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Final Scoping Report **12/1/9/2-V93**

FINAL SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF ± 400 HECTARES OF ORCHARDS ON PORTIONS 1, 29, 30 & 31 OF BEJA 39 LT, ALBASINI DAM AREA, MAKHADO LOCAL MUNICIPALITY, VHEMBE DISTRICT, LIMPOPO PROVINCE

10 October 2019

Prepared for: Eastern Produce Estate SA (Pty) Ltd
Compiled by: HP Jannasch & JH Botha
Document version 2.0 – Final

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FINAL SCOPING REPORT FOR THE PROPOSED DEVELOPMENT OF ± 400 HECTARES OF ORCHARDS ON PORTIONS 1, 29, 30 & 31 OF BEJA 39 LT, ALBASINI DAM AREA, MAKHADO LOCAL MUNICIPALITY VHEMBE DISTRICT, LIMPOPO PROVINCE

10 October 2019

PROJECT APPLICANT

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ENVIRONMENTAL ASSESSMENT PRACTITIONER – CV attached as Appendix 4

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J.H. Botha (*Pri Sci Nat)*

Senior Environmental Scientist – M.Sc. Environmental Management

Final Scoping Report - Beja orchards

REPORT DISTRIBUTION LIST

Surname	Organisation	Position/ Property
Landowner		
Mr P Anderson	Eastern Produce Estate SA (Pty) Ltd	P1, 3 & RE of Driefontein 33 LT P2 of Welgevonden 36 LT P0 of Morgenzon 9 LT
Neighbouring landowners		
Mrs Anthea Lombard	Beja Hengelparadys	RE of Beja 39 LT
Mr Dennis Gilbert	Rionde Farm/Gilbert Packers	RE of P5 of Sterkstroom 6LT
Frits Ahrens		RE of P15 of Sterkstroom 6LT
Mr Andre Prinsloo	Molozi Ttrust	P5 of Beja 39 LT
Ika Cronje	Charles Schlesinger Trust	P6 & 7 of Beja 39 LT
Sanet Badenhorst	El Shaddai	P16 of Beja 39 LT
Dr Tigere	Last Sanctuary	P19 of Beja 39 LT
Jacques Bouwer	Bergheim Estates	RE of P28 of Beja 39 LT
Wynand Louw		RE of Nooitgedacht 3 LT
	Rumic Investments CC	RE of P16 of Goedehoop 8 LT
Nelson	Matidza-Luonde CPA	P17 of Beja 39 LT
	Pilosmart (Pty) Ltd	P20 of Beja 39 LT
	Ruele Fresh Primary Cooperative Ltd	P3 of Hayani 51 LT
Ms Mirungu L Malungana		P3 of Hayani 51 LT
Other I&AP's		
Mr Dries Albert		
Mr Mukheti	Eskom	Eskom servitude
Mr Ian MacDonald	Soutpansberg Boat Club	
Authorities		
Municipal Manager Director Planning & Dev Councillor Ward 15	Makhado Local Municipality	
Municipal Manager	Vhembe District Municipality	
Mr David Nethengwe	Department of Water & Sanitation	DD: Water Resource Oversight
Mr Foletji Mahlakoane	Department of Agriculture (DAFF)	
Mr Kenneth Maunye	Department of Rural Development & Land Reform	
Mr S Monyepao	Limpopo Department Agriculture	
Mr V Maluleke	LEDET	

DOCUMENT HISTORY

Report No	Date	Version	Status
L19 057 E	2 September 2019	1.0	Consultation
12/1/9/2-V93	10 October 2019	2.0	Final

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1 GENERAL INFORMATION

AGES Limpopo (Pty) Ltd was appointed by **Eastern Produce Estate SA (Pty) Ltd (Beja Estate)** to conduct an Environmental Impact Assessment in order to obtain the necessary environmental authorisation for the development of ± 400 ha of orchards Portions 1, 29, 30 & 31 of Beja 39 LT.

1.1 Project Objective

This Scoping Report was done with the objective to supply the Limpopo Department of Economic Development, Environment and Tourism (LEDET) with the necessary environmental information to make a decision regarding the approval of the Scoping Report and the Plan of Study for environmental impact assessment.

This Scoping Report was done to comply with the requirements of the environmental regulations promulgated on 4 December 2014 and amended on 7 April 2017.

These regulations are promulgated in terms of Chapter 5 of the National Environmental Management Act 107 of 1998.

1.1.1 The following activities require a full Environmental Impact Assessment (EIA) process in terms of Regulation 984 of 4 December 2014 as amended of the National Environmental Management Act, and authorization by LEDET:

- **Activity 13:** "*Physical alteration of virgin soil to agriculture, or afforestation for the purpose of commercial tree, timber or wood production of 100 hectares or more*"

  "virgin soil" means land not cultivated for the preceding 10 years;

  Approximately 400 ha of land not cultivated during the past 10 years will be cleared.

- **Activity 15**: *"The clearance of an area of 20 hectares or more of indigenous vegetation."*
  "indigenous vegetation" refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years;

  Approximately 400 ha of land not cultivated during the past 10 years will be cleared

2 PROJECT DESCRIPTION

2.1 Project locality

The proposed croplands will be located on Portions 1, 29, 30 & 31 of Beja 39 LT on Beja Estate north of and adjacent to the Albasini Dam in the Makhado Local Municipality (See attached locality map – Appendix 1).

The surveyor General 21 digit code for the farm portions are:

T	O	L	T	0	0	0	0	0	0	0	0	0	0	3	9	0	0	0	0	1
T	O	L	T	0	0	0	0	0	0	0	0	0	0	3	9	0	0	0	2	9
T	O	L	T	0	0	0	0	0	0	0	0	0	0	3	9	0	0	0	3	0
T	O	L	T	0	0	0	0	0	0	0	0	0	0	3	9	0	0	0	3	1

The following coordinates are at the middle of the proposed orchards:

23°05'37.15"S 30°04'56.48"E

2.2 Nature of activity

The proposed project will entail the following (see Figure 1):

- Clearance of ± 400 ha of indigenous vegetation for orchards to plant macadamia and avocado trees.
- Water will be sourced from boreholes (95%), streams (3.2%) and the Albasini Dam (1.8%) according to the existing lawful water use for the farm portions – see Appendix 3.
- Trees will be irrigated with drippers or micro-jets.

2.3 Need for new orchards

Approximately 400 ha of Beja Estate are available to be developed as orchards. There is a constant growth in demand for avocadoes and macadamia either locally or to be exported to earn foreign exchange. These areas are currently unproductive and a large fire hazard during dry conditions as a result of the composition of the vegetation. The establishment of orchards on these areas over the next five years will result in food production, income generation and job creation.

Macadamia nuts are high in demand and the presence of Royal Macadamia close by who constantly requires more macadamias puts this area in a favourable position for macadamia orchards. The area is also suited for avocados which are doing well because of the climate and soils.

3 CONSIDERATION OF ALTERNATIVES

In the EIA process, the consideration of alternatives is always important, should the proposed site not fit into the parameters of the EIA framework. The alternatives can be categorised as follows:

- Location alternatives
- Process alternatives
- No-Go alternative

3.1 Location alternatives

The following area is being investigated – see Fig 1:

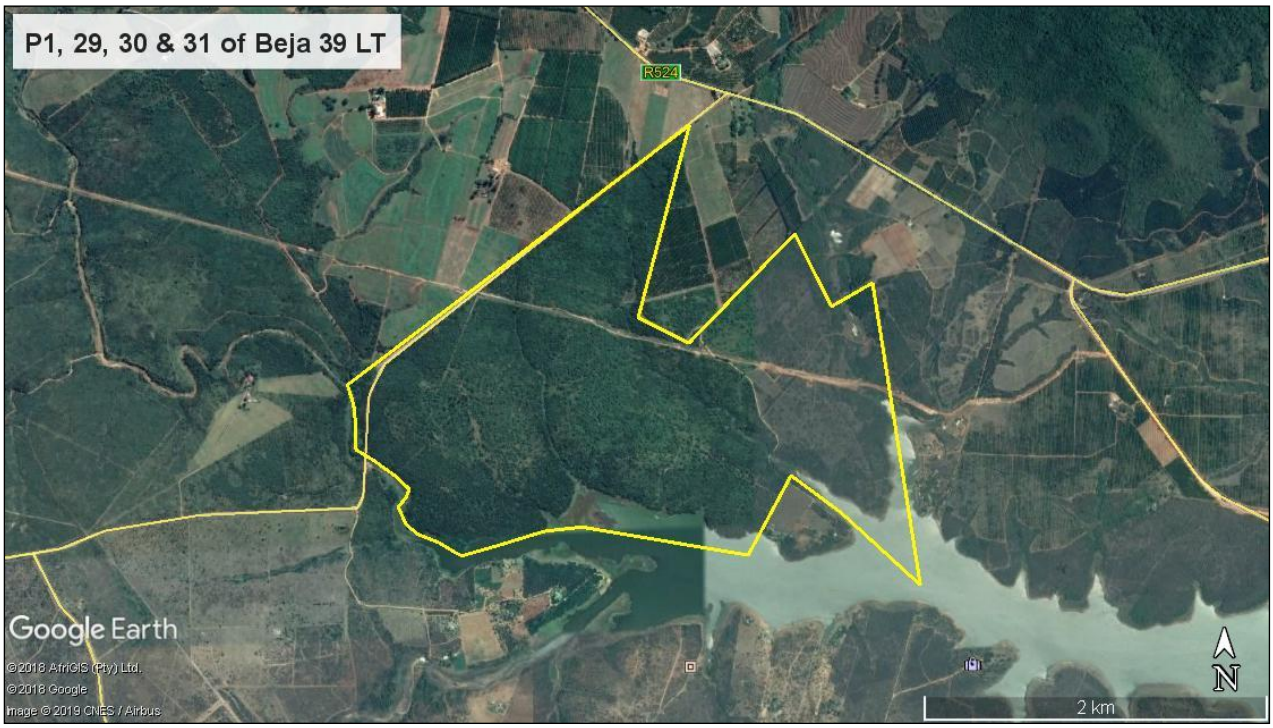

Figure 1. Yellow marked area is being investigated for orchards

The development of the orchards will only be considered on areas suitable in terms of ecological and archaeological sensitivity of the area. The whole area will be surveyed and sensitive areas will be excluded for the development of the orchards. Soil suitability will also be considered.

3.2 Process alternative

Alternatives like different irrigation methods, etc., will be investigated to minimise the impact on the environment.

3.3 No go alternative

This option will be addressed in the EIAR.

4 DESCRIPTION OF THE AFFECTED ENVIRONMENT

4.1 Land Use

- The farms are zoned as agricultural.
- There are three small *Eucalyptus* plantations and approximately 35% old lands on the properties. The remaining area is natural woodland in a degraded state because of alien invader species.
- The dense vegetation and high presence of alien invader species pose a major fire risk at this stage.
- Several drainage channels traverse the area and there are two man made dams.

Surrounding land uses are as follow:

- Orchards, croplands, grazing, plantations and ecotourism.
- The Albasini Dam borders the area on the south.

4.2 Topography

The regional topography of the study area is classified as slightly to moderately undulating plains, with the soils mostly suitable for tree farming.

4.3 Climate

The study area is located in the summer rainfall region of South Africa, with precipitation generally occurring mainly in the period between October and April. The mean annual precipitation for the area measured over 63 years is approximately 791 mm, as measured at Driefontein (weather station 0723-338A; Midgley et al, 1994). This is generally a frost free area.

4.4 Regional geology

The Levubu/Albasini Dam area is underlain by a Goudplaats Gneiss Basement, forming the foundation for a relatively flat and undulating topography. The gneiss is biotite rich and predominantes the Levubu geology. The sequential Schiel Complex, which intruded the gneisses, consists of porphyritic syenite. The younger Vaalian age granites, which are leucocratic, muscovite- and biotite rich, intruded the basement complex. Granite and gneiss outcrops are sparsely distributed, although a syenite outcrop to the south of Levubu, and a biotite-muscovite granite outcrop to the east of Levubu are apparent. Numerous diabase dykes have intruded across the area, trending in a north-east direction. Levubu's red soil is considered an indication of deep granite weathering in comparison to the light coloured, gravel to sandy soils found at higher altitudes.

4.5 Ecology

The study area falls within Tzaneen Sour Bushveld.

The vegetation of the proposed development area comprises of areas designated as *Critical Biodiversity 2* areas, *No natural remaining* areas as well as *Ecological support area 2*. The vegetation and ecological sensitivity will be surveyed and confirmed by an ecological specialist who will also conduct a wetland delineation of the area. Sensitive areas will then be mapped and excluded from orchards development.

4.6 Surface drainage

The study area is located within Quaternary Catchment Area (QCA) A91A and A91B that forms part of the Levhuvhu River Catchment Management Area (CMA) of the Limpopo River.

The drainage lines and water courses with buffer areas will be indicated in maps in the EIA Report. These buffers will be delineated during the drainage lines and wetlands assessment.

4.7 Visual environment

Clearing of areas will result in a change of the visual attributes – especially in the short to medium term. The change from secondary old fields and woodland in a degraded state to orchards can be regarded as an improvement of the visual attributes of the area because it is within an area that is highly productive in terms of agriculture. Macadamia nut trees and Avocadoes are perennial and therefore the area is not ploughed on an annual basis that also reduces the visual impact of the proposed orchards.

4.8 Air quality and noise

During the vegetation clearing phase noise and dust will be a factor. Impacts and mitigation measures of these impacts will be addressed in the draft EIAR.

4.9 Archaeological and historical attributes

A Phase I Heritage Impact Assessment will be conducted on the total study area and the results will be used to determine sensitive areas that must be avoided during development. This study will be included in the EIAR.

4.10 Solid waste management

The establishment of the orchards will mainly produce vegetation debris that will be used for compost and firewood.

All recyclable material used (pipes, plastics and steel) should be recycled.

4.11 Storm water

There are non-perennial drainage channels found throughout the proposed orchards areas. Care will be taken to ensure that the proposed orchards do not infringe on the 1:100 year flood line of the drainage channels and the Albasini Dam.

Contours and storm water control measures to control water runoff from the orchards will be included in the EIAR.

5 LEGAL AND POLICY REQUIREMENTS

The following is a broad overview of the relevant policy and legal requirements, *but not limited to*, applicable to the proposed project.

Constitution of South Africa (Act 108 of 1996)

Section 24 of this Act recognised not only that everyone has a right to an environment that is not harmful to our health or well-being, but it also recognises the notion of sustainable development and its supporting principles.

National Environmental Management Act (Act no 107 of 1989)

This Act defines the concept of sustainability, to ensure that any social or economic development will take place in such a way as to preserve the Environment for present and future generations. This Act also takes into account the pollution principles.

Environmental Impact Assessment Regulations (Act 107 of 1998) – 4 December 2014;

Regulations and guidelines for the implementation of Environmental Impact Assessments**.**

National Water Act (Act no 36 of 1998)

Section 19 of the National Water Act, Act 36 of 1998 requires that all reasonable measures be taken to prevent any water pollution from occurring, continuing or recurring. The Act further describes a number of water uses and requires that a water use License have to be obtained for the specified water uses.

National Heritage Resources Act (Act 25 of 1999)

The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38.

National Biodiversity Act (Act 10 of 2004)

The National Environmental Management Biodiversity Act (Act No. 10 of 2004), aims to provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bio prospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith**.**

Limpopo Environmental Management Act (Act no 7 of 2003)

The Limpopo Environmental Management Act, Act 7 of 2003 entails mainly the management and protection of the environment in the Province. Ecologically sustainable development and responsible use of natural resources in the province are to be secured. The fundamental rights contained in the Constitution of South Africa are underwritten and the Act aims to realise these rights in the Limpopo Province. The Act also aims to give effect to international agreements effecting environmental management which are binding in the province.

Conservation of Agricultural Resources Act (Act 43 of 1983)

This act provide for the control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants**.**

National Veld and Forest Fires Act, 1998 (Act 101 of 1998)

This act provides for the control of veld fires. The regulations in terms of this act set certain conditions for the owner of a property for emergency preparedness for the control of veld fires. It also describes the compulsory making of firebreaks to control veldt fires that originates on the owner's property as well as on adjacent properties**.**

6 KEY ENVIRONMENTAL IMPACTS

The following possible environmental impacts were identified:

ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
Air Pollution and noise		
Dust	During clearing of vegetation	Public nuisance
Smoke	Vehicle emissions and veld fires Burning of cleared vegetation	Health problems Air pollution
Air pollution	Spray drift during application of insecticides and fungicides	Health problems
Noise	Vegetation clearance and farming activities (tractors, pumps & workers)	Nuisance
Water quality		
Silt deposition in surface water drainage lines	Erosion risk due to increased run-off during vegetation clearance	Siltation of aquatic ecosystem
E.coli in water	Poorly planned and managed sanitation facilities	Water pollution & health risk
Domestic waste	Dumping of domestic waste	Water pollution & health risk
Pesticides & fertilizers	Application of fertilizers and spraying of pesticides	Water pollution & impact on terrestrial & aquatic fauna & flora
Water quantity		
Water use	Irrigation of orchards	Lowering of water table
Water use	Irrigation of orchards	Lowering of Albasini dam level
Biodiversity and Land/soil degradation		
Soil contamination	Spillages from tractors & machinery	Effect soil ecology/ground water
Decline in plant species-diversity	Clearing of areas for orchards	Loss of biodiversity
Decline in animal species diversity	Loss of habitat due to orchards establishment	Loss of biodiversity
Soil pollution	Use of pesticides and fertilizers	Effect soil characteristics, fauna & flora and water resources
Soil degradation	Erosion if storm water from orchards not managed correctly	- Loss of topsoil

ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
Cultural Heritage		
Possible heritage sites	Damage during clearing of areas	Possible loss of cultural heritage
Visual impact		
Visual aspect and sense of place	Orchards	± Impact on landscape quality character ± Impact on sense of place
Socio-economic impacts		
Job creation and skills development	Increase in temporary & permanent work opportunities	+ Socio- economic benefit
Safety of neighbouring properties	Presence of workers & security personnel. Availability of produce and equipment that lure criminals. Removal of dense vegetation, erection of electrified fence and presence of security personnel.	• Increase in crime levels + Lowering of crime levels

These key areas of impacts will be further explored and described in the environmental impact assessment report to detail the impacts, the impact ratings and mitigation measures.
The following specialist investigations will also be conducted and used in assessing the environmental impacts of the different activities that form part of the development:

- Ecological assessment
- Drainage lines and wetlands assessment
- Phase I archaeological and heritage resources assessment

7 ENVIRONMENTAL IMPACT DETERMINATION AND EVALUATION

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

7.1 Methodology to assess the impacts

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

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

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

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

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

Table 1 :Significance ratings (Plomp 2004)

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

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

Description of the parameters used in the 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	Within the proposed new orchards
Low-medium	Within portions 1, 29, 30 & 31 of Beja 39 LT
Medium	Within surrounding farms
Medium-high	Within local municipality area
High	Vhembe Region

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

8 PUBLIC PARTICIPATION PROCESS – SEE ALSO APPENDIX 2

8.1 Newspaper Advertisement

The proposed project was advertised in the Zoutpansberger on 2 August 2019 to inform people about the development of the orchards and request them to identify environmental issues of concern. An example of this advert is attached in Appendix 2.

8.2 Site Notice

Site notices in English was put up at all entrances to the farm on 25 July 2019. An example of this said notice as well as photos of the displayed notices is attached in Appendix 2.

8.3 Background Information Notices

Background Information Documents (BID's) were hand delivered, e-mailed or sent by registered mail to neighbours and interested & affected parties.

Background information documents were also sent to:

- Makhado Local Municipality
- Ward 15 Councillor – Makhado Municipality
- Vhembe District Municipality
- Department of Water & Sanitation
- National Department of Agriculture
- Limpopo Department of Agriculture
- Department of Rural Development & Land Reform

An example of the background information document is included in Appendix 2 as well of proof of the distribution thereof.

8.4 Issues and Responses on BID

The following comments were received:

- Mrs Anthea Lombard from Beja Hengelparadys is concerned about security breaches from the farm during and after development.
- Mr Dries Alberts, an agricultural consultant, supports the development.
- Mr Ian Macdonald from the Soutpansberg Boat Club is concerned about reduction in the dam level, noise from pumps & sprayers and the impact on aquatic and terrestrial fauna and flora

No comments were received from authorities.

8.5 Scoping Report and Plan of Study for EIA

The Consultation Scoping Report and Plan of Study for EIA was made available for a 30 day review period (3 September – 4 October 2019) to relevant government departments and registered I&AP's for comments.

Site visits were conducted with officials from DWS and Makhado Local Municipality.

8.6 Issues and Responses on CSR

Mr Ian Macdonald from the Soutpansberg Boat Club (SBC) submitted the following comments:

- The SBC supports all economic developments that will stimulate our economy, generate forex and create jobs and the SBC fully supports the proposed development.
- However, I am very surprised that there is not an aquatic study being done on the impact of the project on the dam's fauna (mainly) and flora. Since the canal system has not worked the dam has remained fairly stable, fishing improved and otters have been seen. It also supports a large bird population and is in fact considered a birding 'hot-spot' that is a benefit of the lodges (tourism). Lowering and/or fluctuating dam levels significantly, obviously has a huge impact on the aquatic fauna as the water becomes deoxygenated and birds move off to a better food source. Boreholes must be used in preference to dam water in order to maintain the dam level to above 70%.
- The SBC concerns remain: Dam level (>70%), noise (at night from drying, spraying & pumping), water quality (chemical and fertiliser drift & leaching).

AGES responded as follows:

- Aquatic Study - an Ecological Assessment (which includes a survey of the fauna and flora around the dam) has been conducted by an independent Ecologist, and this report will be included in the Environmental Impact Assessment Report.
- Dam Levels - 2% of the Existing Lawful Water Use will be sourced from abstraction from the Albasini Dam, constituting 0.35% of its full storage capacity (FSC) when the orchards are fully developed. This volume does not represent a substantial abstraction and should therefore not contribute to dam levels fluctuating significantly.
- Noise - please note that there will not be any processing plant as part of the proposed development and concerns of noise from drying processes are therefore not relevant.
- Water quality - the potential impact of chemical and fertiliser drift & leaching will be addressed in the Environmental Impact Assessment Report, a copy of which will be made available to you upon submission.

9 PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSMENT

The environmental impact assessment process will be based on the actions and findings of the scoping phase.

9.1 Tasks to be undertaken

The physical, biological, social, economic and cultural aspects that were identified in the scoping process will be addressed in detail in the Environmental Impact Assessment report.
The following specialist investigations will be conducted to aid in the description of the environment as well the identification and rating of impacts:

9.1.1 Ecological Assessment – Dr BJ Henning (EXIGO)

- A detailed ecological assessment will be conducted on the proposed footprints of the orchards to anticipate and identify significant environmental issues and impacts on the environment (flora & fauna). Mitigation measures will be proposed.
- The following methodology will be followed:
    - Baseline study of the vegetation of the proposed footprints;
    - Condition of all vegetation will be assessed and mapped;
    - Plant communities will be identified on site and mapped. From this map sensitive areas and a sensitivity map will be produced;
    - A plant species list for the site will be provided;
    - A description of the status and structure of the vegetation will be provided;
    - Buffer zones will be identified to protect the drainage lines and water courses.
    - A scoping study will be conducted on potential mammals that might occur on the sites and management measures will be provided;
    - Potential impacts of the orchards on the vegetation and general ecology of the area will be assessed;
    - Management and mitigating measures to be implemented during the clearance and operational phases will be provided.

9.1.2 Wetland delineation – Dr BJ Henning (EXIGO)

The delineation of drainage lines will be conducted. The following methodology will be followed:

- Obtain relevant information of soil types related to drainage lines. This includes information on the riparian areas and indicator plant species associated with these areas. Information obtained and criteria followed for wetland delineation will be obtained from “A practical field procedure for identification and delineation of wetlands and riparian areas” (Department of Water Affairs and Forestry, South Africa).
- Identify and delineate the different wetland zones (drainage lines and riparian areas) on the sites according to the soil and vegetation indicators. The soil and vegetation indicators will be used to delineate the drainage lines.
- Conduct a functionality assessment of the drainage lines including a Present Ecological State (PES),
- Ecological Importance & Sensitivity (EIS) and Wet-Health Assessment.
- Potential impacts of the orchards on the drainage lines will be assessed;
- Management and mitigating measures to be implemented to limit impacts on the drainage lines or to manage the drainage lines accordingly will be provided.

9.1.3 Heritage Assessment – Nelius Kruger (EXIGO)

Heritage specialist input into the Environmental Impact Assessment (EIA) process is essential to ensure that, through the management of change, developments still conserve our heritage resources. It is also a legal requirement for certain development categories which may have an impact on heritage resources. Thus, EIAs should always include an assessment of heritage resources. The heritage component of the EIA is provided for in the **National Environmental Management Act, (Act 107 of 1998)** and endorsed by section 38 of the **National Heritage Resources Act (NHRA - Act 25 of 1999)**. In addition, the NHRA protects all structures and features older than 60 years, archaeological sites and material and graves as well as burial sites. The objective of this legislation is to ensure that developers implement measures to limit the potentially negative effects that the development could have on heritage resources.

A Phase I heritage assessment will be conducted on the footprints and authorisation will be obtained from SAHRA if necessary. If any graves or significant archaeological sites are discovered a permit needs to be obtained from SAHRA to move or destroy.

The Phase 1 Archaeological Impact Assessment will function subject to the following terms of reference:

- Provide a detailed description of all archaeological artefacts and structures (including graves) and settlements that may be affected, if any that may be found on the project area;
- Provide a cultural context and provenience for archaeological artefacts and structures (including graves) in the project area and in the surrounding landscape by means of a detailed desktop background study;
- Assess the nature and degree of significance of such resources within the area;
- Establish heritage informants/constraints through establishing thresholds of impact significance;
- Assess and rate any possible developmental impacts, present and future, on the archaeological and historical remains within the larger landscape;
- Propose possible heritage management measures provided that such action is necessitated by the development.
- Liaise and consult with the relevant Heritage Resources authority with regards to the site investigation.

9.2 Consultation with the competent authority

The competent authority will also be consulted at the following stages:

- Submission of EIA application.
- Submission of Consultation Scoping Report and Plan of Study for EIA.
- Submission of Final Scoping Report and Plan of Study for EIA.
- Site visit.
- Submission of EIAR (Consultation & Final).

9.3 Methodology to assess environmental issues and alternatives

This methodology has been described in detail in section 7 of this Final Scoping Report and it will be followed to assess environmental impacts, issues and alternatives.

9.4 Public participation process

Comments or inputs received during have been included in this Final Scoping Report.

After approval of the Scoping Report, the Draft Environmental Impact Assessment Report will be compiled and made available to the registered Interested and Affected parties for a 30 day comment period. It will include proof of all the public participation processes as well as copies of all the specialist reports.

A Final Environmental Impact Assessment Report will be submitted to LEDET for review and decision making.

10 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report is to provide the relevant authority with sufficient information regarding the potential impacts and scope of the development to make an informed decision regarding the approval of the Plan of Study for Environmental Impact Assessment.

The Department is therefore respectfully requested to evaluate and consider this Scoping report, as part of an application that has been lodged in terms of section 24(5) of the National Environment Management Act, 1989, (Act no 107 of 1998), in respect of the following listed activities:

R984 of 04 December 2014 as amended	Listing notice 2, activity 13	“Physical alteration of virgin soil to agriculture, or afforestation for the purpose of commercial tree, timber or wood production of 100 hectares or more”
R984 of 04 December 2014 as amended	Listing notice 2, activity 15	“The clearance of an area of 20 hectares or more of indigenous vegetation“

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