

Your Ref.: Kudusberg Split

Our Ref.: 4880

04 November 2020

G7 Renewable Energies (Pty) Ltd
5th Floor, 125 Buitengracht Street
Cape Town
8001

ATTENTION: VERONIQUE FYFE

Dear Veronique

**TRANSPORT SPECIALIST - PART 2 ENVIRONMENTAL AUTHORISATION (EA) AMENDMENT
PROCESS FOR THE KUDUSBERG WIND ENERGY FACILITY (WEF) NEAR SUTHERLAND,
WESTERN AND NORTHERN CAPE PROVINCES**

1. INTRODUCTION

JG Afrika (Pty) Ltd was appointed by SiVEST SA (Pty) Ltd as the Transport Specialist as part of the Part 2 EA Amendment process, in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) (as amended) and Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), for the authorised Kudusberg WEF (14/12/16/3/3/1/1976/AM1).

This letter is to be read in conjunction with the original Transport Study, *Basic Assessment for the proposed development of the 325 MW Kudusberg Wind Energy Facility located west of the R354 between Matjiesfontein and Sutherland in the Northern and Western Cape*, conducted by JG Afrika (Pty) Ltd in October 2018.

2. PROJECT DESCRIPTION

Kudusberg Wind Farm (Pty) Ltd (hereafter referred to as “Kudusberg Wind Farm”) was issued with an Environmental Authorisation (EA) for the proposed construction of the 325MW Kudusberg Wind Energy Facility (WEF) and associated infrastructure, between Matjiesfontein and Sutherland in the Western and Northern Cape Provinces. The EA was granted on 25 March 2019 (DEFF Reference No.: 14/12/16/3/3/1/1976), and subsequently amended on 04 April 2019 to correct a minor naming error (14/12/16/3/3/1/1976/AM1).

The layout for the authorised Kudusberg WEF is presented in **Figure 1** below.

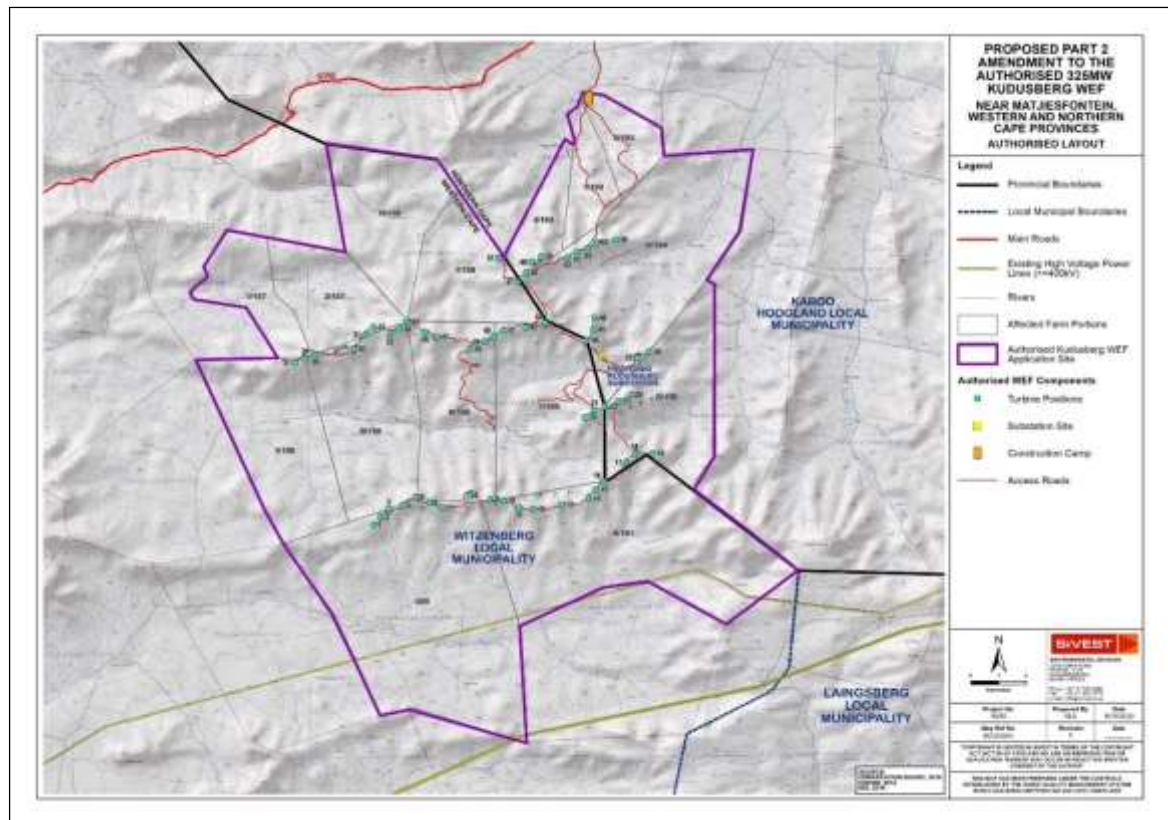


Figure 1: Layout map for authorised Kudusberg WEF (14/12/16/3/3/1/1976/AM1)

Kudusberg Wind Farm is now proposing to submit a Part 2 EA Amendment Application to split the authorised Kudusberg WEF (14/12/16/3/3/1/1976/AM1) into two (2) separate smaller WEF projects, namely the Kudusberg WEF and Oya WEF, which will result in a number of technical and administrative changes detailed below in **Table 1**. The split is being proposed to allow the projects to be suitable for numerous opportunities, such as either the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP), other government run procurement programmes that may arise or for sale to private entities, if enabled and/or required in the drive for energy security in South Africa.

Following the split, the northern section of the authorised WEF will become the Oya WEF (**Figure 2**), while the southern section of the authorised WEF will remain known as the Kudusberg WEF (authorised under 14/12/16/3/3/1/1976/AM1) (**Table 1**) (**Figure 3**). In addition to the split, the final layout for the Oya WEF is being submitted which has been informed by detailed specialist walk-throughs and on-site micro-siting as per condition 29 of the Kudusberg EA¹.

¹ Condition 29 of Kudusberg EA [DEFF Ref: 14/12/16/3/3/1/1976/AM1 – Page 15 of EA (page 17 of full document)]: *the final placement of turbines must follow a micro siting procedure involving a walk-through and identification of any sensitive areas by ecological, avifaunal, bat, surface water and heritage specialists.*

The respective layouts for the proposed Kudusberg WEF (southern section of the authorised WEF) and Oya WEF (northern section of the authorised WEF) are presented in **Figure 2** and **Figure 3** below.

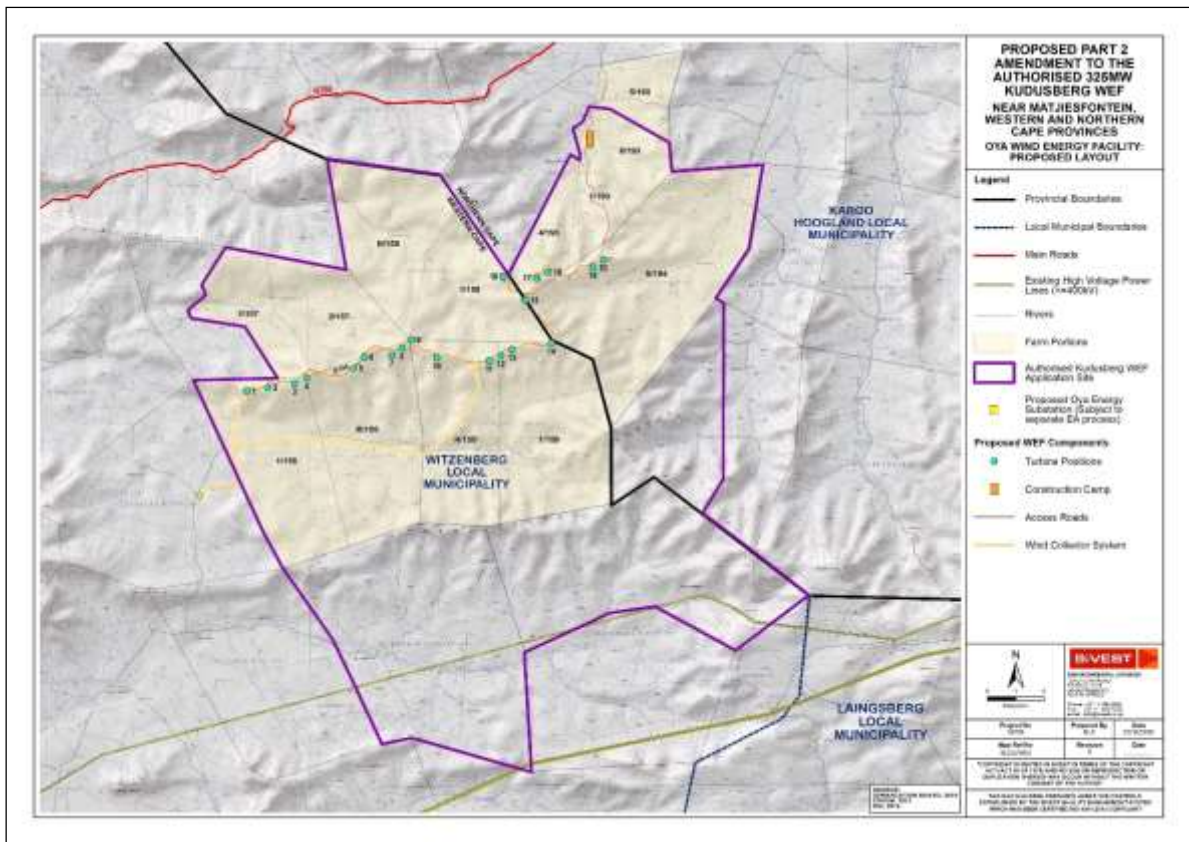


Figure 2: Layout map for proposed Oya WEF (northern section of the authorised WEF)

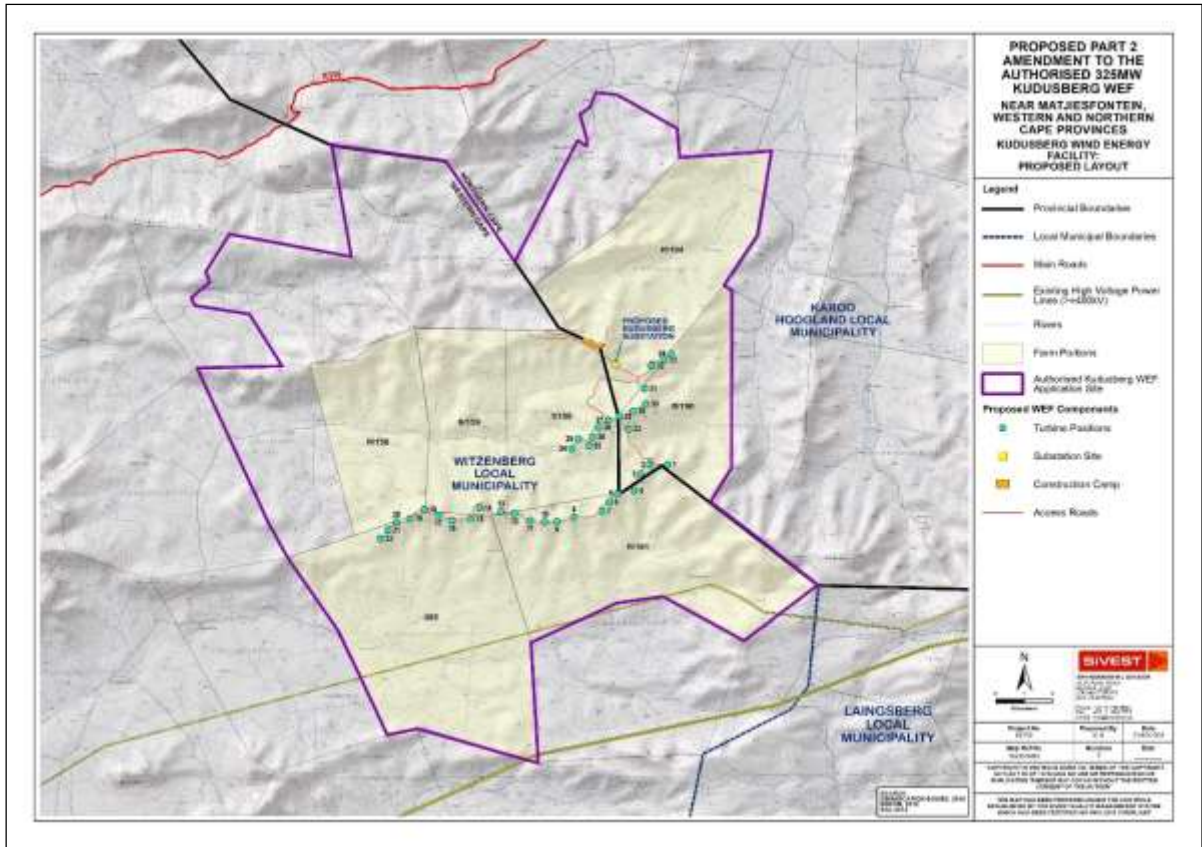


Figure 3: Layout map for proposed Kudusberg WEF (southern section of the authorised WEF)

Furthermore, the approved EMPr authorised as part of the Kudusberg EA is being amended to each WEF and to incorporate the final layout for the Oya WEF, management plans and the walk-throughs.

The amendments detailed in **Table 1** below are proposed for each of the two (2) WEF mentioned above:

Table 1: Proposed Amendments

Aspect to be amended	Authorised	Proposed Amendment	
		Oya WEF	Kudusberg WEF
Administrative Aspects			
Amend the holder of the EA's	Kudusberg Wind Farm (Pty) Ltd	Oya Energy (Pty) Ltd	Kudusberg Wind Farm (Pty) Ltd
Amend the name of the WEFs	Kudusberg Wind Energy Facility	Oya Wind Energy Facility	Kudusberg Wind Energy Facility
Contact Details	kudusberg@g7energies.com	oya@g7energies.com	kudusberg@g7energies.com
Extend the validity of the EA	This activity must commence within a period of five (05) years from the date of issue of this environmental authorization.	This activity must commence within a period of five (05) years from the date of issue of this amended environmental authorization.	This activity must commence within a period of five (05) years from the date of issue of this amended environmental authorization.
Location of Activity and SG codes	<p>Western Cape</p> <ol style="list-style-type: none"> 1. Portion 1 of 156 Gats Rivier Farm: C0190000000015600001 2. Portion 3 of 156 Gats River Farm: C0190000000015600002 3. Remainder of 156 Gats Rivier Farm: C0190000000015600000 4. Portion 1 of 157 Riet Fontein Farm: C0190000000015700001 5. Portion 1 of 158 Amandelbloom Farm: C0190000000015800001 6. Remainder of 158 Amandelbloom Farm: C0190000000015800000 7. Portion 1 of 159 Oliviers Berg Farm: C0190000000015900001 8. Remainder of 159 Oliviers Berg Farm: C0190000000015900000 9. Portion 2 of 157 Riet Fontein Farm: C0190000000015700002 10. Remainder of 161 Muishond Rivier Farm: C0190000000016100000 11. Remainder of 395 Klipbanks Fontein Farm: C0190000000019500000 <p>Northern Cape</p> <ol style="list-style-type: none"> 12. Portion 4 of 193 Urias Gat Farm: C0720000000019300004 13. Portion 6 of 193 Urias Gat Farm: C0720000000019300006 14. Remainder of 193 Urias Gat Farm: C0720000000019300000 15. Remainder of 194 Matjes Fontein Farm: C0720000000019400000 	<p>Western Cape</p> <ol style="list-style-type: none"> 1. Portion 1 of the Farm Gats Rivier No 156: C0190000000015600001 2. Portion 2 of the Farm Gats Rivier No 156: C0190000000015600002 3. Remainder of the Farm Gats Rivier No 156: C0190000000015600000 4. Portion 1 of the Farm Riet Fontein No 157: C0190000000015700001 5. Portion 2 of the Farm Riet Fontein No 157: C0190000000015700002 6. Portion 1 of the Farm Amandelbloom No 158: C0190000000015800001 7. Remainder of the Farm Amandelbloom No 158: C0190000000015800000 8. Portion 1 of the Farm Oliviers Berg No 159: C0190000000015900001 9. Remainder of the Farm Oliviers Berg No 159: C0190000000015900000 <p>Northern Cape</p> <ol style="list-style-type: none"> 10. Portion 4 of the Farm Urias Gat No 193: C0720000000019300004 11. Portion 6 of the Farm Urias Gat No 193: C0720000000019300006 12. Remainder of the Farm Urias Gat No 193: C0720000000019300000 13. Remainder of the Farm Matjes Fontein No 194: C0720000000019400000 14. Portion 5 of the Farm Urias Gat No 193: C0720000000019300005 <p>Properties affected by access road:</p>	<p>Western Cape</p> <ol style="list-style-type: none"> 1. Portion 1 of the Farm Gats Rivier No 156: C0190000000015600001 2. Remainder of the Farm Gats Rivier No 156: C0190000000015600000 3. Portion 1 of the Farm Oliviers Berg No 159: C0190000000015900001 4. Remainder of the Farm Oliviers Berg No 159: C0190000000015900000 5. Klipbanks Fontein No 395: C0190000000039500000 6. Remainder of the Farm Muishond Rivier No 159: C0190000000016100000 <p>Northern Cape</p> <ol style="list-style-type: none"> 7. Remainder of the Farm Karee Kloof No 196: C0720000000019600000 8. Remainder of the Farm Matjes Fontein No 194: C0720000000019400000 <p>Properties affected by public road:</p> <ol style="list-style-type: none"> 9. Zeekoegat Farm No 169: C0720000000016900000 10. Portion 1 of the Farm Roodeheuvel No 170: C0720000000017000001 11. Remainder of the Farm Roodeheuvel No 170: C0720000000017000000 12. Remainder of the Farm Wind Heuvel No 190: C0720000000019000000 13. Portion 1 of the Farm Wind Heuvel No 190: C0720000000019000001 14. Portion 5 of the Farm Urias Gat No 193: C0720000000019300005 15. Remainder of the Farm Vinke Kuil No 171: C0720000000017100000

Aspect to be amended	Authorised	Proposed Amendment	
		Oya WEF	Kudusberg WEF
	16. Remainder of 196 Karree Kloof Farm: C0720000000019600000 Properties affected by public road: 17. 169 Zeekoegat Farm: C0720000000016900000 18. Portion 1 of 170 Roodeheuvel Farm: C0720000000017000001 19. Remainder of 170 Roodeheuvel Farm: C0720000000017000000 20. Remainder of 190 Wind Heuvel Farm: C0720000000019000000 21. Portion 1 of 190 Wind Heuvel Farm: C0720000000019000001 22. Portion 5 of 193 Urias Gat Farm: C0720000000019300005 23. Remainder of 171 Vinke Kuil Farm: C0720000000017100000 24. Alkant Re/220 Farm: C07200000000022000000 25. Portion 1 of 174 Lange Huis Farm: C0720000000017400001	15. Zeekoegat Farm No 169: C07200000000016900000 16. Portion 1 of the Farm Roodeheuvel No 170: C07200000000017000001 17. Remainder of the Farm Roodeheuvel No 170: C07200000000017000000 18. Remainder of the Farm Wind Heuvel No 190: C07200000000019000000 19. Portion 1 of the Farm Wind Heuvel No 190: C07200000000019000001 20. Portion 5 of the Farm Urias Gat No 193: C07200000000019300005 21. Remainder of the Farm Vinke Kuil No 171: C07200000000017100000 22. Alkant Farm No 220: C07200000000022000000 23. Portion 1 of the Farm Lange Huis No 174: C07200000000017400001	16. The Farm Alkant No 220: C07200000000022000000 17. Portion 1 of the Farm Lange Huis No 174: C07200000000017400001
Technical Aspects			
Overall Capacity	325 MW	86 MW	239 MW
Number of turbines	56	20	36
Hub height	Up to 140 m	92 m above the foundation	No Change i.e. up to 140 m
Rotor diameter	Up to 180 m	150 m	No Change i.e. up to 180 m
Blade length	Up to 90 m	75 m	No Change i.e. up to 90 m
Wind Measuring Lattice Masts	Up to 4 x 140 m high depending the final hub height	2 x met masts (same as hub height)	2 x up to 140 m high depending the final hub height
Layout	-	Layout submitted for final approval.	Final layout to be submitted prior to the start of construction
EMPr	The EMPr submitted as part of the Application for EA is hereby approved.	Approve Final EMPr	To be submitted based on final approval of layout

3. METHODOLOGY

This letter followed the same methodology used for the original report. The original report considered and assessed the traffic impact on the surrounding road network in the vicinity of the site during the construction of the WEF, during maintenance in the operational phase and during the decommissioning phase.

Applicable Legislation and Permit Requirements

Key legal requirements pertaining to the transport requirements for the proposed WEF development are:

- Abnormal load permits, (Section 81 of the National Road Traffic Act 93 of 1996 and National Road Traffic Regulations, 2000);
- Port permit (Guidelines for Agreements, Licenses and Permits in terms of the National Ports Act No. 12 of 2005), and
- Authorisation from Road Authorities to modify the road reserve to accommodate turning movements of abnormal loads at intersections.

4. SPECIALIST COMMENT

The Transport Study for the original Kudusberg WEF estimated the vehicle trips generated during the construction, operation and decommissioning phases based on a 325MW facility. The study concluded that the construction and decommissioning phases of the development are the only significant traffic generators and therefore noise and dust pollution will be higher during these phases. The duration of the phases is short term, i.e. the impact of the traffic on the surrounding road network is temporary and wind energy facilities, when operational, do not add any significant traffic to the road network. The impact ratings during the construction and decommissioning phases were deemed to have a **low significance**.

The splitting of the Kudusberg WEF into two smaller WEF projects, namely Oya WEF (86MW) and Kudusberg WEF (239MW), will result in the same traffic impacts during the construction and decommissioning phases. The advantage of splitting the Kudusberg WEF, from a transport perspective, is that the individual WEFs will generate less traffic during the construction and decommissioning phases as the overall capacity of 325MW (i.e. number of turbines) of the original Kudusberg WEF will be distributed between the two smaller WEF projects. The impacts assessed in the original Kudusberg WEF report can therefore be viewed as the worst-case scenario as construction of the two smaller WEF projects will likely not commence at the same time or construction will be slightly staggered.

The splitting of the Kudusberg WEF, from a transport perspective, will not lead to any disadvantages.

The specifications for the proposed Oya WEF and Kudusberg WEF do not exceed the specifications of the authorised Kudusberg WEF i.e. the turbines proposed for the Oya WEF and Kudusberg WEF do not exceed the turbine specifications of the original Kudusberg WEF report (candidate turbine with a maximum hub height of up to 140m and a blade length of approximately 90m and rotor diameter up to 180 m.)

The impact ratings during the construction and decommissioning phases will remain at **low significance** for the two smaller WEF projects.

The proposed Oya WEF and Kudusberg WEF will not require any additional recommendations or mitigation measures and all the proposed mitigation measures stated in the original Kudusberg report remain valid.

In light of the above, the impacts identified in the original Kudusberg Transport Study dated October 2018 remain relevant to the proposed Oya WEF and Kudusberg WEF.

5. CONCLUSION

The original Kudusberg WEF was based on an overall capacity of 325MW. It is proposed to split the Kudusberg WEF into two smaller WEF projects, namely Oya WEF (86MW) and Kudusberg WEF (239MW). The advantage of this, from a transport perspective, is that original overall capacity of 325MW, and the associated impacts for the overall capacity, will be distributed between the two WEFs. The impacts assessed in the original Kudusberg WEF report can be viewed as the worst-case scenario as construction of the two smaller WEF projects will likely not commence at the same time or construction will be slightly staggered. There are no transport related disadvantages to the splitting the Kudusberg WEF. The impact ratings during the construction and decommissioning phases of the two WEFS will remain at a **low significance**.

The impacts associated with the project split are acceptable, from a transport perspective, with the implementation of the recommended mitigation measures and it is therefore recommended that the proposed amendments and the final layout be authorised.

Yours faithfully

I WINK PRENG
ASSOCIATE
MANAGER: TRAFFIC & TRANSPORT ENGINEERING
for: **JG AFRIKA (PTY) LTD**