

**PROPOSED CLEARANCE OF  
INDIGENOUS VEGETATION FOR  
ESTABLISHMENT OF CULTIVATED  
FIELDS NEAR, BLOEMHOF DAM,  
TSWELOPELE MUNICIPALITY,  
FREE STATE PROVINCE**

---

**April 2021**

**FINAL ENVIRONMENTAL MANAGEMENT  
PROGRAMME**

**Ref Nr: EMS/15,12(b)/20/03**



## Details of Role Players

### APPLICANT DETAILS

<b>Applicant</b>	Lobola Farming (Pty) Ltd
<b>Client Contact Person</b>	Mr. Jaco Strauss
<b>Tel</b>	082 414 7980
<b>Address</b>	P.O. Box 814, Jan Kempdorp 8550
<b>Email</b>	<a href="mailto:jaco.strauss@icloud.com">jaco.strauss@icloud.com</a>

### EAP DETAILS

<b>EAP</b>	Jane Mahaba
<b>Affiliations</b>	SACNASP (Cert.Nat.Sci 119631)
<b>Tel</b>	082 806 5675
<b>Email</b>	<a href="mailto:jane@boteboman.co.za">jane@boteboman.co.za</a>
<b>Project Consultant</b>	BioBlue Environmental Sustainability
<b>Email</b>	<a href="mailto:zander@bioblueenviro.com">zander@bioblueenviro.com</a>

<b>Document Control</b>			
<b>Author</b>	Zander Liebenberg	<b>Pri.Nat.Sci – 117291</b> <b>Practitioner Member of IEMA</b>	2021/04/15
<b>Review</b>	Jane Mahaba	<b>SACNASP (Cert.Nat.Sci 119631)</b>	2021/04/15

#### **COPYRIGHT WARNING**

*This document is privileged and confidential in nature and unauthorised dissemination or copying is prohibited. This document will be updated as required. BioBlue Environmental Sustainability (Pty) Ltd. claims protection of this information in terms of the Promotion of Access to Information Act, 2002 (Act 2 of 2002) and without limiting this claim, especially the protection afforded by Chapter 4*

## Table of Contents

1	INTRODUCTION.....	8
2	ENVIRONMENTAL MANAGEMENT PROGRAMME .....	8
2.1	OBJECTIVES OF THE EMPr .....	8
2.2	legal requirements .....	9
2.3	DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER.....	10
2.4	Project background .....	10
2.5	STRUCTURE of the environmental management programme .....	16
2.5.1	Construction Phase.....	16
2.5.2	Operational and Maintenance Phase.....	16
2.5.3	Decommissioning Phase .....	16
3	detailed environmental management programme .....	17
3.1	CONSTRUCTION PHASE.....	17
3.1.1	Possible Impacts Identified .....	17
3.2	OPERATIONAL AND MAINTENANCE PHASE.....	24
3.2.1	Possible Impacts Identified .....	24
3.3	decommissioning phASE.....	24
4	IMPLEMENTATION OF THE EMPr .....	28
4.1	roles and responsibilities .....	28
5	PROPOSED MONITORING SCHEDULE.....	29

## LIST OF FIGURES

Figure 1: Locality Map .....	11
Figure 2: Lobola Farming Final Layout Map – Preferred option 1 .....	12
Figure 3: Lobola Farming – Layout Map – Option 2.....	13
Figure 4: Sensitivity Map .....	14
Figure 5: Wetland Delineation Map.....	15

## LIST OF TABLES

Table 1: Farm Portions and 21SG Codes.....	10
Table 2: Construction Phase .....	18
Table 3: Operational and Maintenance Phase .....	25

## GLOSSARY OF TERMS

- "Alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to property, activity, design or technology.
- "Applicant" means a person who has submitted or intends to submit an application. "Application" means an application for Environmental Authorization in terms of the EIA regulations, 2014 (as amended).
- "Associated Infrastructure," means any building or infrastructure that is necessary for the functioning of a facility or activity or that is used for an ancillary service or use from the facility.
- "Biodiversity" The variety of life occurring in an area, including the number of different species, the genetic wealth within each species, and the natural habitat where they are found.
- "Cultural significance" This means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.
- "Cumulative impact" in relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.
- "Environmental Impact Assessment" in relation to an application to which scoping must be applied, means the process of collecting, organizing, analysing, interpreting and communicating information that is relevant to the consideration of that application.
- "Environment" The environment has been defined as "The external circumstances, conditions and objects that affect the existence and development of an individual, organism or group". These circumstances include biophysical, social, economic, historical, cultural and political aspects.
- "Environmental Assessment Practitioner" Person or company, independent of the applicant (developer), that manages the environmental assessment process of a proposed project on behalf of the applicant.
- "Environmental Management Programme" means a programme presenting management and mitigation measures in relation to identified or specified

activities envisaged in Chapter 5 of the National Environmental Management Act and described in regulation 34.

- “Heritage resources” This means any place or object of cultural significance. It also includes archaeological resources. Scoping Report Page 8 of 45
- “Species of Conservation Concern” All those species included in the categories of endangered, vulnerable or rare, as defined by the International Union for the Conservation of Nature and Natural Resources.
- “Significant impact” means an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment.
- “The Act” means the National Environmental Management: Waste Act, 1998 (Act No.59 of 2008).

## DECLARATION OF INDEPENDENCE

The independent Practitioner

I, **Jane Mahaba** declare that I –

- act as the independent Environmental Practitioner for the Environmental Management Programme
- this report covers the Environmental Impacts and proposed Mitigation measures only and no other scope of work was requested for this study and the information should be interpreted with caution
- do not have and will not have financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- have no and will have any vested interest in the proposed activity proceeding;
- undertake to disclose, to the competent authority any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2010;
- BioBlue accepts no responsibility for the accuracy of any third-party data used in the production of this report.



---

Signature of Author – Zander Liebenberg Pri.Sci. Nat (*Reg.No. 117291*)



---

Signature of Reviewer – Jane Mahaba Cert.Sci. Nat (*Reg.No. 119631*)

Date – 2021/04/15

## 1 INTRODUCTION

Lobola Farming (Pty) Ltd (hereunder referred to as Lobola Farming) has appointed BioBlue Environmental Sustainability (Pty) Ltd (hereunder referred to as BioBlue) to conduct and Environmental Impact Assessment process for the proposed clearance of indigenous vegetation on the Farm Satara 1475, Portion 1 of the Farm Glen Dover 886, Portion 2 of the Farm Glen Dover 886 and Farm Daeraad 1486, near Bloemhof Dam, Tswelopele local Municipality in the Free State Province. The purpose of clearing the sites is to cultivate the land and expand their crop farming activities.

The aim of this report is to establish an Environmental Management Programme (EMPr) that would serve as a management tool that will be used to ensure that the impacts of the construction and operational phases of the project are prevented or minimized and that the positive benefits of the project is enhanced.

## 2 ENVIRONMENTAL MANAGEMENT PROGRAMME

### 2.1 OBJECTIVES OF THE EMPr

This EMPr will provide the actions for the management of identified environmental impacts resulting from the proposed development and a detailed outline of the implementation programme to minimise and/ or eliminate the anticipated negative environmental impacts. The EMPr will also provide strategies to be used to address the roles and responsibilities of environmental management personnel on site, and a framework for environmental compliance and monitoring. The aim of this document is to ensure the establishment of an environmentally sustainable project.

The EMPr is a dynamic document that can be subject to influences and changes that may arise during the project process and thus the document needs to be able to evolve with the project to ensure good environmental practice during all the project phases. The management measures contained within this document is based on the possible impacts identified during the EIA process.

The objectives of the EMPr:

- To ensure compliance with guidelines from the regulatory authority.
- To provide feedback for continual improvement in environmental performance.
- To respond to unforeseen events.



- To identify the required mitigation measures that could reduce the potential impacts to minimal levels and to manage these possible impacts associated with the development.
- To set out the specific actions that need to be taken to assist in mitigating the environmental impacts of the proposed project.
- Establish management structures to address the concerns and complaints of I&As with regards to the project.
- Establish monitoring and auditing management practices that can be utilised during each phase of the project.
- Specify time periods for certain aspects of the project that need to be implemented.

## 2.2 LEGAL REQUIREMENTS

The applicant and the contractor must identify and comply with all South African National and Provincial environmental legislation, including associated regulations and all local by-laws relevant to the project.

The EMPr has been compiled in accordance with the Appendix 4 of the EIA Regulations of 2014.

The EMPr will comply with Section 24N of NEMA and will be undertaken as per the legislative requirements as follows:

- Provide details of the EAP who undertook the EMPr and the expertise as well as a curriculum vitae of the EAP to prepare an EMPr thereof.
- Provide a detailed description of the aspects of the proposed development that are covered by the EMPr as identified by the project description;
- Produce a map which superimpose the proposed development, its associated structures and infrastructure on the environmental sensitivities of the preferred development site, indicating areas that should be avoided including buffers;
- Provide a description of the impact management objectives including management statements identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process of this S&EIR for all the phases of the proposed development.
- Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; and
- Comply with any prescribed environmental management standards or practices.

## 2.3 DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Ms. Mahaba completed her BSc. In Animal, Plan and Environmental Sciences at the University of the Witwatersrand (2003 – 2005) and since then she has accumulated 13 years of experience within the Environmental Sector. She has been involved in numerous Environmental Impact Assessment processes and is involved in the compilation, coordination and management of Environmental Impact Assessments and Scoping Reports.

<b>EAP</b>	<b>Jane Mahaba</b>
<b>Affiliations</b>	<b>SACNASP (Cert.Nat.Sci 119631)</b>
<b>Tel</b>	<b>082 806 5675</b>
<b>Email</b>	<a href="mailto:jane@boteboman.co.za">jane@boteboman.co.za</a>
<b>Project Consultant</b>	<b>BioBlue Environmental Sustainability</b>
<b>Email</b>	<a href="mailto:zander@bioblueenviro.com">zander@bioblueenviro.com</a>

## 2.4 PROJECT BACKGROUND

Lobola Farming (Pty) Ltd. proposed to expand their current crop farming activities with the establishment of 355ha of new cultivated fields for the production of maize, wheat, soybeans and sunflowers. The initial aim of the application was to apply for a proposed area of 500ha, however, with specialist inputs the final layout and possible hectares were established.

A natural corridor will be established to ensure that fauna can be move to and from the Bloemhof dam area. This natural corridor will also include the delineated wetland found within the CBA1 area on Farm Daeraad 1486.

The site is located approximately 3km from the Bloemhof dam and the Free State and North West provincial border. The site is in the Free State province in the Tswelopele Local Municipality. The total site area equates to approximately 2 000 ha. The centre coordinates of the site are 27°46'16.21"S 25°38'36.79"E

Table 1: Farm Portions and 21SG Codes

<b>Farm</b>	<b>21SG Code</b>
Satara 1475	F01700000000147500000
Portion 1 Glen Dover 886	F01700000000088600001
Portion 2 Glen Dover 886	F01700000000088600002
Daeraad 1486	F01700000000148600000

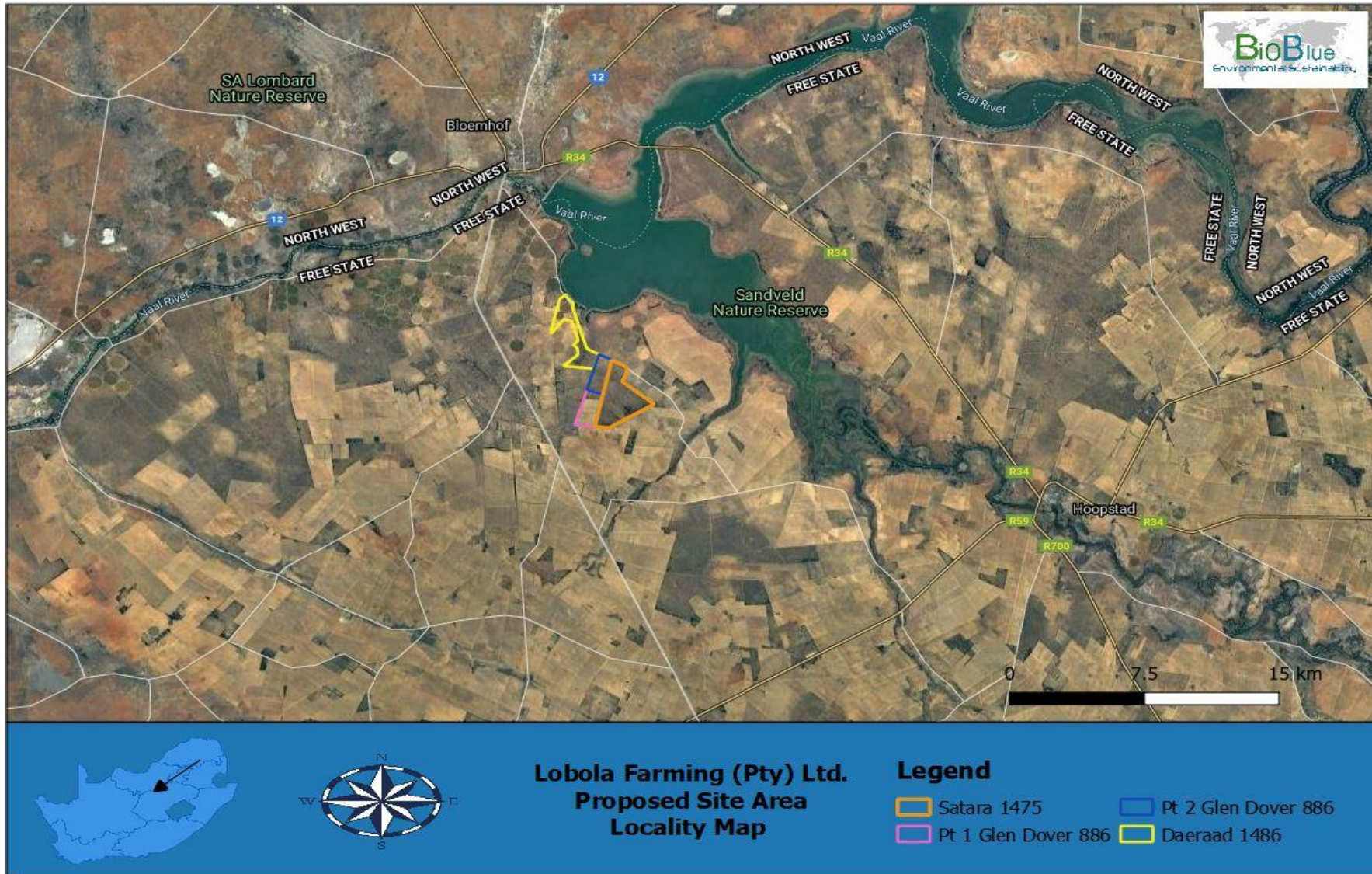


Figure 1: Locality Map

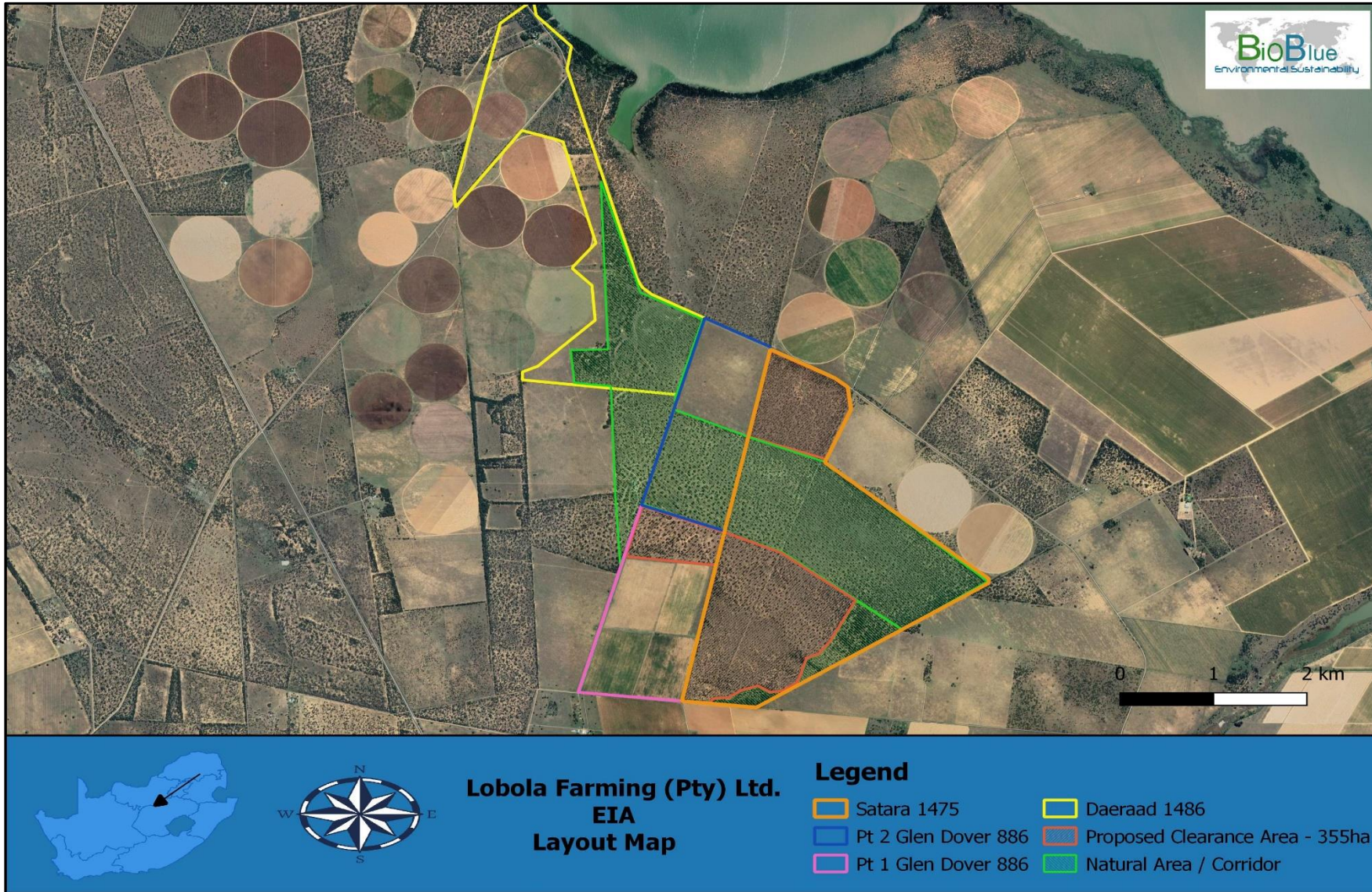


Figure 2: Lobola Farming Final Layout Map – Preferred option 1

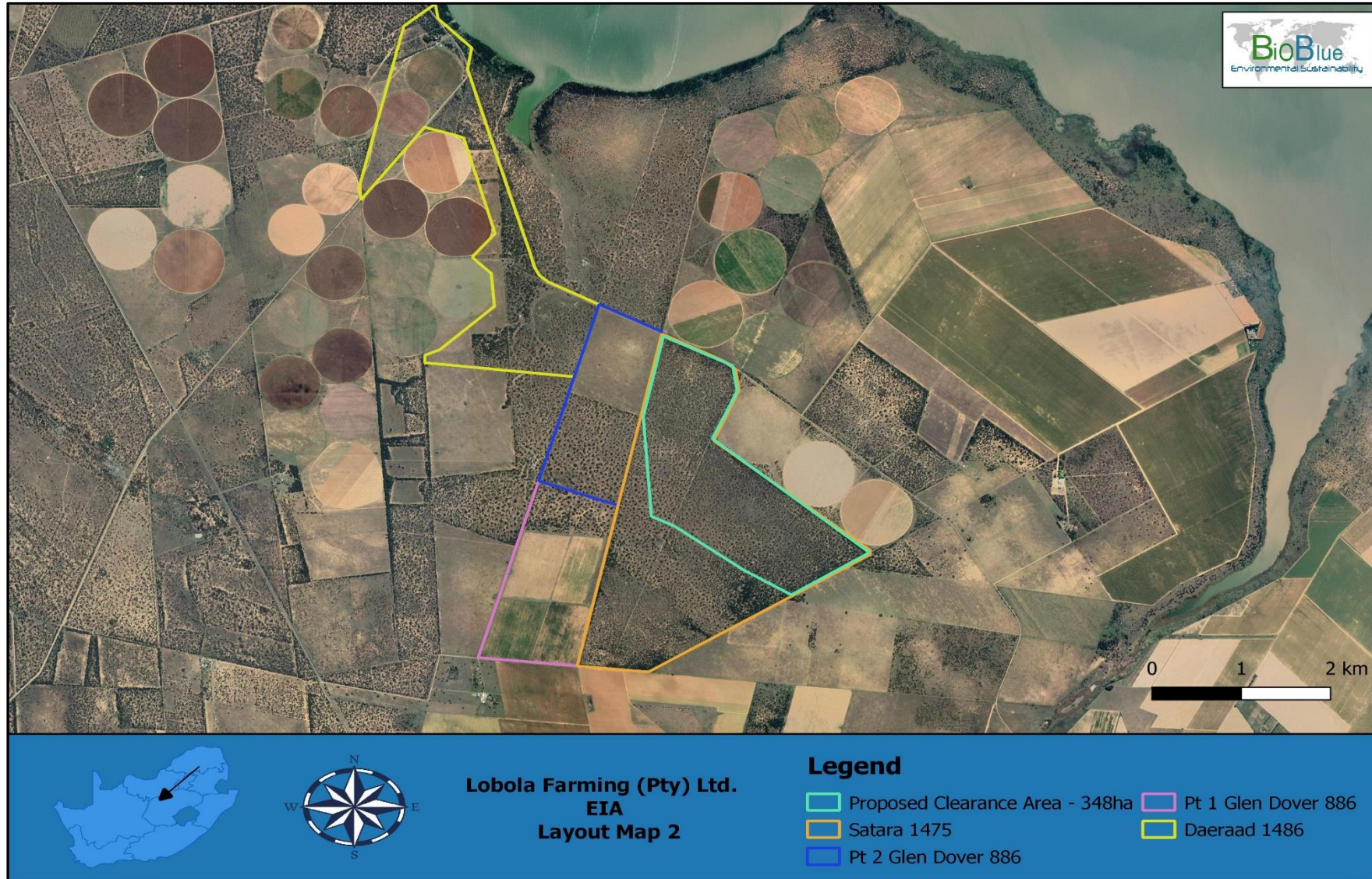


Figure 3: Lobola Farming – Layout Map – Option 2

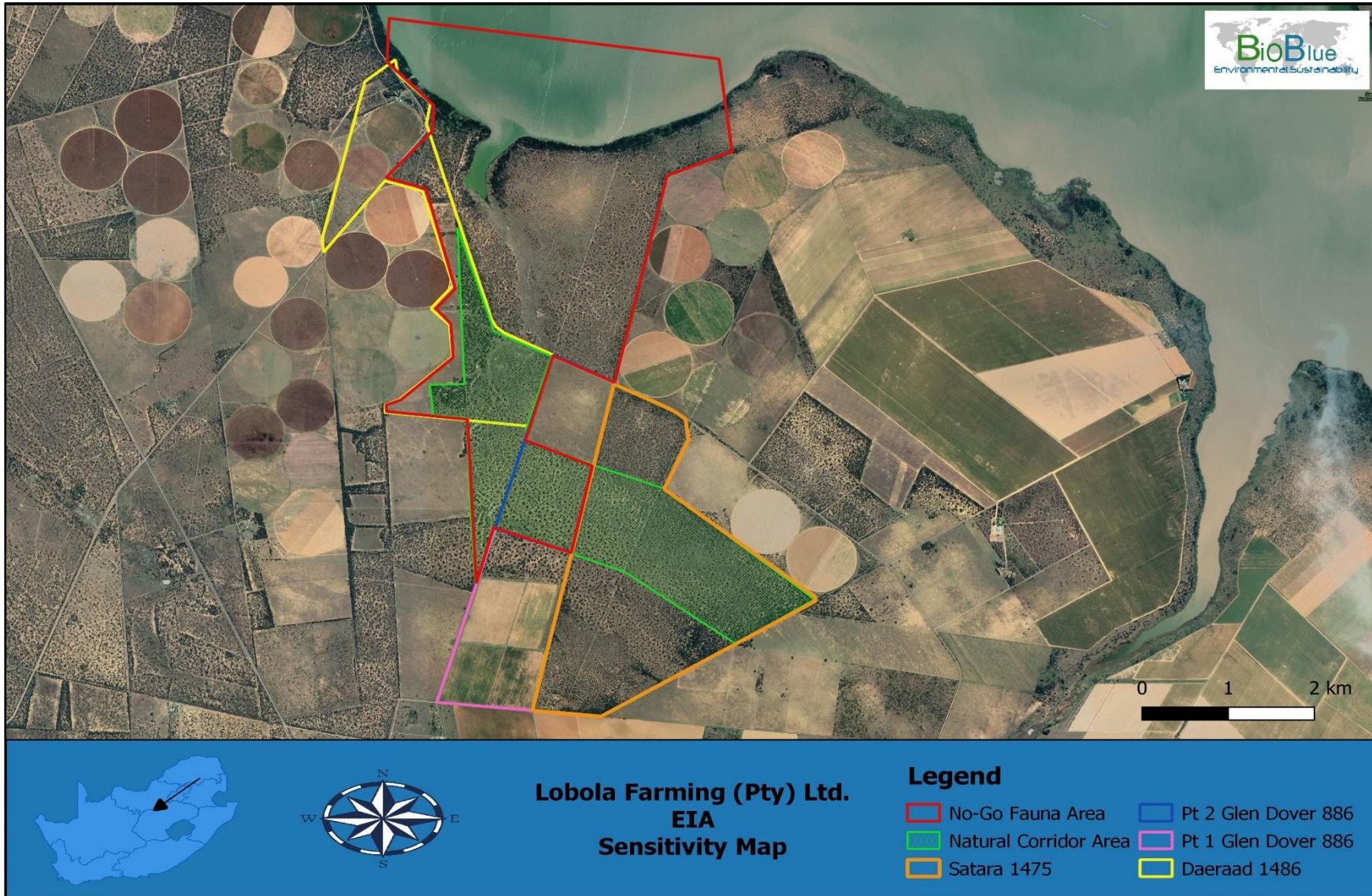


Figure 4: Sensitivity Map

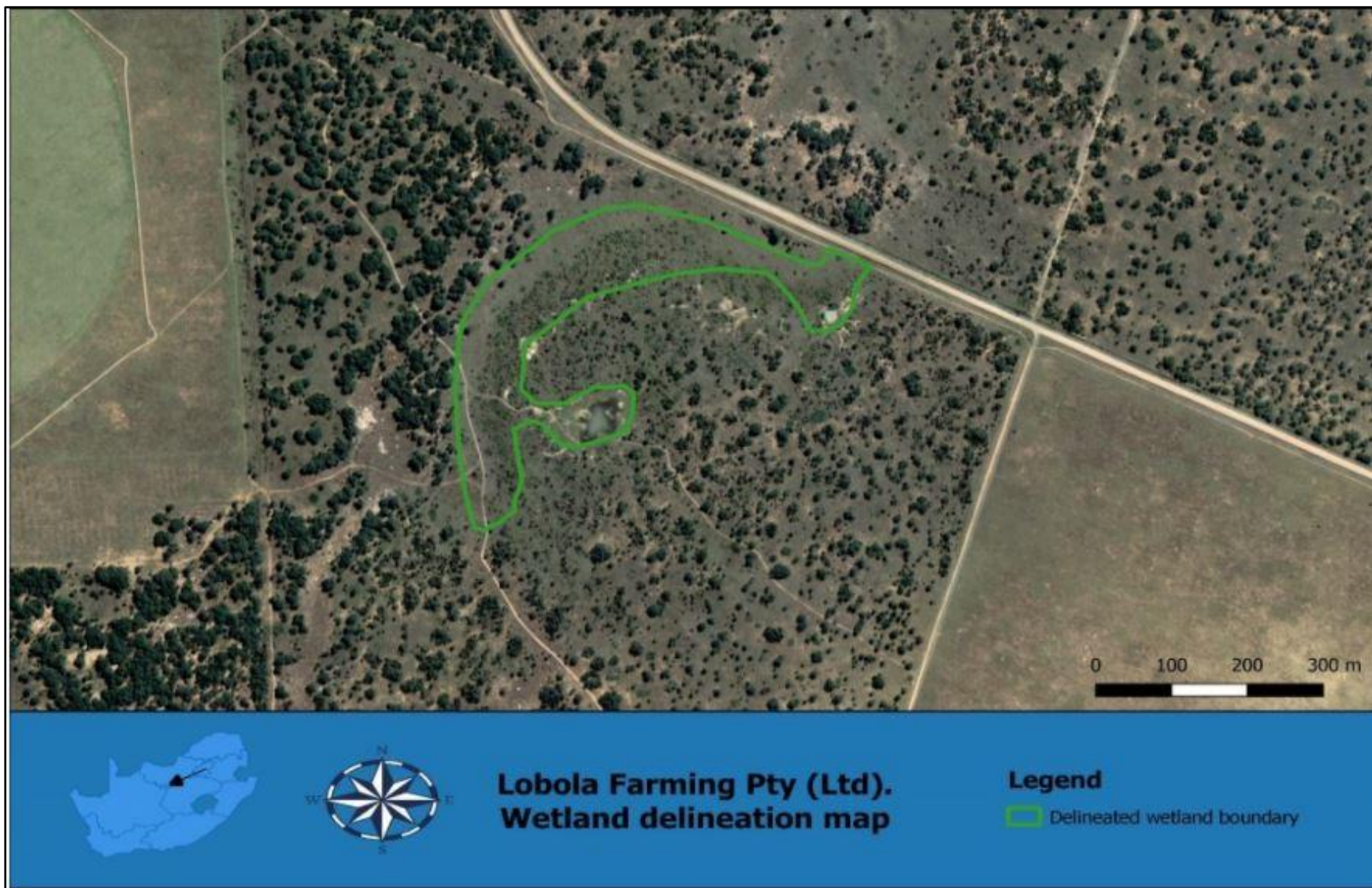


Figure 5: Wetland Delineation Map

## 2.5 STRUCTURE OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

This document is divided into the three phases of development that needs to be monitored, namely the construction phase, the operational phase and the decommissioning phase.

### 2.5.1 Construction Phase

This section of the document provides guidelines and management measures that need to be adhered to during the construction or establishment phase. The inputs from various specialists have been included in this phase to ensure that the project could be sustainable in the long run. The specifications within this section should form part of the contract documentation and therefore the Contractor will be required to comply with these specifications to the satisfaction of the Environmental Control Officer (ECO).

### 2.5.2 Operational and Maintenance Phase

This section of the document provides management measures for the operational and maintenance phases of the project. These measures need to be adhered to by the applicant to ensure the sustainable continuation of the project. Environmental Awareness training for employees that will be involved with the project will also ensure that the whole structure of the company is aware of the requirements stipulated within the EMPr and management actions that need to be taken.

### 2.5.3 Decommissioning Phase

The decommissioning phase has not yet been evaluated within this document. As the EMPr is a dynamic document that will change with time, the actions that will be required within the decommissioning phase will be established once an end land-use has been specified. Currently the proposed cultivated fields will be utilised for the foreseeable future until the proposed activity is not economically viable.



### 3 DETAILED ENVIRONMENTAL MANAGEMENT PROGRAMME

This document stipulates the requirements to be implemented by the applicant as per the recommendations compiled within the Environmental Impact Assessment Process and the various specialist studies conducted.

The provisions of the EMPr are binding on the Applicant during the life of the project. It is essential that the requirements contained within this document be understood, implemented and adhered to throughout the construction and operational phases.

Parties (I&APs), State Departments and other stakeholders are afforded a period of 30 days, for each draft report (DSR and Draft EIR), to comment on the content of that draft report. The comments received from I&APs, State Departments and other Stakeholders are incorporated into a CRR which forms part of each final report (FSR and Final EIR), the final report inclusive of the CRR will be submitted to the DESTEA for decision making.

#### 3.1 CONSTRUCTION PHASE

The key impacts identified for construction phase of the proposed project, as mentioned above, are listed below:

##### 3.1.1 Possible Impacts Identified

- Loss of Biodiversity
- Loss of habitat for fauna species
- Increase in noise due to site preparation;
- Introduction of heavy agricultural vehicles into the proposed development area;
- Potential impact on ambient air quality (dust generation);and
- Potential socio-economic impacts (both positive and negative).

Table 2: Construction Phase

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
Clearance of Vegetation for the proposed establishment of new cultivated fields	<ul style="list-style-type: none"> <li>Impact on the protected tree species recorded on the site will be minimised.</li> <li>The proposed Natural Corridor will allow for the movement of fauna between the site area and the Protected Areas surrounding the Bloemhof Dam.</li> <li>A large portion of Kimberley Thornveld will be conserved.</li> </ul>	<ul style="list-style-type: none"> <li>It is proposed that vegetation clearance only occurs within the necessary footprint area of the new cultivated fields. Vegetation should only be removed when necessary to minimise erosion on the proposed site.</li> <li>The national protected tree <i>Boscia albitrunca</i> (shepherds' tree / witgat) should not be disturbed if possible. It is advised that these trees be marked and avoided if possible, or a tree permit should be obtained. The same should be done for the <i>Vachellia erioloba</i> or <i>Camel Thorn Tree</i>.</li> <li>The proposed Natural Corridor should be protected and kept as large as possible.</li> <li>Access roads should be formalised, and existing roads and tracks should be utilised where feasible, rather than establishing new routes through naturally vegetated areas.</li> </ul>	Applicant / Contractor  The protected species must be marked, and the Natural Corridor must be pegged out before clearance starts
Loss of Fauna & Flora Habitat and protected species	<ul style="list-style-type: none"> <li>The loss of habitat will be minimised as well as any indirect impacts.</li> <li>Alien Invasive species and declared weeds will not</li> </ul>	<ul style="list-style-type: none"> <li>Any disturbance adjacent to the proposed clearance area should be avoided.</li> <li>The final proposed footprint of clearing must be walked to determine whether <i>B albitrunca</i> or <i>H. procumbens</i> will be affected. If so, apply for</li> </ul>	Applicant / Contractor  Protected trees must be marked before

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
	<p>spread into natural areas and be allowed to proliferate.</p>	<p>permits for their removal (or relocation of <i>H procumbens</i>) prior to vegetation clearing.</p> <ul style="list-style-type: none"> <li>Declared weeds and invader plant species should be controlled and eradicated by the means of an eradication and monitoring programme.</li> </ul>	<p>clearance activities commence and a monitoring programme must also be established before activities commence</p>
<p>Potential Increase in invasive vegetation</p>	<ul style="list-style-type: none"> <li>By removing these species before clearance activities commence, the spread of seeds will be prevented into disturbed soils.</li> <li>Well implemented management programme will prevent weeds from spreading to adjacent natural areas and proliferating within these areas.</li> </ul>	<ul style="list-style-type: none"> <li>Alien invasive species, in particular category 1b species that were identified within the study area, should be removed from the development footprint and immediate surrounds, prior to clearing or soil disturbances.</li> <li>Vehicles and equipment should be cleared of plant material before gaining access to the site.</li> <li>Continuously monitor the emergence of alien invasive plant species on the site and remove such species as soon as they become apparent.</li> </ul>	<p>Applicant / Contractor</p> <p>Alien Invasive species should be removed prior to clearance.</p> <p>Continuous monitoring is required throughout the phase.</p>

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
Destruction of significant and / or sensitive fauna habitat (Drainage line and Open Savanna)	<ul style="list-style-type: none"> <li>By establishing the designated natural corridor, the Conservation Importance and Functional Integrity of the area will be well maintained.</li> <li>The natural corridor will ensure the preservation of good open bushveld habitat that may be utilised by the potential SCC and TOP species.</li> <li>It will allow smaller fauna, agile fauna and birds to move between terrestrial open bushveld and Bloemhof dam.</li> </ul>	<ul style="list-style-type: none"> <li>The delineated wetland area should be protected from any further development. The proposed area will not form part of the current activities.</li> <li>Preserve the proposed natural corridor area and implement sustainable management practices.</li> </ul>	Applicant / Contractor
Loss of, or disruption to, SCC species	<ul style="list-style-type: none"> <li>This will allow for the protection of Secretarybirds nesting on site and prevent unnecessary disturbances.</li> <li>Environmental Awareness Training will ensure that contractors and staff no what can and cannot be done.</li> </ul>	<ul style="list-style-type: none"> <li><b>No Clearing</b> may take place if the Secretarybird is observed to be nesting on site. They defend an approximate 50-60km<sup>2</sup> area around their nest from rivals and this should be considered as the buffer area to avoid until such time that chicks are fully fledged.</li> <li>The Martial Eagle nest must be marked on site and this area must be left undisturbed by the proposed clearance project.</li> </ul>	Applicant / Contractor

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
		<ul style="list-style-type: none"> <li>• Ensure that unhindered access for fauna is maintained along the ecological corridors. As SCC birds are known to re-use nests, consideration should be given to incorporating any nesting areas if the species are observed to be nesting on site.</li> <li>• All contractors and Employees must undergo environmental awareness training.</li> <li>• Maintain safe speed limits.</li> </ul>	
Soil and Surface Water Pollution	<ul style="list-style-type: none"> <li>• The prevention of soil and surface water pollution.</li> </ul>	<p>The following precautions need to be taken to minimize the effects of accidental hydrocarbon spillages.</p> <ul style="list-style-type: none"> <li>• Tractors and other farming equipment need to be maintained on a regular basis and checked for leakages every morning.</li> <li>• If re-fuelling is to be done on site, drip trays need to be available.</li> </ul>	Applicant / Contractor
Dust Generation: Impact on air quality and vegetation	<ul style="list-style-type: none"> <li>• The aim is to minimise the impact of dust on the surrounding natural areas.</li> </ul>	<p>During the clearance of vegetation, dust will be generated by the activities.</p> <ul style="list-style-type: none"> <li>• Only the footprint area of the sites should be cleared and only when necessary.</li> <li>• Average speed limits should be communicated to all staff</li> </ul>	<p>Applicant / Contractor</p> <p>Monitoring should be done on a continuous basis to ensure compliance</p>

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
		<ul style="list-style-type: none"> <li>Access roads should be maintained and no new unnecessary roads should be established.</li> </ul>	
Employment Opportunities	<ul style="list-style-type: none"> <li>The creation of employment opportunities is of utmost importance in South Africa but aim of this is to ensure that employees have the skills to obtain other work after the project.</li> </ul>	The proposed expansion will create a possible 15 job opportunities. The local communities should be approached to fill these positions as far as possible. Structures should be established to ensure appropriate development and transfer of skills to the local community.	Applicant
Increased run-off due to hard and exposed surfaces	<ul style="list-style-type: none"> <li>To prevent the loss of valuable topsoil by erosion.</li> </ul>	The farming operation must ensure that the proposed activities are well managed and do not lead to erosion of the valuable topsoil layer. <ul style="list-style-type: none"> <li>Clearance of vegetation should only be implemented once necessary.</li> <li>Contours and other management measures should be implemented to ensure that runoff from storm events is minimized.</li> </ul>	Applicant / Contractor  Monitoring for any signs of erosion must be done on a regular basis
Historical or Archaeological Impacts	<ul style="list-style-type: none"> <li>The protection of historical sites and graveyards.</li> </ul>	The Graveyard located on the site should be fenced off to protect it against any accidental or direct impact by any future development. The site should also be cleaned as properly marked as a cemetery.	Applicant  This area must be fenced off with

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
		Any new materials or sites that are uncovered during the construction phase. The activities should be halted immediately, and an expert should be contacted to investigate.	an appropriate access point

## 3.2 OPERATIONAL AND MAINTENANCE PHASE

### 3.2.1 Possible Impacts Identified

- Increased noise generation, during operational phase;
- Loss of habitat corridor for fauna species
- Potential pollution of surface water resources;
- Health and Safety;
- Air quality impacts due to fugitive dust from ploughing.

## 3.3 DECOMMISSIONING PHASE

The EMP is a dynamic document that needs to evolve with the project, thus once appropriate decommissioning land-use has been approved, the Mitigation measures for this phase will be compiled and submitted for approval.

Site specific rehabilitation measures will need to be established as part of the re-vegetation Process.



Table 3: Operational and Maintenance Phase

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
Agricultural Impact and land use change	<p>The land-use potential will be enhanced and in doing so, more job opportunities can be created.</p> <p>The aim should be to operate a sustainable farming operation continuously.</p>	<p>The proposed expansion will increase the potential of the agricultural activities on the land.</p> <p>The new expansion areas should be utilised productively and sustainably.</p>	<p>Applicant</p> <p>The applicant must ensure that the operations remain environmentally sustainable throughout the operational phase.</p>
Establishment of new cultivated fields	<p>The site will be left clear of debris and adjacent natural areas will not be impacted.</p> <p>Drift from chemical herbicides and pesticides will not impact on the adjacent natural areas.</p>	<ul style="list-style-type: none"> <li>• After Clearance, the land must be cleared of rubbish, surplus materials and equipment and must be left in a condition as close as possible to that prior to clearing.</li> <li>• Measures must be implemented to prevent operational activities from impacting on the adjacent vegetation. Machinery may not turn or park within the natural areas.</li> <li>• Drift from chemical herbicides and pesticides must be prevented.</li> </ul>	<p>Applicant</p> <p>Continuous process of good environmental practice</p>

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
Loss of Fauna & Flora Habitat and protected species	During the operational phase, employees will be made aware of the importance om protecting the natural corridor area.	Operational activities may not trample natural vegetation and work should be restricted to previously disturbed footprint.	Applicant Continuous process of good environmental practice
Potential Increase in invasive vegetation	Alien invasive and weed species will be controlled on site and these species will not negatively impact on the natural corridor area.	A management programme should be established to minimize the proliferation of invasive species and eradicate them where possible.  Staff should receive environmental awareness training assist with implementing these management measures.	Applicant Continuous process of good environmental practice
<b>Bush Densification</b> – Bushveld is prone to bush densification whereby open bushveld, in the absence of good veld management, become denser and dominated by stands of encroacher species.	The natural corridor area will be managed in an environmentally sustainable way and the current species composition will not be impacted negatively.	Plants in this group are not alien plants, but indigenous plants that tend to become abnormally abundant when the area is degraded or mismanaged. <ul style="list-style-type: none"> <li>• Monitor the establishment of dense stands of encroacher species and remove or thin as soon as detected.</li> </ul>	Applicant Continuous process of good environmental practice

ASPECT	IMPACT MANAGEMENT OUTCOMES	MITIGATION MEASURES / MANAGEMENT ACTIONS	IMPLEMENTATION RESPONSIBILITY AND TIMING
		<ul style="list-style-type: none"> <li>• Ensure that areas outside of the operational footprint that were disturbed, are adequately rehabilitated and prevent dense stands of encroacher species</li> </ul>	
Soil and Surface Water Pollution	The topsoil layer and surface water features will be protected from pollution.	<p>The following precautions need to be taken to minimize the effects of accidental hydrocarbon spillages.</p> <ul style="list-style-type: none"> <li>• Tractors and other farming equipment need to be maintained on a regular basis and checked for leakages every morning.</li> <li>• If re-fuelling is to be done on site, drip trays need to be available.</li> <li>• No vehicles may be washed within naturally vegetated areas, except in suitably designed and protected areas.</li> <li>• Strictly prohibit littering and make adequate dustbins available.</li> </ul>	<p>Applicant</p> <p>Continuous process of good environmental practice</p>

## 4 IMPLEMENTATION OF THE EMPr

### 4.1 ROLES AND RESPONSIBILITIES

a) Environmental Incident Register:

An environmental register must be compiled and kept on site at all times and be freely accessible to the whole team. This register must be utilised to record all environmental incidents that occur as a result of the operational aspects on site. The register must contain the following:

- Complaints from neighbouring farmers and businesses and any environmental incidents on site.
- Actions taken to remedy the incident.

b) Environmental Control Officer:

The ECO must be appointed prior to commencement of the construction phase of the project. The ECO will advise site management of any environmental related issues during the construction phase.

- Responsibilities of the ECO will include monitoring and compliance with the EMPr by the applicant and contractor.
- The ECO has the authority to stop operations on the site if it is deemed that the activity has or will cause significant damage and/or harm the environment.
- Should modifications to this document be required, these must be agreed to by all parties concerned.

c) The Contractor / Applicant:

- They will adhere to the conditions within this EMPr and ensure that all sub-contractors, employees and suppliers are fully aware of this EMPr, its requirements and the consequences of any breach of the requirements of this EMPr.

Monthly Toolbox talks must be held with all the employees to that must include:

- Environmental issues
- Health and Safety
- Incidents and mitigation measures

## 5 PROPOSED MONITORING SCHEDULE

MONITORING ASPECT	FREQUENCY			
	Daily	Weekly	Monthly	Quarterly
Weed and invasive species control			x	
Erosion Control			x	
Waste Management		x		
Safety	x			
Hazardous Substances		x		
Maintenance	x			

SCORE	COMPLIANCE RATING	EXPLANATION
5	Compliant	All EMPr requirements have been met
4	Substantial Compliance	Most of the requirements have been met
3	Broad Compliance	50% of the requirements have been met
2	Partial Compliance	Only partially compliant with the requirements
1	Non-Compliance	None of the requirements have been met