

FINAL SCOPING REPORT

**LOWS CREEK AGRICULTURE PROJECT: CLEARING OF NATURAL- AND TRANSFORMED LAND FOR AGRICULTURAL USE AND CLEARANCE OF AN AREA OF 60HA ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA
PROJECT REFERENCE: 1/3/1/16/1E-427**

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TABLE OF CONTENTS	PAGE
1. EXECUTIVE SUMMARY	5
2. ABBREVIATIONS	6
3. APPLICABLE LEGISLATION	8
4. NEEDS AND DESIRABILITY OF THE ACTIVITY	14
5. GENERAL INFORMATION	18
6. LOCALITY INFORMATION	19
7. PROJECT DESCRIPTION	20
8. DESCRIPTION OF NATURAL ENVIRONMENT	21
9. ENVIRONMENTAL ISSUES	24
10. PUBLIC PARTICIPATION	25
11. DECOMMISSIONING	26
12. MONITORING AND AUDITING	27
13. REFERENCES	28

APPENDICES: Separate Document:

APPENDIX 1: Site Maps and Photographs

APPENDIX 2: Public Participation Process

APPENDIX 3: Documentation from DARDLEA

APPENDIX 4: Supportive Documentation

4.1. Title Deeds.

4.2. Land Claim Document

4.3. Water Rights, Verification Process and Permits

1. EXECUTIVE SUMMARY

This initial phase of the **Environmental Investigation Process** was conducted over a period of six months in the Lows Creek area of Nkomazi. The proposed development includes clearing natural vegetation for orchards on an existing crop farm in the Lows Creek area of Mpumalanga.

The public participation process was advertised locally and regionally (**25 August 2022**) in the printed media, on site and at various sites of interest including those open to the Public (e.g., Lows Creek Clinic) in the town of Lows Creek. The immediate neighbours of the property were contacted specifically via e mail and requested to attend the Site/Public Meeting (**6 October 2022**). Government officials and representatives from the irrigation boards were also invited to on-site meetings and discussions.

The **Draft- and Final Scoping Reports** were made available for comment at the **Kudu Farm Gate (opposite the Lows Creek Police Station), the farm office of the applicant, the offices of Nkomazi/Mbombela Municipal Councils and to all individuals and departments that registered and or attended the Public Site Meeting.**

Comments received from various departments will be included in **Appendix 2** (Issues and Responses Report) and will be listed for consideration during the impact assessment phase of the project.

This **study and evaluation** to date has looked at the various aspects that could be affected by the implementation of such a proposal. Experience gleaned from similar projects in the valley was sourced for additional input.

The **evaluation process** did not reveal any fatal flaws at this stage of the Scoping Process and this document is submitted to the **Department of Agriculture, Rural Development, Land and Environmental Affairs (DARDLEA)** for consideration.

The **Environmental Impact Assessment (EIR Phase)** will investigate the **significance** of impacts, **alternative** options and **mitigation** measures where applicable. The EIR will also include an **Environmental Management Programme (EMPr), Specialist Studies** on the terrestrial ecology of the designated project site, the agricultural potential of the soils and a **Heritage Impact Assessment (HIA)** of the project area.

2. ABBREVIATIONS

ASAP	As Soon As Possible
Asl	Above sea level
BEE	Black Economic Empowerment
cm	centimetre
DARDLEA	Department of Agriculture, Rural Development, Land and Environment Affairs
DFFE	Department of Forestry, Fisheries and Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ER	Ecological Reserve
ESKOM	Electricity Supply Commission
EWR	Ecological Water Requirement
GPS	Geographical Positioning System
ha	Hectare
HIA	Heritage Impact Assessment
I&AP's	Interested and Affected Parties
IEM	Integrated Environmental Management
IUCMA	Inkomati Usuthu Catchment Management Agency
kPa	kilopascal
LUDS	Land Use Decision Support Tool
m	metre
mm	millimeter
MTPA	Mpumalanga Tourism and Parks Agency
m/s	metre per second
NA	Not Applicable
OHASA	Occupational Health and Safety Act
OMPr	Operational Management Programme
ONA	Other Natural Areas

PDI	Previously Disadvantaged Individual
PES	Present Ecological State
PPP	Public Participation Process
RES	Rhengu Environmental Services
SABS	South African Bureau of Standards
SAHRA	South African Heritage Resources Agency
sqm	square metre

3. LEGISLATION APPLICABLE TO THE PROPOSED PROJECT

Legislation and guidelines that are being considered for the environmental impact assessment process are as follows:

3.1. Constitution of the Republic of South Africa (No.108, 1996):

The Constitution is the supreme law of South Africa, against which all other laws are measured. It sets out several fundamental environmental rights, which include:

The Environmental Clause:

Section 24 of the Constitution outlines the basic framework for all environmental policy and legislation:

It states that everyone has the right to an environment that is not harmful to their health or well-being and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic- and social development.

Access to Information:

Section 32 of the Constitution provides that everyone has the right of access to any information held by the State or another juristic person and that is required for the exercise or protection of any rights.

Fair Administrative Action:

Section 33 of the Constitution provides for the right to lawful, reasonable and procedurally fair administrative action.

Enforcement of Rights and Administrative Review:

Section 38 of the Constitution guarantees the right to approach a court of law and to seek legal relief in the case where any of the rights that are entrenched in the Bill of Rights are infringed or threatened.

3.2. National Environmental Management Act (No. 107, 1998):

The National Environmental Management Act (NEMA) is South Africa's overarching environmental legislation. The Act gives meaning to the right to an environment that is not harmful to health or well-being, entrenched in Section 24 of the Constitution of the Republic of South Africa, Act 108 of 1996. The National Environmental Management Act (NEMA, Act No. 107 of 1998) establishes a set of principles which all authorities (organs of State) have to consider when exercising their powers, for example, during the granting of permits. These include the following:

- Development must be sustainable.
- Pollution must be avoided or minimised and remedied.
- Waste must be avoided or minimised, reused or recycled.
- Negative impacts must be minimised.
- Responsibility for the environmental consequences of a policy, project, product or service applies throughout its life cycle.

NEMA further provides for an equitable access to natural resources, environmental protection and the formulation of environmental management frameworks. The Act is underpinned by the global concept of sustainable development.

The interpretation, administration and application of NEMA are guided by fundamental principles of sustainable development, provided in Chapter 1 of the Act. "Development must be socially, environmentally and economically sustainable" (s 2(3)) and requires the consideration of all relevant factors, which are elaborated by eight sub-principles".

These principles include:

- The polluter pays principle (s 2(4) (p)).
- The public trust doctrine (s2(4)(o)).
- The equitable access to natural resources (s 2(4)(d)).

Section 24 of the Act states that all activities that may significantly affect the environment and require authorisation by law must be assessed prior to their approval.

The Act goes on to list the requirements for an assessment. These include:

- The environment likely to be affected by the activity and viable alternatives.
- Cumulative effects and their potential significance.
- Mitigation measures including the "no go" option.

Section 28(1) states that "every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring".

If such degradation/pollution cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution. These measures may include:

- Assessing the impact on the environment.
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks.
- Ceasing, modifying or controlling actions which cause pollution/degradation.
- Containing pollutants or preventing movement of pollutants.
- Eliminating the source of pollution.
- Remedying the effects of the pollution.

3.3. National Water Act (No. 36, 1998):

The Act details the management of South Africa's water resources in terms of utilisation and duty of care to prevent water pollution. The act further details the legislation pertaining to the pollution of water reserves (surface and ground water) and the remediation/rehabilitation thereof.

3.4. Mpumalanga Nature Conservation Act (No. 10, 1998):

An Act to consolidate and amend the laws relating to nature conservation within the Province and to provide for matters connected therewith. This Act makes provision with respect to nature conservation in the Mpumalanga Province. It provides for, among other things, protection of wildlife, hunting, fisheries, protection of endangered fauna and flora as listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the control of harmful animals, freshwater pollution and enforcement. The Mpumalanga Parks Board (now MTPA), established by section 2 of the Eastern Transvaal Parks Board Act, 1995, shall be responsible for the administration of the Act.

3.5. Conservation of Agricultural Resources Act (No. 43, 1983):

This Act provides for control over the utilisation 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 combatting of weeds and invader plants and for matters connected therewith.

3.6. National Environmental Management: Biodiversity Act (No.10, 2004):

To provide for, inter alia, the management and conservation of South Africa's biodiversity, to protect species and ecosystems. The Act also covers alien- and invasive species and genetically modified organisms that pose a threat to biodiversity.

The objectives of this Act are to within the framework of the National Environmental Management Act provide for:

- The management and conservation of biological diversity within the Republic and of the components of such biological diversity.
- The use of indigenous biological resources in a sustainable manner.
- The fair and equitable sharing among stakeholders of benefits arising.
- To give effect to ratified international agreements relating to biodiversity.
- To provide for co-operative governance in biodiversity management and conservation.
- To provide for a South African National Biodiversity Institute to assist in achieving these objectives of this act.

3.7. National Environmental Management: Protected Areas Act (No. 57, 2003) as amended by the National Environmental Management: Protected Areas Amendment Act (No 31 of 2004):

To provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes; for the establishment of a national register of all national, provincial and local protected areas; for the management of those areas in accordance with national norms and standards; for inter-governmental co-operation and public consultation in matters concerning protected areas and for matters in connection therewith.

3.8. National Environment Conservation Act (No 73, 1989):

The purpose of the Act is to provide for the effective protection and controlled utilisation of the environment and for matters incidental thereto. It embodies the concept of control of activities which may have detrimental effects on the environment which may be:

- Land use and transformation.
- Water use and disposal.
- Resource removal, including natural living resources.
- Resource renewal and,
- Agricultural processes.

The Act also provides for the control of Environmental Pollution through:

- Prohibition of littering.
- Removal of litter.
- Waste management.

In addition to the above the Act provides for the regulations regarding waste management such as:

- The classification of different types of waste and the handling, storage, transport and disposal of waste.
- Reduction of waste.
- Utilisation of waste by way of recovery, re-use or processing of waste.
- Location, planning and design of disposal sites and the site used for waste disposal.
- Administrative arrangements for the effective disposal of waste.
- Dissemination of information to the public on effective waste disposal.
- Control over the import and export of waste, etc.

3.9. National Heritage Resources Act (No. 25, 1999):

The protection and management of South Africa's heritage resources are controlled by the National Heritage Resources Act (Act No. 25 of 1999). The enforcing authority for this act is the South African National Heritage Resources Agency (SAHRA). In terms of the Act, historically important features such as graves, trees, archaeology and fossil beds are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection.

In terms of Section 38 of the National Heritage Resources Act, SAHRA can call for a Heritage Impact Assessment (HIA) where certain categories of development are proposed. The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required.

According to the National Heritage Resources Act (Section 38(8)), such an assessment has to meet the requirements of the relevant heritage authority. The following requires the approval of SAHRA:

- Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised.
- The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length.
- Any development or other activity which will change the character of a site - exceeding 5 000 m² in extent; or involving three or more erven or divisions thereof which have been consolidated within the past five years.
- The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority.
- The re-zoning of a site exceeding 10 000 m² in extent.
- Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

3.10. Occupational Health and Safety Act (No. 85, 1993):

To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety and to provide for matters connected therewith.

3.11. Promotion of Access to Information Act (No 2, 2000):

To give effect to the constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights and to provide for matters connected therewith.

3.12. National Environment Management: Waste Act, 2008 (No 59 of 2008):

To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.

- To provide for institutional arrangements and planning matters.
- To provide for national norms and standards for regulating the management of waste by all spheres of government.
- To provide for specific waste management measures.
- To provide for the licensing and control of waste management activities.
- To provide for the remediation of contaminated land.
- To provide for the national waste information system.
- To provide for compliance and enforcement.
- To provide for matters connected therewith.

Section 24 of the National Environmental Management Act (1998) requires that activities that require authorisation or permission by law which may significantly affect the environment, must be considered, investigated and assessed prior to their implementation and reported to the organ of state charged by law with authorising, permitting, or otherwise allowing the implementation of an activity. The EIA process is the tool used to apply for authorisation from the regulating authority for the relevant activities identified that may impact on the environment.

3.13. National Forests Act, 1998 (Act No. 84 of 1998):

No person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated.

3.14. ACTIVITY NUMBER LISTED UNDER NEMA

This assessment considered the following listed activities:

Indicate the number and date of the relevant notice:	Activity No (s) (in terms of the relevant notice):	Describe each listed activity as per the detailed project description:
EIA Regulations R 984: Listing Notice 2 of 2014 and No: 325 of 7 April 2017 Gazette Number: 40772	15	The clearance of an area of 20 hectares or more of indigenous- and transformed vegetation for the establishment of macadamia orchards. As per the current evaluation and assessment process 60ha of indigenous vegetation will be cleared.
EIA Regulations R 985: Listing Notice 3 of 2014 and No: 324 of 7 April 2017 Gazette Number: 40772	12	60 ha of indigenous vegetation will be cleared to accommodate the new orchards.

4. NEEDS AND DESIRABILITY OF THE PROPOSED ACTIVITY: CLEARING OF NATURAL VEGETATION FOR CROP PRODUCTION.

- **Introduction:** Development proposals should always follow an integrated approach to project planning. With this in mind the project must make economic sense, while minimising environmental damage or mitigating it fully.
- Secondly, the needs and aspirations of society must be met with the view to producing the best long-term product for the community (both internal and external community).
- Developers risk and spend significant sums of hard-earned money to ensure the financial viability of each proposed project. Due to this they are obliged to thoroughly investigate and plan before budgeting funds towards a specific project – it is ultimately not in their interest to commence with a project without having assessed all risks involved. They, along with society, are keen to see that the project is a long-term sustainable success.
- **Strategic Regional Initiatives:** The Lows Creek area is a historical farming area where farmers have traditionally established and grown short-term fruit and vegetable crops such as tomatoes, cabbage, beans, brinjals and butternuts. In the 1980's sugarcane was established and widely cultivated in the area but has been gradually removed due to the high water demand by the crop, increased input costs, distance from the mill and low returns achieved.
- As a result of this many farmers investigated and experimented with crops which would give better returns, use less water and be able to be locally processed and exported. The most successful experimental crops identified were macadamias and citrus and the area has seen such large plantings volumes of both macadamias and citrus that a processing plant was established in the Lows Creek area for the intake, processing and export of macadamia kernel and macadamia products.
- A packing facility was also established at Eureka for the sorting and packing of citrus products for export.
- With the continued growth within the local Nkomazi region, particularly through the establishment of the Maputo Corridor initiative, export- and economic activities have increased substantially due to the location and ease of exporting through the Port of Maputo.
- The local Nkomazi- and Mbombela Councils are supportive of developments associated with the Maputo Corridor and the expansion of agriculture and sustainable land use envisaged by this project proposal under investigation compliments the regional vision that the authorities have for this area.
- **The Proposed Clearing of Indigenous Vegetation:** Developing the current areas of indigenous vegetation will ensure that Portions 17 and 21 of Naudes Rust 272 JU will remain a viable and profitable entity and achieve economies of scale in terms of employment, machinery and market share.
- Additionally, the macadamia processing facility in Lows Creek and the citrus facility at Eureka will achieve security of supply from the immediate local area and allow it to expand as increased volumes become available ensuring additional job opportunities and local investment in the area as per the economic vision described above.

- **Do we need more area to cultivate crops?** The farm presently has 100ha of existing arable land which traditionally was farmed with papaya, bananas, sugarcane and vegetables - these crops are extremely water dependent and hence the current registered 120ha (778,800m³) of water rights was suitable for those historical crops planted, however with the planned change to macadamias and/or citrus the water demand will be lower which permits additional areas to be farmed thus increasing income for the property and creating additional employment and increased services required for the farming operations. This will in return maximise return on investment for the property owners.
- **What are the benefits of having additional areas to cultivate?** The property will require additional staff to be employed to develop and maintain those areas which in turn will generate long term income for the property thus benefitting the surrounding communities as well as associated industries which will benefit from the additional crop generated – this includes but is not limited to additional processing in the local processing and packing facilities and forex income generated for the crops exported.
- **Will the areas cleared affect the neighbours negatively?** No. The proposed areas to be cleared are adjacent to existing arable areas (already under agricultural production) both on the property concerned and the neighbouring properties.
- **Will the additional arable areas be beneficial to the community at large?** Yes. It will create additional employment, both permanent and on contract, in the farming community as the new arable areas will require to be managed and operated during both the production/growth- and harvesting stages.
- **What are the economic benefits of the new arable areas?** Additional employment will be created and increased volumes of product will be delivered to the local processing and packing facilities thus ensuring job security and bringing much needed income to the local area.
- **What is the development cost of the new arable areas?** The estimated cost is in the region of R 3million which is a substantial investment to ensure the long-term agricultural objective and benefit of the properties.
- **Neighbouring Land Uses and Compatibility:** The project area is surrounded by agriculture and an assortment of similar crops are presently being farmed which includes macadamia, papaya and vegetable production.
- To date no objections to the project proposal have been submitted by any of the neighbours.
- **Financial Viability and Agricultural Potential of the Properties:** The properties, and it's neighbours, have been farmed for many years producing crops for local markets however in the past 10 years more interest has arisen for exportable crops.
- For the current crop types, a financial analysis by the Project Team has emphasised distance from local markets as inhibiting agricultural growth and preventing continued sustainability of the agricultural crops of the properties in the long term. It thus makes sense to convert the farming type to macadamia plants.
- **Land Claims:** The Lows Creek area was subjected to various land claim assessments by the Land Claims Commissioner in the past few years and combined with a recession in the agricultural sector many property owners were, until recently, reluctant to expand or diversify their enterprises under prevailing uncertain conditions.
- The project area is owned by the applicants and no claims exist on the properties. See **Appendix 4.2.**

- **Industry Growth:** The **Ivory Macadamias** processing facility in Lows Creek has joined forces with **Marquis Macadamias Africa** and established a new processing plant in Alkmaar (Nelspruit) and is currently considering expanding the current facility at Lows Creek due to the forecasted growth of the macadamia industry.
- The financial model for these properties is based on crop production and Ivory Macadamias is dependent on a reliable supply of macadamias for processing. To this end the proposal makes economic sense as the crop is a long-term project and will ensure that production does not stifle incoming product and growth within the local area for other industries.
- The security of the ample water allocations also provides the landowners an opportunity to maximise their return on investment and remain financially competitive in an ever changing and diverse business market.
- **Social Commitment and Job Creation:** A number of business sectors and community members will benefit if this project is successful.
- The property owners and their families will benefit financially in the long term. In the short to medium term however the proposed development areas will require substantial capital (approximately R3million) to clear the area, install irrigation and associated infrastructure and maintain the orchards during their growth phase.
- The Nkomazi region and outlying rural areas have been classified as one of the poorest in South Africa. Conservative estimates list unemployment figures in the region of 30%, HIV infections just under 40% and the reality of many job-seeking immigrants from neighbouring countries migrate to this area and add to the challenges faced by rural communities.
- An earthworks company will be tasked with clearing the areas – this will provide work opportunities (an estimated 15 persons) for both skilled and unskilled labour (machinery operators and general labour to clear some of the vegetation).
- Unskilled labour will earn in the region of R4000/month.
- The opportunities listed above do not include the economic addition to subsidiary services such as vehicle maintenance; retail needs; medical facilities and building material. This development will as a result benefit businesses in Malelane, Barberton and Mbombela.
- **Location: Is this the correct location for the project?** Alternatives were assessed during this survey and all options were discussed during the course of this investigation. **The alternatives were identified as not being suitable due to topography and soil conditions (rocky outcrops).**
- The project sites are fixed and the proponents do not own similar land elsewhere. In terms of compatibility of land uses this development will fit in with current agricultural developments in the area and surrounding farms. The site locations are thus regarded as ideal.
- The project site is surrounded in all directions with similar land uses.
- **Environmental (Ecological) Implications/Limitations:** An initial assessment of the prevailing fauna and flora has not revealed any threats to individual species/habitat or highlighted any critical limitations to the development which can be of ecological significance or which cannot be mitigated to ensure sustainability of the environment.
- Detailed studies have however been commissioned to ensure that impacts on the environment are clearly understood and the results will be included in the specialist reports on biodiversity with the Environmental Impact Assessment Report.
- All indications are however that by not developing the alternative rocky sites and steeper slopes more of the natural vegetation will remain intact and this will ensure that ecological corridors (as per MTPA policy and requirements) are maintained on the properties.

- **Positive Impacts:** Job creation and the prevention of job losses is regarded as a significant impact which will spill over into the well-being of a number of families in the local community.
- Additionally, the financial viability of the project will translate into further economic growth for the investors and the local Mbombela and Nkomazi area as a whole, albeit in the medium- to long term.
- The growth in agricultural production together with the improvement in the sustainability of the properties will result in higher incomes and ensure food/crop security.
- **Access Road:** The access to the Project Areas from the R38 Provincial tar road is functional and does not require any changes or upgrading.
- Construction/farm vehicles and equipment will have unhindered access to the project sites.
- **Timing: Is this the right time to implement such a development?** The ever-increasing costs relating to bringing local crops to market in metro areas has highlighted the fact that crop production must plan ahead to remain sustainably competitive. By having an export product which brings in Forex is critical for the long-term success of farming enterprises and of benefit to the South African economy as a whole.
- Additionally, by establishing less water dependent crops the pressures associated with droughts that the region experiences will allow farming operations to continue with a lower negative financial- and operational impact than would occur with other crops.
- **Integrated Environmental Management:** The objective of integrated environmental management is to balance all interests towards sustainability. For many the word “sustainability” remains a ‘unicorn’ of environmental management – i.e., a myth that is often poorly defined and/or understood. As participants in environmental management, we can at best evaluate the project for its inherent advantages and disadvantages. With the help and input of the Public, Specialists and Project Consultants we endeavour to draw a clearer picture with which we all can associate and hopefully agree to as well as support.
- **We raise the questions, which include but are not limited to:**
 - Is the proposed activity/development harmful to the environment?
 - Did we ensure that all perceived impacts were mitigated adequately in favour of maintaining the environmental integrity?
 - Will the local/regional/national community benefit from this development or is the development an improvement on an old or outdated concept?
 - Did we ensure that the general public participated in this project from the day of advertisement till submission of documentation?
 - Did we ensure that the economics of the activity were in place prior to project implementation? Is the project feasible? What are the alternatives?
 - Have we taken into account the various Government role players with regards to sharing information and/or authorisation requirements of this project?
 - The list goes on however the team associated with this proposal is confident that we have ticked the right boxes to date and can answer in the positive to the questions listed above. In some cases, we have suggested measures of mitigation to soften the impact towards a degree of sustainability.
- **Need and Desirability of the Proposed Project:** In conclusion, it is the opinion of the EAP that the cumulative effect of the factors listed above will result in a positive contribution in the fields of economic benefit and social upliftment in the region with little, or at most manageable, impacts in the environmental arena.

5. GENERAL INFORMATION

Project Title	Environmental Impact Assessment: Lows Creek Agriculture Project: Clearing of Natural- and Transformed Vegetation on the Farm: Naudes Rust 272 JU on Portions 17 and 21 in the Lows Creek Area.
Name of Applicants	Mr. Walter Giuricich.
Address	P. O. Box 2161 Rivonia 2128
Contact Persons	Mr. Walter Giuricich.
Telephone Number	082 967 6757.
E Mail	walter@ivorymacs.co.za
Environmental Assessment Practitioner (EAP)	Rhengu Environmental Services (RES)
Address	P. O. Box 1046 Malelane 1320
Contact Person	Ralf Kalwa
Telephone Number	082 414 7088
Fax Number	086 685 8003
Date of Report	February 2023.
Date of Inspection/s Meetings	Site and 1. 19 and 20 September 2022: Inspection and site meetings/fieldwork with Applicants and Specialists. 2. 6 October 2022: Public Meeting on site with Interested and Affected Parties (I&APs) and Government Officials. See Minutes attached in Appendix 2.

6. LOCALITY INFORMATION

Name of Place and Locality.	The development site is found on Portions 17 and 21 of the farm Naudes Rust 272 JU: Lows Creek, Mpumalanga Province. The project site is located adjacent to and west of the R38 Provincial tar road between Lows Creek and Kaapmuiden. The property is bordered in all wind directions by farms practicing agricultural land uses.
Region/District	The property is found in the Nkomazi Region of the Onderberg, between the towns of Kaapmuiden and Lows Creek in Mpumalanga.
Title Deeds	See Appendix 4.1.
Size of Proposed Development	Approximately 60ha. The final project area size will be determined once the specialist studies have been completed.
Magisterial District	Nkomazi-Mbombela District Municipalities.
Nearest Towns	Lows Creek.
Nearest Main Road	R38 Provincial Road. The farm is well serviced by all weather gravel roads.

Type of area where the proposed development will take place (mark all applicable blocks).

CBD		Rural	<input checked="" type="checkbox"/>	City		Recreational area	
Commercial		Agricultural	<input checked="" type="checkbox"/>	Town		Informal Settlement	
Industrial		Staff Housing		Township		Other:	
Tourism		Road	<input checked="" type="checkbox"/>	In a Building			

7. PROJECT DESCRIPTION

Current Status and Infrastructure:

- **Infrastructure:** The farms are **well serviced** with several homesteads, pump houses; storerooms, garages, staff housing and various access roads and service lines which include potable/irrigation water and power supply (Eskom).
- The properties are fenced for security purposes.
- **Access** to the proposed site is in place. No new roads will be developed.
- **Road Access** for purposes of marketing and product sales is in place and functional.
- **No Property Alternatives:** The land earmarked for development is fixed and is part and parcel of existing farming operations. By virtue of its position, it links into all current agricultural land uses.
- **Sustainability:** By optimising the potential of the proposed portions of the farm the applicant is confident that the orchards can continue to contribute sustainably to the agricultural business opportunities in- and around Lows Creek and Mbombela/Nkomazi including the surrounding Maputo Corridor area.
- No other property is available to be considered for an alternative.
- **Alternatives:** RES has assessed the farm as a whole and can confirm that no other alternative sites are suitable for agriculture (too rocky, undulating topography and susceptible to run-off and erosion/too steep).
- **Water for Irrigation:** Existing entitlements will suffice. No new water will be required for this project.
- **Expertise:** All existing farming operations will remain the same. The farmer has access to all applicable expertise, experience, equipment and logistics to accommodate- and manage the operations of a dam.

Planned/Proposed Activity:

- The applicant wishes to develop additional orchards for crop production.
- It is proposed to develop the orchards on the Farm: Naudes Rust 272 JU Portions 17 and 21 at the following locations:
- GPS Latitude: 25° 38' 47.86" Longitude: 31° 15' 32.88"
- GPS Latitude: 25° 39' 01.16" Longitude: 31° 16' 19.33"
- GPS Latitude: 25° 38' 49.93" Longitude: 31° 16' 45.45"
- GPS Latitude: 25° 38' 05.95" Longitude: 31° 16' 43.66"
- 60ha of natural vegetation are under evaluation during this assessment process. The final project size will be determined by the outcome of the biodiversity study.
- Development costs are in the region of R3 million (Clearing vegetation; preparing orchards and irrigation equipment).

8. DESCRIPTION OF NATURAL ENVIRONMENT (Mucina and Rutherford, 2006)

Topography	Mountain	Midslope	Flats	Valley Bottom	Wetland	River	Other
		X	X	X	X	X	
Geology	<ul style="list-style-type: none"> Veld Type: SVI 3 Granite Lowveld: Mucina and Rutherford (2006). From north to south, the Swazian Goudplaats Gneiss, Makhutswi Gneiss and Nelspruit Suite (granite gneiss and migmatite) and further south, the younger Mpuluzi Granite (Randian) form the major basement geology of the area. Archaean granite and gneiss weather into sandy soils in the uplands and clayey soils with high sodium content in the lowlands. 						
Climate	<ul style="list-style-type: none"> Summer rainfall with dry winters. The annual average rainfall in the area is around 630 mm. Generally, a frost-free region. Mean annual maximum and minimum temperatures for Skukuza are 39.5°C and -0.1°C for January and June, respectively. 						
Soil Description	Depth	Texture			Dominant Soil Forms		
	Not Applicable	Valley Bottom: Sandy/Loam Midslopes: Coarse. Sandy/Coarse Gravel.			Not Applicable.		
Stability	Buildings, e.g., pump houses, homesteads, workshops etc.; have been developed on these soils using normal construction methods and processes. Soils are considered as stable.						

Flora Description	<ul style="list-style-type: none"> As per the classification by Mucina and Rutherford (2006) the farms fall within the Granite Lowveld Veld Type. Tree species that <u>normally dominate</u> this veld type under natural conditions include: <i>Sclerocarya birrea</i>; <i>Ficus sansibarica</i>; <i>Trichilia emetica</i>; <i>Peltophorum africanum</i>; <i>Terminalia sericea</i>; <i>Acacia nigrescens</i>; <i>Acacia nilotica</i>; <i>Albizia harveyi</i>; <i>Combretum apiculatum</i>; <i>Combretum imberbe</i>; <i>Combretum zeyheri</i>; <i>Ficus stuhlmannii</i>; <i>Pterocarpus rotundifolius</i>; <i>Acacia exuvialis</i>; <i>Acacia gerrardii</i>; <i>Bolusanthus speciosus</i>; <i>Cassia abbreviata</i>; <i>Combretum collinum</i>; <i>Dalbergia melanoxylon</i>; <i>Gymnosporia glaucophylla</i>; <i>Lanea schweinfurthii</i>; <i>Pavetta schumanniana</i>; <i>Plectroniella armata</i> and <i>Terminalia prunioides</i>. Shrub species in this vegetation type include: <i>Combretum hereroense</i>; <i>Dichrostachys cinerea</i>; <i>Euclea divinorum</i>; <i>Strychnos madagascariensis</i>; <i>Gardenia volkensii</i>; <i>Hibiscus micranthus</i>; <i>Tephrosia polystachya</i>; <i>Abutilon austro-africanum</i>; <i>Agathisanthemum bojeri</i>; <i>Aptosimum lineare</i>; <i>Baleria elegans</i>; <i>Clerodendrum ternatum</i>; <i>Commiphora africana</i>; <i>Gossypium herbaceum</i> and <i>Pavonia burchellii</i>. Woody Climbers include: <i>Sphedamnocarpus pruniensis</i>. Herbaceous climbers include: <i>Rhynchosia totta</i>. Grasses and other Graminoids include: <i>Brachiaria nigropedata</i>; <i>Digitaria eriantha</i>; <i>Eragrostis rigidior</i>; <i>Melinis repens</i>; <i>Panicum maximum</i>; <i>Pogonarthria squarrosa</i>; <i>Aristida congesta</i>; <i>Bulbostylis hispidula</i>; <i>Chloris mosambicensis</i>; <i>Enneapogon cenchroides</i>; <i>Heteropogon contortus</i>; <i>Leptochloa eleusine</i>; <i>Perotis patens</i>; <i>Schmidtia pappophoroides</i>; <i>Sehima galpinii</i>; <i>Tricholaena monachne</i>
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	<p>and <i>Urochloa mosambicensis</i>.</p> <ul style="list-style-type: none"> • Herbs include: <i>Achyranthes aspersa</i>; <i>Aspilia mosambicensis</i>; <i>Becium filamentosum</i>; <i>Chamaecrista absus</i>; <i>Commelina benghalensis</i>; <i>Commelina erecta</i>; <i>Cucumis africanus</i>; <i>Evolvulus alsinoides</i>; <i>Heliotropium strigosum</i>; <i>Hermbstaedtia odorata</i>; <i>Hibiscus praeteritus</i>; <i>Indigofera filipes</i>; <i>Indigofera sanguinea</i>; <i>Kohautia virgata</i>; <i>Kyphocarpa angustifolia</i>; <i>Leucas glabrata</i>; <i>Ocimum gratissimum</i>; <i>Phyllanthus maderaspatensis</i>; <i>Pupalia lappacea</i>; <i>Vahlia capensis</i>; <i>Waltheria indica</i>; <i>Orbea rogersii</i> and <i>Stapelia leendertziae</i>. • Note: Scientific names are quoted as per the article referenced. • A detailed Biodiversity Study of all Terrestrial- and Ecological aspects has been commissioned.
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Conservation Status	<ul style="list-style-type: none"> • This veld type is classified as vulnerable. 17% is statutorily conserved in the Kruger National Park. About 20% of this vegetation type has been transformed mainly by cultivation- and settlement development.
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Has the applicant proof of sufficient water for the proposed development?

Yes	No
X	

Comments:

Water rights are available for agriculture and no additional water will be required. Water use is regulated, and the applicants will abide by the water entitlements allocated to the farms. **See Appendix 4.3 for copies of water rights documents.**

Are there any known Red Data biota on or near the proposed development?

Yes	No
	X

Comments:

- No rare biota was observed during the site visits or during any other visits to the site.
- The Specialist Ecologist that has been appointed for the project will assess this aspect in more detail as part of the Biodiversity- and Ecology Specialist Study.

Are there any known rare bird breeding sites on or near the proposed development?

Yes	No
	X

Comments:

No breeding sites were discovered at or near the project site. The Specialist Study will however assess this aspect in more detail.

Are there any known archaeological, cultural- or historical sites on or near the proposed development?

Yes	No
	X

- A Heritage- and Culture Specialist has been commissioned to assess the potential presence of historical sites and artefacts.
- No artefacts have been observed during the farming activities which have occurred on the property for decades.
- Should any artefacts or a find be discovered during the development phase, the proponent must engage the services of an accredited archaeologist to deal with the find.
- Should the application be approved, it is recommended that an Environmental Control Officer (ECO) oversee the implementation of the development phase and the handling of any finds will be addressed as per the conditions listed in the Environmental Management Programme (EMPr).

What general precautionary measures will be taken if an archaeological, cultural- or historical site is discovered?

- Should any artefact, or historical site be discovered during the removal of vegetation and or installation of irrigation systems as well as in future, all works must cease with immediate effect.
- The find must be reported to the Project Manager for the development and the ECO for the project. These representatives will initiate an Action Plan in conjunction with SAHRA to address the management and handling of the find.

Any **social benefits** that will result from this proposed development?

Yes	No
X	

Comments:

- **Job Security:** The development process will result in significant job security and business opportunities during various stages of the process.
- Development labour and expertise will be required to install the irrigation systems and shape the orchards as per the best land use practice requirements.
- This phase will require input from both informal- and formal sectors of the agricultural industry.
- The advent of the proposed project will necessitate the employment of skilled- and unskilled labour and expertise.
- Job opportunities will include but not be limited to maintenance positions on the irrigation systems and general farming operations.
- Unskilled labour will earn in the region of R 4000.00 per person per month.
- The opportunities above do not include subsidiary services such as an increase in maintenance of vehicles, retail needs and medical facilities. This development will thus benefit the businesses in Lows Creek-Kaapmuiden and Mbombela.

9. ENVIRONMENTAL ISSUES

This chapter describes the **issues, queries, concerns and opinions** identified:

- during the **public participation process, i.e., focus group meetings;**
- by **authorities and the applicant/management authority** during consultation- and pre-application meetings and telephonic discussions;
- by the **EAP** based on previous experience in the area.

9.1. Key Issues: See Issues and Responses Report in Appendix 2.

- The response to the on-site and newspaper advertisements was poor. The call for potential Interested and Affected Parties to attend the on-site meeting did not attract any interest from the broader public.
- The EAP has made a **special effort** to engage the local councils in the form of Mr. Jan Mashele and Mr. Sihle Mthembu to ensure that these important role-players were kept abreast of the progress of all aspects of the project.
- The following key **issues/impacts** are listed for consideration:

Environmental Aspects	<ul style="list-style-type: none"> • Specialist Study on Terrestrial Ecology and Biodiversity. • Irrigation Systems and Water Rights. • Protected Tree/Special Plant Species. • Soil Type and Suitability. • Agricultural Potential.
Economic-Operational Aspects	<ul style="list-style-type: none"> • Job Opportunities. • Economic Sustainability.
Social Aspects	<ul style="list-style-type: none"> • Cultural Artefacts. • Job Opportunities. • Land Claim. • Needs- and Desirability of Project.

10. PUBLIC PARTICIPATION

10.1. Legislation: As per applicable environmental legislation the applicant must submit an application to the local Department of Environmental Affairs to obtain authorisation and permission to develop the proposed dam.

10.2. Advertisements (Printed Media): A newspaper advertisement (The Lowvelder: Local- and Regional newspaper) was placed in the printed press on **25 August 2022** inviting public participation and involvement.

10.3. Advertisements on Site and Town: Site Notices were placed at the entrance/access to the site on the Lows Creek-Kaapmuiden Tar Road, near the sites on the farm and at public facilities (Lows Creek Clinic) in Lows Creek Town. **See Appendix 2** for copies of Notices, Advertisements and Newspaper clippings.

10.4. Neighbours: Advertisements and invitations were also submitted to direct neighbours of the property.

10.5. Government Departments: The Department of Agriculture, South African Heritage Resources Agency; the Department of Rural Development, Land and Environmental Affairs; the Inkomati Usuthu Catchment Management Agency (IUCMA); the Department of Agriculture, Forestry and Fisheries; Mpumalanga Tourism and Parks Agency and the Municipalities of Mbombela/Nkomazi were all informed of the project and invited to participate.

10.6. Public Information Meeting: An information/public meeting was held on site on **6 October 2022 at 10h00**. Persons that may be affected and or interested in the proposed project were invited to register their interest with the EAP and requested to attend the Public Meeting.

10.7. Focus Group Meetings: Where applicable, on-going consultation will be formalised through focus group meetings with each neighbour and or official department as per request and or as the need arises.

10.8. Reports/Copies of Information: Copies of all **Reports** generated will be submitted for comments as per the registered list of Interested and Affected Parties. **Hard Copies** will be made available at **Public Venues** and electronic copies will be submitted as requested via postnet.

10.9. Specialist Studies Completed: Ms Christine Rowe (Heritage Specialist) has completed an archaeological evaluation of the Project Site and Dr. Andrew Deacon (Biodiversity Specialist) has undertaken various terrestrial/biodiversity surveys. Contents and outcomes of these studies will be shared with I&APs with the submission of the **Environmental Impact Reports**. Additional reports will include an assessment of the agricultural potential of the proposed soils in the development zones.

10.10. Impacts: Issues and Impacts were determined by RES and complimented by those raised during discussions with neighbours and officials from the various departments. Many of these were also gleaned from similar projects in the Onderberg valley and from previous experience obtained on projects recently completed in the area.

10.11. Minutes: See **Appendix 2** for a comprehensive set of minutes and the Issues and Responses Report.

10.12. Reports: The **Draft- and Final Scoping Reports** were made available for public- and official comment and input.

11. DECOMMISSIONING PHASE

The applicant accepts responsibility for the Cradle to Grave principle. It is unlikely that the proposed development will be decommissioned in the foreseeable future however elements of the site may require a change in land use or must undergo a process of decommissioning in some form or another. For this event, several **objectives** are submitted for the record and consideration.

11.1. Decommissioning Objectives

The applicant/developer remains responsible for the life cycle of the project and all the decommissioning activities in the project area. The infrastructure will undergo a full and comprehensive decommissioning programme. This programme must be described in a **decommissioning plan**.

It is recommended that an **Independent Environmental Assessment Practitioner (EAP)** is appointed at the time **to compile a detailed decommissioning plan** to address all the aspects of the decommissioning process prevalent at the time.

11.2. Decommissioning Approach (Under guidance of an EAP)

Essentially the following approach must be implemented:

11.2.1. Removable concrete structures

- All foreign material such as gravel and concrete (Pump Houses?) must be broken up and removed to a designated gravel pit, which will be identified by the local Municipality for purposes of rehabilitation.
- All roads, buildings and service infrastructure must be demolished and removed off site.
- All service lines, where applicable (electrical- and water supply) must be removed and trenches rehabilitated.
- The lie of the land must be returned to fit in with the adjoining land surface.

11.2.2. Reinstatement

- All foreign material must be removed and disposed of at a borrow pit earmarked for rehabilitation.
- The disturbed area must be levelled off and contoured to fit in with the rest of the landscape.
- The disturbed area must be ripped and fertilised to enhance re-vegetation.
- The exposed soil must be brush packed with brush and grass material from the area, to serve as a seed bank for re-vegetation.
- The reinstated area must be irrigated once a week to promote the re-vegetation process.
- These aspects will require on-site monitoring, as the occurrence of natural rainfall will determine the frequency of irrigation required.

12. MONITORING AND AUDITING

It is recommended, that in the event that this proposal/application is approved, that the developer/applicant appoint an independent **Environmental Control Officer (ECO)** to oversee the implementation of the **Environmental Management Programme (EMPr)** and **monitor compliance** of the **Environmental Impact Assessment (EIA)** and the **Environmental Authorisation (EA)**.

Furthermore, if the proposal is approved, the ECO must ensure that all the **conditions** as set out in the **Environmental Authorisation** issued by DARDLEA, are met and implemented as stipulated.

The ECO must submit a monthly Audit Report during the development phase to the applicant and DARDLEA for record- and implementation purposes.

The **role of the ECO** and independent audit teams are well defined within the framework of the **Integrated Environmental Management (IEM)**.

13. REFERENCES

Department of Environmental Affairs and Tourism, 1998. *Guideline Document, EIA Regulations, implementation of sections 21, 22 & 26 of the Environment Conservation Act*. Government Printer, Pretoria.

Gertenbach W P D, 1980. *Rainfall Patterns in the Kruger National Park*. Koedoe 23, National Parks Board, Pp 35 – 43.

Mucina L. and Rutherford M.C., 2006. *The Vegetation of South Africa, Lesotho and Swaziland*.