



GEOHYDROLOGY

GEOTECHNICAL

ENVIRONMENTAL

SOCIAL DEVELOPMENT

Final Scoping Report

12/1/9/2-V87
LIM/EIA/0000880/2019



**FINAL SCOPING REPORT FOR THE PROPOSED DEVELOPMENT
OF ± 450 HA OF NEW CROPLANDS ON THE REMAINDER OF
PORTION 3 OF THE FARM CONISTON 699 MS IN THE
WATERPOORT AREA OF MAKHADO LOCAL MUNICIPALITY,
VHEMBE DISTRICT OF LIMPOPO PROVINCE**

5 August 2019

Prepared for: Koedoespan Boerdery (Pty) Ltd
Compiled by: JH Botha
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5 August 2019

PROJECT APPLICANT

Company name: Koedoespan Boerdery (Pty) Ltd
Contact Person: Mr A van Staden
Physical Address: Jachtpad. Mooketsi
Postal Address: P O Box 19, Mooketsi, 0825
Telephone Number: 015 395 2040
Mobile: 082 576 6355
E-mail: antonie@zz2.co.za

ENVIRONMENTAL ASSESSMENT PRACTITIONER – CV attached as Appendix 4

Company Name: AGES Limpopo (Pty) Ltd (Reg: 2006/020831/07)
Contact Persons: Mr Johan Botha
Physical Address: 120 Marshall Street, Polokwane, 0699, South Africa
Postal Address: P.O. Box 2526, Polokwane, 0700, South Africa
Telephone Number: +27 (83) 557 6494 / +27 0(15) 291 1577
Fax Number: +27 (15) 291 1577
E-mail: jbotha@ages-group.com

.....
J.H. Botha (*Pri Sci Nat*)
Senior Environmental Scientist – M.Sc. Environmental Management

LIMPOPO PROVINCE: 120 Marshall Street, Polokwane 0699, PO Box 2526, Polokwane, 0700
Tel & fax: +27 15 2911 577 www.ages-group.com

Offices: Northern Cape Eastern Cape Western Cape Gauteng Limpopo North-West Province
AGES Limpopo Directors: JH Botha HP Jannasch THG Ngoepe

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REPORT DISTRIBUTION LIST

Surname	Organisation	Position/ Property
Landowner		
Mr A van Staden	Koedoespan Boerdery (Pty) Ltd	RE of Ptn 3 of Coniston 699 MS
Neighbouring landowners		
Mr B Schlesinger		RE of Woodlands 701 MS
Mr A van Staden	Sandpan Boerdery (Edms) Bpk	Ptn 2 of Esmefour 697 MS
Mr AS Tshivaula		Ptn 4 of Coniston 699 MS
Mr A Miles		Rochdale 870 MS
Mr Roberts	Fanja Trust	RE of Kliprivier 692 MS
Mr JBC Barwise		P1 of Sutherland 693 MS
Mr B Lottering	Creosote pole plant	P1 of 700 MS
Other I&AP's		
W van Jaarsveld (CEO)	Agri Limpopo	
A Humphrey Jurgen Miles		Rochdale 870 MS
Authorities		
Me Hilda Mpho Mudau	Makhado Local Municipality	
Mr N Mukwevho Mr K Kubayi	Vhembe District Municipality	
Mr David Nethengwe	Department of Water & Sanitation (DWS)	
Mr Foletji Mahlakoane	Department of Agriculture, Forestry and Fisheries (DAFF)	
Mr Tuwani Tshotheli	Department of Rural Development & Land Reform	
Mr Rhulani Mthombeni	Limpopo Department of Economic Development, Environment & Tourism	

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1 GENERAL INFORMATION

AGES Limpopo (Pty) Ltd was appointed by **Koedoespan Boerdery (Pty) Ltd** to conduct an Environmental Impact Assessment in order to obtain the necessary environmental authorisation for the development of ± 450 ha of croplands on areas that were not previously used for croplands.

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 in Regulation 325 of 7 April 2017 of the National Environmental Management Act, and authorization by LEDET:

- **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 450 ha of vegetation will be removed and be cleared for new croplands.

2 PROJECT DESCRIPTION

2.1 Project locality

The proposed croplands will be located on the remainder of portion 3 of the farm Coniston 699 MS in the Waterpoort area in the Limpopo Province (See attached locality map – Appendix 1).

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

T	O	M	S	0	0	0	0	0	0	0	0	0	6	9	9	0	0	0	0	3

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

22°52'29.88"S

29°41'12.80"E

2.2 Nature of activity

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

- Clearance of \pm 450 ha of indigenous vegetation for new croplands to plant tomatoes. The expansion is necessary to provide enough lands for a crop rotation cycle of 3 - 7 years.
- Water will be sourced from the registered legal water use for the Waterpoort area farms owned by ZZ2.
- Tomatoes will be irrigated with drippers.

2.3 Need for new Croplands

The climate and soils in this area puts this area in a favourable position for croplands for the production of tomatoes during the winter months. The expansion is necessary to provide enough lands for a crop rotation cycle of 3 - 7 years. The total area to be planted per year will not be expanded and there is enough water available for the production of crops from the existing registered legal water use for the adjacent farms owned by ZZ2.

The proposed development will enhance the utilisation of this farm where a number of croplands have already been developed and where the infrastructure already exists for the farming of the land. These croplands will also enhance the economic viability of the farm in the application and will help in providing more food for an ever increasing population in the country as well as income generation and job creation.

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:

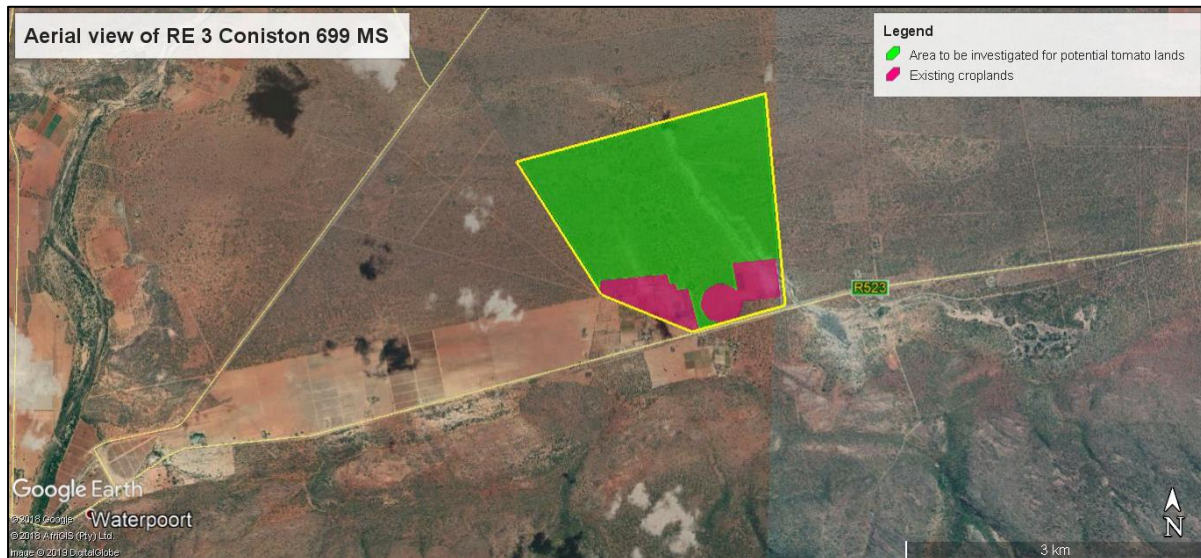


Figure 1. The green area is being investigated

3.2 Process alternative

The current farming practises exercised on the other ZZ2 farms have proven the success to grow tomatoes. The use of effective micro-organisms, natural compost, drip irrigation and good crop rotation cycles (“Natuurboerdery”) have resulted in improved production (greater yields) with less fertilizer and insecticides being applied. The main aim of the increased area for tomato lands is to provide a crop rotation of 3 - 7 years. During the resting period natural grasses and herbs will re-grow and restore the soil micro-fauna, organic material and structure.

3.3 No go alternative

This option will be addressed in the EIAR.

4 DESCRIPTION OF THE AFFECTED ENVIRONMENT

4.1 Land Use

The farm is zoned as agricultural.

Surrounding land uses are as follow:

- ZZ2 tomato croplands to the south west.
- Game & cattle farms to the east, north and west.
- Croplands, game and cattle farm to the south.
- A creosote pole treatment plant to the south west.

4.2 Topography

The proposed cropland development sites occur on a landscape that varies from slightly undulating plains to flat plans bisected by a drainage channel.

4.3 Climate

The study area is located in the summer rainfall region of South Africa, with precipitation generally occurring as short, heavy, thunder showers mainly in the period between November and April. The mean annual precipitation for the area is approximately 437 mm, as measured at

Sandow near Waterpoort (weather station 0765-253; *Midgley et al, 1994*). Rainfall is very irregular and the high temperatures (mean monthly maximum for January is 30.4°C) result in poor grass growth except when there are some good follow-up rain for 3 – 4 consecutive weeks. This is generally a frost free area.

4.4 Regional geology

According to the available geological information, the study area is underlain by the sedimentary deposits of the Karoo Supergroup. The study area is underlain by a number of linear sequential lithological units that are banded together and orientated in an E-W direction. The basic geological composition of the study area is chronological in nature (as mentioned above) with the northern sections being the youngest and the southern sections the oldest.

The Karoo Supergroup consists of the following lithological units (in chronological order), the first located in the northern parts of the study area with the last forming the oldest of the Supergroup:

- *Tshipise member* of the **Clarens Formation** consisting of a fine-grained whitish to pinkish sandstone (youngest)
- *Red Rocks member* of the **Clarens Formation** consisting of fine-grained, white and red mottled argillaceous sandstone
- **Bosbokpoort Formation** consisting of a brick-red to purplish mudstone and siltstone
- **Klopperfontein Formation** consists mainly of white feldspathic sandstone grit and conglomerate
- **Solitude Formation** that consists of a multi-coloured siltstone, sandstone and mudstone
- **Fripp Formation** that is mainly comprised of white feldspathic sandstone, grit and conglomerate
- **Mikambeni, Madzaringwe & Tshidzi Formation** that is comprised of mudstone, shale, carbonaceous shale, sandstone and conglomerate coal seams with diamictite or conglomerate at the base (oldest)

The sedimentary rocks are deemed to be fractured in nature with a moderate to high (2.0 - 5.0L/s) groundwater potential.

The northern part of the study area is covered by red and yellow, well drained sandy soils with high base status, while the central and southern areas consist of soils with negligible to weak profile development, usually occurring on deep alluvial deposits (LCPV2 : www.bgis.sanbi.org).

The area surrounding the drainage channel consists of calcareous material not suitable for farming.

4.5 Ecology

The most recent classification of the area by *Rutherford & Mucina (2006)* shows the site to be part of the Musina Mopane Bushveld although no mopane trees occur on site. The Musina Mopane Bushveld vegetation unit (type) is the most diverse Mopane veld type in South Africa with only 2% statutorily conserved and roughly 3% transformed with a least threatened conservation status.

The following vegetation units occur on the croplands site.

- Mixed *Sclerocarya birrea* – *Combretum* - *Terminalia* sandveld
- *Terminalia prunoides* – *Commiphora pyracanthoides* woodland

- Mixed *Terminalia prunoides* – *Sclerocarya* – *Senegalia nigrescens* woodland
- *Senegalia mellifera* – *Senegalia grandicornouta* shrubveld on calcareous soils;
- Secondary old fields;
- River with riparian woodland

According to the Limpopo Conservation Plan the proposed development area is located in an Other Natural Area (ONA) which can be considered a compatible land-use for cropland development.

It is evident from the distribution of biodiversity, presence of threatened species and sites of scientific interest, that the most sensitive areas occur in the direct vicinity of the riparian zone.

Most of the vegetation on the footprint areas of the croplands will be removed; therefore a licence for the removal of protected trees such as Baobab, Marula, Apple leaf and Shepherd's tree on site needs to be obtained from DAFF. The large Baobab trees will be left undisturbed in the lands. Detailed ecological (fauna habitat & flora) surveys have been conducted during May 2019.

4.6 Surface drainage

The study area is located in the Limpopo Catchment Management Area (CMA), and falls mainly in Quaternary Catchment Areas A71J. The study area is drained mainly by means of surface run-off (sheet-flow) with storm water collecting along roads and footpaths cutting through the area, to drain into the non-perennial streams that cut through the proposed development area. It must be noted that surface flow along these rivers generally only occur in the period directly after precipitation events or a wet rainy season, and that these rivers may exhibit a large base-flow component with groundwater flow occurring within the sandy sediments lining its channel.

The drainage channels and water courses are indicated on the map in Figure 2. Buffers will be determined by the ecological specialist to ensure the proposed croplands are outside the riparian vegetation zone.

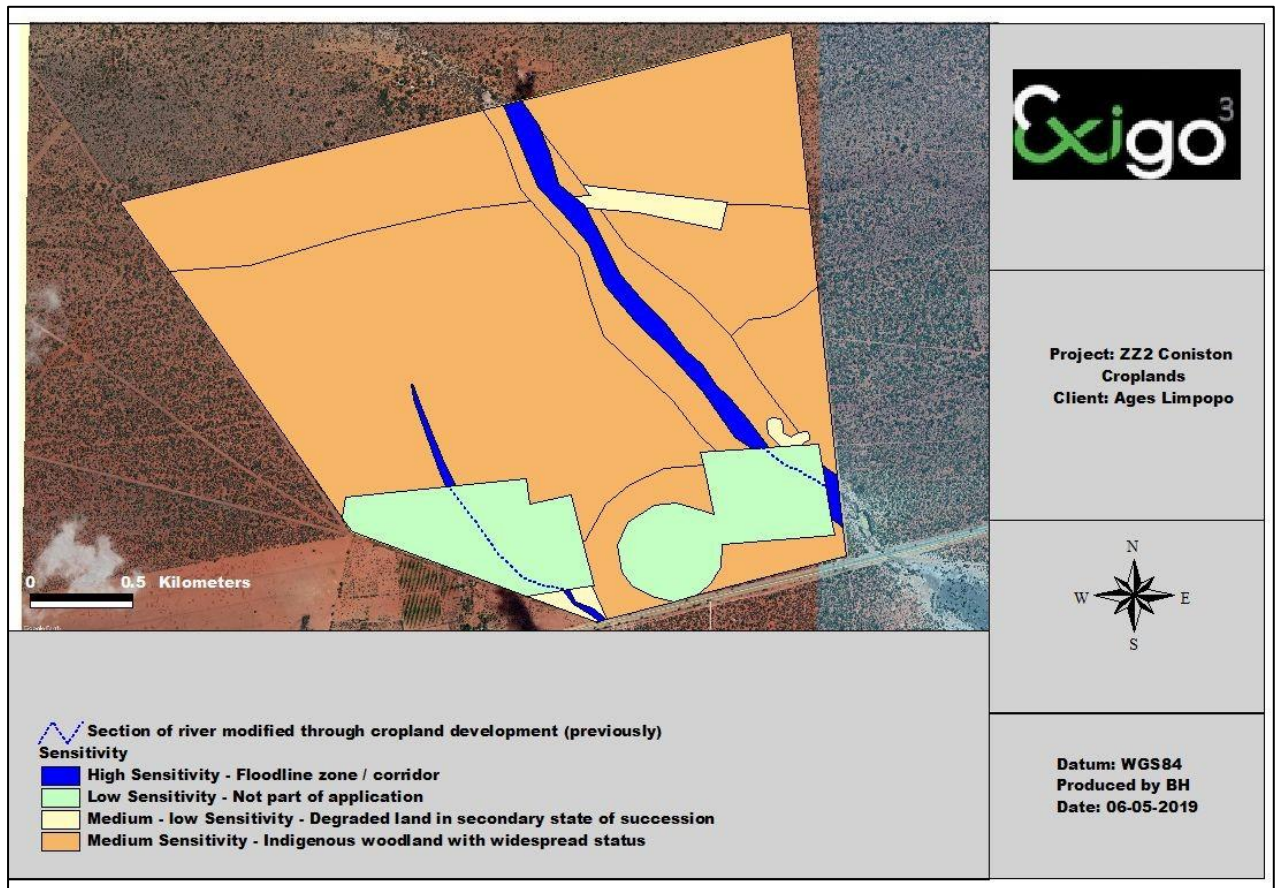


Figure 2. Drainage channels with preliminary sensitivity for the study area

4.7 Visual environment

Clearing of such a large area will result in a change of the visual attributes. The change from natural indigenous vegetation to croplands can be regarded as acceptable visual attributes of the area because it is within an area that is highly productive in terms of agriculture, especially during the winter months.



Figure 3. This is how the lands will look after clearance (bottom) and with crops on it (top)

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 study area and results used to determine sensitive areas that should be avoided. This study will be included in the EIAR.

4.10 Solid waste management

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

All recyclable material used during the production phase (pipes, plastics and steel) should be recycled.

4.11 Access Roads

The existing access roads will be used.

4.12 Storm water

There are two non-perennial drainage channels in the proposed croplands area. Care will be taken to ensure that the proposed croplands do not infringe on the 1:100 year flood line of the drainage channels.

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

5 LEGAL AND POLICY REQUIREMENTS

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

Constitution of South Africa (Act No. 108 of 1996)

Section 24 of this Act recognises 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 1998)

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 No. 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 No. 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 No. 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 No. 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 No. 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 No. 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 veld 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 removed vegetation	Health problems Air pollution
Noise	Farming activities	Nuisance
Water quality		
Silt deposition in surface water drainage channels	Erosion risk due to increased run-off from croplands	Siltation of aquatic ecosystem
Pollution by <i>E.coli</i>	Poorly planned and managed sanitation facilities	Water pollution & health risk
Water pollution	Use of Pesticides and Fertilizers	Effect on groundwater quality
Water quantity		
Over use of water allocation	Use of more water than the Sand River and underlying aquifers can deliver	Use of a scarce resource and decrease in water availability
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 croplands	Loss of biodiversity
Decline in animal species diversity	Loss of habitat due to croplands establishment	Loss of biodiversity
Soil pollution	Use of Pesticides and Fertilizers	Effect soil characteristics
Soil degradation	Erosion if storm water from croplands is not managed correctly	Loss of topsoil

ENVIRONMENTAL ISSUES	POSSIBLE CAUSE	POTENTIAL IMPACTS
Cultural Heritage		
Possible loss of heritage sites	Damage during clearing of areas	Possible loss of cultural heritage
Visual impact		
Visual impact & impact on sense of place	Croplands	± 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

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 Channels and Riparian 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 croplands
Low-medium	Within RE of P3 of Coniston
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 26 April 2019 to inform people about the proposed new croplands and request them to identify environmental issues of concern. An example of this notice is attached in Appendix 2.

8.2 Site Notice

Site notices in English were fixed at all entrances to the farm on 26 April 2019. An example of this said notice as well as photos of the displayed notices are attached in Appendix 2.

8.3 Background Information Notices

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

Background Information Documents were also sent to:

- Makhado Local Municipality
- Vhembe District Municipality
- Department of Water & Sanitation
- Department of Agriculture, Forestry & Fisheries
- Agri Limpopo
- Land Claims Commissioner: Limpopo

An example of the Background Information Document as well of proof of the distribution thereof is included in Appendix 2.

8.4 Issues and Responses

Requests from neighbours to be registered as Interested and Affected Parties have been received. A summary of these listed Interested and Affected Parties and their respective comments/responses is included in Appendix 2.

8.5 Scoping Report and Plan of Study for EIA

The Consultation Scoping Report and Plan of Study for EIA was available for a 30-day review period (1 June 2019 – 18 July 2019) to relevant government departments and registered I&APs.

Comments were received from the following Interested and Affected Parties (IAP's), a summary of which has been included in the Comments and Responses Summary.

- The Tshivaula family, who resides on the farm, was concerned about their right to access to ancestral graves situated on the farm. Their concerns were forwarded to ZZ2 and they were requested to discuss the issue with the Human Resources Manager at the Waterpoort Office. ZZ2 does have a policy in place that allows people to visit graves on their properties.
- Office of the Land Claims Commissioner: Limpopo, who confirmed that there is one registered land claim and one potential land claim on the farm Coniston. No comments were received on the CSR.

- Makhado Municipality requested a site visit, and were informed that a date for a site visit will be scheduled.
- DWS requested a site visit and confirmed in writing that a Water Use Licence for S21 (a) will be required.
- Mr Brink Schlesinger wants to know how the water abstraction will affect his farm, requires a long term solution for the movement of small animals and reptiles and the primates and warthogs problem as well as how wind erosion will be curbed in the sandy soils.
- Mr Andy Miles wants to know how the water abstraction will affect his farm, how the increased number of monkeys, baboons and warthogs will be managed and how will the spreading of pests and plant diseases be prevented.

These comments/concerns will be addressed in the Consultation EIA Report.

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 as inform the identification and rating of impacts:

9.1.1 Ecological Assessment – Dr BJ Henning

- A detailed ecological assessment has been conducted on the proposed footprints of the croplands to anticipate and identify significant environmental issues and impacts on the environment (flora & fauna). Mitigation measures will be proposed.
- The following methodology has been followed:
 - Baseline study of the vegetation of the proposed footprints;
 - Condition of all vegetation was assessed and mapped;
 - Plant communities were identified on site and mapped. From this map sensitive areas and a sensitivity map was produced;
 - A plant species list for each 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 channels and riparian vegetation.
 - 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 croplands on the vegetation and general ecology will be assessed;
 - Management and mitigating measures to be implemented during the clearance and operational phases will be provided.

9.1.2 Drainage channels delineation – Dr BJ Henning

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

- Obtain relevant information of soil types related to drainage channels. 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 channels 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 channels.
- Conduct a functionality assessment of the drainage channels including a Present Ecological State (PES),
- Ecological Importance & Sensitivity (EIS) and Wet-Health Assessment.
- Potential impacts of the croplands on the drainage channels will be assessed;
- Management and mitigating measures to be implemented to limit impacts on the drainage channels or to manage the drainage channels accordingly will be provided.

9.1.3 Heritage Assessment – SHASA Heritage

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 such remains.

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

- Provide a description of archaeological artefacts and structures (including graves) that may be expected within the project areas;
- 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 any possible developmental impacts, present and future, on the archaeological and historical remains within the larger landscape;
- Propose possible heritage management measures for subsequent phases of heritage mitigation and management.
- 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 Consultation Scoping Report and will be followed to assess environmental impacts, issues and alternatives.

9.4 Public participation process

Any comments or inputs received during or after the 30 days comment period will be included in the Final Scoping Report which will be submitted to LEDET for approval.

After approval of the Scoping Report, the Consultation 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, 1998 (Act no 107 of 1998), in respect of the following listed activities:

R984 of 04 December 2014	Listing Notice 2, Activity 15	"The clearance of an area of 20 hectares or more of indigenous vegetation"
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