecological assessment undertaken as part of the water use authorisation process indicated that a large drainage network of ephemeral watercourses, associated with the Groot, Roggeveld, Muishond and Wilgebos Rivers were identified as well as various Channelled Valley Bottom Wetlands. Most of these watercourses are considered to be in a largely natural to moderately modified ecological condition and of high ecological importance and sensitivity.

Only access road crossings as well as trenching of cabling within these crossings will directly impact on the watercourses. All other proposed infrastructure will be located outside of the delineated extent of the watercourses; however, some will be located within the 100 m/500 m regulated area. The proposed overhead collector powerlines will directly traverse watercourses, however, as far as feasible, all powerline support structures will be located at least 32 m from the delineated extent.

Due to the ecological sensitivity and importance of the watercourses, the upgrading of watercourse crossings and the upgrading of an extensive section of access road located adjacent to a channelled valley bottom wetland and the Groot River poses a moderate to low risk significance to the watercourses, with the application of the recommended mitigation measures. As a result, authorisation by means of a Water Use Licence Application (WULA) in terms of Sections 21 (c) and (i) of the National Water Act, 1998 (Act No. 36 of 1998) must be obtained from the DWS for the proposed development prior to the commencement of any works. It can be noted that this application has already been submitted to the DWS.

Based on the findings of the assessment, no fatal flaws from a freshwater resource management point of view were identified. With adherence to cogent, well-conceived and ecologically sensitive construction plans and the implementation of the mitigation measures provided in freshwater ecological assessment report (**Appendix H**) and provided that general good construction practice is adhered to, from a freshwater conservation perspective the proposed development is considered acceptable.

The mitigation measures recommended in **Appendix H** have been incorporated into the updated EMPr (**Appendix O**).

6.6 NOISE ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist. The mitigation measures included within the EMPr remain valid. No changes have therefore been made to the EMPr as a result of the Noise Report 2021 findings.

6.7 VISUAL ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist. The mitigation measures included within the EMPr remain valid. No changes have therefore been made to the EMPr as a result of the 2021 findings.

6.8 TRAFFIC AND TRANSPORT ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist. The mitigation measures included within the EMPr remain valid.

A Traffic Management Plan (TMP) was however developed and has been included as Appendix C of the updated EMPr (**Appendix O**) and in **Appendix K** of this report.

6.9 HERITAGE AND PALAEOLOGICAL ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialists with regards to the proposed amendments.

The mitigation measures included within the EMPr remain valid. However, recommendations made based on the findings of the walkdown, have been included the amended EMPr (**Appendix O**). These recommendations include:

- Pre-construction survey by a professional archaeologist and paleontologist of the proposed footings for the 33kV overhead powerline pylons.

6.10 SOCIO- ECONOMIC ADDITIONAL OR AMENDED MITIGATION MEASURES

No additional or amended mitigation measures have been recommended by the specialist with regards to the proposed amendments. The mitigation measures included within the EMPr remain valid.

A number of interviewees highlighted the positive impacts that the ongoing construction of WEFs in the Komsberg REDZ have on the local economy in the area. These include the benefits that the construction activities have on the local hospitality, retail and services sector. It is noted that early, effective and on-going communication was highlighted as a key issue that needs to be implemented and/or addressed to manage impacts associated with the WEFs. Other impacts highlighted by the landowners affected by existing WEFs were attributed to extensive land clearance, damage to farm infrastructure such as gates and a concern on crime and security (although not directly linked to the WEFs). Other issues of concern included potential increases of Sexually Transmitted Diseases, unplanned pregnancies, reduced availability of accommodation for visitors and limited benefits to the local farming community. Impact on sense of place and visual impacts were also highlighted as potential issues for consideration and subsequent mitigation.

Based on the above, a number of recommendations have been made for inclusion in the planning and implementation of construction related activities, to minimise social impacts, impact footprint and avoid unnecessary disturbances. These measures have been incorporated into the EMPr (**Appendix O**) and include:

- A Grievance Mechanism is included in Section 15 of the updated EMPr (**Appendix O**) and should be implemented as part of the Stakeholder Engagement Plan.
- Stakeholder engagement processes should be put in place to make sure that all interested and affected party have buy in in the process which will be designed and followed for employment and local procurement opportunities.
- Early, clear, and effective communication with affected and adjacent landowners prior to and throughout the construction phase is critical. A detailed Stakeholder Engagement Plan should be developed prior to the implementation of the construction phase and should be developed in conjunction with the affected landowners and key stakeholders, such as local landowners, the local farming association and municipality.
- A Monitoring Committee (MC) should be established as part of the Stakeholder Engagement Plan. The MC should be made up of representatives from the affected landowners and key stakeholders, such as the local farmers, the local farming association, municipality and proponent.
- Procedures and timeframes should be identified for reporting and addressing incidents, such as damage to gates and fences etc. Based on the comments from the affected landowners, it would appear that the role played by the ECO involved in the existing projects can be improved. The ECO and CLP should liaise closely with each other throughout the construction phase.
- A Community Liaison Person (CLP) should be appointed by the proponent at the outset of the construction phase. Ideally this person should be from the local community and his or her role should be to ensure that the Stakeholder Engagement Plan is implemented on the ground. The CLP should be involved in the development of the Stakeholder Engagement Plan and not merely appointed to implement the Plan. In this way he or she will have met with and engaged with the affected landowners and key stakeholders prior to the start of the construction phase and will have a good understanding of farming activities in the area and how these may be impacted by the construction related activities.
- The approach to responding to and addressing complaints or concerns should be sympathetic, open, transparent, and constructive. This would go a long way in maintaining good relations. In this regard the Stakeholder Engagement Plan should be informed by a set of engagement principles that support this approach.
- Contractor training must include making workers aware of the consequences of their actions and the impact that they may have on farming activities. A Contractor Training programme should be developed and implemented prior to the commencement of the construction phase. The programme should inform contract workers of the requirements of the Stakeholder Engagement Plan and Environmental Management Plan and their roles and responsibilities in terms of these plans.

6.11 GEOTECHNICAL ADDITIONAL OR AMENDED MITIGATION MEASURES

The mitigation measures recommended by the geotechnical specialist were noted to already be included in the EMPr, however, any recommendations over and above those already included have been added in the EMPr as recommended. These include:

- Construction of temporary berms and drainage channels to divert surface water; and
- Minimize earthworks and fills.

These measures have been incorporated into the EMPr (**Appendix O**).

6.12 CONCLUSION

The 2016 EMPr has been updated as required in Condition 16 of the EA. The updates are based on the authorised infrastructure, proposed amendments and 2021 specialist recommendation and is appended to this report (**Appendix O**). Please note that this is the **final EMPs which is being submitted to DFFE for approval in line with Condition 16 of the EA.**

7 PUBLIC PARTICIPATION

7.1 PURPOSE OF PUBLIC PARTICIPATION PROCESS

Public participation is understood to be a series of inclusive and culturally appropriate interactions aimed at providing I&APs with opportunities to express their views, so that these can be considered and incorporated into the decision-making process, if required. Effective public participation requires the prior disclosure of relevant and adequate project information to enable I&APs to understand the risks, impacts, and opportunities of the project.

The following was undertaken as part of the Public Participation Process for the amendment:

Basic reasons why the involve public should get involved in the Amendment Process:

- The environment is held in public trust, therefore use of environmental resources is everyone's concern – in line with the Constitution.
 - Public participation is proper, fair conduct in public decision-making activities. Focus on vulnerable and disadvantaged person and offer equitable participation due to historical issues.
 - A way to ensure that projects meet the citizens' needs and are suitable to the affected public.
 - Finally, the final decision is informed when local knowledge and values are included and when expert knowledge is publicly examined.
-

7.1.1 OBJECTIVES

The objectives of the public participation process can be summarised as follows:

- Identify relevant individuals, organisations and communities who may be interested in or affected by the authorised project;
 - Clearly outline the scope of the project, including the scale and nature of the existing and proposed activities;
 - Identify viable project alternatives that will assist the relevant authorities in making an informed decision;
 - Identify shortcomings and gaps in existing information;
 - Identify key concerns, raised by I&APs;
 - Highlight the potential for environmental impacts, whether positive or negative; and
 - To inform and provide the public with information and an understanding of the project, issues and solutions.
-

7.1.2 WHAT IS AN INTERESTED AND AFFECTED PARTY?

An I&AP is defined as any person, group of persons or organisations interested in or affected by an activity, and any organ of state that may have jurisdiction over any aspect of the activity.

RIGHTS, ROLES AND RESPONSIBILITIES OF THE I&AP

In terms of Chapter 6, specifically Section 43(1) of the NEMA EIA Regulations 2014, as amended registered I&APs have the right to bring to the attention of the CA any issues that they believe may be of significance to the consideration of the application. The rights of I&AP are qualified by certain obligations, namely:

- I&APs must ensure that their comments are submitted within the timeframes that have been approved by the Department of Environmental Affairs (DEA), or within any extension of a timeframe agreed by the applicant, Environmental Assessment Practitioner (EAP) or CA; and
- Disclose to the EAP any direct business, financial, personal or other interest that they might have in the approval or refusal of the application.

In order to participate effectively, I&APs should:

- Become involved in the process as early as possible;
 - Register as a I&AP;
 - Advise the EAP of other I&APs who should be consulted;
 - Follow the process once it has been concluded;
 - Read the material provided and actively seek to understand the issues involved;
 - Give timeous responses to correspondence;
 - Be respectful and courteous towards other I&APs;
 - Refrain from making subjective, unfounded or ill-informed statements; and
 - Recognise that the process is confined to issues that are directly relevant to the application.
-

7.2 COVID-19 SCENARIO

Given the spread of the COVID-19 virus to various parts of the world, including to South Africa, on 15 March 2020, in terms of Section 27 of the Disaster Management Act (Act 57 of 2002) (DMA), President Cyril Ramaphosa declared a national state of disaster in South Africa. From 01 May 2020 the Alert Level has been adjusted according to the risk-adjusted strategy, as and when required reflecting the level of risk associated with Covid-19 infections throughout the country.

Due to the restrictions imposed by the various Alert Levels, restrictions were imposed on public participation associated with COVID-19 on 31 March 2020, which meant that the PPP required by Regulation 41 of the EIA Regulations (2014, as amended) could not reasonably be adhered to. On 05 June 2020, new Directions were issued by the Minister of Forestry, Fisheries and the Environment, “*Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 relating to National Environmental Management Permits and Licences*”, in respect of the undertaking and administration of EIA and related processes during Lockdown Alert Level 3. The Directions of 05 June 2020 repealed the Directions of 31 March 2020. On 09 September 2020, new Directions were again issued by the Minister of Forestry, Fisheries and the Environment in respect of the undertaking and administration of EIA and related processes during Lockdown Alert Level 2 and lower.

It is now possible to proceed with public participation in accordance with the “*Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 relating to National Environmental Management Permits and Licences*” (GN 650) published on 05 June 2020 and the “*Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 relating to National Environmental Management Permits and Licences*” (GN 970) published on 09 September 2020.

Annexure 2 of the Directions require that “*At all times it must be ensured that reasonable opportunity is provided for public participation and that all administrative actions are reasonable. While the COVID-19 pandemic is a unique circumstance, the specific circumstances in each case must be considered in order to determine what will be reasonable. If in the circumstances of a particular case reasonable alternative methods to give notice to potential interested and affected parties are available, then the relevant competent authority can be approached for an agreement in this regard as provided for in regulation 41(2)(e) of the Environmental Impact Assessment Regulations.*”

In line with the Directions, a public participation plan was compiled and presented to DFFE for approval at the outset of the assessment process (as detailed in Section 7.3). Due to the risks associated with COVID-19, as far as possible, the focus of the PPP has shifted from physical public engagements to digital and electronic communication (including e-mail and websites). No provision has been made for public or focus group meetings due to current COVID-19 restrictions as well as past experience with projects of this nature. Should significant interest be obtained in this Project, a public meeting will be included as part of the PPP, should COVID-19 protocols and regulations permit.

7.3 APPROVED PUBLIC PARTICIPATION PLAN

As part of the pre-application consultation meeting held with DFFE on 08 October 2021, the proposed plan for public participation was discussed. A public participation plan was subsequently submitted to DFFE, along with the meeting minutes, for approval on **16 November 2021**. The meeting minutes and public participation plan were approved by DFFE on **19 November 2021**. **Table 7-1** below outlines the approved Public Participation Plan for the Part 2 Amendment Process for the Brandvalley WEF.

Table 7-1: Approved Public Participation Plan

SUMMARY OF PPP REQUIREMENT (GNR 326 OF EIA REGULATIONS)	PLAN/ACTIVITIES
<p>41(2) The person conducting a PPP must give notice to all potential I&APs by-</p> <p>(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of—</p> <ul style="list-style-type: none"> (i) the site where the activity to which the application or proposed application relates is or is to be undertaken; and (ii) any alternative site; 	<ul style="list-style-type: none"> — Placement of six (6) site notices (in English and Afrikaans) at appropriate locations on site and in the surrounding area. — This will include the boundary/access road to the WEFs, as well as additional public places within the project area, such as grocery stores, municipalities, and/or local public libraries.
<p>(b) giving written notice, in any of the manners provided for in section 47D of the Act, to—</p> <ul style="list-style-type: none"> (i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken; (ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken; (iii) the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area; (iv) the municipality which has jurisdiction in the area; (v) any organ of state having jurisdiction in respect of any aspect of the activity; and (vi) any other party as required by the competent authority; 	<ul style="list-style-type: none"> — Written notification (in English and Afrikaans) will be sent to owners and occupiers on or adjacent to the WEFs, municipality ward councillors, local and district municipalities, and relevant state departments. — General communication (written notification) with stakeholders (public and government departments/authorities) throughout the Part 2 and EMPr amendment processes. — Stakeholders will be added to the database on request as the project progresses.
<p>(c) placing an advertisement in—</p> <ul style="list-style-type: none"> (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; 	<p>An advert will be published in one provincial (Cape Times) and one local newspaper (Die Courier) (in English and Afrikaans), formally announcing the commencement of the Part 2 Amendment Applications and associated EMPr amendment processes, requesting stakeholders to register their interest in the project, and informing them of the release of the Draft Part 2 Amendment Reports and amended EMPrs for public review and comment.</p>

**SUMMARY OF PPP REQUIREMENT
(GNR 326 OF EIA REGULATIONS)**

PLAN/ACTIVITIES

<p>(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 district municipality in which it is or will be undertaken</p>	
<p>(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.</p>	<ul style="list-style-type: none"> — The existing databases for the Rietkloof WEF and Brandvalley WEF projects will be verified and updated for the purposes of the Part 2 Amendment and EMPr amendment processes. As part of the verification process, existing I&APs will be contacted telephonically and asked to confirm their preferred method of communication. The POPI act will also be put into consideration to confirm all the relevant POPI requirements for the database. — The relevant ward councillors will be contacted to ensure that community-based organisations are aware of the Project and can assist in distributing and communicating relevant Project information to community members. — No public meetings or focus group discussions have been provided for.
<p>(42) A proponent or applicant must ensure the opening and maintenance of a register of interested and affected parties and submit such a register to the competent authority,</p>	<ul style="list-style-type: none"> — Stakeholders with a potential interest in the Project will be identified at the outset of the Project. As noted above, the existing databases will be verified and updated for the purposes of the Part 2 Amendment and EMPr amendment processes. The database will also be updated to include landowners and other stakeholders relevant to the Projects. — All stakeholders identified will be registered on the project stakeholder database, and the database will be maintained throughout the BA and EMPr amendment processes.
<p>(43) & (44) Registered Interested and affected parties (I&APs) must be given 30 days to comment on the draft Report</p>	<p>The Draft Amendment Reports and amended EMPrs will be made available to all stakeholders for a 30-day comment period. Strict adherence to all COVID-19 protocols and regulations as well as best practice measures will be ensured throughout PPP. As a result, the Draft BAR and amended EMPrs will be made available to stakeholders as follows:</p> <ul style="list-style-type: none"> — Matjiesfontein Community Hall; — Laingsburg Public Library; — From WSP on request; and — Online on the WSP website <p>At the time of disclosure, WSP will confirm the relevant COVID-19 protocols and regulations in place and <i>will confirm with the local libraries as to whether they are open and able to accept documents for public review prior to placement.</i></p> <p>A Comment and Response Report (CRR) will be generated for inclusion in Final Amendment Reports and amended EMPrs for consideration by the competent authority.</p>

7.4 PUBLIC PARTICIPATION TO DATE

7.4.1 PRE-APPLICATION CONSULTATION

A pre-application meeting was held on 08 October 2021 with the DFFE in order to discuss the proposed Project. The minutes of this meeting as well as the proof of the approval of the Public Participation Plan are included in **Appendix P-1**.

7.4.2 IDENTIFICATION OF KEY STAKEHOLDERS

Section 41 of the EIA Regulations (2014, as amended) states that written notices must be given to identified stakeholders as outlined in **Table 7-2**.

Relevant authorities (Organs of State) have been automatically registered as I&APs. In accordance with the EIA Regulations, 2014 (as amended), all other persons must request in writing to be placed on the register, submit written comments, or attend meetings to be registered as stakeholders, and included in future communication regarding the Project.

Table 7-2: Interested and Affected Parties Table

NEMA REQUIREMENT	DISCUSSION
<i>(i) the owner or person in control of that land if the applicant is not the owner or person in control of the land</i>	The project activity is located on 12 portions of privately-owned land. All 12 the landowners have been included on the I&AP database.
<i>(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</i>	All landowners have been contacted to confirm whether there are any occupiers on the land portions. Occupiers have been included on the database (Appendix P-2).
<i>(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</i>	Adjacent landowner and occupier details were collected, and the landowners were notified via a project notification letter via email and/or SMS notification.
<i>(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</i>	Ward Councillors have been included on the I&AP database, including: <ul style="list-style-type: none">– Ward 1 (Laingsburg Local Municipality);– Ward 4 and 12 (Witzenberg Local Municipality); and– Ward 3 (Karoo Hoogland Local Municipality).
<i>(v) the municipality which has jurisdiction in the area</i>	The Laingsburg, Witzenburg, and Karoo Hoogland Local Municipalities which are located in the Central Karoo, Winelands and Namakwa District Municipalities have been included on the I&AP database.
<i>(vi) any organ of state having jurisdiction in respect of any aspect of the activity</i>	The DFFE has been identified as the competent authority. The Western Cape Department Environmental Affairs and Development Planning (DEA&DP) and Northern Cape Department of Environment and Nature Conservation (NC DENC) are included on the I&AP database as a commenting authorities.

NEMA REQUIREMENT	DISCUSSION
(vii) any other party as required by the competent authority.	<p>All tiers of government, namely, national, provincial, local government and parastatals have been included on the I&AP database. Inclusive of:</p> <ul style="list-style-type: none"> – Department of Energy – Department of Rural Development and Land Reform – Department of Agriculture, Forestry and Fisheries – Department of Water and Sanitation – Department of Mineral Resources – Department of Public Works – DFFE: Biodiversity and Conservation – Department of Transport and Public Works – Breede-Gouritz Catchment Management Agency – CapeNature – Western Cape Department of Environmental Affairs and Development Planning – Square Kilometre Array South Africa – Eskom – South African Civil Aviation Authority – Air Traffic Navigation Services – Astronomy Management Authority – South African Astronomical Observatory – Laingsburg Local Municipality – Witzenburg Local Municipality – Karoo Hoogland Local Municipality – Central Karoo District Municipality – Winelands District Municipality – Namakwa District Municipality – Heritage Western Cape – South African Heritage Resources Association

Appendix P-2 provides a list of stakeholders registered on the Project database. The stakeholder database will be updated throughout the Amendment process.

7.4.3 NOTIFICATION PROCEDURES

DIRECT NOTIFICATION

Notification of the proposed Amendment Application will be issued to potential Stakeholders, via direct correspondence (i.e. site notices and e-mail) on **19 May 2022**. The notification letter to be circulated is included in **Appendix P-3** of this report. Proof of notification will be included in the Final Assessment Report (FAR).

ADVERTISEMENT

Notification of the proposed Project was issued to the general public via an advertisement on **19 May** and **20 May 2022**. The purpose of the advertisement was to notify the general public of the proposed application and provide an opportunity to register on the Project database and provide input into the process. A copy of the advertisement is included as **Appendix P-4**. The advertisement publication details are provided in **Table 7-3**. Proof of placement of the advertisements will be included in the FAR.

Table 7-3: Dates on which the advert was published

NEWSPAPER	PUBLICATION DATE
The Cape Times	19 May 2022
Die Courier	20 May 2022

SITE NOTICES

In accordance with GNR 326 Section 41(2)(a-b) site notices were developed (see **Appendix P-5**) and placed at four (4) strategic points along the boundary of the WEF that are accessible by the public, as well as in public places within the town of Laingsburg and Matjiesfontein. Site notices were placed on site on **19 May 2022**.

Proof of display and the mapped locations of the site notice placements along the route will be included in the Final BAR.

AVAILABILITY OF THE DRAFT ASSESSMENT REPORT

The DAR will be placed on public review for a period of 30 days from **19 May 2022** to **21 June 2022**, at the venues as follows:

- Hard copy: Laingsburg library (Van Riebeeck street, Laingsburg);
- Hard copy: Matjiesfontein community centre (Matjiesfontein); and
- Electronic Version: WSP’s website - to be accessed by the public via the following link:
<https://www.wsp.com/en-ZA/services/public-documents>

7.4.4 STAKEHOLDER REGISTRATION

All stakeholders that either call in or send written correspondence, such as emails, fax, or post, to the EAP will be added to the database and their comments and/or queries will be responded to.

7.5 COMMENTS RECEIVED

Comments received from registered stakeholders will be captured and responded to within the comments and response report, which will form part of the FAR.

8 ENVIRONMENTAL IMPACT STATEMENT

This DAR is submitted in support of the application for amendment of the EA issued to Brandvalley for the operation of the 140MW WEF near Matjiesfontein in the Western Cape. Due to the fact that the proposed amendments constitute a change of scope, a Part 2 Amendment Process in terms of Regulation 31 of the EIA Regulations (2014), as amended is required.

WSP were appointed to undertake the amendment process in terms of Regulation 31 and 32 of the EIA Regulations (2014), as amended. In addition, various specialists were appointed to assess the proposed amendments to the EA.

The advantages and disadvantages for the proposed amendments are outlined in the table below. It can be noted that no disadvantages have been identified.

ASPECT TO BE AMENDED	PROPOSED AMENDMENT	ADVANTAGES/ DISADVANTAGES
Technical Aspects		
Number of Turbines	Up to 32 wind turbines with a maximum generating capacity of 140MW in total of up to 7MW capacity each	Wind turbine generators are constantly under development to increase the potential energy output per wind turbine. These amendments are proposed in order to increase the efficiency of the facility and consequently the economic competitiveness thereof, in turn reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large.
Generation capacity per turbine	Up to 7MW	The increase in generation capacity per turbine to a maximum of up to 7MW is as a result of the advances in turbine technology. As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of generation capacity per turbine. The benefit of increasing the generation capacity of each turbine results in the need to utilise fewer turbine positions than original authorised.
Area Occupied by Each Turbine and hard standing area	laydown area of approximately 0.45ha per turbine	The increase in generation capacity per turbine to a maximum of up to 7MW will result in a reduced number of turbine positions being utilised on site. The exact orientation, position and dimensions of the hardstands will be subject to minor change pending the final selection of the TSA. The increased maximum allowable size of the hard standing will allow for these changes should they be required.
Turbine Hub Height	up to 125m	Wind shear refers to the variation in wind speed over vertical distances. Installing wind turbine generators with a higher hub height will increase the overall performance of the WEF. This amendment will increase the economic competitiveness of the WEF, in turn reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large.

ASPECT TO BE AMENDED

PROPOSED AMENDMENT

ADVANTAGES/ DISADVANTAGES

		As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of the turbine hub height.
Rotor Diameter	up to 180m	<p>The power output of a wind turbine is directly related to the swept area of the blades. The larger the diameter of swept area / rotor diameter of the blades, the more power it is capable of extracting from the wind. By potentially installing wind turbine generators with a larger rotor diameter, it will increase the energy output per turbine. This will result in increasing the overall performance of the WEF. This amendment will increase the economic competitiveness of the WEF, in turn reducing the electricity tariffs to be charged by the facility which would benefit electricity consumers at large.</p> <p>As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of the rotor diameter</p>
Width of Internal Roads	Internal Roads width: up to 12m wide	<p>The final layout makes provision for roads with a maximum width of between 9 and 12m to ensure suitable access to site for all required vehicles and equipment.</p> <p>As confirmed by the specialists and EAP, there are no disadvantages associated with the amendment of the EA in terms of increasing the maximum allowable road width.</p>
Construction Camp	The existing Roggeveld Wind Project construction camp will be retained for use by Brandvalley.	The construction camp has been shifted to the existing construction camp previously utilised by the Roggeveld WEF. The new location has been included in the final layout.
Construction ordinates	<p>Co- 32°57'20.14"S</p> <p>20°30'50.60"E</p>	<p>The location of construction camp, was identified by considering the following aspects:</p> <ul style="list-style-type: none"> — Landowner preference and support; — Ease of access to R354; — Selecting a flat area requiring little to no blasting; — An area where the site is currently disturbed, thus limiting the need for additional vegetation clearance — The approved construction camp traversed a watercourse and therefore the relocation of the construction camp to the existing Roggeveld site will eliminate the potential negative impact on this watercourse. <p>As confirmed by the EAP, there are no disadvantages associated with the amendment of the EA in terms of moving the construction camp.</p>
Administrative Aspects		
Amend the name of the Holder of the EA	Brandvalley Wind Farm (RF) (Pty) Ltd	We request to amend the name of the Holder of the EA. This amendment request is administrative in nature and therefore no disadvantages are foreseen.

All of the specialists concluded that the proposed amendments are acceptable with limited additional mitigation required. Where specialists made recommendations these have been taken into account and accommodated where practically possible in the final layout and the final EMPr.

Additional mitigations as a result of the amendments and as a result of the specialist walkdowns of the Final layout have been included in the updated EMPr.

The updated EMPr is appended to this report (**Appendix O**). The updated EMPr, appended to this report **is the final EMPs which is being submitted to DFFE for approval in line with Condition 16 of the EA.**

It can be confirmed that public participation in being undertaken in terms of Chapter 6 of the NEMA EIA Regulations 2014, as amended.

This report was provided to potentially interested and affected parties for a 30-day review period from **19 May 2022** to **21 June 2022**. All comments received will be used to update the FAR which will be submitted to the competent authority, the DFFE. The DFFE is tasked with making a decision on the amendment application.

Based on the findings of the specialists, the EAP recommends that DFFE amends the EA as follows:

ASPECT TO BE AMENDED	AUTHORISED	PROPOSED AMENDMENT	EA REFERENCE
Technical Aspects			
Number of Turbines	58 wind turbines with a maximum generating capacity of 140MW in total	Up to 32 wind turbines with a maximum generating capacity of 140MW in total of up to 7MW capacity each	<ul style="list-style-type: none"> • Page 7 of EA (page 19 in full document) <ul style="list-style-type: none"> ○ First bullet of the list outlining the infrastructure associated with the facility
Generation capacity per turbine	1 – 5.5 MW	Up to 7MW	<ul style="list-style-type: none"> • Page 2 and the first Amendment
Area Occupied by Each Turbine and hard standing area	Laydown areas of approximately 70m x 50m per turbine (total 20.3ha);	laydown area of approximately 0.45ha per turbine	<ul style="list-style-type: none"> • Page 7 of EA (page 9 in full document) <ul style="list-style-type: none"> ○ Fourth bullet of the list outlining the infrastructure associated with the facility
Turbine Hub Height	120m	up to 125m	<ul style="list-style-type: none"> • Page 8 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 7 of the table outlining the technical details of the proposed facility
Rotor Diameter	140m	up to 180m	<ul style="list-style-type: none"> • Page 8 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 8 of the table outlining the technical details of the proposed facility
Width of Internal Roads	Internal Roads width: up to 9m wide	Internal Roads width: up to 12m wide	<ul style="list-style-type: none"> • Page 9 of EA (page 11 in full document) <ul style="list-style-type: none"> ○ Row 9 of the table outlining the technical details of the proposed facility
Construction Camp	Construction camp of 10ha and onsite batching plant of 1ha	The existing Roggeveld Wind Project construction camp will be retained for use by Brandvalley.	<ul style="list-style-type: none"> • Page 8 of EA (page 10 in full document) <ul style="list-style-type: none"> ○ Fifth bullet of the list outlining the infrastructure associated with the facility

ASPECT TO BE AMENDED	AUTHORISED	PROPOSED AMENDMENT	EA REFERENCE
Construction Co-ordinates	32°57'09.78"S 20°32'41.52"E	32°57'20.14"S 20°30'50.60"E	<ul style="list-style-type: none"> • Page 7 of EA (page 9 in full document) <ul style="list-style-type: none"> ○ Sixth row of the table outlining the facility co-ordinates
Administrative Aspects			
Amend the Holder of the EA	Brandvalley Wind Farm (Pty) Ltd	Brandvalley Wind Farm (RF) (Pty) Ltd	<ul style="list-style-type: none"> • Page 1 – Contact Details • Page 2 and 3 of EA (Page 4 and 5 of full document) – Contact Details

APPENDIX

A

EAP CV



APPENDIX

B

EAP DECLARATION OF
INTERESTED



APPENDIX

C

SPECIALIST DECLARATIONS



APPENDIX

D

AGRICULTURAL STATEMENT



APPENDIX

E ECOLOGY STATEMENT



APPENDIX

F

AVIFAUNA STATEMENT



APPENDIX

G

BAT STATEMENT



APPENDIX

H

AQUATIC STATEMENT



APPENDIX



NOISE STATEMENT



APPENDIX

J

VISUAL STATEMENT



APPENDIX

K

TRAFFIC STATEMENT



APPENDIX

L HERITAGE STATEMENT



APPENDIX

M

SOCIAL STATEMENT



APPENDIX

N

GEOTECHNICAL STATEMENT



APPENDIX

O

AMENDED ENVIRONMENTAL
MANAGEMENT PROGRAMME



APPENDIX

P

PUBLIC PARTICIPATION



APPENDIX

P-1 *PRE-APPLICATION MEETING MINUTES AND APPROVED PUBLIC PARTICIPATION PLAN*

APPENDIX

P-2 *I&AP DATABASE*

APPENDIX

P-3 *NOTIFICATION LETTER*

APPENDIX

P-4 *ADVERT*

APPENDIX

P-5 *SITE NOTICE*