



**DEPARTMENT OF  
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM**

**BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2014**

Basic Assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

**File Reference Number:**

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**NEAS Reference Number:**

(For official use only)

**Date Received:**

**Due date for acknowledgement:**

**Due date for acceptance:**

**Due date for decision**

**Kindly note that:**

1. The report must be compiled by an independent Environmental Assessment Practitioner.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable in the report.
4. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.
5. An incomplete report may be returned to the applicant for revision.

6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.
8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2014.
9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.
10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

<p><b><u>Postal Address:</u></b></p> <p>Central Administration Office  Environmental Impact Management  P. O. Box 55464  <b>POLOKWANE</b>  0700</p>	<p><b><u>Physical Address:</u></b></p> <p>Central Administration Office  Environmental Affairs Building  Cnr Suid and Dorp Streets  <b>POLOKWANE</b>  0699</p>
<p><b>Queries should be directed to the Central Administration Office: Environmental Impact Management:-</b></p> <p><b>For attention:</b> Mr E. V. Maluleke  <b>Tel:</b> (015) 290 7138/ (015) 290 7167  <b>Fax:</b> (015) 295 5015  <b>Email:</b> <a href="mailto:malulekeev@ledet.gov.za">malulekeev@ledet.gov.za</a></p>	

View the Department's website at [http://www.ledet.gov.za/](http://www.ledet.gov.za) for the latest version of the documents.

## SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

NO

If YES, please complete the form entitled “Details of specialist and declaration of interest” or appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

### 1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail<sup>1</sup>:

**Clearing of an area of approximately 13 ha for new orchards on the Remainder of Portion 37 and Portion 3 of the farm Schoonuitzicht 10 LT in the Levubu area, ± 6.5 km northeast of the Albasini Dam, Makhado Local Municipality, Vhembe District, Limpopo**

### 2. FEASIBLE AND REASONABLE ALTERNATIVES

“*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—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the Department may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

- a) the property on which or location where it is proposed to undertake the activity;

**Muirhead & Roux CC has been farming on these properties for generations and wish to expand the current macadamia and banana orchards into the study areas.  
An ecological and heritage impact assessment was conducted over a total area of 19 ha to determine site sensitivities and it was determined that 13 ha is suitable for development.**

<sup>1</sup> Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

(b) the type of activity to be undertaken;

**The ideal farming alternative is banana or macadamia trees as the soils and climate are very suitable as proved by the existing orchards on the remainder of the farm.**

(c) the design or layout of the activity;

**The area to be developed as orchards is suitable from an ecological, heritage and topographical perspective.**

(d) the technology to be used in the activity;

**Drip irrigation or micro-jets from electric driven pumps will be used.**

(e) the operational aspects of the activity; and

**The most economically viable and most effective method of farming is orchards with drip irrigation. From an environmental perspective, this is also the most responsible water use method.**

**Environmentally friendly pesticides and herbicides will be used. Pest management include a combination of chemical and mechanical methods as an integrated approach to pest management – Appendix G.3.**

**Bananas are harvested by hand. Each banana bunch is carried to the packhouse by hand, to prevent damage to produce.**

(f) the option of not implementing the activity.

**The farms would remain in their current state, undeveloped and with continued invasion of alien plant species and increased fire and safety risk.**

**Illegal poaching of forest animals occurring on the farms pose a huge threat to the survival and continued existence of these animal populations.**

**The control and prevention of poaching is hampered by dense vegetation resulting from alien encroachment and absence of productive land use activities and benevolent human presence.**

**Paragraphs 3 – 13 below should be completed for each alternative.**

### 3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the Hartebeeshoek 94 WGS84 spheroid in a national or local projection.

	Latitude (S):			Longitude (E):		
List alternative sites, if applicable.						
<b>Alternative:</b>						
<b>Alternative S1<sup>2</sup> (preferred area 1)</b>	<b>23°</b>	<b>03'</b>	<b>18.20"</b>	<b>30°</b>	<b>09'</b>	<b>13.68"</b>
Alternative S2 (if any)	°	'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

#### In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
Alternative S1 (preferred or only route alternative)						
<ul style="list-style-type: none"> <li>Starting point of the activity</li> <li>Middle/Additional point of the activity</li> <li>End point of the activity</li> </ul>	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"
Alternative S2 (if any)						
<ul style="list-style-type: none"> <li>Starting point of the activity</li> <li>Middle/Additional point of the activity</li> <li>End point of the activity</li> </ul>	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"
Alternative S3 (if any)						
<ul style="list-style-type: none"> <li>Starting point of the activity</li> <li>Middle/Additional point of the activity</li> <li>End point of the activity</li> </ul>	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

<sup>2</sup> "Alternative S.." refer to site alternatives.

#### 4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the **preferred activity/technology** as well as alternative activities/technologies (footprints):

**Alternative:**

**Size of the activity:**

<b>Alternative A1<sup>3</sup> (preferred area 1)</b>	<b>130 000 m<sup>2</sup></b>
Alternative A2 (if any)	m <sup>2</sup>
Alternative A3 (if any)	m <sup>2</sup>

or, for linear activities:

**Alternative:**

**Length of the activity:**

Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

Indicate the **size of the alternative sites** or servitudes (within which the above footprints will occur):

**Alternative:**

**Size of the site/servitude:**

<b>Alternative A1 (preferred activity alternative)</b>	m <sup>2</sup>
Alternative A2 (if any)	m <sup>2</sup>
Alternative A3 (if any)	m <sup>2</sup>

#### 5. SITE ACCESS

**Does ready access to the site exist?**

YES	
m	

**If NO, what is the distance over which a new access road will be built**

**Describe the type of access road planned:**

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

<sup>3</sup> "Alternative A.." refer to activity, process, technology or other alternatives.

## 6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
  - rivers;
  - the 1:100 year flood line (where available or where it is required by Department of Water Affairs);
  - ridges;
  - cultural and historical features;
  - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.11 the positions from where photographs of the site were taken.

## 7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

## 8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

## 9. ACTIVITY MOTIVATION

### 9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R 1 200 000
What is the expected yearly income that will be generated by or as a result of the activity?	R 4 000 000
Will the activity contribute to service infrastructure?	NO
Is the activity a public amenity?	NO
How many new employment opportunities will be created in the development phase of the activity?	30
What is the expected value of the employment opportunities during the development phase?	R 120 000
What percentage of this will accrue to previously disadvantaged individuals?	100%
How many permanent new employment opportunities will be created during the operational phase of the activity?	20
What is the expected current value of the employment opportunities during the first 10 years?	R 8 400 000
What percentage of this will accrue to previously disadvantaged individuals?	100%

### 9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

<b>NEED:</b>	
i.	Was the relevant municipality involved in the application? YES
ii.	Does the proposed land use fall within the municipal Integrated Development Plan? YES
iii.	<p>If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:</p> <p><b>The Makhado Local Municipality was consulted during the environmental impact assessment process.</b></p> <p><b>According to the Makhado Local Municipality 2020-2021 Draft IDP agriculture is one of the main labour-absorbing sectors, however employment data showed that this sector has experienced job losses and a decline of -0.7% (Limpopo province) recently. The proposed new orchards will make more jobs available in this sector to local communities.</b></p> <p><b>Agriculture is listed as one of the municipality's Economic Cluster priority issues.</b></p> <p><b>The study area in question is highly suitable agricultural land as it is directly adjacent to existing orchards on the same farm.</b></p>



<b>DESIRABILITY:</b>			
i.	Does the proposed land use / development fit the surrounding area?	YES	
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	YES	
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
v.	Will the proposed land use / development impact on the sense of place?		NO
vi.	Will the proposed land use / development set a precedent?		NO
vii.	Will any person's rights be affected by the proposed land use / development?		NO
viii.	Will the proposed land use / development compromise the "urban edge"?		NO
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

<b>BENEFITS:</b>			
i.	Will the land use / development have any benefits for society in general?	YES	
ii.	Explain:		
	<b>The project will provide economic stimulation in the area through increased demand for goods and services associated with increased agricultural production. These include, amongst others: higher demand for packing materials (plastic sheeting, pallets, cardboard boxes); increased demand in agrichemical, fertiliser and supporting industries; as well as increased transport requirements for goods and labour.</b>		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
iv.	Explain:		
	<b>Local labour will be used to establish and farm the orchards and equipment for the infrastructure will be purchased locally. (e.g. fencing, support poles, irrigation system, electricity etc.)</b>		

## 10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

<b>Title of legislation, policy or guideline:</b>	<b>Administering authority:</b>	<b>Date:</b>
National Environmental Management Act (Act no. 107 of 1998)	Environmental Affairs	1998
National Heritage Resources Act (Act no. 25 of 1999)	SAHRA	1999
Constitution of South Africa (Act no. 108 of 1996)	Minister	1996
National Environmental Management: Biodiversity Act (Act no. 10 of 2004)	Environmental Affairs	2004
Conservation of Agricultural Resources Act (Act no. 43 of 1983)	Department of Agriculture	1983
National Water Act (Act no. 36 of 1998)	DWS	1998
National Forests Act (Act no. 84 of 1998)	Department of Forestry	1998
National Environmental Management: Biodiversity Act (Act no. 10 of 2004)	Environmental Affairs & LEDET	2004
Limpopo Environmental Management Act (Act no. 7 of 2003)	LEDET	2003
National Environmental Management Act EIA Regulations (2014) – Listed Activity (GN 982-985 of 04 December 2014 as amended on 07 April 2017)	Environmental Affairs & LEDET	2014
Occupational Health and Safety Act (Act no. 85 of 1993)	Department of Labour	1993

## 11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

### 11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES

If yes, what estimated quantity will be produced per month?

100 m<sup>3</sup>

How will the construction solid waste be disposed of (describe)?

**Construction solid waste will consist only of tree branches and wood, which will be re-used on the farm as soil stabilization or chipped and used as compost or mulch. Branches too large to be used or chipped will be made available to farm labourers and/or the local community for fire wood.**

Where will the construction solid waste be disposed of (describe)?

**On Ptn 3 and RE Ptn 37 of the farm Schoonuitzicht 10 LT or be given to the labourers and /or the local community.**

Will the activity produce solid waste during its operational phase?

YES

If yes, what estimated quantity will be produced per month?

5 m<sup>3</sup> per 90 days

How will the solid waste be disposed of (describe)?

**Plastic and containers from packaging, boxing, bags, containers etc. will be taken to the Makhado Local Municipality landfill site by the applicant – Appendix G.4.**

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the department to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

NO

If yes, inform the department and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility?

NO

If yes, then the applicant should consult with the Department to determine whether it is necessary to change to an application for scoping and EIA.

### 11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

	NO
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If yes, what estimated quantity will be produced per month?

	m <sup>3</sup>
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Will the activity produce any effluent that will be treated and/or disposed of on site?

	NO
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If yes, the applicant should consult with the Department to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

	NO
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If yes, provide the particulars of the facility:

Facility name:

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Contact person:

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Postal address:

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Postal code:

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Telephone:

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Cell:

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E-mail:

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Fax:

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Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

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### 11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

	NO
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If yes, is it controlled by any legislation of any sphere of government?

	NO
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

N/A
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### 11(d) Generation of noise

Will the activity generate noise?

YES	
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If yes, is it controlled by any legislation of any sphere of government?

	NO
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If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

**During the preparation phase there will be noise of construction machinery and vehicles.**

**During the operational phase there will be noise from tractors for maintenance of the orchards.**

## 12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> groundwater	<input checked="" type="checkbox"/> river, stream, dam or lake	<input type="checkbox"/>	<input type="checkbox"/>
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

40 000 litres

Does the activity require a water use permit from the Department of Water Affairs?

NO

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

## 13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

## SECTION B: SITE/AREA/PROPERTY DESCRIPTION

### Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.
3. Has a specialist been consulted to assist with the completion of this section?

**YES**

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

**All specialist reports are contained in Appendix D.**

Property description/physical address:

**REMAINDER OF PTN 37 & PTN 3 OF THE FARM SCHOONUITZICHT 10 LT**

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

**Makhado Local Municipality  
Vhembe District**

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

**Agriculture**

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

<input checked="" type="checkbox"/>	<b>NO</b>
<input checked="" type="checkbox"/>	<b>NO</b>

Must a building plan be submitted to the local authority?

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.) The map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any;
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

Locality map:

## 1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	████████	1:20 – 1:15	████████	████████	1:7,5 – 1:5	████████
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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## 2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

████████		████████	
████████		2.7 Undulating plain / low hills	X
████████████████		████████	
████████████		████████	
████████			

**3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	<input type="checkbox"/>	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	<input type="checkbox"/>	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	<input type="checkbox"/>	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	<input type="checkbox"/>	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	<input type="checkbox"/>	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	<input type="checkbox"/>	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	<input type="checkbox"/>	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	<input type="checkbox"/>	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

**4. GROUNDCOVER**

Indicate the types of groundcover present on the site:

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

<input type="checkbox"/>	Natural veld with scattered aliens <sup>E</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Cultivated land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.



**5. LAND USE CHARACTER OF SURROUNDING AREA**

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

<b>5.1 Natural area</b>	<b>X</b>	5.22 School	
5.2 Low density residential		5.23 Tertiary education facility	
5.3 Medium density residential		5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial <sup>AN</sup>		5.26 Museum	
<b>5.6 Office/consulting room</b>	<b>X</b>	5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam <sup>A</sup>		5.29 Sewage treatment plant <sup>A</sup>	
5.9 Light industrial		5.30 Train station or shunting yard <sup>N</sup>	
5.10 Heavy industrial <sup>AN</sup>		5.31 Railway line <sup>N</sup>	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport <sup>N</sup>	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station <sup>H</sup>		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		<b>5.37 River, stream or wetland</b>	<b>X</b>
<b>5.17 Plantation</b>	<b>X</b>	5.38 Nature conservation area	
<b>5.18 Agriculture</b>	<b>X</b>	5.39 Mountain, koppie or ridge	
<b>5.19 Archaeological site</b>	<b>X</b>	5.40 Graveyard	
5.20 Quarry, sand or borrow pit		<b>5.41 River, stream or wetland</b>	<b>X</b>
<b>5.21 Dam or Reservoir</b>	<b>X</b>	5.42 Other land uses (describe)	

If any of the boxes marked with an “N “are ticked, how will this impact / be impacted upon by the proposed activity?

**The drainage channels, wetland, sensitive natural areas and heritage site (grave) on the farm will not be impacted upon by the proposed orchards.**

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity?

If YES, specify and explain:	N/A
If NO, specify:	

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	
If NO, specify:	

## 6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

YES

Archaeological or palaeontological sites, on or close (within 20m) to the site?

No

If YES, explain:

**A single burial site, Exigo SCH-BP01 has been recorded in the Archaeological Impact Assessment Report but will not be impacted on as the proposed orchards are, at its closest point, more than 220 metres away.**

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

**The single burial site is situated in the Firebreak Block in a densely vegetated area. Two of the graves are dressed with marked marble headstones and the other burials are indicated by elongated stone circle features filled in with earth. The burials area is positioned in a relative east-west orientation, the site is fenced off and its condition of preservation is fair.**

Will any building or structure older than 60 years be affected in any way?

NO

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

## SECTION C: PUBLIC PARTICIPATION

### 1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the department) at a place conspicuous to the public at the boundary or on the fence of—
  - (i) the site where the activity to which the application relates is or is to be undertaken; and
  - (ii) any alternative site mentioned in the application;

**A site notice was fixed at the entrance to the farm - Appendix E.**

- (b) giving written notice to—
  - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
  - (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;
  - (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;
  - (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;
  - (v) the municipality which has jurisdiction in the area;
  - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
  - (vii) any other party as required by the department;

**Background Information Documents were hand delivered and/or emailed to adjacent landowners and organs of state with jurisdiction over any aspect of the proposed activity - Appendix E.**

- (c) placing an advertisement in—
  - (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;

**A notice was placed in the *Zoutpansberger* newspaper on 20 November 2020 - Appendix E.**

- (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 local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in sub regulation 54(c)(ii); and

- (e) using reasonable alternative methods, as agreed to by the department, in those instances where a person is desiring of but unable to participate in the process due to—
  - (i) illiteracy;
  - (ii) disability; or
  - (iii) any other disadvantage.

## **2. CONTENT OF ADVERTISEMENTS AND NOTICES**

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
  - (i) that the application has been submitted to the department in terms of these Regulations, as the case may be;
  - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
  - (iii) the nature and location of the activity to which the application relates;
  - (iv) where further information on the application or activity can be obtained; and
  - (v) the manner in which and the person to whom representations in respect of the application may be made.

## **3. PLACEMENT OF ADVERTISEMENTS AND NOTICES**

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the department in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these Regulations.

Advertisements and notices must make provision for all alternatives.

## **4. DETERMINATION OF APPROPRIATE MEASURES**

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the department to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

## 5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

## 6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input.

<b>Name of Authority informed:</b>	<b>Comments received (Yes or No)</b>
Department Agriculture, Land Reform and Rural Development	No
Limpopo Department of Agriculture	No
Department of Water Affairs	No
Vhembe District Municipality	No
Makhado Local Municipality	Yes
Department of Rural Development and Land Reform	No
South African Heritage Resources Agency	Yes
Limpopo Economic Development, Environment and Tourism	Yes

## 7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

**Has any comment been received from stakeholders?**

YES	<input type="checkbox"/>
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**If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):**

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- **Mr Kobus Janse van Rensburg (Royal Macadamia) requested registration as I&AP but no comments or concerns were submitted.**
- **Ms Mpho Mudau (Makhado Local Municipality) requested a site visit. Arrangements for a site visit were attempted but no site visit was possible. The MLM confirmed that there is no objection to the proposed development proceeding.**
- **Mr Michael Holford raised concerns about the impact of the development on the ecology of the area, loss of topsoil and soiling of water systems due to impact of topsoil runoff. Socio-economic impact. Downstream effects of excessive topsoil pollution within the water ways system. Excessive loss of underground water due to foreign alternative to post-natural agricultural propagation.**
- **The South African Heritage Resources Agency confirmed that there is no objection to the proposed development proceeding, provided the conditions as per section 6.1.4/page 20-21 of the FBAR is adhered to.**
- **The Limpopo Department of Economic Development, Environment and Tourism requested:**
  - **proof of consultation with Interested and Affected Parties – Appendix E;**
  - **that all comments and input from Interested and Affected Parties must be adequately addressed and be contained in a Comments and Responses Report – Appendix E;**
  - **clarification on the areas proposed for clearance as 19 ha and 13 ha – p. 11-12 and Figure 3 & 4 of this Report;**
  - **that Specialist Declarations be included in the Final BAR – Appendix D.1 & D.2;**
  - **that mitigation measures recommended in the specialists' reports be integrated into the EMPr – Appendix F;**
  - **a service agreement letter for general waste disposal from the Makhado Local Municipality be submitted with the Final BAR – Appendix G.4.**

## SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

### 1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

**Impact of the development (large-scale, commercial monoculture) on ecology, possible soil erosion, sedimentation of (downstream) water bodies, over-abstraction of groundwater and socio-economic impact.**

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

**Registration was confirmed. The EAP acknowledged that concerns will be addressed in the report to follow.**

### 2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

#### IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

##### **Alternative S1 (ONLY alternative)**

###### ***Direct impacts:***

- No impacts are expected during the design and planning phase of the proposed project

###### ***Indirect impacts:***

- No impacts are expected during the design and planning phase of the proposed project

###### ***Cumulative impacts:***

- No impacts are expected during the design and planning phase of the proposed project

## IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

### **Alternative S1 (ONLY alternative)**

#### ***DIRECT IMPACTS:***

##### ***❖ Air Quality and Noise:***

- Dust, smoke (fumes) and noise generation due to vegetation clearance and movement of machines & vehicles on site.
- Burning of solid waste and farming matter.

##### ***❖ Surface and Groundwater pollution:***

- Water pollution due to spillages of oil/fuel and other lubricants.
- Storm water run-off from cleared areas.
- Impact on rivers and streams and wetland if activity footprint is not managed.

##### ***❖ Water Use (Available resources):***

- Water use should be kept to a minimum. Ensure that pipes, taps or water tanks are not leaking. Workers must be educated on the importance and ways to use water sparingly.
- Clean drinking water must be made available to workers at all times.

##### ***❖ Archaeology/Heritage:***

- Possible destruction of archaeological/heritage findings during vegetation clearance.

##### ***❖ Ecology (Fauna and Flora):***

- Habitat fragmentation due to change in land use.
- Loss of indigenous flora and fauna due to vegetation clearance
- Loss of indigenous fauna due to killing, snaring or collection of animals.
- Loss of indigenous fauna and flora due to the inappropriate use of herbicides and pesticides.
- Loss of indigenous flora and fauna due to accidental fires.
- Animal mortalities due to movement of machinery & vehicles on site.
- Spread of alien invasive plant species.

##### ***❖ Soil Pollution and Degradation:***

- Soil pollution due to oil and diesel spillages during the operation of machines & vehicles.
- Loss of topsoil (erosion) due to storm water over cleared areas.



❖ **Visual:**

- Visual impact due to removal of indigenous vegetation.

❖ **Safety, Security and Fire Hazard:**

- **Increased risk to the safety of people due to:**
  - Construction activities
  - Construction machines on site
  - Burning of removed vegetation – could lead to veld fires

❖ **Socio- Economic:**

- Positive impact on job creation (site clearance & preparation phase)

**INDIRECT IMPACTS:**

- Socio economic benefits to the area through job creation and skills development.
- Loss of valuable topsoil through erosion.
- Loss of larger sections of indigenous forest through possible uncontrollable veld fires and unauthorized access.
- Loss of fauna due to killing and snaring of animals.
- Storm water damage.

**CUMULATIVE IMPACTS:**

- Reduction of a disturbed habitat and control of alien vegetation.
- Increase in water consumption.

**MITIGATION MEASURES THAT MAY ELIMINATE OR REDUCE THE POTENTIAL IMPACTS LISTED ABOVE:  
(CONSTRUCTION PHASE)**

**Alternative S1 (ONLY alternative)**

**DIRECT IMPACTS:**

**Air Quality and Noise:**

- Implement standard dust control measures on access roads to the construction sites of the orchards, including periodic spraying (frequency will depend on many factors including weather conditions, soil composition and traffic intensity and must thus be adapted on an on-going basis) and chemical dust suppressants of construction areas and access roads, and ensure that these are continuously monitored to ensure effective implementation;
- Soil dumps may be covered if necessary;
- A speed limit should be enforced on dirt roads (preferably 40km/h) during vegetation clearance and

orchards establishment.

- Machines & vehicles used on or entering the site to be maintained in order to reduce excessive smoke or fumes.
- Tree branches must be made available to the farm labourers or local community for firewood or used alternatively for compost or soil stabilization measures.
- Open fires for cooking are only to be made at designated safe areas.
- The necessary fire breaks must be in place around the perimeters of the site.
- All noise levels must be controlled at source.
- The applicant must comply with provincial noise regulations. Construction machinery must be fitted with noise mufflers and be maintained properly.
- All employees must be given the necessary ear protection gear when required.

**Surface and Groundwater pollution:**

- Construction and maintenance activities must be conducted in such a way that minimal damage is caused to the streams and drainage channels on site.
- **No development can be done within the flood-line zone or within 500 meters of a wetland, or within 100 meters of a river, without a Water Use Licence.**
- **Demarcate and maintain buffer areas of at least 32 m from the edge of drainage channels.**
- **Water quality monitoring should be conducted at least annually as per Appendix G.3.**
- Machinery to be maintained to prevent oil and fuel leaks and all vehicles should be inspected for oil and fuel leaks on a regular basis. The servicing or refueling of vehicles or machinery must only take place at the farm workshop.
- Drip pans are to be used during the servicing of construction machinery and used oil must be stored in suitable containers.
- Used parts, including oil filters are to be contained and disposed of at a site suitably licensed for such waste products. The storage of fuel, oils and lubricants must only take place at a designated storage area which is adequately bunded / sealed.
- Spill kits should be on-hand to deal with spills immediately;
- Oil spillages must be remediated. Large spillages must be reported to the relevant authorities.
- Hazardous chemicals to be stored on an impervious surface protected from rainfall and storm water run-off;
- No dumping of waste should take place within the riparian zone. If any spills occur, they should be immediately cleaned up;
- Contain all dirty water in the dirty water system and contain all dirty storm water up to a 1:50 year flood event as a minimum . Ensure that all activities impacting on ground water resources of the subject property are managed according to ground water monitoring and management requirements;
- Any excess or waste material or chemicals should be removed from the site and discarded in an environmentally friendly way. The ECO should enforce this rule rigorously;
- Ensure strict compliance that no foreign matter is deposited in pipeline trenches. Any foreign matter must be removed immediately.
- Solid waste must be kept in adequate wind-, water- and animal proof waste bins and disposed of weekly at the Makhado municipal landfill site.
- Removal of vegetation to be limited to the demarcated lands area.
- Regular maintenance (stabilization) of and the implementation of adequate erosion control measures.
- Appropriate sanitary facilities must be provided during construction and all waste removed to an appropriate

waste facility.

- Pit latrines must be constructed 200 m apart on the edges of the orchards. These pits must be sprayed with Effective Micro-organisms (EM) once per month to assist in the biological breakdown process.
- Clearing of vegetation should be scheduled for the drier winter months and limited to areas immediately needed for construction. Vegetation stripping should occur in parallel with the progress of construction to minimise erosion and/or run-off. Large tracts of bare soil will either cause dust pollution or quickly erode and then cause sedimentation in the lower portions of the catchment. Only selected plant species must be used in the re-vegetation process.
- Minimize soil exposure around the orchards. Re-vegetate exposed areas surrounding the orchards and allow a sufficient buffer between the cropland development to prevent sedimentation into the wetlands / rivers;
- Manage water effectively on, to, within, and from this site;
- Employ sediment capture techniques and stormwater attenuation techniques.
- All development activities should be restricted to the footprint areas of the proposed development. The Environment Site Officer (ESO) should demarcate and control these areas. Storage of building equipment, fuel and other materials should be limited to demarcated areas. Layouts should be adapted to fit natural patterns rather than imposing rigid geometries.
- The Environment Control Officer (ECO) should advise the construction team in all relevant matters to ensure minimum destruction and damage to the environment and specifically wetlands. The ECO should enforce any measures that he/she deem necessary. Regular environmental training should be provided to construction workers to ensure the protection of the habitat, fauna and flora and their sensitivity to conservation.
- Rehabilitation of the development area after construction have been completed should be considered a high priority and all areas rehabilitated should be audited after construction has ceased by a suitably qualified environmentalist;
- Should the development be approved by authorities, environmental monitoring of environmental aspects should be implemented during and after the construction phase of the development to ensure that minimal impact is caused to the floodline or wetlands of the area.
- **Demarcate all riparian boundaries with pegs and danger tape;**
- Edge effects of pre-construction and construction activities, including erosion, sedimentation and alien/weed control, need to be strictly managed in wetland areas as well as their associated buffer zones;
- The following general rehabilitation measures should be implemented in the disturbed riparian zone:
- All disturbed surface areas will be re-shaped to resemble the surrounding natural topography. Surfaces will be ripped / scarified, and re-vegetated with indigenous grass species.
- As far as is practical, implement concurrent rehabilitation processes to limit degradation of soil biota.
- Terrestrial invasive removal programs must be maintained throughout the proposed development as well as in the aftercare and maintenance phases;

**Water Use (Available resources):**

- Ensure that pipes, taps or water tanks are not leaking. Workers must be educated on the importance and ways to use water sparingly.
- Clean drinking water and water to wash their hands must be made available to workers at all times.

### Archaeology/Heritage:

- It is recommended that the burial site (**Site Exigo-SCH-BP01**) be conserved in situ and that conservation buffers of at least 30m be implemented around the heritage receptor.
- The site should be fenced and an access gate should provide controlled access to the site.
- A distance of at least 2m should be maintained between the grave and fence which should be at least 1,8m high.
- A clear signboard should be erected indicating the heritage sensitivity of the site and contact details for visitation of the grave should be provided.
- A suitably qualified archaeologist must be notified whenever anything of archaeological importance is discovered and the work in that area must cease immediately.
- A GPS reading of the site where findings were made must be taken.
- Under no circumstances may the applicant, contractors or employees remove, destroy or interfere with archaeological artefacts.

### Ecology (Fauna and Flora):

- The removal of plant species should only occur on the footprint area of the development and not over the larger area;
- Conduct flora species search and rescue efforts before ground clearing begins to reduce negative impacts on species of concern;
- Remove and relocate any plants of botanical or ecological significance as indicated by the ecologist or Environmental Control Officer (ECO);
- Vegetation to be removed as it becomes necessary;
- Large indigenous trees should be protected wherever possible.
- Clearly demarcate the entire development footprint prior to initial site clearance and prevent construction personnel from leaving the demarcated area;
- Monitoring should be implemented during the construction phase of the development to ensure that minimal impact is caused to the flora of the area;
- The ECO should advise the construction team in all relevant matters to ensure minimum destruction and damage to the environment. The ECO should enforce any measures that he/she deem necessary. Regular environmental training should be provided to construction workers to ensure the protection of the habitat, fauna and flora and their sensitivity to conservation;
- **Strict rules and penalties against the snaring, killing, catching or poaching of any animals will be enforced for all workers. This restriction includes collection of fauna as pets, food or for use as muti.**
- Limit pesticide use to non-persistent, immobile pesticides and apply in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications;
- Where trenches pose a risk to animal safety, they should be adequately cordoned off to prevent animals falling in and getting trapped and/or injured. This could be prevented by the constant excavating and backfilling of trenches during pipeline construction;
- Poisons for the control of problem animals should rather be avoided since the wrong use thereof can have disastrous consequences for the raptors (refer to Appendix D.1) occurring in the area. The use of poisons for the control of rats, mice or other vermin should only be used after approval from an ecologist. **The use of owl-boxes and bat hotels as biological pest control agents are highly recommended.**

- A monitoring programme should be implemented to ensure the rehabilitation of areas is done sufficiently.
- All construction and maintenance activities should be conducted in such a way that minimal damage is caused to the drainage features on site.
- **No development can be done within the flood-line zone or within 500 meters of a wetland, or within 100 meters of a river, without a Water Use Licence.**
- **The conservation of natural corridors such as pristine forests, dams, wetlands and riparian woodland around the development footprint, to allow fauna to move freely between the different vegetation units on the property, must be prioritized;**
- **The conservation of the pristine forests, dams, wetlands and riparian woodland would allow the species and their habitats to be preserved.**
- **All possible efforts must be made to ensure as little disturbance as possible to the sensitive habitats such as drainage channels during construction;**
- Only necessary damage must be caused and, for example, unnecessary driving around in the veld or bulldozing natural habitat must not take place;
- Construction activities must remain within defined construction areas and the road servitudes. No construction / disturbance will occur outside these areas.
- Staff should not be accommodated on site. No temporary accommodation must be erected on the site.
- Adequate rubbish bins and sanitation facilities should be provided to construction workers;
- The ECO should regularly inspect the site, including storage facilities and compounds. A monitoring programme should also be implemented around these areas to detect alien invasive species early, before they become established and, in the case of weeds, before the release of seeds;
- Maintain proper firebreaks around entire development footprint.
- Educate construction workers regarding fire risks and the occurrence of important resources in the area and the importance of protection;
- Construction activities must remain within defined construction areas and the road servitudes. No construction / disturbance will occur outside these areas.
- Construction activities must be restricted to working hours Monday to Saturday, unless otherwise approved by the appropriate competent person in consultation with the affected residents.
- Instruct employees, contractors, and site visitors to avoid harassment and disturbance of wildlife, especially during reproductive (e.g. courtship, nesting) seasons. In addition, control pets to avoid harassment and disturbance of wildlife.
- Campfires at construction sites must be strictly controlled to ensure that no veld fires are caused.
- A speed limit should be enforced (speed on site max 30 km/hour; Outside of the site 60 km/h. In rainy conditions max 20 km/h). It can be considered to install speed bumps in sections where the speed limit tends to be disobeyed. (Speed limits will also lessen the probability of road accidents and their negative consequences).
- Travelling at night should be avoided or limited as much as possible. No travelling at night should be allowed without approval by site manager.
- **The spread and establishment of alien invasive species must be prevented through:**
  - Control which will involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. Weeds and invader plants will be controlled in the manner prescribed for that category by the CARA or in terms of Working for Water guidelines.
  - The control of these species should even begin prior to the construction phase considering that small

populations of these species was observed during the field surveys;

- Instituting strict control over materials brought onto site, which should be inspected for seeds of noxious plants and steps taken to eradicate these before transport to the site.
- Routinely fumigate or spray all materials with appropriate low-residual herbicides prior to transport to or in a quarantine area on site.
- The contractor is responsible for the control of weeds and invader plants within the construction site for the duration of the construction phase.
- Alien invasive tree species listed by the CARA regulations should be eradicated;
- Rehabilitating disturbed areas as quickly as possible to reduce the area where invasive species would be at a strong advantage and most easily able to establish;
- Developing and implementing a plan to control of noxious weeds and invasive plants that could occur because of new surface disturbance activities at the site.
- The plan should address monitoring, weed identification, the way weeds spread, and methods for treating infestations.
- Require the use of certified weed-free mulching.
- Prohibit the use of fill materials from areas with known invasive vegetation problems. The spread of invasive nonnative plants should be avoided by keeping vehicles and equipment clean and reseeded disturbed areas with native plants;
- Institute a monitoring programme to detect alien invasive species early, before they become established and, in the case of weeds, before the release of seeds.
- Once detected, an eradication/control programme should be implemented to ensure that the species' do not spread to surrounding natural ecosystems.

### **Soil Pollution and Degradation:**

- Machinery to be maintained to prevent oil and fuel leaks.
- All vehicles should be inspected for oil and fuel leaks on a regular basis.
- Drip pans are to be used during the servicing of construction machinery and used oil must be stored in suitable containers.
- Used parts, including oil filters are to be contained and disposed of at a site suitably licensed for such waste products.
- The storage of fuel, oils and lubricants must only take place at a designated storage area which is adequately bunded / sealed.
- The servicing or refueling of vehicles or machinery must only take place at the farm workshop.
- Spill kits should be on-hand to deal with spills immediately;
- Oil spillages must be remediated. Large spillages must be reported to the relevant authorities.
- Hazardous chemicals to be stored on an impervious surface protected from rainfall and storm water run-off;
- Any excess or waste material or chemicals should be removed from the site and discarded in an environmentally friendly way. The ECO should enforce this rule rigorously;
- Ensure strict compliance that no foreign matter is deposited in trenches. Any foreign matter must be removed immediately.
- Solid waste must be kept in adequate wind and animal proof waste bins and disposed of weekly at the Makhado municipal landfill site.
- Appropriate sanitary facilities must be provided during construction and all waste removed to an appropriate waste facility.

- Pit latrines must be constructed 200 m apart on the edges of the orchards. These pits must be sprayed with Effective Micro-organisms (EM) once per month to assist in the biological breakdown process.
- Removal of vegetation to be limited to the demarcated orchards area. Removed vegetation can also be used to stabilize exposed sections and for compost.
- Minimize clearance of vegetation. Retain natural trees, shrubbery, and grass species wherever possible.
- Regular maintenance (stabilization) of and the implementation of adequate erosion control measures as recommended.
  
- **Erosion must be minimized and managed as follows:**
  - Erosion and storm water control should be addressed by a hydrological engineer in a detailed storm water management plan to ensure that water runoff is diverted off the site without pooling and stagnation or erosion. Financial provision for closure will include the estimated costs for erosion control post-construction;
  - Cover disturbed soils as completely as possible, using vegetation or other materials;
  - Minimize the amount of land disturbance and develop and implement stringent erosion and dust control practices.
  - Protect sloping areas that are susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and work areas;
  - Ridges where trees will be planted must follow the contours.
  - Repair all erosion damage as soon as possible to allow for sufficient rehabilitation growth;
  - Gravel roads must be well drained to limit soil erosion by constructing a sufficient number of outflow drains from roads;
  - Stringent controls must be put in place to prevent any unnecessary disturbance or compaction of alluvial soils. Compaction of soils should be limited and / or avoided as far as possible. Compaction will reduce water infiltration and will result in increased runoff and erosion. Where any disturbance of the soil takes place (have taken place in the past), these areas must be stabilized and any alien plants which establish should be cleared and follow up undertaken for at least 2 years thereafter and preferably longer. Where compaction becomes apparent, remedial measures must be taken (e.g. "ripping" the affected area). Topsoil should preferably be separated from the subsoil, and topsoil sections should be kept intact as deep as possible.
  - Reprofilling of the banks of disturbed drainage areas to a maximum gradient of 1:3 to ensure bank stability;
  - Reinforce banks and drainage features where necessary with gabions, reno mattresses and geotextiles. This is especially relevant for stormwater outlet areas;
  - Reseed any areas where earthworks have taken place with indigenous grasses to prevent further erosion;
  - Erosion control mechanisms must be established as soon as possible. Further financial provision should be continued over the subsequent years to allow for maintenance of the gabions, reno mattresses, and associated structures;
  - If compaction occurs, rectification can be done by application and mixing of manure, vegetation mulch or any other organic material into the area. Use of well cured manure is preferable as it will not be associated with the nitrogen negative period associated with organic material that is not composted;
  - Vehicle traffic should not be allowed on the rehabilitated areas, except on allocated roads, must not be allowed. It will have a negative impact due to the dispersive/compaction characteristics of soils and its implications on the long term;

- Appropriate design and mitigation measures must be developed and implemented to minimise impacts on the natural flow regime of the watercourse i.e. through placement of structures/supports and to minimise turbulent flow in the watercourse;
- The indiscriminate use of machinery within the in-stream and riparian habitat will lead to compaction of soils and vegetation and must therefore be strictly controlled;
- Perform scheduled maintenance to be prepared for storms. Insure that culverts have their maximum capacity, ditches are cleaned, and that channels are free of debris and brush than can plug structures.

**Visual:**

- Vegetation removal must be confined to the demarcated orchards area.
- Any stockpiled vegetation must be made available for use by farm labourers or local communities or alternative be used for soil stabilization, mulch or compost.

**Safety, Security and Fire Hazard:**

- Fire breaks should comply with the National Veld and Forest Fire Act 101 of 1998 (Chapter 4: Duty to Prepare and maintain firebreaks). Firebreaks must be made around the perimeter of the site. An emergency plan must be in place so that any uncontrolled fire can be combatted in the most efficient manner.
- Speed control of vehicles on the farm must be exercised for the safety of people.
- No vegetation may be burnt on the premises or surrounding areas.
- No trespassing by construction workers onto neighbouring properties must be allowed. Strict measures must be implemented in this regard.

**Socio- Economic:**

Local labour must be employed wherever possible during the clearance and preparation phase.



## **IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE**

### **Alternative (S1 - preferred alternative)**

#### ***DIRECT IMPACTS:***

##### ***❖ Air Quality and Noise:***

- Air and Noise pollution (fumes and exhaust gasses) from tractors and vehicles.
- Burning of solid waste and farming matter.
- Noise and insecticide spray nuisance to neighboring residents.

##### ***❖ Surface and Groundwater pollution:***

- Surface and groundwater pollution due to leakages of fuel/oil or other lubricants from vehicles and workshop.
- Surface and groundwater pollution due to lack of sanitation facilities.
- Impacts on sensitive drainage channels and wetland on the farm if footprint of development not managed.

##### ***❖ Water Use (Available resources):***

- Excessive use of irrigation water and leakages.

##### ***❖ Ecology (Fauna and Flora):***

- Loss of fauna due to the inappropriate use of pesticides and herbicides on site
- Loss of fauna due to human activities like the killing or snaring of animals.
- Loss of habitat and fauna – accidental fires.
- Spreading of alien invasive species.

##### ***❖ Soil Pollution and Degradation:***

- Pollution of soil by fuel and oil from vehicles.
- Pollution of soil due to the inappropriate use of fertilizers, herbicides and pesticides

##### ***❖ Visual/Appearances:***

- Visual pollution if orchards are not maintained and alien invaders are not controlled.

##### ***❖ Socio Economic, Security and Health:***

- Positive impact - job creation
- Theft of produce, infrastructure and equipment.

**INDIRECT IMPACTS:**

❖ **Surface and Groundwater pollution:**

- Increased demand on water resource
- Contamination of water sources

❖ **Health (Safety and Security)::**

- Possible occurrence of fires – spread to adjacent properties

**CUMULATIVE IMPACTS:**

- Increased pressure on water resource
- Possible increased erosion.
- Alien plant control.

**MITIGATION MEASURES THAT MAY ELIMINATE OR REDUCE THE POTENTIAL IMPACTS LISTED ABOVE:**  
**OPERATIONAL PHASE**

**Alternative S1 (ONLY alternative)**

***DIRECT IMPACTS:***

***Air Quality and Noise:***

- No solid waste or farming refuse should be burned on site.
- Spraying of insecticides must be done during low wind speeds.

***Water Use (Available resources):***

- The water allocation must not be exceeded.
- Ensure that pipes and taps are not leaking and use water responsibly. Labourers must be educated on the importance and ways to use water sparingly.

***Surface and Groundwater pollution:***

- Construction and maintenance activities must be conducted in such a way that minimal damage is caused to the streams and drainage channels on site.
- **No development can be done within the flood-line zone or within 500 meters of a wetland, or within 100 meters of a river, without a Water Use Licence.**
- **Demarcate and maintain buffer areas of at least 32 m from the edge of drainage channels.**
- **Water quality monitoring should be conducted at least annually as per Appendix G.3.**
- Environmentally friendly agricultural products should be used.
- Recycling of plastics, metals, glass & paper should be promoted.
- The domestic waste must be taken to the Makhado municipal landfill site.
- Tractors and vehicles should not be serviced at the site to prevent pollution of the soils by hydrocarbons or oil and must be checked for leaks to ensure no fuel, oil or other similar pollutants, pollutes the soils.
- Application of insecticides, herbicides and fertilizers must be according to methods and dosages supplied by the suppliers.
- Pit latrines must be sprayed with Effective Microbes (EM) once a month to assist with the biological breakdown process.

- ***Ecology (Fauna and Flora):***

- Only ecologically friendly pesticides may be used if necessary for the control vermin or problem insects. The advice of an ecologist must be obtained in this regard.
- **Natural control of mice and rats by owls should be exercised by provision of owl boxes and perches for birds of prey around and in the orchards.**
- Alien invasive species must be eradicated when and where they occur.

- **Soil Pollution and Degradation:**
- Retain vegetative cover on the soil surface for as long as possible between tilling / planting operations.
- Should erosion scars begin to form on the landscape, erosion counter measures must be implemented immediately.
- Erosion control measures should be implemented on steep portions of the site that may be sensitive to erosion.
- **Visual/Apearances:**
- The orchards must be kept neat at all times.
- **Socio Economic (Job creation):**
- Local labour should be employed wherever possible during the operational phase.
- The farm should be fenced and patrolled to prevent criminal activities.
- **Safety, Security and Health:**
- No fires should be made on the farm.

**INDIRECT IMPACTS:**

- **Surface and Groundwater pollution:**
- Use environmentally friendly agricultural products
- **Health (Safety and Security)::**
- Prevent veld fires spreading to adjacent properties

**CUMULATIVE IMPACTS:**

- Use water wisely
- Use environmentally friendly agricultural products to prevent increased pollution to underground water system.

## ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION

An environmental impact is defined as a change in the environment, be it the physical/chemical, biological, cultural and or socio-economic environment. Any impact can be related to certain aspects of human activities in this environment and this impact can be either positive or negative. It could also affect the environment directly or indirectly and the effect of it can be cumulative.

### METHODOLOGY TO ASSESS THE IMPACTS

To assess the impacts on the environment, the process will be divided into two main phases namely the Construction phase and the Operational phase. The activities, products and services present in these two phases will be studied to identify and predict all possible impacts.

In any process of identifying and recognising impacts, one must recognise that the determination of impact significance is inherently an anthropocentric concept. Duinker and Beanlands, (1986) in DEAT 2002. Thompson (1988), (1990) in DEAT 2002 stated that the significance of an impact is an expression of the cost or value of an impact to society.

However, the tendency is always towards a system of quantifying the significance of the impacts so that it is a true representation of the existing situation on site. This will be done by using where ever possible, legal and scientific standards which are applicable

The significance of the aspects/impacts of the process will be rated by using a matrix derived from Plomp (2004) and adapted to some extent to fit this process. These matrixes use the consequence and the likelihood of the different aspects and associated impacts to determine the significance of the impacts.

The *consequence matrix* use parameters like *severity, duration and extent* of impact as well as *compliance* to standards. Values of 1-5 are assigned to the parameters that are added and averaged to determine the overall consequence. The same process is followed with the *likelihood* that consists of two parameters namely *frequency* and *probability*. The overall consequence and the overall likelihood are then multiplied to give values ranging from 1 to 25. These values as shown in the following table are then used to rank the significance. It must be said however that in the end, a subjective judging of an impact can still be done, but the reasons for doing so must be qualified.

**Table 1: Significance ratings (Plomp 2004)**

Significance	Low	Low-Medium	Medium	Medium-High	High
Overall Consequence X Overall Likelihood	1-4.9	5-9.9	10-14.9	15-19.9	20-25
Significance	Low+	Low-Medium+	Medium+	Medium-High+	High+
Overall Consequence X Overall Likelihood	1-4.9	5-9.9	10-14.9	15-19.9	20-25

### Description of the parameters used in the matrices

### **Severity**

Low	Low cost/high potential to mitigate. Impacts easily reversible, non-harmful insignificant change/deterioration or disturbance to natural environments
Low-medium	Low cost to mitigate Small/ potentially harmful Moderate change/deterioration or disturbance to natural environment.
Medium	Substantial cost to mitigate. Potential to mitigate and potential to reverse impact. Harmful Significant change/ deterioration or disturbance to natural environment
Medium-high	High cost to mitigate. Possible to mitigate Great/Very Harmful Very significant change/deterioration or disturbance to natural environment
High	Prohibitive cost to mitigate. Little or no mechanism to mitigate. Irreversible. Extremely Harmful Disastrous change/deterioration or disturbance to natural environment

### **Duration**

Low	Up to one month
Low-medium	One month to three months
Medium	Three months to one year
Medium-high	One to ten years
High	Beyond ten years

### **Extent**

Low	Footprint areas
Low-medium	Remainder of Portion 37 and Portion 3 of the farm Schoonuitzicht 10 LT
Medium	Adjacent properties
Medium-high	Levubu area
High	Vhembe district

### **Frequency**

Low	Once/more a year or once/more during operation
Low-medium	Once/more in 6 months
Medium	Once/more a month
Medium-high	Once/more a week
High	Daily

**Probability**

Low	Almost never/almost impossible
Low-medium	Very seldom/highly unlikely
Medium	Infrequent/unlikely/seldom
Medium-high	Often/Regularly/Likely/Possible
High	Daily/Highly likely/definitely

**Compliance**

Low	Best Practise
Low-medium	Compliance
Medium	Non-compliance/conformance to Policies etc. - Internal
Medium-high	Non-compliance/conformance to Legislation etc. - External
High	Directive, prosecution of closure or potential for non-renewal of licences or rights

**Alternative S1 (ONLY alternative)**

Project Phase	Environmental aspect: Air quality, atmospheric pollution and noise									
	Activity that causes impact	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance		
								With Mitigation	Without Mitigation	
Construction	Movement of machines & vehicles and vegetation clearance	Dust, smoke (fumes) and noise generation	Low	Low-medium	Low-medium	High	High	Low-medium	Medium	
	Vegetation clearance - burning of plant material	Excessive smoke	Medium	Low	Medium	Low	Low-medium	Low	Medium	
Operation	Movement of vehicles on the site	Fumes and exhaust gasses	Low	High	Low	Medium - High	High	Low-medium	Medium	
	Burning of solid waste and farming matter.	Air pollution	Low-medium	Low-medium	Low-medium	Low-medium	Medium	Low	Low-Medium	
	Pruning, spraying and harvesting noises	Noise & spray drift	Low	Low-medium	Low	Low-medium	High	Low	Low-Medium	



Project Phase	Environmental aspect: Ground- and surface water pollution								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Spillages of fuel/oils and other lubricants	Possible Water Pollution	Low-medium	Medium	Medium	Medium	Medium	Low	Medium
	Storm water run-off from cleared areas	Possible siltation of water courses & damage to downstream properties	Medium	Low-Medium	Low-medium	Low-Medium	Medium	Low	Low - Medium
Operation	Leakages of fuel/oil or other lubricants from vehicles Incorrect storage of oil and lubricants and disposal thereof	Possible Surface and groundwater pollution	Low-medium	Low-medium	Low-medium	Medium	Medium	Low	Low-medium
	Lack of sanitation facilities	Pollution of surface and ground water	Low-medium	Medium	Low	High	Medium	Low	Low-medium
	Inappropriate use of fertilizers, herbicides and pesticides	Soil- and water pollution	Medium	High	Low-medium	Medium	Medium	Low-medium	Medium

Project Phase	Environmental aspect: Water use								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Site preparation	Consumption of available water resources	Low	Low	Low-medium	Low-Medium	Low	Low	Low
Operation	Irrigation of orchards	Possible reduction in water resources	Low-medium	High	Medium	Low-Medium	Low-Medium	Low	Low-Medium

Project Phase	Environmental aspect: Loss of archaeological, cultural and social features								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Clearance and preparation of orchards	Possible destruction of archaeological/heritage findings	Medium	Low-medium	Low	Low	Low	Low	Low-medium

Project Phase	Environmental aspect: Ecology (fauna and flora)									
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance		
								With Mitigation	Without Mitigation	
Construction	Site preparation and vegetation clearance	Loss of indigenous vegetation and fauna mortalities	Low-medium	High	Low	Low	High	Medium	Medium	
	Site preparation and vegetation clearance	Removal of alien invaders	Low-medium	High	Low	Low	High	Medium +	Medium -	
	Killing, snaring or collection of animals	Loss of indigenous fauna	Low	Medium	Low-medium	Medium	Low-Medium	Low	Low-medium	
	Inappropriate use of herbicides and pesticides	Loss of indigenous fauna and flora	Medium	Medium	Low-medium	Medium	Medium	Low-medium	Medium	
	Accidental fires	Loss of indigenous flora and fauna	High	Low	Low-medium	Low	Low-medium	Low	Low-Medium	
	Spreading of alien invasive plants	Establishment of invasive plants	Low-medium	Medium	Low-medium	Medium	Medium	Low-medium	Medium	
Operation	Inappropriate use of herbicides and pesticides	Loss of indigenous fauna and flora	Medium	High	Low-medium	Medium	Medium	Low-medium	Medium	

Project Phase	Environmental aspect: Ecology (fauna and flora)									
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance		
								With Mitigation	Without Mitigation	
	Killing or snaring of animals	Possible loss of fauna	Low-medium	High	Low-medium	Medium	Medium	Low	Low-medium	
	Accidental fires	Loss of habitat and fauna	High	Low	Low-medium	Low	Low-medium	Low	Low-Medium	
	Spreading of alien invasive plants	Establishment of invasive plants	Low-medium	High	Low-medium	Medium	Medium	Low-medium	Medium	
Project Phase	Environmental aspect: Soil degradation									
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance		
								With Mitigation	Without Mitigation	
Construction	Operation of construction vehicles – oil and diesel spillages	Soil pollution	Low	Medium	Low	Medium	Medium	Low	Low-medium	
	Storm water	Loss of topsoil (erosion)	Low-medium	Medium	Low-medium	Medium	Medium-high	Low-medium	Medium	
Operation	Storm water	Loss of topsoil (erosion)	Low-medium	Medium	Low-medium	Low-medium	Low-medium	Low	Low-medium	

Project Phase	Environmental aspect: Ecology (fauna and flora)								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
	Inappropriate use of fertilizers, herbicides and pesticides	Soil pollution	Medium	High	Low-medium	Medium	Medium	Low-medium	Medium

Project Phase	Environmental aspect: Visual disturbance								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
<b>Construction</b>	Removal of trees and alien invaders	Visual	Low-medium	Medium	Medium	Low	High	Low-medium	Medium
<b>Operation</b>	Visual pollution if orchards are not maintained and alien invaders are not controlled	Visual	Low-medium	Medium	Medium	Low	Low	Low	Low-medium

Project phase	Environmental aspect: Safety, security, fire hazards & health									
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance		
								With Mitigation	Without Mitigation	
Construction	Construction activities & machinery of site	Risk to the safety of workers	Low-medium	Medium	Low	Medium-high	Low-medium	Low	Low-medium	
	Possible occurrence of accidental fires	Risk to the safety of people	Medium	Low	Medium	Low	Low-medium	Low	Low-medium	
Operation	Theft of produce, infrastructure and equipment	Viability of project	Low-medium	Low-medium	Low	Low	Low	Low	Low-medium	
	Possible occurrence of accidental fires	Risk to the safety of people	Medium	Low	Medium	Low	Low-medium	Low	Low-medium	

Project phase	Environmental aspect: Socio - economic								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
<b>Construction</b>	Construction/site preparation	Job creation and skills development	Medium-High	Low - medium	Low-medium	Medium	High		Low-medium (Positive)
<b>Operation</b>	Operational phase	Job creation	Medium-High	Low - medium	Low-medium	Medium	High		Low-medium (Positive)

## PROPOSED MANAGEMENT OF IMPACTS AND MITIGATION

Indicate how identified impacts and mitigation will be monitored and/or audited.

### Alternative S1 (ONLY alternative)

- A buffer-zone of at-least 30m must be maintained around the identified burial ground (**Site Exigo-SCH-BP01**).
- Considering the localised nature of heritage remains, the general monitoring of the development progress by an ECO or by the heritage specialist is recommended for all stages of the project. Should any subsurface palaeontological, archaeological or historical material, or burials be exposed during construction activities, all activities should be suspended and the archaeological specialist should be notified immediately.
- In the event that fossils are uncovered during construction then construction must cease within the immediate vicinity, a buffer of 30 m must be established, and a palaeontologist called in to inspect the finds. The palaeontologist must obtain a section 35(4) permit in terms of NHRA and Chapter IV NHRA Regulations, before any fossils are collected.
- If any new heritages resources are discovered during construction and operation phases of the proposed development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the findings at the expense of the developer.
- If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required at the expense of the developer. Mitigation will only be carried out after the archaeologist or palaeontologist obtains a permit in terms of section 35 of the NHRA (Act 25 of 1999).
- SAHRA APM Unit may be contacted for further details: (Nokukhanya Khumalo/Phillip Hine 021 202 8654).
- If any unmarked human burials are uncovered and the archaeologist called in to inspect the finds and/or the police find them to be heritage graves, then mitigation may be necessary and the SAHRA Burial Grounds and Graves (BGG) Unit must be contacted for processes to follow (Thingahangwi Tshivase/Mimi Seetelo 072 802 1251).
- The Final BAR and its appendices must be submitted to the case and once a Record of Decision from the competent authority is issued, it must also be submitted to the case.
- The necessary amendments to the EMPR through monitoring by and advice obtained from the ECO.

### 3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.



## Alternative S1 (ONLY alternative)

All impacts can be mitigated to LOW or LOW-MEDIUM except water use and the ecological impacts due to removal of vegetation that will be MEDIUM.

The proposed orchards will significantly impact on the footprint areas in terms of the removal of vegetation (approximately 13 hectares in total) and consequently the loss of a section of habitat for fauna and flora occurring in the area.

All the necessary mitigation measures as indicated above and within the EMPR must be implemented.

Local labour must be employed during the orchards preparation and operational phases.

In the event of a heritage object being unearthed, construction/site preparation work that could impact on the object must be suspended and the discovery must be reported to the Limpopo Authority or the appropriate archaeologist/s and may require further mitigation measures. Heritage objects are not to be moved or destroyed without the necessary permits in place.

The remaining potentially significant negative impacts that have been identified for the preparation and operational phases must be mitigated through the proper implementation of the mitigation measures included in this report as well as indicated within the EMPR.

## No-go alternative (compulsory)

### Planning and design Phase

No impacts are expected during the design and planning phase for the proposed project

### Preparation Phase

- Should the sites not be cleared for orchards, continued invasion by alien invaders will further negatively impact on the ecology.
- Poaching of fauna will continue to occur.
- There will be no possible surface and groundwater pollution through oil or diesel spillages.
- The benefit of temporary job creation & skills development will be lost.

### Operational Phase

- There will be no loss of topsoil (erosion) due to storm water flow over the cleared area.
- There will be no possible surface and groundwater pollution through oil or diesel spillages and incorrect usage of fertilizers, herbicides and pesticides.
- There will be no increased pressure on water resources for irrigation.
- The benefit of permanent job creation, skills development and increased production will be lost.
- Less efficient control of alien/invasive species.

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**Alternative B**

None

**Alternative C**

None

For more alternatives please continue as alternative D, E, etc.

Kindly refer to the tables above (Environmental impact assessment tables for impact ratings)

**SECTION E. RECOMMENDATION OF PRACTITIONER**

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	
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If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

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If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the department in respect of the application:

<b>All the recommended mitigation measures outlined in this report must be considered for inclusion in the Environmental Authorization</b>
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Is an EMPr attached?

YES	
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The EMPr must be attached as Appendix F.

## **SECTION F: APPENDIXES**

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

## SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, JOHAN BOTHA | -

- (a) act as the independent environmental practitioner in this application;
- (b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- (c) do not have and will not have a vested interest in the proposed activity proceeding;
- (d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (e) undertake to disclose, to the competent authority, any material information that has 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, 2006;
- (f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (h) will keep a register of all interested and affected parties that participated in a public participation process; and
- (i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

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**Signature of the Environmental Assessment Practitioner:**

**AGES LIMPOPO (Pty) Ltd**

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**Name of company:**

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**Date:**