



**Draft Environmental Management Plan for  
Propose clearance of approximately 18 hectares  
of vegetation for agricultural purposes, on the  
farm Karino 134-JU, near Mbombela, City of  
Mbombela, Mpumalanga Province**

Draft Environmental Management Plan

10 July 2020

**CORE Environmental Services**

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SACNASP: 300067/15  
EAPASA: 2020/602

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# 1. OVERVIEW OF THE PROJECT

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## 1.1 Introduction

**Louis Walters Trust** is proposing to clear approximately 18 hectares of indigenous vegetation to establish an agricultural area for the purpose of macadamia farming. In accordance with the National Environmental Management Act 107 of 1998, GNR 983 of 2014 (as amended in 2017), an Environmental Authorisation (EA) is required before any clearance activities can take place.

Louis Walters Trust appointed Core Environmental Services to apply for the EA by means of conducting a Basic Environmental Authorisation process and compiling an Environmental Management Plan as regulated within General Notice Regulation 982, 2014 (as amended in 2017).

## 1.2 Location

The proposed site is located on the corner of the N4 and the Uitkyk Road, on portion 35 of the farm Karino 134-JU, near Mbombela, City of Mbombela, Mpumalanga Province.

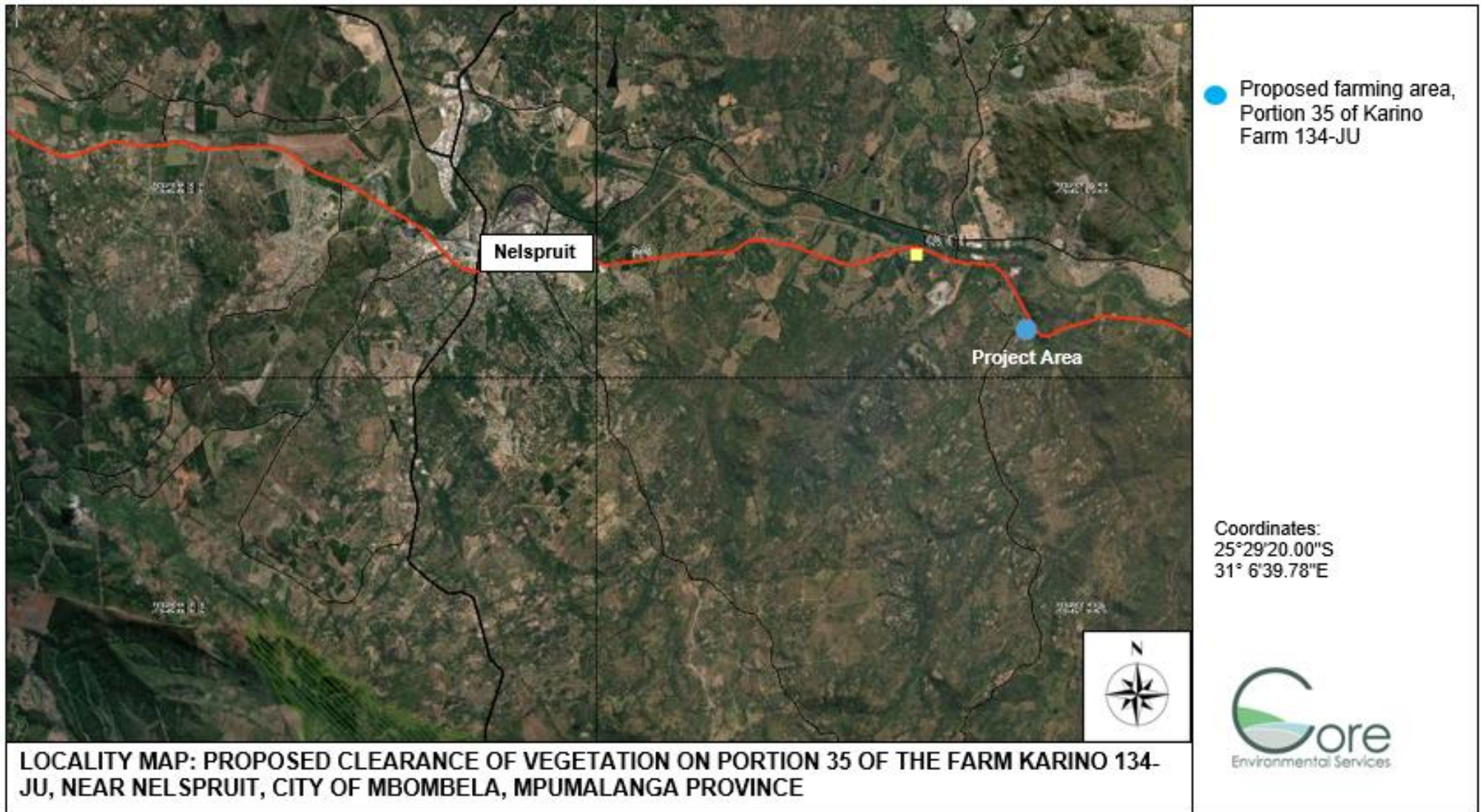
Coordinates:

25° 29'20.00"S

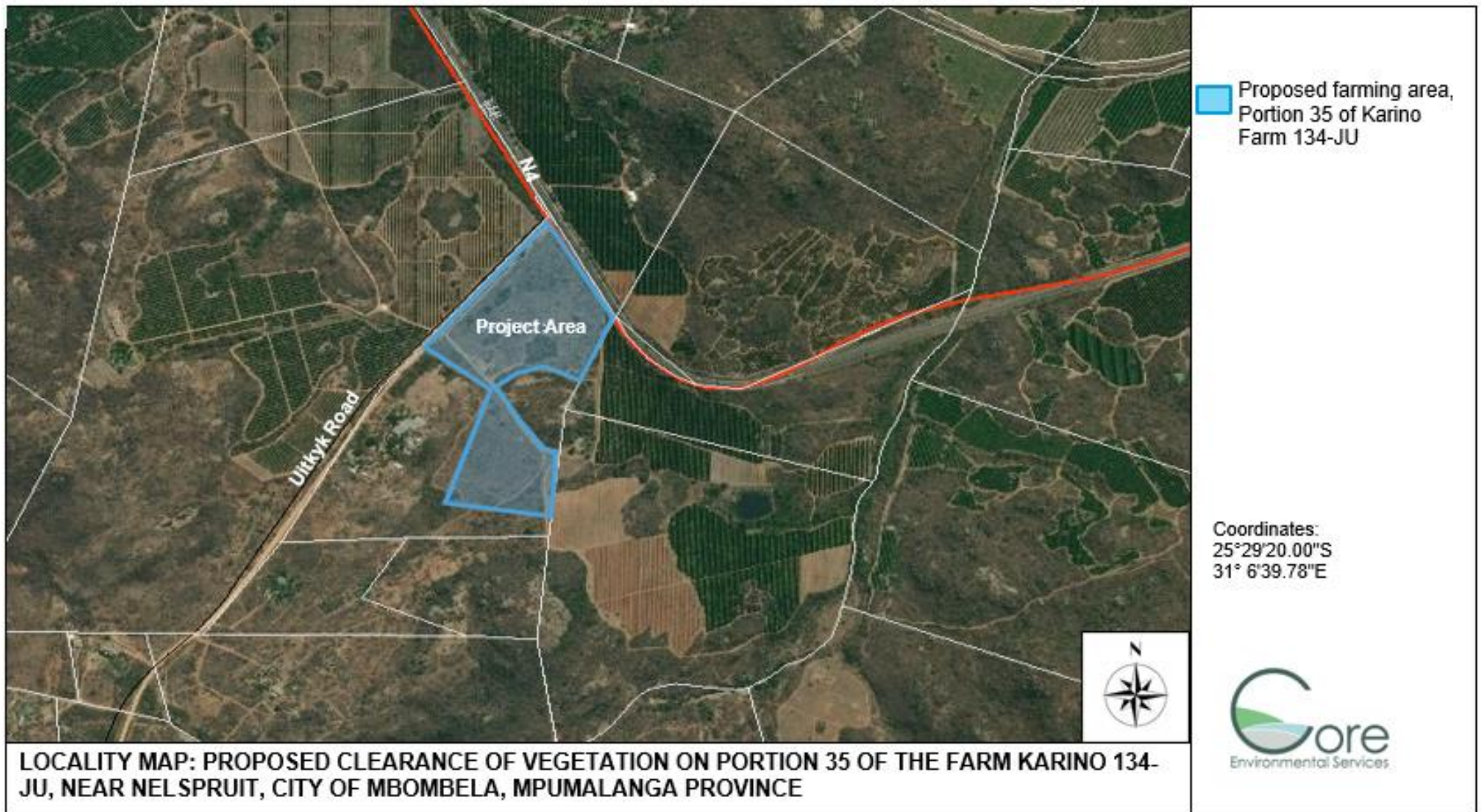
31° 6'39.78"E

Surveyor General Code: T0JU00000000013400035

Please refer to the locality map below, Figure 1.



**FIGURE 1: LOCALITY MAP – PROPOSED PROJECT AREA ON PORTION 35 OF KARINO FARM 134-JU**



**FIGURE 2: ZOOMED LOCALITY MAP OF THE PROPOSED AGRICULTURAL AREA, PORTION 35 OF KARINO FARM 134-JU**

## 1.3 Details of the EAP

Ms. Anne-Mari White, is an Environmental Specialist, who started her studies at the North-West University (NWU) and completed her Bachelor of Science: Environmental Management at the University of South Africa (UNISA) in 2007. Ms. White is registered with the Environmental Assessment Practitioners Association of South Africa (EAPASA Reg No: 2020/602) as well as the South African Council for Natural Scientific Professionals as a Certificated Natural Scientist (Reg. No 300067/15). In addition to her qualification, she completed short courses in soil classification and wetland delineations (Terrasoil Science), Geographic Information Systems (University of KwaZulu-Natal), and Environmental Impact Assessments (NWU).

## 1.4 Policy Legal and Administrative Framework

**TABLE 1: LEGISLATION APPLICABLE TO THE PROJECT**

Applicable legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments considered	Project application and type (permit / licence / authorisation / comment)
The Constitution of South Africa, Act No. 108 of 1996	<p>Louis Walters Trust will be required to adhere to the Environmental Management Programme (EMPr) requirements to ensure that social and environmental management considerations are considered and implemented.</p> <p>As per Section 25 the Constitution, a public participation process (PPP) was and will continue to be undertaken, as this is considered to be an essential mechanism for informing stakeholders of their rights and obligations in terms of the project.</p>
National Environmental Management Act, 1998 (Act No. 107 of 1998)	Environmental Authorisation will subsequently be applied for by means of conducting a Basic Environmental Authorisation process as regulated within GNR982 of 2014 (as amended in 2017).
National Biodiversity Act, 2004 (Act No. 10 of 2004)	<p>The act provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resource; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith.</p> <p>The National Biodiversity Act, 2004, must therefore be considered prior to the clearance of vegetation</p>

	to minimise the impact on the terrestrial biodiversity.
Occupational Health and Safety Act, 1998 (Act No. 85 of 1998)	The Act provides for the health and safety of people at work and for the health and safety of people using plant and machinery.  During establishment, work must be conducted with strict adherence to the Occupational Health and Safety Act 85 of 1998.
National Heritage Resources Act, 1999 (Act No 25 of 1999)	This legislation aims to promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations.
City of Mbombela Integrated Development Plan (IDP) (2017 - 2022)	The primary objectives of the IDP is to foster economic growth that creates jobs and improve infrastructure within the Province.  Job opportunities will be created by the proposed agricultural activities which supports economic growth within the area.

In accordance with the National Environmental Management Act 107, of 1998, the following listed activities will be triggered by the proposed development and will require approval prior to commencement:

GNR 983, Activity 27, 2014 (as amended in 2017):

*The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for –*

- (i) *The undertaking of a linear activity; or*

*Maintenance purposes undertaken in accordance with a maintenance management plan.*

## 1.5 Description of the project

**Louis Walters Trust** is proposing to clear approximately 18 hectares of indigenous vegetation to establish an agricultural area for the purpose of macadamia farming activities. The larger portion of the proposed project area is heavily invested with alien invasive species and it is evident that the areas was previously cultivated.

In terms of water use, the applicant has water rights on adjoining properties (Portion 11 and 12 of the farm Karino 134-JU) and permission is granted to abstract water from the Crocodile River according to the Crocodile River Major Irrigation Board (Please refer to Appendix E). According to the documentation obtained, the applicant has 8 000m<sup>3</sup> of water rights per hectare per annum for portion 11 and 12 of the farm Karino 134-JU. This equates to a total of 265 600 m<sup>3</sup> of water per annum.

Currently 312 trees are planted per hectare on these portions of which 31 hectares are being cultivated. Each mature tree requires a  $0.18\text{m}^3$  of water per week, which totals a current water use of  $90\,529\text{m}^3$  per annum.

With the additional 18 hectares of macadamia trees proposed to be planted, an additional  $52\,565\text{m}^3$  of water will be required for irrigation purposes. Even with the additional 18 hectares of cultivated land, the applicant still has a surplus of  $122\,506\text{m}^3$  per annum available for irrigation purposes.



## 2. DESCRIPTION OF IMPACT MANAGEMENT OUTCOMES

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### 2.1 Impact Management Outcomes

The impact management measures described in this section have been informed by the independent environmental assessment of the activities conducted and to be conducted on the farm. These measures have been proposed to mitigate negative impacts and enhance the positive benefits of the project and to, ultimately, achieve the impact management outcomes:

1. Louis Walters Trust is operated in an environmentally and socially responsible manner;
2. The EMPr prescribes practical measures for the mitigation of impacts;
3. Roles and responsibilities for the environmental management and monitoring of the proposed activities are defined;
4. All employees and its contractors are aware of the environmental impacts of the activities, thus enabling them to take timeous precautions against environmental damage;
5. Pollution or similar events are mitigated effectively; and
6. Regulatory requirements are complied with throughout.

Louis Walters Trust has a legal obligation to comply with the EMPr and to ensure compliance by its workers and agents, where applicable.

The EMPr describes mitigation measures designed to minimise or eliminate the significant adverse impacts that may be caused by the operational activities. It shall form the basis for environmental management at the company. This EMPr should be considered dynamic, as it should be amended if conditions change or more information becomes available.

### 2.2 Management Statement

A commitment is required from the management in that they shall:

- Take into consideration the surrounding environment and neighbours;
- Always behave professionally on and off site;
- Ensure quality in all work done, both technical and environmental;
- Resolve problems and claims arising from damage immediately, to ensure an uninterrupted flow of operations;
- Read and understand this EMPr and use it for the benefit of all involved;
- Preserve the natural environment by limiting destructive actions on site and by using resources efficiently; and
- Continually improve their environmental management strategies.

### 3. IMPACT MANAGEMENT

This section forms the core of the EMPr as it provides a description of the proposed impact management actions by identifying the manner in which the impact management outcomes contemplated in section 2 will be achieved. These actions, outlined in Table 2, are shown for the establishment and operational phase throughout. It is the responsibility of the owner of the farm to ensure that adequate resources are allocated to the achievement of these actions. It is the responsibility of the site manager to ensure that these actions are implemented on a day-to-day basis and to verify compliance to the EMPr. The time period for the implementation of the EMPr will be throughout the lifetime of the farming activities, or until such time as the EMPr is amended as a result of an environmental audit or if significant activity-changes take place.

**TABLE 2 | MITIGATION MEASURES REQUIRED FOR ACTIVITIES ASSOCIATED WITH ESTABLISHMENT AND OPERATIONAL PHASE.**

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
Biodiversity	Establishment and operational	Spreading of invasive plant species  Clearing additional vegetation	Clearance of vegetation for footprint of the agricultural area	<p><b>Objective(s):</b></p> <ul style="list-style-type: none"> <li>• Elimination of invasive plant species.</li> <li>• Protection of indigenous vegetation of surrounding areas</li> <li>• Protection of fauna</li> </ul> <p><b>Target(s):</b></p> <ol style="list-style-type: none"> <li>a) Where possible, large trees must be retained on site;</li> <li>b) Spoil material may not be pushed unto adjoining properties</li> </ol>	Visual Inspection and yearly external environmental audit	On-going, continuous monitoring by farm manager during establishment and operation.  Yearly external audit by an external environmental auditor	No invasive plant species within the perimeter of the site.  No additional clearance of vegetation besides the footprint of the agricultural area

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
				<ul style="list-style-type: none"> <li>c) Workers to be discouraged from killing animals and birds for relish;</li> <li>d) No staff member may be allowed to collect firewood or any other plant resources from surrounding vegetation. Any evidence of this must be followed up with prosecution and penalties levied on the company responsible for the establishment. Trees removed within the footprint of the agricultural area may be sold or donated during the establishment phase.</li> <li>e) Where alien invasive plants occur, they must be uprooted, cut and /or chemically treated. (Use only approved chemicals);</li> <li>f) Implement an alien vegetation control programme;</li> <li>g) No wild animal may under any circumstance be handled, removed or be interfered with</li> </ul>			
Air Quality	Establishment phase	Dust generation	Clearance of vegetation	<p><b>Objectives:</b> To minimise the impact of dust generated, on neighbouring land users</p>	Visual inspection and complaints received from neighbouring land users.	On-going, continuous monitoring by farm manager.	No complaints from neighbouring land users

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
			Disturbance of soil  Vehicle movement on and off site	<b>Targets:</b> a) Speed limit must be enforced in all areas to reduce the levels of dust pollution. b) No refuse waste or vegetation are to be burned on the premises or on surrounding premises			No excessive dust generated during establishment activities
Water	Establishment and operational phase	Irresponsible water use	Irrigation	<b>Objectives:</b> To minimise the impact on water resources and minimise water consumption  <b>Targets:</b> a) Ensure that there are no leaking water pipes or taps on the property. b) Provide water to Macadamia trees according to their requirements and ensure that it is not exceeded.	Visual inspection and monthly monitoring of water abstraction.	Monthly by the farm manager	Water use within the allocation
Sanitation and waste disposal	Establishment and operational phase	Soil pollution  Environmental pollution	Personnel conduct	<b>Objectives:</b> To prevent pollution caused by improper sanitation and waste storage and disposal	Visual inspection	Daily by the farm manager	No littering on site or pollution caused by improper storage and disposal of waste

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
				<b>Targets:</b> a) Littering on site and the surroundings areas are prohibited. b) Waste must be disposed, as soon as possible and not be allowed to stand on to decay, resulting in bad odours and attracting vermin. c) All waste removed from site must be disposed at the municipal/permitted waste disposal site.			
Soil	Establishment and operational phase	Soil erosion  Soil contamination	Heavy rain/storms increasing the possibility of erosion  Use of pesticides during establishment	<b>Objective(s):</b> To minimise soil erosion and soil contamination with the use of pesticides.  <b>Target(s):</b> a) Measures must be taken to prevent soil erosion. This can be achieved by means of using sandbags as a temporary measure or gabions on areas prone to erosion during the operational phase; b) Clearance of vegetation must be limited to the footprint of the agricultural area only. Areas	Visual inspections	Continuous site inspections, especially after heavy rainfall.	No erosion and soil contamination present on site

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
				<p>cleared of vegetation must be rehabilitated immediately after the establishment phase is complete</p> <p>c) Alternatives for the management of pests must be investigated. Only approved pesticides and herbicides may be used for the management of pests</p>			
All environmental aspects Health and safety	Establishment	Various environmental, Health and safety impacts.	Personnel conduct	<p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>To ensure that personnel adhere to EMPr requirements;</li> <li>To ensure the health and safety of employees and surrounding landowners</li> </ul> <p><b>Target:</b></p> <p>a) Ensure that inductions are conducted, and all personnel have records that are up to date;</p> <p>b) Ensure that all training includes requirements of the EMPr.</p> <p>c) Take adequate precautions to ensure that fires are not started as a result of works on site.</p> <p>d) Do not permit any fires or open flames, especially during the dry season.</p>	Visual inspection and inspection of records	On-going, continuous monitoring by farm manager.	No incidents recorded or reported.

Aspect	Phase	Potential Impact	Activity	Actions to avoid, modify, remedy, control or stop action, activity or process causing pollution or environmental degradation	Recommended Monitoring Method	Frequency of Monitoring	Performance Indicator
				<ul style="list-style-type: none"> <li>e) Ensure that the site is equipped with adequate firefighting equipment. Take immediate steps to extinguish any fire, which may break out.</li> <li>f) No open trenches are permitted without the use of demarcation tape.</li> <li>g) Secure storage of materials on site particularly hazardous material e.g. chemicals and fuels.</li> <li>h) Do not store any fuel or chemicals under trees.</li> <li>i) Do not permit any smoking within 3m of any fuel or chemical storage area, or refuelling area.</li> </ul>			
Social	Establishment and operational phase	Employment	Employment opportunities	<p><b>Objectives:</b> To ensure that employment opportunities and social benefits are maximised.</p> <p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>a) Unskilled job opportunities should be afforded to local communities where feasible.</li> <li>b) Payment should comply with applicable labour legislation in terms of minimum wages.</li> </ul>	As and when basis.	Whenever new labour is hired.	Job and contracting opportunities are afforded where feasible.