3Foxes Biodiversity Solutions
ECOLOGICAL SPECIALIST SERVICES
Assessment/Management/Research

Simon Todd Pr.Sci.Nat
Director & Principle Scientist
C: 082 3326502
O: 021 782 0377
Simon.Todd@3foxes.co.za

60 Forrest Way
Glencairn
7975

Ecological Solutions for People & the Environment

Simon Todd
23 De Villiers Road
Kommetjie
7975

Zutari
1 Century City Drive
Waterford Precinct
Century City
South Africa
7441
Att: Franci Gresse

2 September 2020

TERRESTRIAL ECOLOGY SPECIALIST STATEMENT WITH REGARDS TO THE PROPOSED AMENDMENTS TO THE UMSINDE EMOYENI WIND ENERGY FACILITY (PREVIOUSLY UMSINDE EMOYENI WIND ENERGY FACILITY: PHASE 1)

Emoyeni Wind Farm Project (Pty) Ltd has proposed amendments to the authorized Umsinde Emoyeni Wind Energy Facility located near the town of Murraysburg along the Northern Cape – Western Cape border. The Environmental Authorisation (EA) Amendment Application proposes changes to the final approved layout and consequently Zutari (Pty) Ltd has requested comments from 3Foxes Biodiversity Solutions on the ecological implications of the proposed changes to the layout in terms of the original assessment as authorised. The proposed changes to the Umsinde Emoyeni Wind Energy Facility (previously referred to as Phase 1 of the Umsinde Emoyeni Wind Energy Facility), are detailed in Table 1 below. As the layout of the facility will be affected by these changes, Zutari has requested confirmation regarding the assessed impacts in terms of the following:

1. Discussion on the change in Ecological impact or any new Ecological impacts, if any
2. Any changes to the likely cumulative impacts associated with the project.
3. Additional mitigation measures, if any
4. Any disadvantages and advantages that may result due to the amendment

Table 1. The intended amendments to the Umsinde Emoyeni Wind Energy Facility.

	Component / Specification	**Authorised**	**Proposed change**
3.1	Rotor diameter	Up to 150 m	Up to 180 m
3.2	Hub height	Up to 135 m	Up to 160 m
3.3	WTG	Up to 35	Up to 33
3.6	Capacity	Each turbine up to 4.5 MW	Each turbine up to 10 MW
3.7	The boundaries of the wind farms	As per the final site layout map	As per the revised site layout map, the location of some turbines has changed but

	Component / Specification	Authorised	Proposed change
			remains within the original site that was considered and assessed.
3.8	Internal roads and overhead lines	Existing farm access tracks and watercourse crossing will be upgraded. • Internal roads: 9 m width during construction. • Reduced to 4 - 6 m during operations. • Internal road length: 35.8 km	Existing farm access tracks and watercourse crossing will be upgraded. • Internal roads: 12 m width during construction; • Reduced to 4 - 6 m width during operations • Internal road length: 30.7 km
3.9	Hardstand areas (including temporary construction laydown areas)	35 turbines each with a permanent hardstand area of 45 x 25 m (1,125 m^2) and temporary turbine laydown areas of 60 m x 30 m (1,800 m^2). In addition, central laydown areas comprising of up to three laydown areas of 9,000 m² each (150 m x 60 m)	33 turbines each with the permanent hardstand area of 55 x 35 m (1,925 m^2) and temporary turbine laydown areas of 95 x 23 m (2,185 m^2). In addition, central laydown areas comprising of up to three laydown areas of 9,000 m² each (150 m x 60 m)
3.10	Substation locations; grid connection locations	As per the final site layout map	No changes
	Total Footprint	**55ha**	**61.1ha**

1. <u>Change in Terrestrial Ecology Impact or any New Impact Due to the Proposed Amended Layout</u>

The approved layout of both phases of the Umsinde Emoyeni WEF is illustrated below in Figure 1, while the amended layout is illustrated below in Figure 2. From an ecological perspective the change of greatest potential impact is the relocation of turbines from their original assessed positions and an increase in the footprint associated with each turbine. However, it is important to note that the final increase in the development footprint would depend on the size and hence also the number of turbines used. Depending on the scenario, this would result in a range of footprints from 51-56ha during construction, reduced to 28-30ha during operation. A review of these changes and their ecological implications indicates the following outcomes:

- No turbines have been relocated from areas of low sensitivity to areas of higher sensitivity with the result that an increase in impact as a result of the relocation of turbines would not occur. The total footprint of the development at construction has however increased from 55ha to 61.1ha (as a worst case scenario shown in Table 1), but in reality would range between 51ha to 56ha depending on what size turbines are used, this is as a result of the increase in temporary road width and increase in turbine hard-stand size. However, in the long-term the roads during operation would be the same as the previous assessment with the result that there would be not be an overall increase in the development footprint for the operational phase. Given that the footprint would be largely restricted to areas of low ecological sensitivity, the original significance

rating for the 'impact on vegetation and plant species of conservation concern' during construction assessed as Medium negative post mitigation does not warrant revision.

- Although the drop in the total number of turbines would potentially decrease noise and disturbance impacts on fauna, the overall decrease in maximum turbine positions from 35 to 33 is not considered as being sufficient to warrant a change in impact as the original impact on fauna during operation has been assessed as being a minor negative impact, post mitigation and the amendment would not warrant a further reduction. The actual number of turbines that would be present would depend on the output of each turbine and the fewer the number of turbines used the better for fauna. However, for the amendment purposes, the maximum of 35 vs 33 is taken as representing the worst-case scenario and does not warrant any change in the assessed impact.
- When considering the cumulative impacts of the two phases of the development, these would remain similar and an increase in the overall cumulative impact on 'broad-scale ecological processes' is not anticipated. The overall likely decrease in the number of turbines associated with the two wind farm projects will ultimately be likely to reduce some of the cumulative impacts associated with the development. Furthermore, the Critical Biodiversity Mapping (CBA) mapping has been revised, see further information below. The rating is therefore expected to remain as Medium negative significance post mitigation.

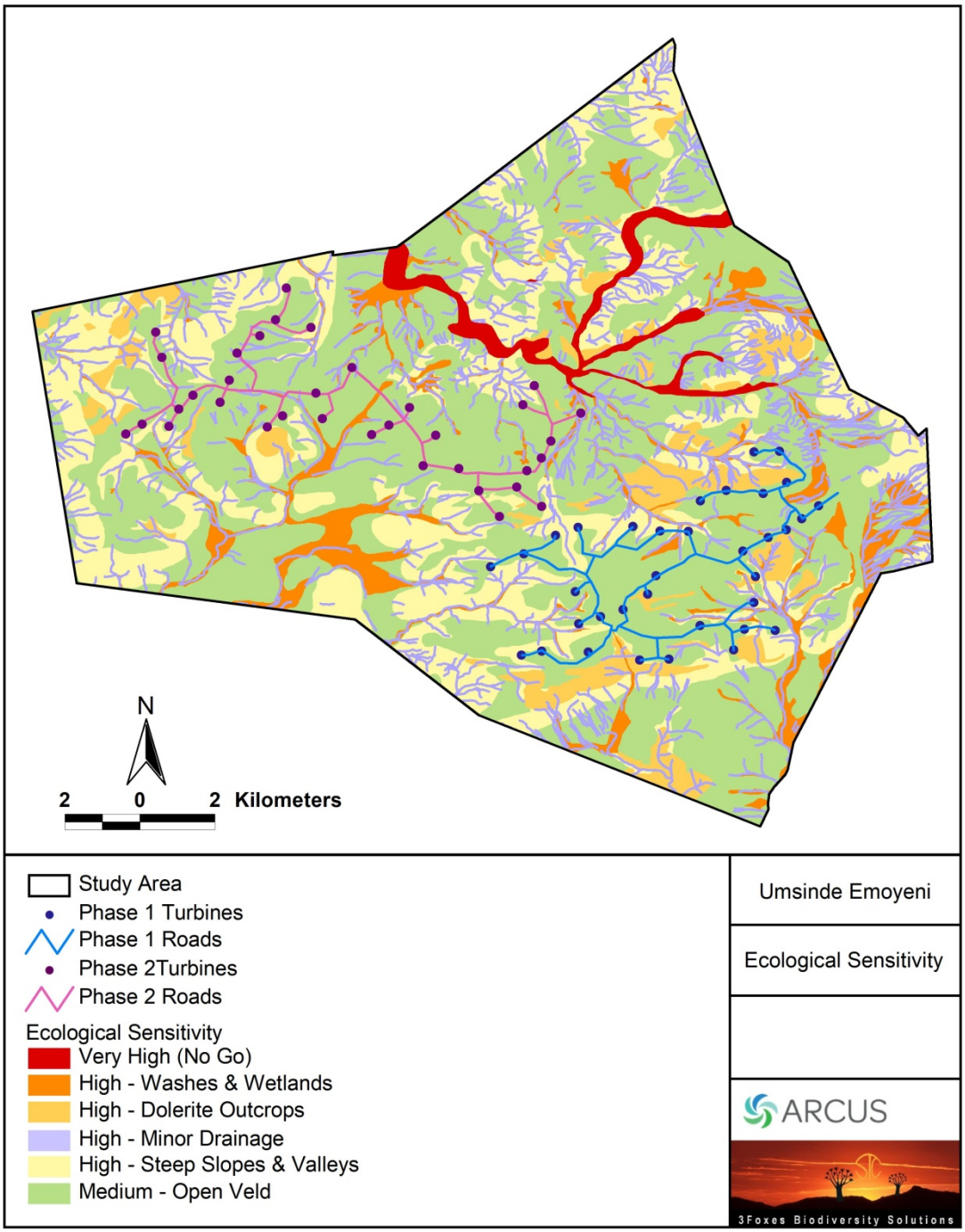


Figure 1. Ecological sensitivity map of the Umsinde Emoyeni site, showing the Phase 1 and Phase 2 layouts as authorised with 35 turbines each. Phase 2 is now known as Khangela Emoyeni WEF, but the current amendment letter serves Phase 1/Umsinde Emoyeni WEF only.

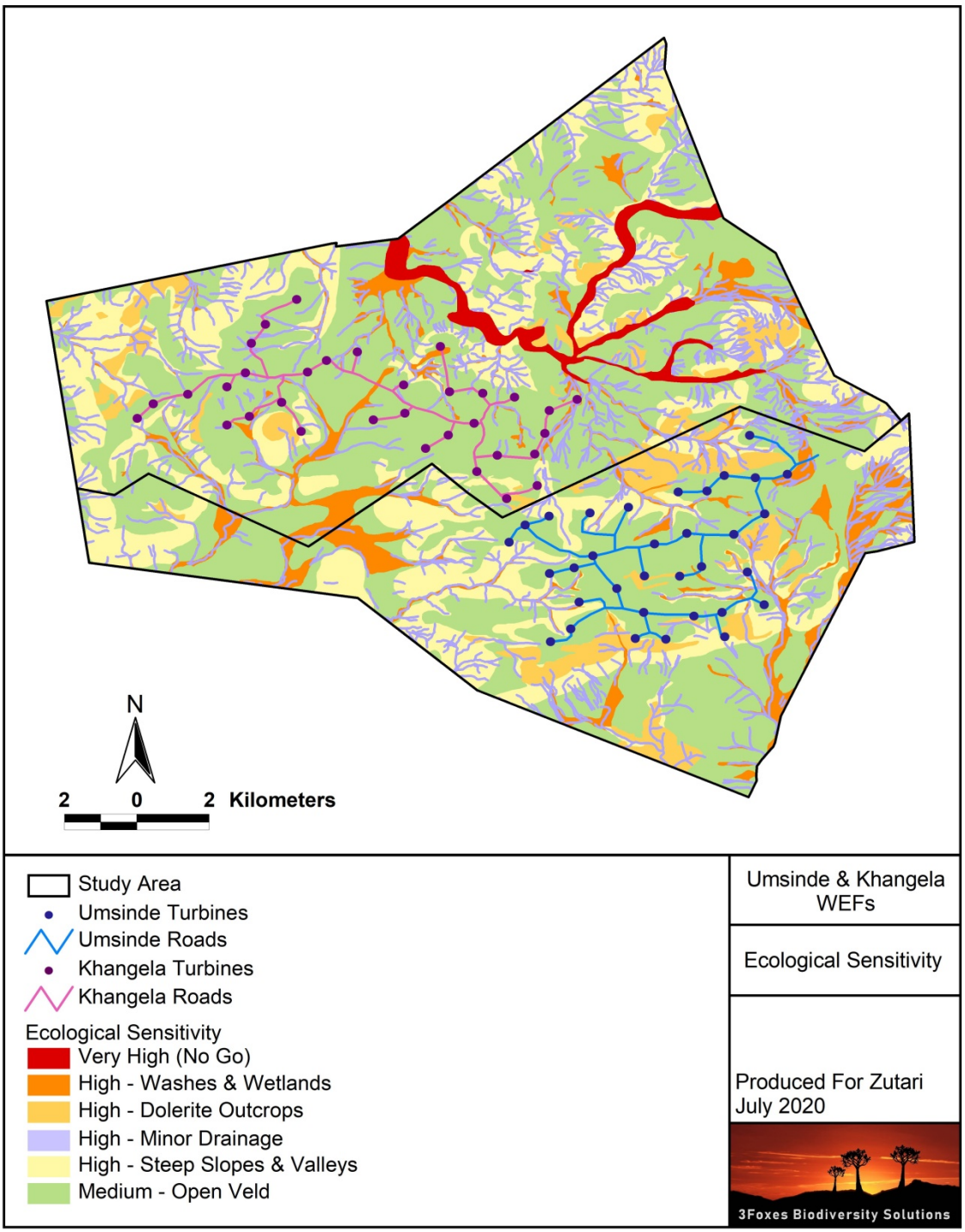


Figure 2. Ecological sensitivity map of the proposed amended Umsinde Emoyeni site, showing the Umsinde Emoyeni WEF in the south and the Khangela WEF in the north of the site.

There have been significant changes to the CBA mapping in the area since the original EIA study was conducted. The 2018 amendment, which split the development into the current two phases addressed these changes. Parts of both Phase 1/Umsinde and Phase 2/Khangela were within CBAs and Ecological Support Areas (ESAs), the extent of these areas has been significantly reduced. Under the current revised layouts, there are no turbines within either development within CBAs or within ESAs. There is minimal impingement of drainage line ESAs by access roads and significant impact on ESAs is not likely. Overall, due to the changes in the CBA maps as well as changes to the layout, the impact on CBAs has been

reduced from the original layout and remains unchanged from the 2018 amendment. Consequently, no significant impacts on CBAs is likely to occur under the layouts provided for this amendment.

ASSESSED IMPACTS

The assessed impacts of the Umsinde Emoyeni Phase 1 / Umsinde Emoyeni WEF as assessed for the authorised development are considered here in terms of whether or not any changes to the assessed impacts are justified as a result of the changes to the layout of the facilities. A summary of the impacts of the development as authorised is provided below in Table 2. The original impacts are considered representative of the likely impacts of the development. All the assessed impacts are considered equivalent post-mitigation to the authorised layout. The recommended mitigation measures as described in the original study have been reviewed and no changes are recommended in this regard. As such, all the stipulated mitigation and avoidance measures listed remain valid for the revised layout, but no additional mitigation measures are recommended either.

Table 2. Summary assessment of impacts associated with the Umsinde Emoyeni WEF (Phase 1). There are no changes from the authorised layout.

Impact		Consequence	Probability	Significance	Status	Confidence
Planning & Construction Phase						
Impact 1: Impacts on vegetation and listed or protected plant species resulting from construction activities	Before Mitigation	High	Probable	High	– ve	High
	After Mitigation	Medium	Probable	Medium	– ve	High
Impact 2: Alien Plant Invasion Risk	Before Mitigation	Medium	Probable	Medium	– ve	High
	After Mitigation	Very Low	Probable	Low	– ve	High
Impact 3: Increased Erosion Risk	Before Mitigation	Medium	Probable	Medium	– ve	High
	After Mitigation	V Low	Probable	V Low	– ve	High
Impact 4. Direct faunal impacts during construction	Before Mitigation	Medium	Probable	Medium	– ve	High
	After Mitigation	Low	Probable	Low	– ve	High
Operational Phase						
Impact 1. Alien plant invasion risk	Before Mitigation	Medium	Definite	Medium	– ve	High
	After Mitigation	Low	Probable	Low	– ve	High
Impact 2. Increased erosion risk	Before Mitigation	Medium	Definite	Medium	– ve	High
	After Mitigation	Low	Probable	Low	– ve	High
Impact 3 Faunal impacts during operation	Before Mitigation	Medium	Probable	Medium	– ve	High
	After Mitigation	Medium	Probable	Medium	– ve	High
Decommissioning Phase						
Impact 1. Alien plant invasion risk	Before Mitigation	Medium	Definite	Medium	– ve	High
	After Mitigation	Low	Probable	Low	– ve	High
Impact 2. Increased erosion risk	Before Mitigation	Medium	Definite	Medium	– ve	High
	After Mitigation	Low	Probable	Low	– ve	High
Cumulative Impacts						

Impact 1. Impact on CBAs and Broad-Scale Ecological Processes	Before Mitigation	Medium	Probable	High	– ve	High
	After Mitigation	Medium	Probable	Low	– ve	High

2. Additional Mitigation Measures

No additional mitigation measures or changes to the EMPr mitigation measures would be required in terms of this amendment because no significant change to impacts or new impacts will occur. All the original avoidance and mitigation measures as indicated in the original ecological study (2015 and reiterated in the 2018 amendment) are still relevant and applicable to the current amended layout and must be implemented.

3. Advantages and Disadvantages of the Proposed Amendment

The major changes to the development in terms of the current amendment which are of ecological relevance include the changes to the number and distribution of turbines and the size of turbine hard stands. These changes are minor but can be seen as being neutral or slightly positive in nature and the significance of impacts as assessed in the original study are considered still valid and applicable for the current assessment. No upward or downward adjustment of impacts is justified based on the changes to the layout. As such, the amendment is supported from an ecological perspective as it would not increase or change any impacts or lead to new impacts associated with the development and implementation of the amended layout.

Conclusions and Summary Findings

- Overall, the impact of the amended layout of the Umsinde Emoyeni WEF (previously Phase 1) on fauna and flora would be similar to the authorised layout and there are no fatal flaws or critical issues associated with the proposed changes.
- The amendment is supported from an ecological perspective as it will result in similar assessed impacts on fauna, flora and habitats at the site. Consequently, the proposed amended layout would not result in a change in the assessed impacts and no adjustment to the original assessed impacts is required.
- The original mitigation and avoidance measures are considered applicable to the amendment and no new or additional measures are considered necessary.
- The cumulative impacts associated with the amended layout are similar to the authorised layout and are considered acceptable.

Prepared by Simon Todd
18 July 2020

Pr.Sci.Nat
SACNASP 400425/11.

environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Proposed Amendment of the Phase 1 Umsinde Emoyeni Wind Energy Facility near Murraysburg, Western Cape Province

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at https://www.environment.gov.za/documents/forms.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Private Bag X447
Pretoria
0001

Physical address:
Department of Environmental Affairs
Attention: Chief Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

2.

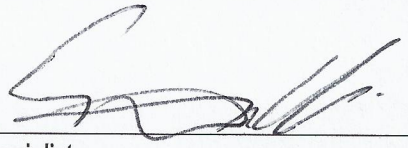
Specialist Company Name:	3Foxes Biodiversity Solutions			
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	Level 4	Percentage Procurement recognition	100%
Specialist name:	Simon Todd			
Specialist Qualifications:	BSc (Zool. & Bot.) BSc Hons (Zool.) MSc (Cons. Biol.)			
Professional affiliation/registration:	SACNASP Pr.Sci.Nat 400425/11			
Physical address:	23 DeVilliers Road, Kommetjie			
Postal address:	23 DeVilliers Road, Kommetjie	Cell:	082 3326 502	
Postal code:	7975	Fax:		
Telephone:				

3.

4. DECLARATION BY THE SPECIALIST

I, ____Simon Todd_____, declare that –

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



Signature of the Specialist

3Foxes Biodiversity Solutions

Name of Company:

03/09/2020

Date

5. UNDERTAKING UNDER OATH/ AFFIRMATION

I, ____Simon Todd_____, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

Signature of the Specialist

3Foxes Biodiversity Solutions

Name of Company

03/09/2020

Date

Signature of the Commissioner of Oaths

2020/09/03

Date

SUID-AFRIKAANSE POLISIEDIENS
COMMUNITY SERVICE CENTRE
03 SEP 2020
OCEAN VIEW W.C.
SOUTH AFRICAN POLICE SERVICE