LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2010

Basic Assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

	(For official use only)
File Reference Number:	
NEAS Reference Number:	
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 2010.

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:-

Postal Address:	**Physical Address**:
Central Administration Office Environmental Impact Management P. O. Box 55464 **POLOKWANE** 0700	Central Administration Office Environmental Affairs Building Cnr Suid and Dorp Streets **POLOKWANE** 0699

Queries should be directed to the Central Administration Office: Environmental Impact Management:-

For attention: Mr E. V. Maluleke
Tel: (015) 291 1315 / (015) 291 5640
Fax: (015) 295 5015
Email: malulekeev@ledet.gov.za

View the Department's website at 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?	YES	■

If YES, please complete the form entitled "Details of specialist and declaration of interest" or appointment of a specialist for each specialist thus appointed: **Find attached specialist declarations and Declaration of Interest by EAP**

Any specialist reports must be contained in Appendix D. **Find attached specialist reports (Appendix D)**

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail[1]:

The clearing of 50 hectares of natural vegetation for the purpose of planting new *Aloe vera* plants.

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) Property on which or location where it is proposed to undertake the activity:

The property on which the activity is to be undertaken is on the Remainder of the farm Wintersveld 427 MS, near Vivo in the Makhado Municipal area. The property is owned by the applicant, which is African Caribbean Aloe Products (Pty) and no further consents and/or applications are needed in this regard.

[1] 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.

Three sites have been identified for the clearing of the vegetation in order to serve as the croplands for the *Aloe vera* plants.

- The first site is situated in the center of the northern boundary of the farm and is an extension of an already existing cropland.
- The second site is just south of the first site and will in turn serve as an extension of the first site, although almost a third of this site has been used as a cropland in the past.
- The third site is near the western boundary and is close to the Aloe processing facility in an area which has been altered in the past.

These sites have been specifically chosen because of past activities that caused changes to the natural vegetation. Most of the rest of the farm will remain in a natural condition and will not be impacted on.

b) The type of activity to be undertaken; - an Aloe processing facility has already been established on the Remainder of the farm Wintersveld 427 MS and this application endeavors to provide a continuous supply to the processing facility.

The type of activity remains the cultivation of one species of plant and the removal of indigenous vegetation for this purpose.

c) The design or layout of the activity; - the most appropriate design/layout for the proposed activity has been chosen and is very simple in that there are three areas where the *Aloe vera* plants will be cultivated. Very little further development and infrastructure is needed for this purpose. Irrigation will take place by means of a dripper system which will lead to a more effective and efficient way of irrigating the plants.

d) The technology to be used in the activity – the most practical technology has been chosen for the proposed activity. The only technology applicable to the activity is the irrigation system and this leads to a very efficient way of using water.

e) The operational aspects of the activity – No alternatives are applicable in terms of the operational plan as the harvested *Aloe vera* plants will be taken to the Aloe processing facility and will be processed there. The processing of the plants does not form part of this application because it has already been authorized and this application will not result in an expansion of the processing plant.

f) The option of not implementing the activity. – The activity will also contribute to local job creation as well as skills development. The option of not implementing the activity will only come into effect when a fatal flaw is applicable to the proposed activity or the specific sites which have been identified for such purposes.

Requests for exemption of completing parts of application form:

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.

No facilities or structures will be erected or constructed for the undertaking of the proposed activity. No facility illustration is thus attached as Appendix C.

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

No foundations will be placed upon or structures erected on the proposed site wherefore a geotechnical investigation will normally be required.

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 WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:	**Latitude (S):**			**Longitude (E):**		
Alternative S1[2] (preferred or only site alternative)						
Land 1	22°	53'	21"	29°	13'	47"
Land 2	22°	53'	36"	29°	13'	49"
Land 3	22°	54'	03"	29°	13'	18"
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)						
• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"

[2] "Alternative S.." refer to site alternatives.

• End point of the activity	°	'	"	°	'	"

Alternative S2 (if any)

• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"

Alternative S3 (if any)

• Starting point of the activity	°	'	"	°	'	"
• Middle/Additional point of the activity	°	'	"	°	'	"
• End point of the activity	°	'	"	°	'	"

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.

4. PHYSICAL SIZE OF THE ACTIVITY (LAND 1, LAND 2 AND LAND 3)

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

Alternative:	**Size of the activity:**
Alternative A1[3] (preferred activity alternative) – (Land 1, Land 2 and Land 3)	500 000 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or,

<u>for linear activities:</u>

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:**
Alternative A1 (preferred activity alternative)	m^2
Alternative A2 (if any)	m^2

[3] "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative A3 (if any) | m^2

5. SITE ACCESS (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

LAND 1, LAND 2 AND LAND 3

Does ready access to the site exist?	**YES** ■
If NO, what is the distance over which a new access road will be built	m

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.

Alternative A2 (if any)

Does ready access to the site exist?	**YES**	**NO**
If NO, what is the distance over which a new access road will be built	m	

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.

Alternative A3 (if any)

Does ready access to the site exist?	**YES**	**NO**
If NO, what is the distance over which a new access road will be built	m	

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.

6. SITE OR ROUTE PLAN (LAND 1, LAND 2 AND LAND 3)

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 – SEE ATTACHED PHOTOS OF LAND 1, LAND 2 AND LAND 3 (APPENDIX B)

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 (Refer to request for exemption to complete sections of the application form).

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.

11. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity (Land 1, Land 2 and Land 3)

What is the expected capital value of the activity on completion?	R4 000 000	
What is the expected yearly income that will be generated by or as a result of the activity?	R 3, 500, 000	
Will the activity contribute to service infrastructure?	[redacted]	NO
Is the activity a public amenity?	[redacted]	NO
How many new employment opportunities will be created in the development phase of the activity?	20 -40	
What is the expected value of the employment opportunities during the development phase?	R 84,000 per month	
What percentage of this will accrue to previously disadvantaged individuals?	95 %	
How many permanent new employment opportunities will be created during the operational phase of the activity?	40 -50	
What is the expected current value of the employment opportunities during the first 10 years?	R1,102,50	
What percentage of this will accrue to previously disadvantaged individuals?	95 %	

9(b) Need and desirability of the activity (Land 1, Land 2 and Land 3)

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

NEED: (Land1, Land 2 and Land 3) – Preferred and only site alternative)			
i.	Was the relevant municipality involved in the application?	YES	[redacted]
ii.	Does the proposed land use fall within the municipal Integrated Development Plan? **The proposed activity is an agricultural activity**	YES	[redacted]
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY: (Land 1, Land 2 and Land 3) – Preferred and only site alternative			
i.	**Does the proposed land use / development fit the surrounding area?**	YES	[redacted]
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**? **It is an agricultural activity – no change in zoning is required.**	YES	[redacted]

iii.	**Will the benefits of the proposed land use / development outweigh the negative impacts of it?**	YES (if all proposed management and mitigation measures are adhered to)	■
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.		

BENEFITS: (Land 1, Land 2 and Land 3) – Preferred and only site alternative			
i.	Will the land use / development have any benefits for society in general?	YES	■
ii.	Explain: *Aloe vera* is renowned for its healing properties and are also used in the cosmetic, food and beverage sector. The demand of *Aloe vera* is increasing and is a profitable investment. Is available commercially		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES	■
iv.	Explain: Through the implementation of the proposed activity job opportunities will be created and people will have the opportunity to learn a new trade which also will have an educational value.		

Alternative A2 (if any)

NEED:			
i.	Was the relevant municipality involved in the application?	YES	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	YES	NO
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	NO
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	NO
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?	YES	NO
vi.	Will the proposed land use / development set a precedent?	YES	NO
vii.	Will any person's rights be affected by the proposed land use / development?	YES	NO
viii.	Will the proposed land use / development compromise the "urban edge"?	YES	NO
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES	NO
ii.	Explain:		
iii.	Will the land use / development have any benefits for the local communities where it will	YES	NO

	be located?		
iv.	Explain:		

Alternative A3 (if any)

NEED:			
i.	Was the relevant municipality involved in the application?	YES	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		

DESIRABILITY:			
i.	Does the proposed land use / development fit the surrounding area?	YES	NO
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	NO
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	NO
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?	YES	NO
vi.	Will the proposed land use / development set a precedent?	YES	NO
vii.	Will any person's rights be affected by the proposed land use / development?	YES	NO
viii.	Will the proposed land use / development compromise the "urban edge"?	YES	NO
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES	NO
ii.	Explain:		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES	NO
iv.	Explain:		

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:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act	Environmental Affairs	1998
Environmental Impact Assessment Regulations	Environmental Affairs	2006
National Heritage Resources Act	SAHRA	1999
Occupational Health and Safety Act	Department of Labour	1993
National Veld and Forest Fires Act	DAFF	1998
National Water Act	DWA	1998
National Environmental Management: Waste Act	Environmental Affairs	2008
Conservation of Agricultural Resources Act	Department of Agriculture	1983
Health Act	Department of Health	1977
National Forest Act	Department of Forestry	1998
Constitution of South Africa	Office of the President	1996
National Environmental Air Quality Act	Environmental Affairs	2004

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	[redacted]	NO
If yes, what estimated quantity will be produced per month?		

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

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

Will the activity produce solid waste during its operational phase?	[redacted]	NO
If yes, what estimated quantity will be produced per month?		m^3

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

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?	YES	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?	[redacted]	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.

Alternative A2 (if any)

WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	NO
If yes, what estimated quantity will be produced per month?		m^3

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

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

Will the activity produce solid waste during its operational phase?	YES	NO
If yes, what estimated quantity will be produced per month?		m^3

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

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?	YES	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?	YES	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.

Alternative A3 (if any)

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	NO
If yes, what estimated quantity will be produced per month?		m^3

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

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

Will the activity produce solid waste during its operational phase?	YES	NO
If yes, what estimated quantity will be produced per month?		m^3

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

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?	YES	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?	YES	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 (Land 1, Land 2 and Land 3) – PREFERRED AND ONLY SITE ALTERNATIVE

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	■	NO
If yes, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?	■	NO

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

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

No waste water will be generated from the proposed activity.

Alternative A2 (if any)

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO
If yes, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	NO

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?	YES	NO

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	

E-mail:		Fax:	

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

Alternative A3 (if any)

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO
If yes, what estimated quantity will be produced per month?	m^3	
Will the activity produce any effluent that will be treated and/or disposed of on site?	Yes	NO

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?	YES	NO

If yes, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

No waste water will be generated from the proposed activity.

11(c) Emissions into the atmosphere (Land 1, Land 2 and Land 3) – PREFERRED AND ONLY SITE ALTERNATIVE

YES	■
■	NO

Will the activity release emissions into the atmosphere?

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

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:

- Medium levels of dust can be created during vegetation clearance, especially during dry and windy conditions.
- Low levels of fumes can originate from vehicles (Bulldozer, tractor and back actor)

Alternative A2 (if any)

11c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

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:

Alternative A3 (if any)

11c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

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:

Will the activity release emissions into the atmosphere?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

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:

11(d) Generation of noise (Land 1, Land 2 and Land 3) – PREFERRED AND ONLY SITE ALTERNATIVE

Will the activity generate noise?	YES (Vegetation clearance and soil preparation)	[redacted]
If yes, is it controlled by any legislation of any sphere of government?	[redacted]	NO

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:

Medium levels of noise can be generated during the removal of vegetation (Bulldozer and back actor). Low-medium levels of noise can be generated during the soil preparation phase (Tractor)

Alternative A2 (if any)

11(d) Generation of noise (Land 1, Land 2 and Land 3) – Preferred Site

Will the activity generate noise?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

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:

Alternative A3 (if any)

11(d) Generation of noise (Land 1, Land 2 and Land 3) – Preferred Site

Will the activity generate noise?	YES	NO
If yes, is it controlled by any legislation of any sphere of government?	YES	NO

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:

12. WATER USE (Land 1, Land 2 and Land 3) – PREFERRED AND ONLY SITE ALTERNATIVE

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

[redacted]	[redacted]	groundwater	[redacted]	[redacted]	[redacted]

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:	4 200 m^3
Does the activity require a water use permit from the Department of Water Affairs?	YES [redacted]

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. **(In process - proof of submission will be attached to the final BA Report)**

Alternative A2 (if any)

12. WATER USE

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

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water

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

Alternative A3 (if any)

12. WATER USE

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

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water

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:	
Does the activity require a water use permit from the Department of Water Affairs?	YES 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 (Land 1, Land 2 and Land 3) – PREFERRED AND ONLY SITE ALTERNATIVE

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

The only technology applicable to the activity is the irrigation system and the proposed drip irrigation system ensures a very efficient use of water.

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

No alternative energy sources have been taken into account

Alternative A2 (if any)

13. ENERGY EFFICIENCY

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

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

Alternative A3 (if any)

13. ENERGY EFFICIENCY

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

.

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

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: **Find attached specialist declarations**

All specialist reports must be contained in Appendix D. (**Find attached specialist reports (Ecology, Heritage, – Appendix D)**

Property description/physical address:	**Remainder of the farm Wintersveld 427 MS**

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

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?	[redacted]	NO
Must a building plan be submitted to the local authority?	[redacted]	NO

Locality map

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)

1. GRADIENT OF THE SITE (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

Indicate the general gradient of the site:

LAND 1

[redacted]	1:50 – 1:20	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

LAND 2

[redacted]	1:50 – 1:20	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

LAND 3

[redacted]	1:50 – 1:20	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

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

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

2. LOCATION IN LANDSCAPE (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

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

LAND 1

2.1 Ridgeline		2.6 Plain	X
2.2 Plateau		2.7 Undulating plain / low hills	
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

LAND 2

2.1 Ridgeline		2.6 Plain	X
2.2 Plateau		2.7 Undulating plain / low hills	
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

LAND 3

2.1 Ridgeline		2.6 Plain	X
2.2 Plateau		2.7 Undulating plain / low hills	
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

Alternative S2 (if any):

2.1 Ridgeline		2.6 Plain	
2.2 Plateau		2.7 Undulating plain / low hills	
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.6 Open valley			

Alternative S3 (if any):

2.1 Ridgeline		2.6 Plain	
2.2 Plateau		2.7 Undulating plain / low hills	
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.7 Open valley			

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

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

LAND 1, LAND 2 AND LAND 3 (PREFERRED AND ONLY SITE ALTERNATIVE)

	LAND 1		
Shallow water table (less than 1.5m deep)			NO
Dolomite, sinkhole or doline areas			NO
Seasonally wet soils (often close to water bodies)			NO
Unstable rocky slopes or steep slopes with loose soil			NO
Dispersive soils (soils that dissolve in water)			NO
Soils with high clay content (clay fraction more than 40%)			NO
Any other unstable soil or geological feature			NO
An area sensitive to erosion			NO

	LAND 2		
Shallow water table (less than 1.5m deep)			NO
Dolomite, sinkhole or doline areas			NO
Seasonally wet soils (often close to water bodies)			NO
Unstable rocky slopes or steep slopes with loose soil			NO
Dispersive soils (soils that dissolve in water)			NO
Soils with high clay content (clay fraction more than 40%)			NO
Any other unstable soil or geological feature			NO
An area sensitive to erosion			NO

	LAND 3		
Shallow water table (less than 1.5m deep)			NO
Dolomite, sinkhole or doline areas			NO
Seasonally wet soils (often close to water bodies)			NO
Unstable rocky slopes or steep slopes with loose soil			NO
Dispersive soils (soils that dissolve in water)			NO
Soils with high clay content (clay fraction more than 40%)			NO
Any other unstable soil or geological feature			NO
An area sensitive to erosion			NO

4. GROUNDCOVER (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

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).

LAND 1

Natural veld - good condition[E]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

LAND 2

Natural veld - good condition[E]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	(Old field section)	[redacted]	[redacted]	[redacted]

LAND 3

Natural veld - good condition[E]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	(Old field section)	[redacted]	[redacted]	[redacted]

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.

Alternative S2 (if any):

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	(Old field section)	Paved surface	Building or other structure	Bare soil

Alternative S3 (if any):

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	(Old field section)	Paved surface	Building or other structure	Bare soil

Summary of findings and recommendations within the Ecological Report

The following general recommendations and mitigation measures for the site should be adhered to according to the attached ecological report (Appendix D):

- The removal of indigenous trees and shrubs should only occur on the footprint area of the croplands. The clearing and damage of plant growth in these areas should be restricted to the footprint area. Permits should be obtained from DAFF before any protected tree species is eradicated.
- Clearly demarcate the entire croplands footprint prior to initial site clearance and prevent personnel from leaving the demarcated area.
- 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.
- Poisons for the control of problem animals should rather be avoided since the wrong use thereof can have disastrous consequences for the raptors 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. Biological control should rather be implemented.
- The croplands must be fenced off with a decent game fence to keep game out of the Aloes.
- Storm water management should be done by means of contours and water must be directed towards drainage canals in order to control storm water.
- Repair all erosion damage as soon as possible and in any case not later than six months before the termination of the construction period.
- Do not allow surface water or storm water to be concentrated, or to flow down cut or fill slopes or along pipeline routes without erosion protection measures being in place.
- Pit latrines must be erected for the workers. Water must also be available at the latrines for washing of hands.
- Effective Micro-organisms can be used in the pit latrines to assist in the breaking down of solid organic matter. It renders these pit latrines odourless and no pathogenic bacteria survives in this environment, making the use of EM very effective in preventing soil and ground water pollution.

- A plan should be developed for control of noxious weeds and invasive plants that could occur as a result of new surface disturbance activities at the site. The spread of invasive non-native plants should be avoided by keeping vehicles and equipment clean and reseeding disturbed areas with native plants.
- Should the croplands be approved by authorities, environmental monitoring of environmental aspects should be implemented to ensure that minimal impact is caused to the fauna and flora of the area.

Provided that the proposed croplands development is consistent with the sensitivity map and the proposed mitigation measures are implemented, the planned croplands can be supported.

5. LAND USE CHARACTER OF SURROUNDING AREA (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY SITE ALTERNATIVE

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:

LAND 1

5.1 Natural area	X	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 [AN]		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam [A]		5.29 Sewage treatment plant [A]	
5.9 Light industrial		5.30 Train station or shunting yard [N]	
5.10 Heavy industrial [AN]		5.31 Railway line [N]	
5.11 Power station		5.32 Major road (4 lanes or more)	
5.12 Sport facilities		5.33 Airport [N]	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station [H]		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River, stream or wetland	X
5.17 Plantation		5.38 Nature conservation area	

5.18 Agriculture	X	5.39 Mountain, koppie or ridge	
5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit		5.41 River, stream or wetland	X
5.21 Dam or Reservoir		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?

LAND 2

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

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:	
If NO, specify:	

LAND 3

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

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 (LAND 1, LAND 2 AND LAND 3) – PREFERRED AND ONLY ALTERNATIVE SITE

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	■	NO
Archaeological or palaeontological sites, on or close (within 20m) to the site?	Uncertain	
If YES, explain:		
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:	No significant heritage resources such as archaeological or historical material or places of social or religious significance were found on the site of the proposed development. From a heritage resources management point of view, we have no objection with regard to the development.	
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.

Summary of Findings within the Heritage Report – Appendix D

No management or mitigation measures are required. This letter serves to confirm that *no significant heritage resources* such as archaeological or historical material or places of social or religious significance were found on the site of the proposed development. *From a heritage resources management point of view, we have no objection with regard to the development*.

The discovery of previously undetected subterranean heritage remains on the terrain must be reported to the Limpopo Heritage Authority or the archaeologist, and may require further mitigation measures.

Kindly also refer to the attached Heritage Impact Report – Appendix D

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;

(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;

(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;

(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.

Kindly find attached a list of authorities with their contact details at the end of this report. (See PPP summary).

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.

Name of Authority informed:	**Comments received (Yes or No)**	**Contact Details**
Department of Agriculture (National)	No	Mr. L. Mahlatji
Vhembe District Municipality	No	
Makhado Local Municipality	No	
Ward Councillor – Makhado Local Municipality	No	
Department of Water Affairs	No	Ms. Refilwe Mothiba

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	■

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

The following comments have been received thus far:

Objection to application received : Registered Interested and Affected Party will require the following before reconsidering the objecting

- Map of the area which will be affected, and which will affect the farm Wintersveld
- Groundwater Assessment Study
- Environmental Study for the affected and surrounding area (Regulation 546 of 18 June 2010): Activity 13:cii(ff)

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, 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.

The following comments have been received thus far:

Objection to application received : Neighbour (will require the following before reconsidering the objection)

- Map of the area which will be affected, and which will affect the farm Wintersveld
- Groundwater Assessment Study
- Environmental Study for the affected and surrounding area (Regulation 546 of 18 June 2010): Activity 13:cii(ff)

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):

Your response is appreciated.

- Attached is a Google map indicating the proposed position of the lands.
- The groundwater assessment study will be submitted to you for comments when it is finished.
- The Draft Basic Environmental Assessment with all specialist studies will also be submitted to you for comments when it is finished.

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

LAND 1, LAND 2 AND LAND 3 (Preferred and only site alternative)
Direct impacts: • No impacts are expected during the design and planning phase for 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.

Alternative S2 (if any):

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

Alternative S3 (if any):

Direct impacts: ***Indirect impacts:***   ***Cumulative impacts:***

IMPACTS THAT MAY RESULT DURING THE CLEARANCE AND SOIL PREPARATION PHASE (LAND 1, LAND 2 AND LAND 3)

LAND 1, LAND 2 AND LAND 3 (Preferred and only site alternative)

Direct impacts:

- ***Air Quality and Noise:***
  - Dust, fumes and noise generation due to vegetation clearance - movement of vehicles on site (especially during dry and windy conditions).
  - Smoke due to the burning of plant material (vegetation clearance).

- ***Surface and Groundwater pollution:***
  - Water pollution if no toilets are available.
  - Water pollution due to spillages of oil/fuel and other lubricants.

- ***Water use:***
  - Negative impact on groundwater resources.

- ***Archaeology/Heritage:***
  - Destruction of archaeological/heritage findings during vegetation clearance and soil preparation.

- ***Ecology (Fauna and Flora):***
  - Loss of fauna habitat due to vegetation clearance.
  - Loss of indigenous flora and fauna due to accidental fires.
  - Loss of indigenous flora due to the cutting and intentional removal of trees and shrubs, especially large indigenous and protected trees.
  - Introduction of alien and invasive plant species.

- ***Soil Pollution and Degradation:***
  - Soil pollution due to oil and diesel spillages during the operation of construction vehicles.
  - Soil pollution due to unavailability of sanitation facilities.

- 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:***

- Injuries to staff during the operation of construction machines as well as during soil preparation.
- Burning of removed vegetation which can lead to veld fires.

❖ **Socio- Economic:**

- Positive impact on job creation.

Indirect impacts:

- Socio economic benefits to the area through job creation and skills development.
- Loss of habitat through the occurrence of accidental fires

Cumulative impacts:

- The reduction in natural habitat for fauna and flora.

MITIGATION MEASURES THAT MAY ELIMINATE OR REDUCE THE POTENTIAL IMPACTS LISTED ABOVE: CLEARANCE AND SOIL PREPARATION PHASE

LAND 1, LAND 2 AND LAND 3 (Preferred and only site alternative)

❖ ***Air Quality and Noise:***

- Vehicles must be maintained to avoid excessive noise levels and also the generation of excessive fumes from machinery.
- No plant material may be burnt on site. Plant material can be re-used as mulch or brush packing on adjacent areas. Thicker branches can be used for firewood by the workers.
- No open fires are allowed at the site. Open fires for cooking are only to be made at designated and safe areas at the staff village.
- Existing firebreaks around the farm and lands must be maintained to decrease the risk of accidental fires.
- Pit latrines must be provided on the edges of the croplands. The pits must be sprayed on a weekly basis with Effective Micro-organisms (EM) to speed up the biological breakdown process and prevent odours.

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

- Pit latrines must be provided on the edges of the croplands. The pits must be sprayed on a weekly basis with Effective Micro-organisms (EM) to speed up the biological breakdown process and prevent groundwater pollution.
- Machinery to be maintained to reduce the risk of excessive spillages of fuel and oils.
- The storage of fuel, oils and lubricants must only take place at the existing farm maintenance yard.
- Refueling and maintenance must also be done at the farm maintenance yard.
- Removal of vegetation to be limited to the croplands footprint.
- Storm water management should be done by means of contours and water must be directed towards drainage canals in order to control storm water.
- Repair all erosion damage as soon as possible.
- Do not allow surface water or storm water to be concentrated, or to flow down along roads or pipeline routes without erosion protection measures being in place.

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

- The necessary water use authorization must be obtained from DWA before any water can be abstracted from boreholes. Daily abstraction volumes (140m^3) may not be exceeded.

❖ ***Archaeology/Heritage:***

- Care must be taken during the vegetation clearance and soil preparation phase to ensure that anything of archaeological value which is unearthed is recorded.
- A suitably qualified archaeologist must be notified whenever anything of importance is discovered and the work in that area must cease immediately.
- A GPS reading of the site where discoveries were made must be taken
- Under no circumstances may the applicant or his employees remove, destroy or interfere with archaeological artefacts or discoveries.

❖ ***Ecology (Fauna and Flora):***

- No protected trees may be removed. If a protected tree has to be removed the necessary permit to do so must firstly be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) prior to the removal thereof.
- No trees may be cut or destroyed for firewood outside the footprint of the croplands. Removal of vegetation is to be confined to the croplands footprint areas.
- Large indigenous trees and especially protected trees occurring on site must where possible be incorporated into the lands.
- Woody vegetative cover that is removed must either be randomly spread throughout the surrounding veldt to

provide biomass for micro-organisms and habitats for small mammals and birds or it may be used as a soil stabilization measure at exposed sections.

- Only removed vegetation (wood) during site clearance can be used as firewood. No fires may however be made on the site or at the surrounding areas.
- Staff must be educated on the dangers of accidentals fires. The necessary safety measures must be in place on site.
- Vehicles must only use existing access roads to and from the site. No new roads are allowed to be constructed.
- The applicant is responsible for the eradication of alien invasive species during the site preparation phase. Strict control measures must be implemented regarding the introduction of materials into the area/ brought onto the site.

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

- Machinery to be maintained to avoid the risk of excessive oil and fuel spillages.
- The storage of fuel, oils and lubricants must only take place at a designated storage room at the farm maintenance yard.
- Pit latrines must be provided on the edges of the croplands. The pits must be sprayed on a weekly basis with Effective Micro-organisms (EM) to speed up the biological breakdown process and prevent soil pollution.
- Removal of vegetation to be limited to the croplands footprint areas. Removed vegetation can also be used to stabilize exposed sections.
- Regular maintenance (stabilization) of and the implementation of adequate erosion control measures of the exposed site and also internal road sections must take place.

❖ ***Visual:***

- Vegetation removal must be confined to the cropland footprint areas.
- Large indigenous trees and especially protected trees occurring on site must where possible be incorporated into the lands.
- Any stockpiled vegetation must be removed or alternative be spread out in the surrounding veld or be used as a soil stabilization measure.

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

- Safety act (Act 85 of 1993) requires the designation of a Health and Safety representative when more than 20 employees are employed.
- Clean drinking water must be made available to workers at all times.
- Water for the washing of hands must be available at the pit latrines.
- Fire breaks should comply with the National Veld and Forest Fire Act 101 of 1998 (Chapter 4: Duty to Prepare and maintain firebreaks). An emergency plan must be in place so that any uncontrolled fire can be combated in the most efficient manner.
- No vegetation may be burnt on the premises or surrounding areas.

- No trespassing by staff onto neighboring private land is allowed. Strict measures must be implemented in this regard.
- Staff must be adequately trained and provided with the necessary safety gear/clothing during vegetation clearance, and during the operation of machinery.
- There must be a first aid trained person on the farm as well as a first aid medical kit.

❖ ***Socio- Economic:***

- Local labor must be employed wherever possible. Employment records must be available at all times. Requirements of BBBEE to be met.

IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

LAND 1, LAND 2 AND LAND 3 – Preferred and only site alternative

Direct impacts:

❖ ***Air Quality and Noise:***

- Air and Noise pollution (fumes and exhaust gasses) from tractors and vehicles.

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

- Surface and groundwater pollution due to leakages of fuel/oil or other lubricants from tractors and vehicles.
- Water pollution if no toilets are available or not operated correctly.
- Water pollution from the use of herbicides, insecticides and fertilizers.

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

- Reduction in groundwater sources - abstraction from existing boreholes.

❖ ***Ecology (Fauna and Flora):***

- Loss of fauna due to human activities like the killing or snaring of animals.
- Spread of alien invasive plant species.

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

- Loss of topsoil due to storm water flow over the croplands and internal roads

- Soil pollution due to leakages of fuel/oil or other lubricants from tractors and vehicles.
- Soil pollution if no toilets are available or not operated correctly.

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

- Injuries to staff during the operation of machines as well as cutting of leaves.
- De-hydration of workers.
- Accidental veld fires.
- Trespassing on neighbouring property

❖ ***Socio Economic and Health:***

- *Aloe vera* is renowned for its healing properties and is also used in the cosmetic, food and beverage sector.

Indirect impacts:

- Positive impact - job creation and skills development

Cumulative impacts:

- The increased pressure on groundwater resources.
- The demand of Aloe Vera is increasing and is a profitable investment. Is available commercially.

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

LAND 1, LAND 2 AND LAND 3 (Preferred Site)

❖ ***Air Quality and Noise:***

- Vehicles must be maintained as to not produce excessive fumes and noise.

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

- It is recommended that the boreholes be equipped according to the maximum recommended yield, and that the boreholes be pumped for selected hours per day not to exceed the maximum daily abstraction. This will facilitate the water management system on site with the earthen balancing dam and the dripper irrigation system.
- The necessary water use authorization must be obtained from DWA before any water can be abstracted from boreholes. Daily abstraction volumes (140m^3) may not be exceeded.

- Groundwater levels (rest and pump levels) should be monitored on a quarterly basis. Should the water level drop to within 10 metres of the pump intake during regular pumping, the pumping rate should be reduced. Results of recorded abstraction rates, abstraction volumes, and water levels may then be re-evaluated.
- Totalling flow meters should be installed on all production boreholes in order to monitor quarterly abstraction volumes.
- An annual assessment of the groundwater quality should be conducted to ensure that the water quality is suitable for irrigation use.

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

- Vehicles to be maintained as to not spill diesel and oil.
- Contours and drainage canals must be maintained.
- Application of insecticides, herbicides and fertilizers must be according to an approved program.
- Pit latrines must be treated weekly with EM.

❖ ***Ecology (Fauna and Flora):***

- Appropriate management measures for alien/invasive species must be undertaken in conjunction with an ecologist
- No killing of fauna by snaring or trapping is allowed.
- Tractors and vehicles must only use existing access roads to and from the site.

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

- Vehicles to be maintained to prevent excessive oil and fuel leaks.
- Any damages to soil stabilization measures must be repaired immediately.
- Contours and drainage canals must be maintained.
- Application of insecticides, herbicides and fertilizers must be according to an approved program.

❖ ***Visual/Appearances:***

- The site must be kept neat at all times.

❖ ***Socio Economic (Job creation):***

- Local labor should be employed wherever possible during the operational phase.

❖ ***Safety, Security and Health:***

- Safety act (Act 85 of 1993) requires the designation of a Health and Safety representative when more than 20

employees are employed.

- Clean drinking water must be made available to workers at all times.
- Water for the washing of hands must be available at the pit latrines.
- Fire breaks should comply with the National Veld and Forest Fire Act 101 of 1998 (Chapter 4: Duty to Prepare and maintain firebreaks). An emergency plan must be in place so that any uncontrolled fire can be combated in the most efficient manner.
- No trespassing by staff onto neighboring private land is allowed. Strict measures must be implemented in this regard.
- Staff must be adequately trained and provided with the necessary safety gear/clothing.
- There must be a first aid trained person on the farm as well as a first aid medical kit.

IMPACTS THAT MAY RESULT FROM THE DECOMMISIONING AND CLOSURE PHASE

***LAND 1, LAND 2 AND LAND 3* – Preferred and only site alternative**

Direct impacts:

- Loss of habitat that has occurred during vegetation clearance will slowly be re-established.
- Loss of topsoil during vegetation clearance (along steeper sloping sections) will not occur
- Loss of large indigenous trees during vegetation clearance will not occur

Indirect impacts:

- Loss of job opportunities and skills development
- Loss of a product with health benefits, commercially available and which are also used in the cosmetics, food and beverage sectors

Cumulative impacts:

- No cumulative impact are foreseen

PROPOSED MANAGEMENT OF IMPACTS AND MITIGATION

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

LAND 1, LAND 2 AND LAND 3 (PREFERRED AND ONLY SITE ALTERNATIVE)

- Appointment of an Environmental Monitoring Officer to conduct visual inspections to ensure the implementation of preventative and mitigation measures during the site preparation and operational phases of the proposed activity.
- Compulsory monitoring reports.
- The necessary amendments to the EMPR through monitoring and also advice obtained from the environmental monitoring officer (ECO).

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

Description of the parameters used in the matrixes

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 area
Low-medium	Remainder of the farm Wintersveld 427 MS
Medium	Adjacent properties
Medium-high	Vivo area
High	Limpopo areas

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

The following criteria are used during the rating of possible impacts.

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

LAND 1, LAND 2 AND LAND3 (PREFERRED AND ONLY SITE ALTERNATIVE)

Project Phase	Environmental aspect :Atmospheric Pollution and noise								
	Activity that causes impact	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Movement of vehicles on site and vegetation clearance	Dust, fumes and noise generation (especially so during dry and windy conditions).	Low	Low	Low	Medium	Medium	Low-medium	Low-medium

	Vegetation clearance (burning of plant material)	Excessive smoke	Low-medium	Low	Medium	Low	Low-medium	Low	Low-medium
Operation	Movement of vehicles to and from the site	Fumes and exhaust gasses and noise	Low	Low	Low	Low	Medium	Low	Low-medium

Project Phase	**Environmental aspect: Groundwater and Surface water Pollution**								
	Activity/Aspect	**Specific impact**	**Severity**	**Duration**	**Extent**	**Frequency**	**Probability**	**Significance**	
								With Mitigation	**Without Mitigation**
Construction	Spills from toilets	Surface and groundwater pollution	Low	Low	Low	Low	Low	**Low**	**Low-medium**
	Spillages of fuel/oils and other lubricants	Surface and groundwater pollution	low	low	low	Medium	Low-medium	**Low**	**Low-medium**
	Storm water run-off from cleared areas and internal roads	Excessive sedimentary deposits to the nearby Brak River	Low-medium	Low	Medium	Low	Low-medium	**Low**	**Medium**
Operation	Leakages of fuel/oil or other lubricants from vehicles moving to and from the site	Surface and groundwater pollution	low	low	low	medium	Low-medium	**Low**	**Low-medium**

Project Phase	**Environmental aspect: Water use**								
	Activity/Aspect	**Specific impact**	**Severity**	**Duration**	**Extent**	**Frequency**	**Probability**	**Significance**	
								With Mitigation	**Without Mitigation**
Operation	Abstraction from boreholes	Reduction in groundwater sources	Low-medium	Medium	Medium	Low-medium	Medium	Low-medium	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	Vegetation clearance	Destruction of archaeological/heritage findings	Medium	Low	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	Vegetation clearance	Loss of habitat	Low-medium	High	Low	High	High	Low - medium	Medium
	Cutting large indigenous and protected trees - firewood	Loss of indigenous flora	Low	Low	Low	Medium	Medium	Low	Medium
	Accidental fires	Loss of indigenous flora and fauna	Medium – High	Low	Medium – should it occur	Low	Low	Low	Low - medium
	Vegetation clearance and soil preparation	Introduction of alien invasive plants – distribution of seeds	Low-Low medium	Low-medium	Low	Low-medium	Medium	Low	Low-medium
Operation	Killing or snaring of animals	Possible loss of fauna	Low	Low	Low	Medium	Low-medium	Low	Low-medium
	Alien seed introduction	Spread of alien invasive species	Low-Low-medium	Low-medium	Low	Medium	Low-medium	Low	Low-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	low	low	Medium	Low-medium	**Low**	**Low-medium**
	Sanitation facilities	Soil pollution	Low	Low	Low	Low	Low	**Low**	**Low-medium**
	Storm water over lands	Loss of topsoil (erosion)	Low-low medium	Low	Low	Medium	Medium	**Low**	**Low-medium**
Operation	Leakages of fuel/oil or other lubricants from vehicles moving to and from the site	Soil pollution	Low	Low	Low	Medium	Low-medium	**Low**	**Low-medium**
	Storm water run-off from cleared areas – result of damages to contour walls, inadequate soil stabilization measures and damages thereof	Siltation (Excessive sedimentary deposits)	Low	Low	Low-medium	Low-medium	Low-medium	**Low**	**Low-medium**

Project Phase	Environmental aspect: Visual								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Removal of vegetation	Visual	Low-medium	Medium-high	Low	Medium	High	Low - medium	Medium

Project phase	Environmental aspect: Safety, security and fire hazards, Health								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Site preparation – operation of vehicles	Increased risk to the safety of people	Medium-High	Medium	Low	Low	Low	Low	Medium
	Occurrence of accidental fires	Increased risk to the safety to people	Medium–High	Low	Medium	Low	Low	Low	Medium
	Burning of removed vegetation – which can lead to veld fires	Increased risk to the safety of people	Medium–High	Low	Medium	Low	Low	Low	Medium
Operation	Operation of tractors and machinery	Injury to staff	Low- High	Low	Low	Low	Medium	Low	Medium

Project phase	Environmental aspect: Socio - Economic								
	Activity/Aspect	Specific impact	Severity	Duration	Extent	Frequency	Probability	Significance	
								With Mitigation	Without Mitigation
Construction	Site preparation	Job creation and skills development	N/A	Low-medium	Low	Low-medium	Highly positive	Medium Positive	N/A
Operation	Operational phase	Job creation	N/A	Medium High - High	Low-medium	Low- low medium	Highly positive	Medium Positive	N/A
	Use and distribution of Aloe Vera products	Health benefits, used in the cosmetic, food and beverage sector, Commercially available, Investment benefits	N/A	High	High	High	Highly positive	N/A	Medium Positive

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.

Impacts:

The following impacts could have a medium to medium – high and high significance/severity without mitigation or management measures:

Construction Phase:

- ***Vegetation clearance and habitat destruction (Medium)***

  Mitigation/Management measures:

  - Removal of vegetation to be limited to the croplands footprint areas.
  - Woody vegetative cover that is removed must either be randomly spread throughout the surrounding veldt to provide biomass for micro-organisms and habitats for small mammals and birds or it may be used as a soil stabilization measure at exposed sections.
  - Only removed vegetation (wood) during site clearance can be used as firewood. No fires may however be made on the site or at the surrounding areas.

- ***Cutting and destruction of trees, especially large indigenous and protected trees (Medium)***

  Mitigation/Management measures:

  - No protected trees may be removed. If a protected tree has to be removed the necessary permit to do so must firstly be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) prior to the removal thereof.
  - No trees may be cut or destroyed for firewood outside the footprint of the croplands. Removal of vegetation is to be confined to the croplands footprint areas.
  - Large indigenous trees and especially protected trees occurring on site must where possible be incorporated into the lands.

- ***Over abstraction of water for irrigation (Medium)***

  Mitigation/Management measures:

  - It is recommended that the boreholes be equipped according to the maximum recommended yield, and that the boreholes be pumped for selected hours per day not to exceed the maximum daily abstraction. This will facilitate the water management system on site with the earthen balancing dam and the dripper irrigation system.
  - Groundwater levels (rest and pump levels) should be monitored on a quarterly basis. Should the water level drop to within 10 metres of the pump intake during regular pumping, the pumping rate should be reduced. Results of recorded abstraction rates, abstraction volumes, and water levels may then be re-evaluated.
  - Totalling flow meters should be installed on all production boreholes in order to monitor quarterly abstraction volumes.
  - An annual assessment of the groundwater quality should be conducted to ensure that the water quality is suitable for irrigation use.

- ***Risk of accidental fires (Medium)***

  Mitigation/Management measures:

  - Staff must be educated on the dangers of accidentals fires. The necessary safety measures must be in place on site. This includes fire extinguishers, backup water tanks and the regular removal of stockpiled plant material. Existing firebreaks must be maintained for this purpose.
  - No fires may be made on the site or at the surrounding areas.

- ***Visual impact – removal of vegetation (Medium)***

  Mitigation/Management measures:

  - Vegetation removal must be confined to the croplands footprint areas. Large indigenous trees and especially protected trees occurring on site must where possible be incorporated into the lands.
  - Any stockpiled vegetation must be removed on a weekly basis or alternatively be spread out in the surrounding veld or be used as a soil stabilization measure.

- ***Operation of heavy machinery during site clearing – injuries to staff (Medium)***

  Mitigation/Management measures:

  - Staff must be adequately trained and provided with the necessary safety gear/clothing during vegetation clearance, and during the operation of machinery.
  - There must be a first aid trained person on the farm as well as a first aid medical kit.

Operational Phase:

- ***Injuries to staff – operation of large machinery (Medium)***

  Mitigation/Management measures:

  - Staff must be adequately trained and provided with the necessary safety gear/clothing during vegetation clearance, and during the operation of machinery.
  - There must be a first aid trained person on the farm as well as a first aid medical kit.

LAND 1, LAND 2 AND LAND 3 (ONLY AND PREFERRED SITE ALTERNATIVE)

No –go alternative (Planning and design Phase)

- Alternative croplands for production of *Aloe vera* leaves will have to be sourced.

No –go alternative (Site Preparation Phase)

- The contribution of the activity towards increased local job creation as well as skills development will be lost.
- Loss of habitat that has occurred during vegetation clearance will not occur.

- Loss of topsoil during vegetation clearance (along steeper sloping sections) will not occur.
- Loss of large indigenous trees during vegetation clearance will not occur.
- Groundwater will not be used for irrigation.

No –go alternative (Operational Phase)

- The contribution of the activity towards increased local job creation as well as skills development will be lost.
- Loss of a product with health benefits, commercially available and which are also used in the cosmetics, food and beverage sectors.

No –go alternative (Decommissioning and Closure Phase)

- Will not be required if no-go option is implemented

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

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	■

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):

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:

Site clearance and preparation phase:

- Vehicles must be maintained to avoid excessive noise levels and also the generation of excessive fumes from machinery.
- No plant material may be burnt on site. Plant material can be re-used as mulch or brush packing on adjacent areas. Thicker branches can be used for firewood by the workers.
- No open fires are allowed at the site. Open fires for cooking are only to be made at designated and safe areas at the staff village.
- Fire breaks should comply with the National Veld and Forest Fire Act 101 of 1998 (Chapter 4: Duty to Prepare and maintain firebreaks). An emergency plan must be in place so that any uncontrolled fire can be combated in the most efficient manner.
- Pit latrines must be provided on the edges of the croplands. The pits must be sprayed on a weekly basis with Effective Micro-organisms (EM) to speed up the biological breakdown process and prevent odours.

- Machinery to be maintained to reduce the risk of excessive spillages of fuel and oils.
- The storage of fuel, oils and lubricants must only take place at the existing farm maintenance yard. Refuelling and maintenance must also be done at the farm maintenance yard.
- Removal of vegetation to be limited to the croplands footprint.
- Storm water management should be done by means of contours and water must be directed towards drainage canals in order to control storm water. Repair all erosion damage as soon as possible. Do not allow surface water or storm water to be concentrated, or to flow down along roads or pipeline routes without erosion protection measures being in place.
- The necessary water use authorization must be obtained from DWA before any water can be abstracted from boreholes. Daily abstraction volumes may not be exceeded.
- A suitably qualified archaeologist must be notified whenever anything of importance is discovered and the work in that area must cease immediately.
- No protected trees may be removed. If a protected tree has to be removed the necessary permit to do so must firstly be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) prior to the removal thereof.
- No trees may be cut or destroyed for firewood outside the footprint of the croplands. Removal of vegetation is to be confined to the croplands footprint areas.
- Large indigenous trees and especially protected trees occurring on site must where possible be incorporated into the lands.
- Woody vegetative cover that is removed must either be randomly spread throughout the surrounding veldt to provide biomass for micro-organisms and habitats for small mammals and birds or it may be used as a soil stabilization measure at exposed sections.
- Vehicles must only use existing access roads to and from the site. No new roads are allowed to be constructed.
- The applicant is responsible for the eradication of alien invasive species during the site preparation phase. Strict control measures must be implemented regarding the introduction of materials into the area/ brought onto the site.
- Safety act (Act 85 of 1993) requires the designation of a Health and Safety representative when more than 20 employees are employed.
- Clean drinking water must be made available to workers at all times.
- Water for the washing of hands must be available at the pit latrines.
- No trespassing by staff onto neighbouring private land is allowed. Strict measures must be implemented in this regard.
- Staff must be adequately trained and provided with the necessary safety gear/clothing during vegetation clearance, and during the operation of machinery.
- There must be a first aid trained person on the farm as well as a first aid medical kit.
- Local labour must be employed wherever possible. Employment records must be available at all times. Requirements of BBBEE to be met.

Operational Phase:

- The necessary water use authorization must be obtained from DWA before any water can be abstracted from boreholes. Daily abstraction volumes may not be exceeded.
- Pit latrines must be treated weekly with EM.
- Vehicles to be maintained as to not spill diesel and oil.
- Contours and drainage canals must be maintained.
- Application of insecticides, herbicides and fertilizers must be according to an approved program.
- Appropriate management measures for alien/invasive species must be undertaken in conjunction with an ecologist
- No killing of fauna by snaring or trapping is allowed.
- Tractors and vehicles must only use existing access roads to and from the site.

- Vehicles to be maintained to prevent excessive oil and fuel leaks.
- Any damages to soil stabilization measures must be repaired immediately.
- Local labour should be employed wherever possible during the operational phase.
- Safety act (Act 85 of 1993) requires the designation of a Health and Safety representative when more than 20 employees are employed.
- The boreholes should be equipped according to the maximum recommended yield and pumped for selected hours per day not to exceed the maximum daily abstraction. This will facilitate the water management system on site with the earthen balancing dam and the dripper irrigation system.
- Groundwater levels (rest and pump levels) should be monitored on a quarterly basis. Should the water level drop to within 10 metres of the pump intake during regular pumping, the pumping rate should be reduced. Results of recorded abstraction rates, abstraction volumes, and water levels may then be re-evaluated.
- Totalling flow meters should be installed on all production boreholes in order to monitor quarterly abstraction volumes.
- An annual assessment of the groundwater quality should be conducted to ensure that the water quality is suitable for irrigation use.
- Clean drinking water must be made available to workers at all times.
- Water for the washing of hands must be available at the pit latrines.
- Fire breaks should comply with the National Veld and Forest Fire Act 101 of 1998 (Chapter 4: Duty to Prepare and maintain firebreaks). An emergency plan must be in place so that any uncontrolled fire can be combated in the most efficient manner.
- No trespassing by staff onto neighboring private land is allowed. Strict measures must be implemented in this regard.
- Staff must be adequately trained and provided with the necessary safety gear/clothing.
- There must be a first aid trained person on the farm as well as a first aid medical kit.

Is an EMPr attached?	YES	■

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) - Not Applicable to proposed activity

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information –Included additional information

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, _____

(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, 2010;
(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.

Signature of the Environmental Assessment Practitioner:

Name of company:

Date: