

# FINAL ENVIRONMENTAL IMPACT REPORT APPENDICES

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

PREPARED BY:



**RHENGU ENVIRONMENTAL SERVICES**

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PREPARED FOR:

MR. WALTER GIURICICH

FOR SUBMISSION TO:



DEPARTMENT OF AGRICULTURE, RURAL DEVELOPMENT, LAND AND ENVIRONMENT AFFAIRS, MPUMALANGA PROVINCIAL GOVERNMENT

MAY 2023

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Nkomazi Municipality	Mr. Jan Mashele	1
Mbombela Municipality	Mr. Sihle Mthembu	1
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## **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
LFIS	Low Flow Irrigation System
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

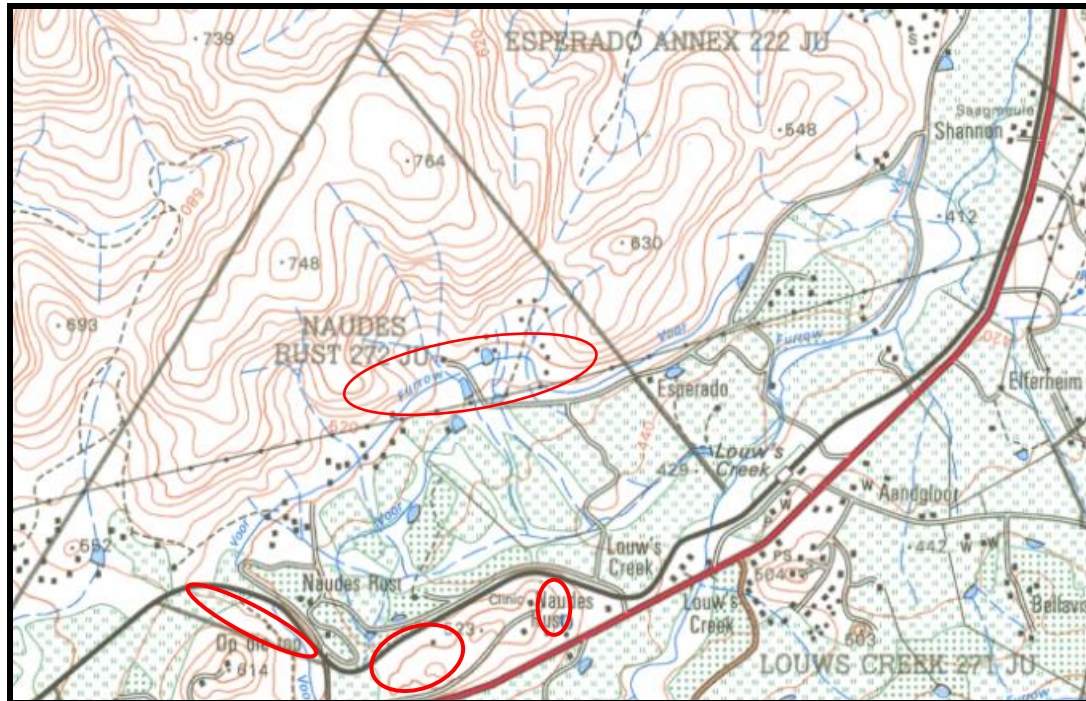
ONA	Other Natural Areas
PDI	Previously Disadvantaged Individual
PES	Present Ecological State
PPP	Public Participation Process
RES	Rhengu Environmental Services
SABS	South African Bureau of Standards
SAHRA	South African Heritage Resources Agency
sqm	square metre

**APPENDIX 1:**  
**SITE MAPS**  
**SITE PHOTOGRAPHS**

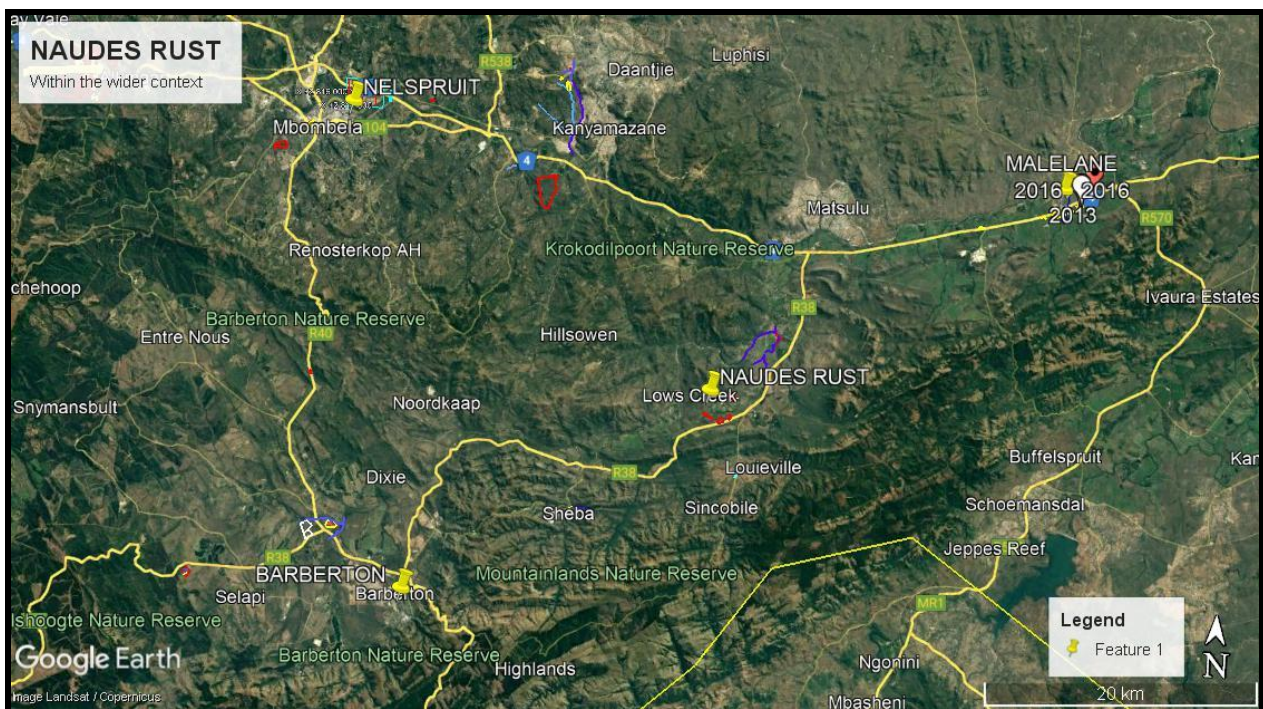
**GPS Positions of the preferred sections of natural vegetation identified for the new orchards as per the Maps Areas 3 to 7 below:**

- Debush natural bush on the following farm sections:
- Area Nr 1: GPS Latitude: 25° 38' 47.86" Longitude: 31° 15' 32.88"
- Area Nr. 2: GPS Latitude: 25° 39' 01.16" Longitude: 31° 16' 19.33"
- Area Nr. 3: GPS Latitude: 25° 38' 49.93" Longitude: 31° 16' 45.45"
- Area Nr. 4: GPS Latitude: 25° 38' 05.95" Longitude: 31° 16' 43.66"

**LOCALITY GOOGLE AND TOPOGRAPHICAL MAPS: PORTIONS 17 AND 21 OF NAUDES RUST 272 JU**

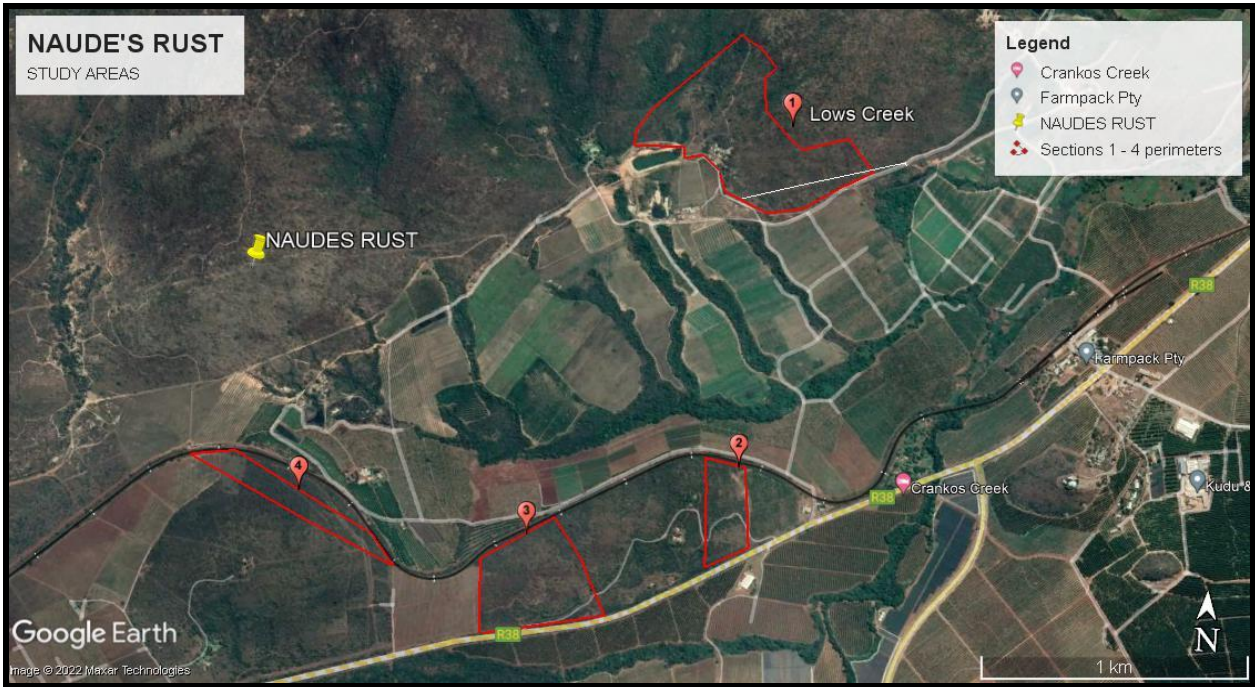


**Map 1: 1984 Topographical Map: The study area is within the red ovals. Extensive cultivated lands are visible. Red Road: Kaapmuiden to Lows Creek Provincial Road.**

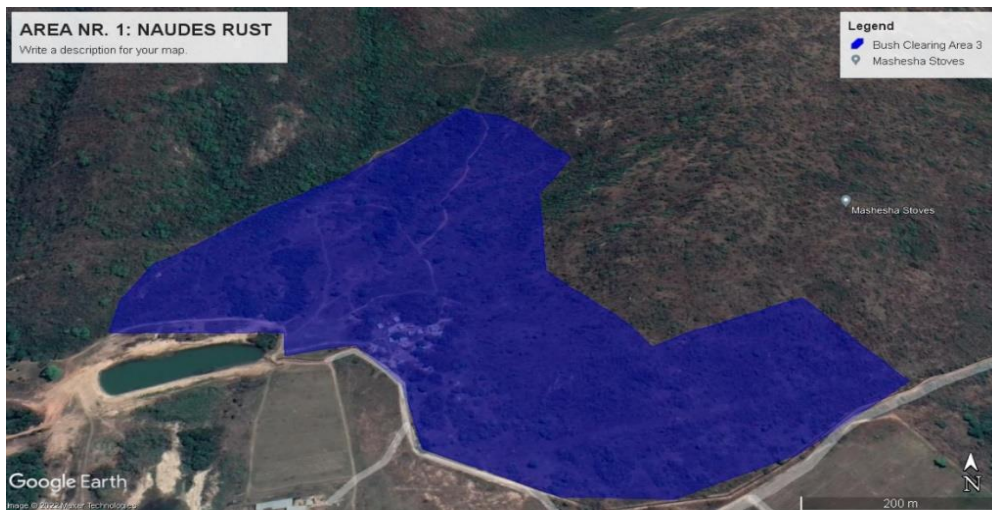


**Map 2: Farm Naudes Rust within the wider context of the area near Lows Creek town**





**Map 3: The study area is indicated by the red boundary lines.**



**Map 4: Study area 1 is in the extent of 15ha.**

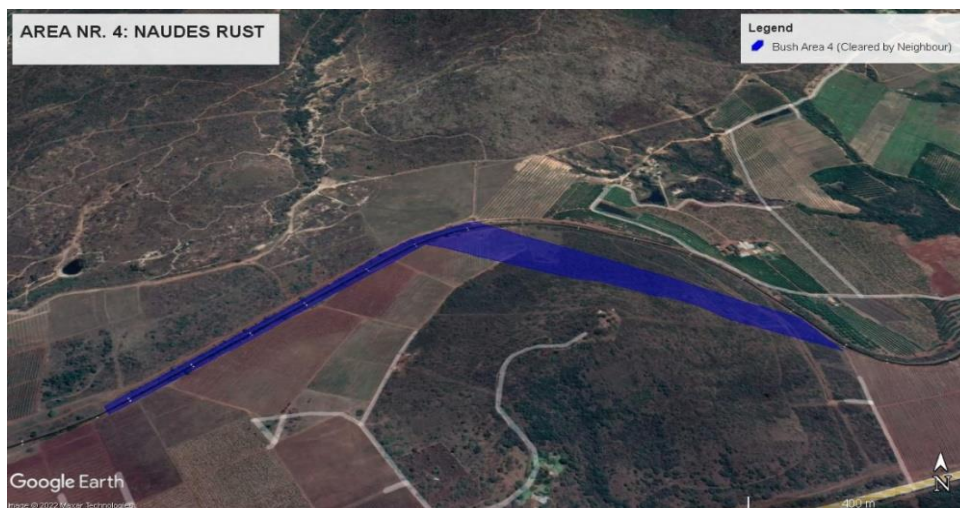


**Map 5: Study area 2 is 10ha.**





**Map 6: Study area 3 is in the extent of 12 ha.**



**Map 7: Study area 4 is 10ha and is situated between the foot of a hill, and the railway line.**

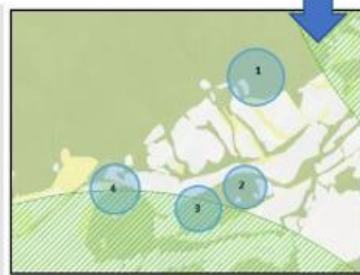
# FINAL DEVELOPMENT MAP

## Final Development Map: Naude's Rust Portion 272JU (42 ha)



Cultivated
  Old lands
  Dams

Note that no terrestrial and aquatic CBAs will be impacted on in areas to be cleared.



1 Naude's Rust project sites
   ESA Protected Area Buffer

  Other Natural Areas (ONA)
   Heavily modified

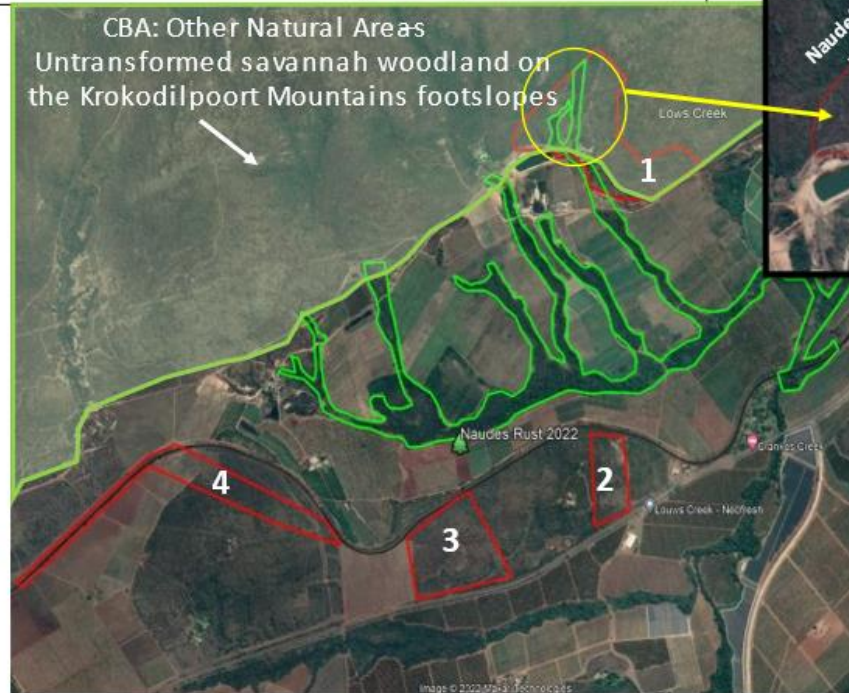
  Moderately modified

**Terrestrial Critical Biodiversity areas**



  Naude's Rust Project site
   Other Natural Areas (ONA)
   Heavily modified

**Freshwater Critical Biodiversity areas**



Delineated riparian zone forms a network of corridors.



Boundaries of project sites.



  Naude's Rust - Site 1
   Site 1 Drainage line: riparian delineation
   10m riparian buffer



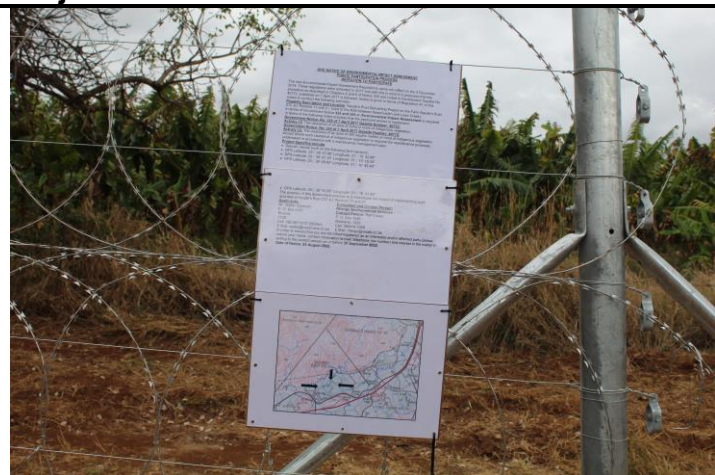
**Site Photographs: EIA: Naudes Rust 272 JU Portions 17 and 21**



**Figure 1: Public Participation: Advertisement at Project Site Entrance off Provincial Road.**



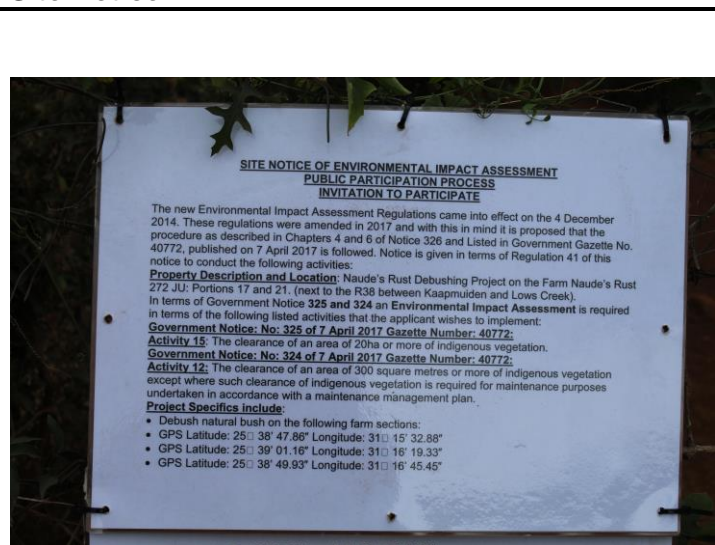
**Figure 2: Public Participation: Advertisement at Project Site Entrance off Provincial Road.**



**Figure 3: Public Participation: Close up view of Site Notice.**



**Figure 4: Public Participation: Advertisement at Farm Entrance Gate and Clinic.**



**Figure 5: Public Participation: Close up of the top section of the advertisement.**



**Figure 6: Public Participation: The advertisement was also placed at the Lows Creek Clinic. A public facility frequented by many local residents.**



**Site Photographs: EIA: Naudes Rust 272 JU Portions 17 and 21**



**Figure 7: Public Participation: Waiting at the entrance for I&APs.**



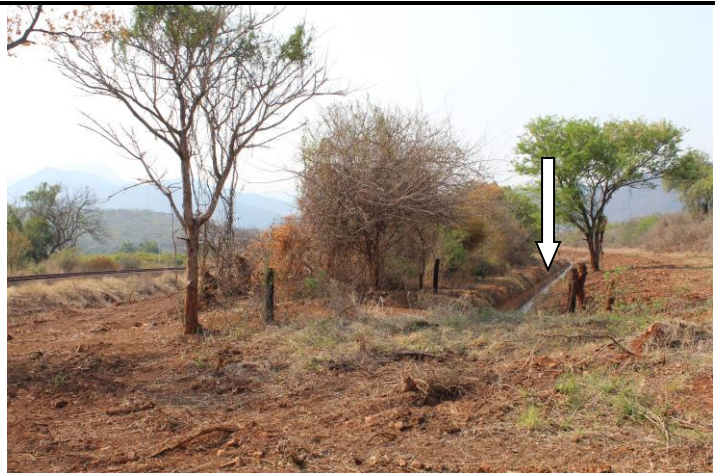
**Figure 8: Public Participation: Attendance register at the site/public meeting.**



**Figure 9: Existing irrigation canal winding through the farm.**



**Figure 10: Existing irrigation canal winding through the farm.**



**Figure 11: Existing irrigation canal winding through the farm.**



**Figure 12: Existing irrigation storage dam on the farm.**



**Site Photographs: EIA: Naudes Rust 272 JU Portions 17 and 21**



**Figure 13: Farm infrastructure is well established.**



**Figure 14: Many buildings have become derelict and the sites will be rehabilitated and become part of the orchards.**



**Figure 15: Many buildings have become derelict and the sites will be rehabilitated and become part of the orchards.**



**Figure 16: A redundant railway line criss-crosses the farm portions.**



**Figure 17: Existing papaya orchards. These will be phased out for macadamia trees over time.**



**Figure 18: Existing papaya orchards. These will be phased out for macadamia trees over time.**



**Site Photographs: EIA: Naudes Rust 272 JU Portions 17 and 21**



**Figure 19: Project Area Nr. 1: General View.**



**Figure 20: Project Area Nr. 2: General View.**



**Figure 21: Project Area Nr. 3: General View.**



**Figure 22: Project Area Nr. 4: General View.**



**Figure 23: The natural areas are home to several exotic, alien- and invader plants.**



**Figure 24: The natural areas are home to several exotic, alien- and invader plants.**



**Site Photographs: EIA: Naudes Rust 272 JU Portions 17 and 21**



**Figure 25: The natural areas are home to several exotic, alien- and invader plants.**



**Figure 26: The natural areas are home to several exotic, alien- and invader plants.**

**APPENDIX 2:**  
**PUBLIC PARTICIPATION PROCESS**  
**ISSUES AND RESPONSES REPORT**  
**INTERESTED AND AFFECTED PARTIES REGISTER**  
**COPIES OF ADVERTISEMENTS, NEWSPAPER NOTICES AND MINUTES**  
**COPIES OF E-MAIL CORRESPONDENCE**  
**COPIES OF NOTIFICATIONS AND REPORT SUBMISSIONS**

**ISSUES AND RESPONSES REPORT:**  
**NAUDES RUST DEBUSHING PROJECT: DEVELOPMENT OF 60 HA ORCHARDS FOR AGRICULTURE ON THE FARM NAUDES RUST**  
**272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA**

<b><u>Interested and Affected Party:</u></b>	<b><u>Response</u></b>
<b>Note: Questions/queries posed by all parties during meetings, discussions and informal conversations are listed below and included in the report.</b>	
<b>1.HC:</b> We have no objection to the development going ahead.	<b>1. RK:</b> Comment noted.
<b><u>Interested and Affected Party:</u></b>	
<b><u>Note: Questions/queries/comments submitted by Interested Parties on the contents of the Draft Scoping Report.</u></b>	
None have been submitted by the general public at this stage of the process. Comments were received from three Government Departments. See letters and responses below.	
<b><u>Interested and Affected Party:</u></b>	
<b><u>Note: Questions/queries/comments submitted by Interested Parties on the contents of the Final Scoping Report.</u></b>	
None were submitted to date.	
<b><u>Interested and Affected Party:</u></b>	
<b><u>Note: Questions/queries/comments submitted by Interested Parties on the contents of the Draft EIR.</u></b>	
None have been submitted by the general public at this stage of the process. DARDLEA submitted a letter of acknowledgement including several comments. <b>See Appendix 3.</b>	
<b><u>Interested and Affected Party:</u></b>	
<b><u>Note: Questions/queries/comments submitted by Interested Parties on the contents of the Final EIR.</u></b>	
We wait any additional comments on the Final EIR.	

**Notes:**

**HC** Heather Cranko (Neighbour)  
**RK** Ralf Kalwa (EAP)

**PUBLIC PARTICIPATION AND ROLEPLAYERS REGISTER:**  
**INTERESTED AND AFFECTED PARTIES: NAUDES RUST DEBUSHING PROJECT: DEVELOPMENT OF 60 HA ORCHARDS FOR**  
**AGRICULTURE ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA**

Name: Company, Neighbour, Department	Postal Address	E Mail	Fax	Telephone or Cell Number	Attended Public Information Meeting
Cranko, Heather.	Crank's Creek, Portion 13 of Naudes Rust	heather@hectra.co.za	NA	083 300 8074	No
Deacon, Andrew Dr.	House 4 Jakkalsbessie Farm, Malelane, 1320	andrew@nethog.co.za	NA	082 800 0037	Yes
Giuricich, Ivan.	Electprops 131 Pty Ltd, Portions 7 and 11 of Louws creek	ivangiuricich@icloud.com	NA	083 238 6419	No
Potgieter, Schalk.	Neofresh Pty Ltd, Portion 19 of Naudes Rust	schalk@neofresh.net	NA	076 288 6979	No
Whiteman, Pieter.	Dortannion Pty Ltd, Portion 14 of Naudes Rust	dortan@soft.co.za	NA	073 166 6501	No
Van der Schyff, Dawie.	Jindilli Farms, Karlien Farm and Grootberg	denl@vodamail.co.za	NA	073 168 2780	No
Van Zyl, Andre.	Silver Creek Farms Pty Ltd, Portions 6 and 7 of Esperado Annex	silvercreek222accrecon@gmail.com	NA	084 893 7239	No



Government or Official Departments/Business Interests	Postal Address	E Mail	Fax	Telephone or Cell Number	Attended Public Meeting or other Focus Group Meeting
Nemathaga, Felicia: IUCMA	13 Streak Street MAXMA Building, Nelspruit, 1200	NemathagaF@iucma.co.za	NA	013 753 9000 082 766 0035	No
Khumalo, Nokukhanya: SAHRA.	P. O. Box 4637, Cape Town, 8001	nkhumalo@sahra.org.za	021 462 4509		No
Malele, Khumbelo: MTPA	Private Bag X 11338, Nelspruit, 1200.	khumbelomalele@gmail.com	NA	013 235 2395 Ext. 222	No
Mashabela, Frans: DALRRD: LSM	P. O. Box 8806, Nelspruit, 1200.	fransmas@dalrrd.gov.za	013 754 0735	013 754 0730 072 130 1204	No
Mashele, Jan: Nkomazi Municipality	Private Bag X 101, Malelane, 1320.	Jan.Mashele@nkomazi.gov.za	013 790 0886	013 790 1303 082 265 0528	No
Mthembu, Sihle: Mbombela Municipality	Nr. 7 Jones Street Nelspruit	Sihle.mthembu@mbombela.gov.zag	NA	060 676 9467	No
Mavhunga, Kenneth: DFFE	Private Bag X 11243, Nelspruit, 1200.	KMavhunga@dffe.gov.za namudau@dffe.gov.za	NA	072 211 4458	No
Oelofsen, Ronel: Lower Kaap and Eureka Irrigation Board	12 Judge Street, P. O. Box 451, Barberton, 1300	water@roseinnes.co.za majorboard@roseinnes.co.za	NA	013 712 4200 082 451 6334 071 403 3670	No
Shabane, Love: DARDLEA	P. O. Box 8806, Nelspruit, 1200.	LoveS@nda.agric.za	013 754 0735	013 754 0734	No
Wolmarans, Andre: DARDLEA	P. O. Box 8806, Nelspruit, 1200	Andrewolmarans01@gmail.com	NA	079 133 4892	No

**MINUTES OF THE PUBLIC PARTICIPATION AND INFORMATION MEETING/DISCUSSION  
HELD ON SITE FOR INTERESTED AND AFFECTED PARTIES  
ALTERATION 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  
6 OCTOBER 2022: 10h00**

**1. Participants:**

- Walter Giuricich (WG) Applicant.
- Dr. Andrew Deacon (AD) Project Ecologist.
- Ralf Kalwa (RK) Rhengu Environmental Services: EAP

Note: I&AP = Interested and Affected Party.

**2. Apologies:**

- Tshimangadzo Thavhavhulimu from DFFE: Forestry submitted apologies. All the direct neighbours and relevant Government Officials were invited to the meeting.
- No one else attended.

**3. Welcome, Introductions and Procedures**

• **Reason for the Meeting/Information Session:**

- **For purposes of clarity RK shares the following information to ensure that all registered I&APs are kept up to date of the Environmental Impact Assessment process and procedures:**

- Ralf indicated that the purpose of this Meeting was specifically planned to:
- Inform the participants of the implications of the proposed project, and
- To allow the participants an opportunity to submit their requests/ideas and queries in order to ensure that the Project Team take cognisance of these aspects during the Environmental Impact Assessment (EIA) process.

• **EIA Process: Interested and Affected Parties (I&AP's) Role:**

- To comply with **Environmental Legislation** an **Application** will be submitted to the Department of Rural Development, Land and Environment Affairs (DARDLEA) in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment (EIA) Regulations of 2014-2017.
- Several activities which require approval by DARDLEA are listed in these regulations.
- The purpose of this assessment process is to investigate the impact of implementing such activities at Naudes Rust.
- Having said this, Rhengu Environmental Services (RES) were appointed to undertake the assessment process. As part of this assessment process a **Public Participation Process (PPP)** must be initiated to involve all potential Interested and Affected Parties.
- Ralf explained the EIA process and the necessity of conducting an EIA. He emphasised the fact that an EIA consists of three components (environmental, - social and economic aspects). These components should each receive adequate attention during the assessment process resulting in a balanced, sustainable approach to problem solving.
- The process is also geared towards assessing potential impacts which the activity (in this case debushing natural land) may trigger and to propose solutions to minimise/mitigate or address these impacts where applicable.
- All Interested and Affected Parties will be kept up to date with the assessment process and progress of the EIA. Participants will be sent draft copies or notifications of all important EIA documents/minutes and Ralf requested the participants to please comment on these documents as the contribution by participants remains vital to the success or the failure of the project.

Ralf also informed the meeting that interested parties not present are welcome to join the process at a later stage. Although the various applicable Acts and Regulations set prescribed time periods within which to respond, Ralf indicated to the meeting that he will be flexible within limits with regards to compliance in terms of such periods.

**4. Public Advertisements:**

The proposed project and the Environmental Impact Assessment process were advertised in a Regional Newspaper (**The Lowvelder: 25 August 2022**). Advertisements and Site Notices have been placed on site. Neighbours and Government Officials also received e mail copies of the site notices.

**5. Additional meetings:**

If required, additional meetings will be scheduled and communicated to the participants and those parties that have registered their intentions to participate.

**6. Presentation, Comments, Queries and Issues:**

A number of Specialist Studies have been commissioned to investigate and evaluate various aspects pertaining to the project site: Biodiversity Study (Terrestrial); Heritage Study. Together with the applicable Specialist Reports, these studies will allow the Project Team an opportunity to take an informed decision on the various impacts and issues associated with the proposed development.

No issues were raised during the meeting.

**General Comments:**

- The meeting adjourned at 10h30.

**COPIES OF ADVERTISEMENTS, NEWSPAPER- AND SITE NOTICES**





**SITE NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT**  
**PUBLIC PARTICIPATION PROCESS**  
**INVITATION TO PARTICIPATE**

The new Environmental Impact Assessment Regulations came into effect on the 4 December 2014. These regulations were amended in 2017 and with this in mind it is proposed that the procedure as described in Chapters 4 and 6 of Notice 326 and Listed in Government Gazette No. 40772, published on 7 April 2017 is followed. Notice is given in terms of Regulation 41 of this notice to conduct the following activities:

**Property Description and Location:** Naude's Rust Debushing Project on the Farm Naude's Rust 272 JU: Portions 17 and 21. (next to the R38 between Kaapmuiden and Lows Creek).

In terms of Government Notice **325 and 324** an **Environmental Impact Assessment** is required in terms of the following listed activities that the applicant wishes to implement:

**Government Notice: No: 325 of 7 April 2017 Gazette Number: 40772:**

**Activity 15:** The clearance of an area of 20ha or more of indigenous vegetation.

**Government Notice: No: 324 of 7 April 2017 Gazette Number: 40772:**

**Activity 12:** The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

**Project Specifics include:**

- Debush natural bush on the following farm sections:
- 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"

The purpose of this assessment process is to investigate the impact of implementing such activities at Naude's Rust 272 JU: Portions 17 and 21.

**Applicants:**

Mr. Walter Giuricich  
 P. O. Box 2161  
 Rivonia  
 2128  
 Cell: 082 967 6757 (Walter)

**Consultant and Contact Person:**

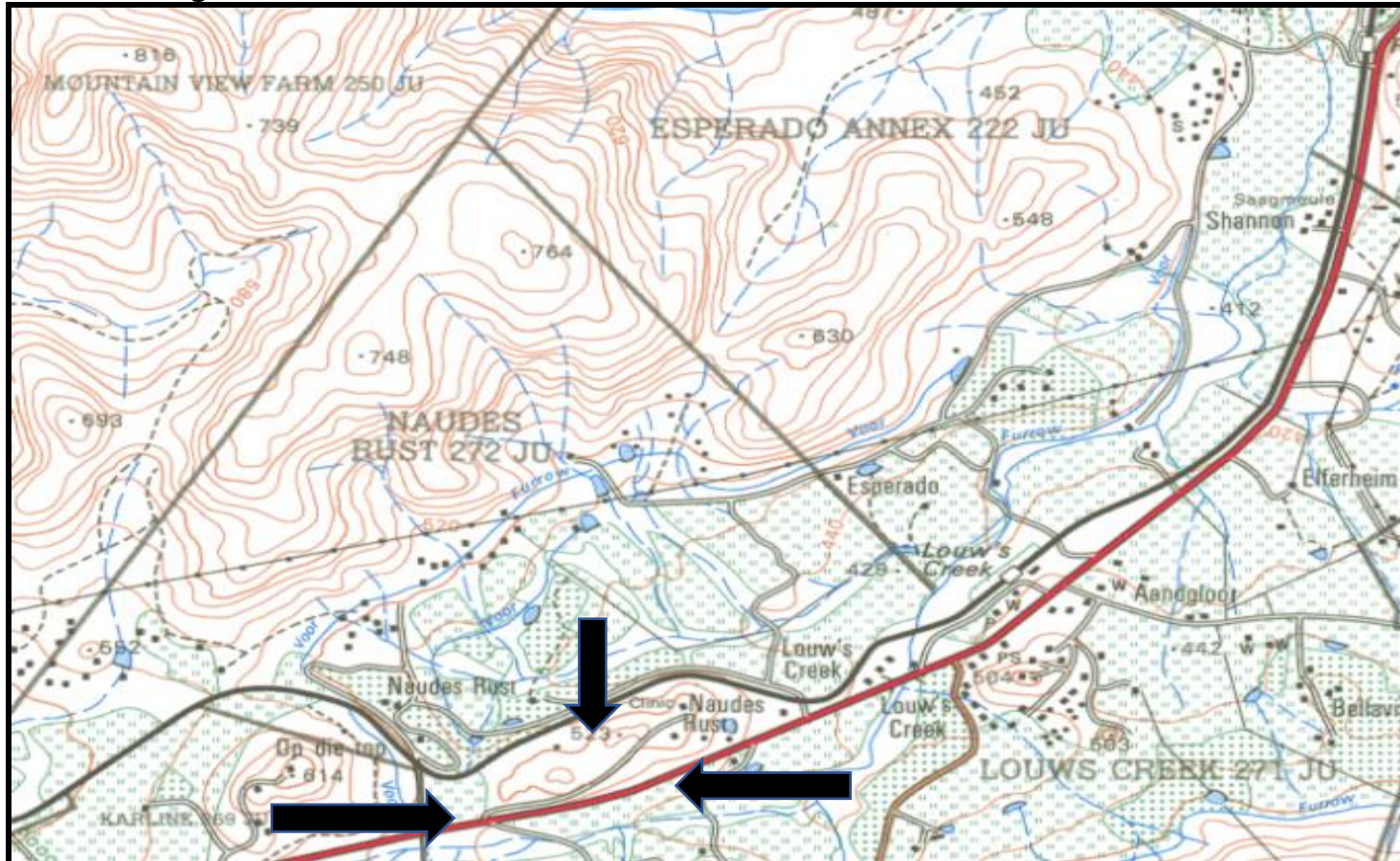
**Rhengu Environmental Services**  
**Contact Person:** Ralf Kalwa  
 P. O. Box 1046  
 Malelane, 1320  
 Cell: 082414 7088

E Mail: [walter@ivorymacs.co.za](mailto:walter@ivorymacs.co.za)

E Mail: [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)

In order to ensure that you are identified/registered as an interested and/or affected party please submit your name, contact information (e-mail; telephone; fax number) and interest in the matter in writing to the contact person on or before **20 September 2022.**

**Date of Notice: 25 August 2022.**



**COPIES OF E MAILS, NOTIFICATIONS AND RECEIPT OF DOCUMENTS**



**E Mails:****From:** rhengu@mweb.co.za [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)**Sent:** Wednesday, 31 August 2022 14:12**To:** shabangus@iucma.co.za; LoveS@nda.agric.za; maserekamaate@gmail.com; 'Frans Mashabela' <FransMas@dalrrd.gov.za>; KMavhunga@dffe.gov.za; namudau@dffe.gov.za; schalk@neofresh.net; dortan@soft.co.za; heather@hectra.co.za; silvercreek222accreon@gmail.com; ivangiuricich@icloud.com; denl@vodamail.co.za; 'Nancy O'Farrell' <Nancy@rmputter.co.za>; water@roseinnes.co.za; 'Majorboard' <Majorboard@roseinnes.co.za>; nkhumalo@sahra.org.za; jan.mashele@nkomazi.gov.za; 'Khumbelo Malele' <Khumbelo.Malele@mtpa.co.za>; 'Khumbelo Malele' <khumbelomalele@gmail.com>**Cc:** 'Walter' <walter@ivorymacs.co.za>; 'Andrew Deacon' <andrewd@mpu.co.za>; 'Christine Rowe' <christinevwr@gmail.com>; rhengu@mweb.co.za**Subject:** LOWS CREEK DEBUSHING PROJECT**Dear Interested and Affected Party and Government Official**

Please find attached notifications for the Environmental Impact Assessment on the Farm: Naudes Rust 272 JU: Portions 17 and 21. (next to the R38 between Kaapmuiden and Lows Creek).

1. This notification was advertised in the Lowvelder newspaper on **25 August 2020**.
2. Please take note that the date for the Public Meeting on-site will be announced once the registration period (after **20 September 2022**) has lapsed.
3. Feel free to contact me to discuss any issues of concern and or to verify any information.

Kind regards,

Ralf Kalwa

Rhengu Environmental Services

Cell: 082 414 7088

**From:** rhengu@mweb.co.za [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)**Sent:** Wednesday, 31 August 2022 14:22**To:** [silvercreek222accreon@gmail.com](mailto:silvercreek222accreon@gmail.com)**Cc:** rhengu@mweb.co.za **Subject:** LOWS CREEK DEBUSHING PROJECT**Dear Interested and Affected Party and Government Official**

Please find attached notifications for the Environmental Impact Assessment on the Farm: Naudes Rust 272 JU: Portions 17 and 21. (next to the R38 between Kaapmuiden and Lows Creek).

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3. Feel free to contact me to discuss any issues of concern and or to verify any information.

Kind regards,

Ralf Kalwa

Rhengu Environmental Services

Cell: 082 414 7088

**From:** rhengu@mweb.co.za [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)**Sent:** Thursday, 01 September 2022 07:29**To:** [heather@hectra.co.za](mailto:heather@hectra.co.za)**Cc:** 'Walter' <walter@ivorymacs.co.za>; rhengu@mweb.co.za**Subject:** RE: LOWS CREEK DEBUSHING PROJECT

Thanks Heather,  
I take note. I will however keep you on the mailing list if that is acceptable to you.

Regards,  
Ralf Kalwa

**From:** heather@hectra.co.za <heather@hectra.co.za>

**Sent:** Wednesday, 31 August 2022 17:33

**To:** rhengu@mweb.co.za

**Subject:** Re: LOWS CREEK DEBUSHING PROJECT

Hi Ralf,

Please note that we have no objections.

Regards

Heather Cranko

**From:** rhengu@mweb.co.za <rhengu@mweb.co.za>

**Sent:** Wednesday, December 14, 2022 6:51 AM

**To:** heather@hectra.co.za; ivangiuricich@icloud.com; schalk@neofresh.net; dortan@soft.co.za; denl@vodamail.co.za; silvercreek222accrecon@gmail.com; NemathagaF@iucma.co.za; 'Nokukhanya Khumalo' <nkhumalo@sahra.org.za>; 'Khumbelo Malele' <khumbelomalele@gmail.com>; 'Frans Mashabela' <FransMas@dalrrd.gov.za>; jan.mashele@nkomazi.gov.za; 'Sihle Mthembu' <Sihle.Mthembu@mbombela.gov.za>; 'Kenneth Mavhunga' <KMavhunga@dffe.gov.za>; namudau@dffe.gov.za; water@roseinnes.co.za; 'Majorboard' <Majorboard@roseinnes.co.za>; LoveS@nda.agric.za; Andrewolmarans@gmail.com

**Cc:** rhengu@mweb.co.za; 'Christine Rowe' <christinevwr@gmail.com>

**Subject:** DRAFT SCOPING REPORT DEVELOPMENT OF ORCHARDS FOR AGRICULTURE ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA

#### **Dear Interested and Affected Party and Government Officials**

We have completed the **Draft Scoping Report** for the Naudes Rust Project. We have included/addressed all your comments and suggestions to date in the Issues and Responses Report (**Appendix 2**).

**Hard Copies** have been posted or delivered to the following venues and or persons:

#### **DOCUMENT DISTRIBUTION LIST**

<b>ORGANISATION</b>	<b>CONTACT</b>	<b>COPIES</b>
<b>DARDLEA</b>	<b>Ms. Robyn Luyt</b>	<b>1</b>
<b>IUCMA: Nelspruit</b>	<b>Ms. Felicia Nemathaga</b>	<b>1</b>
<b>SAHRA: Cape Town Office</b>	<b>Ms. Nokukhanya Khumalo</b>	<b>1</b>
<b>MTPA</b>	<b>Ms. Khumbelo Malele</b>	<b>1</b>
<b>DFFE</b>	<b>Mr. Kenneth Mavhunga</b>	<b>1</b>
<b>DALRRD: LSM</b>	<b>Mr. Frans Mashabela</b>	<b>1</b>
<b>DARDLEA</b>	<b>Mr. Andre Wolmarans Mr. Love Shabane</b>	<b>1</b>
<b>Nkomazi Municipality</b>	<b>Mr. Jan Mashele</b>	<b>1</b>
<b>Mbombela Municipality</b>	<b>Mr. Sihle Mthembu</b>	<b>1</b>
<b>Applicant</b>	<b>Mr. Walter Giuricich</b>	<b>2</b>
<b>Lower Kaap River Major Irrigation Board</b>	<b>Ms. Ronel Oelofsen</b>	<b>1</b>
<b>Rhengu Environmental Services</b>	<b>Mr. Ralf Kalwa</b>	<b>1</b>

The Draft Report consists of **two sections**:

- The Report Section and,

- The Appendices Section.

Interested and Affected Parties can also access a digital copy on the dropbox link on [https://www.dropbox.com/sh/cahyuval39fw68p/AADFpgfkje7UyYFZ2kz313\\_ta?dl=0](https://www.dropbox.com/sh/cahyuval39fw68p/AADFpgfkje7UyYFZ2kz313_ta?dl=0)

Interested and Affected Parties can access the Public Copy at the Kudu Farm Office at the Entrance Gate.

Should you have any comments, suggestions, questions and or issues for clarification please submit these to this office in writing by close of business on or before **6 February 2023**.

Many thanks for your assistance and guidance during this project to date.

Kind regards,

**Ralf Kalwa**

**Environmental Assessment Practitioner**

**Rhengu Environmental Services**

**From:** rhengu@mweb.co.za <rhengu@mweb.co.za>

**Sent:** 19 February, 2023 8:01 AM

**To:** heather@hectra.co.za; ivangiuricich@icloud.com; schalk@neofresh.net; dortan@soft.co.za; denl@vodamail.co.za; silvercreek222accrecon@gmail.com; NemathagaF@iucma.co.za; 'Nokukhanya Khumalo' <nkhumalo@sahra.org.za>; 'Khumbelo Malele' <khumbelomalele@gmail.com>; 'Frans Mashabela' <FransMas@dalrrd.gov.za>; jan.mashele@nkomazi.gov.za; 'Sihle Mthembu' <Sihle.Mthembu@mbombela.gov.za>; 'Kenneth Mavhunga' <KMavhunga@dffe.gov.za>; namudau@dffe.gov.za; water@roseinnes.co.za; 'Majorboard' <Majorboard@roseinnes.co.za>; LoveS@nda.agric.za; Andrewolmarans@gmail.com; walter@ivorymacs.co.za

**Cc:** 'Christine Rowe' <christinevwr@gmail.com>; rhengu@mweb.co.za

**Subject:** FINAL SCOPING REPORT DEVELOPMENT OF ORCHARDS FOR AGRICULTURE ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA

### **Dear Interested and Affected Party and Government Officials**

1. We have completed the **Final Scoping Report** for the Naudes Rust Project. We have included/addressed all your comments and suggestions to date in the Issues and Responses Report (**Appendix 2**).

**Hard Copies** have been posted or delivered to the following venues and or persons:

#### **DOCUMENT DISTRIBUTION LIST**

<b>ORGANISATION</b>	<b>CONTACT</b>	<b>COPIES</b>
<b>DARDLEA</b>	<b>T. Sithole</b>	<b>1</b>
<b>IUCMA: Nelspruit</b>	<b>Ms. Felicia Nemathaga</b>	<b>1</b>
<b>SAHRA: Cape Town Office</b>	<b>Ms. Nokukhanya Khumalo</b>	<b>1</b>
<b>MTPA</b>	<b>Ms. Khumbelo Malele</b>	<b>1</b>
<b>DFFE</b>	<b>Mr. Kenneth Mavhunga</b>	<b>1</b>
<b>DALRRD: LSM</b>	<b>Mr. Frans Mashabela</b>	<b>1</b>
<b>DARDLEA</b>	<b>Mr. Andre Wolmarans Mr. Love Shabane</b>	<b>1</b>
<b>Nkomazi Municipality</b>	<b>Mr. Jan Mashele</b>	<b>1</b>
<b>Mbombela Municipality</b>	<b>Mr. Sihle Mthembu</b>	<b>1</b>
<b>Applicant</b>	<b>Mr. Walter Giuricich</b>	<b>2</b>
<b>Lower Kaap River Major Irrigation Board</b>	<b>Ms. Ronel Oelofsen</b>	<b>1</b>
<b>Rhengu Environmental Services</b>	<b>Mr. Ralf Kalwa</b>	<b>1</b>

2. The Final Report consists of **two sections**:

- The Report Section and,
  - The Appendices Section. The appendices are too large for an email run.
3. Interested and Affected Parties can also access a digital copy on the dropbox link on [https://www.dropbox.com/sh/cahyuva139fw68p/AADFpqfkje7UyYFZ2kz313\\_ta?dl=0](https://www.dropbox.com/sh/cahyuva139fw68p/AADFpqfkje7UyYFZ2kz313_ta?dl=0)
4. Interested and Affected Parties can access the **Public Copy at the Kudu Farm Office at the Entrance Gate.**
4. Should you have any comments, suggestions, questions and or issues for clarification please submit these to this office in writing by close of business on or before **20 March 2023.**

Many thanks for your assistance and guidance during this project to date.

Kind regards,

Ralf Kalwa

**Environmental Assessment Practitioner**

**Rhengu Environmental Services**

**Cell: 082 414 7088**

**From:** rhengu@mweb.co.za <rhengu@mweb.co.za>

**Sent:** Friday, April 21, 2023 5:00 AM

**To:** heather@hectra.co.za; ivangiuricich@icloud.com; schalk@neofresh.net; dortan@soft.co.za; denl@vodamail.co.za; silvercreek222accrecon@gmail.com; NemathagaF@iucma.co.za; 'Nokukhanya Khumalo' <nkhumalo@sahra.org.za>; 'Khumbelo Malele' <khumbelomalele@gmail.com>; 'Frans Mashabela' <FransMas@dalrrd.gov.za>; jan.mashele@nkomazi.gov.za; 'Sihle Mthembu' <Sihle.Mthembu@mbombela.gov.za>; 'Kenneth Mavhunga' <KMavhunga@dffe.gov.za>; namudau@dffe.gov.za; water@roseinnes.co.za; 'Majorboard' <Majorboard@roseinnes.co.za>; LoveS@nda.agric.za; Andrewolmarans@gmail.com; walter@ivorymacs.co.za

**Cc:** 'Christine Rowe' <christinevwr@gmail.com>; rhengu@mweb.co.za

**Subject:** DRFT EIR DEVELOPMENT OF ORCHARDS FOR AGRICULTURE ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA

**Dear Interested and Affected Party and Government Officials**

1. We have completed the **Draft Environmental Impact Report** for the Naudes Rust Project. We have included/addressed all your comments and suggestions to date in the Issues and Responses Report (**Appendix 2**).

**Hard Copies** have been posted or delivered to the following venues and or persons via Postnet: **DOCUMENT DISTRIBUTION LIST**

ORGANISATION	CONTACT	COPIES
DARDLEA	Ms.T. Sithole	1
IUCMA: Nelspruit	Ms. Felicia Nemathaga	1
SAHRA: Cape Town Office	Ms. Nokukhanya Khumalo	1
MTPA	Ms. Khumbelo Malele	1
DFFE	Mr. Kenneth Mavhunga	1
DALRRD: LSM	Mr. Frans Mashabela	1
DARDLEA	Mr. Andre Wolmarans Mr. Love Shabane	1
Nkomazi Municipality	Mr. Jan Mashele	1
Mbombela Municipality	Mr. Sihle Mthembu	1
Applicant	Mr. Walter Giuricich	2
Lower Kaap River Major Irrigation Board	Ms. Ronel Oelofsen	1
Rhengu Environmental Services	Mr. Ralf Kalwa	1

2. The Final Report consists of **two sections**:

- The Report Section and,
  - The Appendices Section. The appendices are too large for an email run.
3. Interested and Affected Parties can also access a digital copy on the dropbox link on [https://www.dropbox.com/sh/cahyuval39fw68p/AADFpqfkje7UyYFZ2kz313\\_ta?dl=0](https://www.dropbox.com/sh/cahyuval39fw68p/AADFpqfkje7UyYFZ2kz313_ta?dl=0)
  4. Interested and Affected Parties can access the **Public Copy at the Kudu Farm Office at the Entrance Gate.**
  5. Should you have any comments, suggestions, questions and or issues for clarification please submit these to this office in writing by close of business on or before **24 May 2023.**

Many thanks for your assistance and guidance during this project to date.

Kind regards,

Ralf Kalwa

**Environmental Assessment Practitioner**

**Rhengu Environmental Services**

**Cell: 082 414 7088**

**From:** rhengu@mweb.co.za <rhengu@mweb.co.za>

**Sent:** Friday, May 26, 2023 11:32 AM

**To:** heather@hectra.co.za; ivangiuricich@icloud.com; schalk@neofresh.net; dortan@soft.co.za; denl@vodamail.co.za; silvercreek222accrecon@gmail.com; NemathagaF@iucma.co.za; 'Nokukhanya Khumalo' <nkhumalo@sahra.org.za>; 'Khumbelo Malele' <khumbelomalele@gmail.com>; 'Frans Mashabela' <FransMas@dalrrd.gov.za>; jan.mashele@nkomazi.gov.za; 'Sihle Mthembu' <Sihle.Mthembu@mbombela.gov.za>; 'Kenneth Mavhunga' <KMavhunga@dffe.gov.za>; namudau@dffe.gov.za; water@roseinnes.co.za; 'Majorboard' <Majorboard@roseinnes.co.za>; LoveS@nda.agric.za; Andrewolmarans@gmail.com; walter@ivorymacs.co.za  
**Cc:** 'Christine Rowe' <christinevwr@gmail.com>; 'Andrew' <andrew@nethog.co.za>; andrewd@mpu.co.za; rhengu@mweb.co.za

**Subject:** DRAFT EIR DEVELOPMENT OF ORCHARDS FOR AGRICULTURE ON THE FARM NAUDES RUST 272 JU PORTIONS 17 AND 21: LOWS CREEK AREA, MPUMALANGA

**Dear Interested and Affected Party and Government Officials**

Hope this mail find you all well? We have not received any additional comments on the Draft EIR and will now complete the Final EIR for submission next week. You will receive copies of the Final EIR as per the distribution list, the dropbox link and hard copies via Postnet.

Many thanks for your contributions to date.

Regards,

Ralf Kalwa

**Environmental Assessment Practitioner**

**Rhengu Environmental Services**

**Cell: 082 414 7088**

**COMMENT LETTERS FROM GOVERNMENT DEPARTMENTS, IRRIGATION  
BOARDS ETC. ON DRAFT SCOPING DOCUMENTS**

**Comments from DALRRD**



Tel: (013) 754 0730 ☐☐Fax: (013) 754 0735 ☐☐e-mail: FransMas@dalrrd.gov.za  
Enquiries: Frans Mashabela Ref: LSM/13/10/6/2/NIs/MP – clearance of an area  
Rhengu Environmental Services

Rhengu Environmental Services  
P.O. Box 1046  
**MALELANE**  
1320  
30 January 2023

**Att: Mr. Kalwa Ralf**

**DRAFT 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:  
MBOMBELA LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.**

Department of Agriculture, Land Reform & Rural Development, Directorate: Land and Soil Management would like the following studies to be amongst the studies to be undertaken and be included in the reports:

- Detailed soil studies of all the proposed sites.
- Production potential of the lands to be affected.
- Rehabilitation post clearing.
- Management of excessive loss of soil.
- It is recommended that before any activity starts, the land user should apply for cultivation of virgin land if not yet applied.

Kindly regards.

**N.F. Mashabela**

**On behalf of: EXECUTIVE OFFICER: ACT NO. 43 of 1983  
DIRECTORATE: LAND AND SOIL MANAGEMENT**

**From:** rhengu@mweb.co.za [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)  
**Sent:** Wednesday, February 8, 2023 8:58 AM  
**To:** 'Elly Thulari' <[EllyT@Dalrrd.gov.za](mailto:EllyT@Dalrrd.gov.za)>  
**Cc:** 'Frans Mashabela' <[FransMas@dalrrd.gov.za](mailto:FransMas@dalrrd.gov.za)>; 'rhengu@mweb.co.za' <[rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)>  
**Subject:** RE: Comments

Many thanks Elly and Frans for your comments.  
They will be addressed in the Environmental Impact Reports.

Regards,  
Ralf Kalwa  
RES

**From:** Elly Thulari <[EllyT@Dalrrd.gov.za](mailto:EllyT@Dalrrd.gov.za)>  
**Sent:** Wednesday, February 1, 2023 11:30 AM  
**To:** [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)  
**Cc:** Frans Mashabela <[FransMas@dalrrd.gov.za](mailto:FransMas@dalrrd.gov.za)>  
**Subject:** Comments

Dear Rhengu

Kindly receive both comments for your attention  
Regards,  
Ms Elly Thulari  
Directorate: Land and Soil Management (LSM)  
27 Brown Str Old Perमानent Bld, 2<sup>nd</sup> Floor Office B1  
P O Box 8806 Nelspruit, 1200  
Tel: 0137540701  
Cell: 0724094789  
Email: [EllyT@Dalrrd.gov.za](mailto:EllyT@Dalrrd.gov.za)



agriculture, land reform  
& rural development

Department:  
Agriculture, Land Reform and Rural Development  
REPUBLIC OF SOUTH AFRICA



## Comments from MTPA

OFFICE OF THE CEO



Ref: LUA 22/3319  
 Unit: LUA/SS  
 Enquiries: K. Malele  
 E-mail: [khumbelo.malele@mtpa.co.za](mailto:khumbelo.malele@mtpa.co.za)  
 Tel/Fax: 013-2352395

**Mr. R. KALWA**  
 Rhengu Environmental Services  
 PO Box 1046  
 MALELANE  
 1200

E-mail: [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)

Dear Mr. Kalwa

**SUBJECT: THE MTPA COMMENTS REGARDING THE DRAFT ENVIRONMENTAL SCOPING REPORT FOR THE PROPOSED ALTERATION OF NATURAL LAND AND TRANSFORMED LAND FOR AGRICULTURAL USE AND CLEARANCE OF AN AREA OF 60 HA ON PORTIONS 17 AND 21 OF THE FARM NAUDES RUST 272 JU, SITUATED WITHIN THE NKOMAZI LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.**

Your correspondence, of date 22/12/2022 has reference.

According to the Mpumalanga Biodiversity Sector Plan (MBSP) terrestrial assessment, the proposed development will occur within *Other natural areas* and within *moderately and highly transformed areas*. According to the freshwater assessment there is an ESA Wetland within the proposed area of development. Appropriate mitigation measures including buffers will need to be considered and implemented around all sensitive areas.

The MTPA have no objection to the application looks forward to receive and review the EIR. Appropriate mitigation measures including buffers will need to be considered and implemented around all sensitive areas.

Please do not hesitate to contact this office if there are any enquiries.

Regards,

**MR MH VILAKAZI**  
**ACTING CHIEF EXECUTIVE OFFICER**  
 DATE: 03 / 02 / 2023



Private Bag X11338 Mbombela, 1200, N4 National Road, Hall's Gateway  
 Motalfin, Mbombela, Mpumalanga  
 Tel: +27 (0)13 759 5300/01 Fax: +27 (0)13 755 3928 www.mpumalanga.com





**From:** rhengu@mweb.co.za [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)  
**Sent:** Wednesday, February 8, 2023 8:54 AM  
**To:** 'Phumla Nkosi' [Phumla.Nkosi@mtpa.co.za](mailto:Phumla.Nkosi@mtpa.co.za)  
**Cc:** 'Khumbelo Malele' [Khumbelo.Malele@mtpa.co.za](mailto:Khumbelo.Malele@mtpa.co.za)  
 'Frans Krige' <Frans.Krige@mtpa.co.za>; 'Komilla Knarasoo' <Komilla.Knarasoo@mtpa.co.za>; 'Johan Eksteen' <Johan.Eksteen@mtpa.co.za>; 'Karin Van Niekerk' <Karin.VanNiekerk@mtpa.co.za>; 'Tebogo T. Sibande' <Tebogo.Sibande@mtpa.co.za>; 'Thembelihle thabethe' <Thembelihle.thabethe@mtpa.co.za>; 'Lorraine Oosthuizen' <Lorraine.Oosthuizen@mtpa.co.za>; walter@ivorymacs.co.za; rhengu@mweb.co.za; 'Andrew' <andrew@nethog.co.za>; 'Andrew Deacon' [andrewd@mpu.co.za](mailto:andrewd@mpu.co.za)  
**Subject:** RE: MTPA'S comments regarding the draft environmental scoping report

Dear Phumla

Many thanks for your comments. A comprehensive Biodiversity Study has been undertaken by Dr. Andrew Deacon and will be included in the EIR Appendices. Buffer areas have been identified to protect and conserve special areas around the project zones.

Regards,

Ralf Kalwa  
 RES

**From:** Phumla Nkosi <[Phumla.Nkosi@mtpa.co.za](mailto:Phumla.Nkosi@mtpa.co.za)>  
**Sent:** Monday, February 6, 2023 12:55 PM  
**To:** [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)  
**Cc:** Khumbelo Malele <[Khumbelo.Malele@mtpa.co.za](mailto:Khumbelo.Malele@mtpa.co.za)>; Frans Krige <[Frans.Krige@mtpa.co.za](mailto:Frans.Krige@mtpa.co.za)>; Komilla Knarasoo <[Komilla.Knarasoo@mtpa.co.za](mailto:Komilla.Knarasoo@mtpa.co.za)>; Johan Eksteen <[Johan.Eksteen@mtpa.co.za](mailto:Johan.Eksteen@mtpa.co.za)>; Karin Van Niekerk <[Karin.VanNiekerk@mtpa.co.za](mailto:Karin.VanNiekerk@mtpa.co.za)>; Tebogo T. Sibande <[Tebogo.Sibande@mtpa.co.za](mailto:Tebogo.Sibande@mtpa.co.za)>; Thembelihle thabethe <[Thembelihle.thabethe@mtpa.co.za](mailto:Thembelihle.thabethe@mtpa.co.za)>; Lorraine Oosthuizen <[Lorraine.Oosthuizen@mtpa.co.za](mailto:Lorraine.Oosthuizen@mtpa.co.za)>  
**Subject:** MTPA'S comments regarding the draft environmental scoping report

Good Afternoon Mr. Kalwa

I trust you are doing well. Attached, please find the MTPA'S comments regarding the draft environmental scoping report.

Ref: LUA 22/3319

Kind Regards

Phumla Nkosi

## Comments from SAHRA

**Debushing of sections on the farm Naude's Rust, Lows Creek, for agricultural purposes**

**Our Ref:**



an agency of the  
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: info@sahra.org.za  
South African Heritage Resources Agency | 111 Harrington Street | Cape Town  
P.O. Box 4637 | Cape Town | 8001  
www.sahra.org.za

Enquiries: Natasha Higgitt  
Tel: 021 462 4502  
Email: nhiggitt@sahra.org.za  
CaseID: 20380

Date: Friday January 27, 2023  
Page No: 1

### Interim Comment

**In terms of Section 38(3), 38(8) of the National Heritage Resources Act (Act 25 of 1999)**

Attention: Rhengu Environmental Services

P O Box 1046  
MALELANE  
1320

#### **A Phase 1 AIA & HIA for the proposed Naude's Rust debushing project on portions 17 & 21 of the farm Naude's Rust, Kaapmuiden, Mpumalanga Province**

Rhengu Environmental Services has been appointed by Mr. Walter Giurichich to undertake an Environmental Authorisation Application for the proposed clearing of natural and transformed land for Agricultural use and clearance of an area of 60 ha of portions 17 and 21 of the farm Naudes Rust 272 JU, near Louws Creek, Mpumalanga Province.

A Draft Scoping Report (DSR) has been submitted in terms of the National Environmental Management Act, 1998 (NEMA) and the NEMA Environmental Impact Assessment (EIA) Regulations. The proposed activities will include the clearance of 60 ha to accommodate new orchards.

Adansonia Heritage Consultants were appointed to provide heritage specialist input as part of the EA process as per section 24(4)b(iii) of NEMA and section 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA).

*Van Wyk Rowe, C. 2022. Phase 1 Archaeological / Heritage Impact Assessment for the Proposed Naude's Rust Debushing Project on Portions 17 & 21 of the Farm Naude's Rust 272JU, Kaapmuiden - Lows Creek Area, Mpumalanga Province*

A single Iron Age potsherd of low heritage significance was identified within the proposed development area. A Chance Finds Procedure is recommended to be followed.

**Interim Comment**

**Debushing of sections on the farm Naude's Rust, Lows Creek, for agricultural purposes**

**Our Ref:**



an agency of the  
Department of Arts and Culture

T: +27 21 462 4502 | F: +27 21 462 4509 | E: [info@sahra.org.za](mailto:info@sahra.org.za)  
South African Heritage Resources Agency | 111 Harrington Street | Cape Town  
P.O. Box 4637 | Cape Town | 8001  
[www.sahra.org.za](http://www.sahra.org.za)

Enquiries: Natasha Higgitt  
Tel: 021 462 4502  
Email: [nhiggitt@sahra.org.za](mailto:nhiggitt@sahra.org.za)  
CaseID: 20380

Date: Friday January 27, 2023  
Page No: 2

The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit notes the submitted HIA. Further comments will be issued upon receipt of the Draft EIA inclusive of appendices.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully

---

Natasha Higgitt  
Heritage Officer  
South African Heritage Resources Agency

---

Phillip Hine  
Manager: Archaeology, Palaeontology and Meteorites Unit  
South African Heritage Resources Agency

**ADMIN:**

Direct URL to case: <https://sahris.sahra.org.za/node/611353>

**Response:**

Thank you for acknowledging receipt of the HIA and the Draft Scoping. The EIR will be submitted shortly.

## **APPENDIX 3:** **DOCUMENTATION WITH DARDLEA**



agriculture, rural development,  
land & environmental affairs

**MPUMALANGA PROVINCE**  
REPUBLIC OF SOUTH AFRICA

Building 4, Aqua Street, Riverside Park, Mbombela, 1200, Mpumalanga Province, P.O Box 266, Mbombela, 1200  
Tel: +27 (013) 759 4000

Litiko Letekulima, Kutfutukiswa  
Kwetindzawo Tasemakhaya, Temhlaba  
Netesimondzawo

Departement van Landbou,  
Landelike Ontwikkeling,  
Grond en Ongewing Sake

umNyango weZelimo  
UkuThuthukiswa kweNdawo zemaKhaya,  
iNarha neeNdaba zeBhoduluko

**Enquiries : T. Sithole**  
**Telephone : 082 7373 400**  
**Reference : 1/3/1/16/1E-427**

Ralf Kalwa  
Rhengu Environmental Services  
P.O. Box 1046  
**Malelane**  
**1320**

Email: rhengu@mweb.co.za

Dear Sir,

### **APPLICATION FOR ENVIRONMENTAL AUTHORISATION: CLEARANCE OF INDIGENOUS VEGETATION FOR THE PURPOSE OF CULTIVATION OF ORCHARDS ON PORTION 17 & 21 OF THE FARM NAUDES RUST 272 JU, LOWS CREEK, CITY OF MBOMBELA**

The Department confirms having received the application form for environmental authorization and the draft scoping report for the abovementioned project on 10 February 2023.

The application has been assigned the reference number **1/3/1/16/1E-427**. Kindly quote this reference number in any future correspondence in respect of the application. The responsible officer is T. Sithole and all correspondence must be directed to: Environmental Impact Management, Ehlanzeni District Office, marked for the attention of the responsible officer. Please note that you must, within 44 days from 10 February 2023, submit to this office a final Scoping Report which has already been subjected to a public participation process of at least 30 days, and which reflects the incorporation of comments received, including any comments from this office. In this regard you are referred to the requirements of Regulation 40(3).

Please note that in terms of the provisions of Regulation 45, this application will lapse, and this office will deem the application to have lapsed, if the applicant fails to submit the final scoping report within the timeframe specified above.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully,

\_\_\_\_\_  
**MR. XE. NKOSI**  
**DEPUTY DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT**  
**DATE: \_\_\_\_\_**





agriculture, rural development,  
land & environmental affairs

**MPUMALANGA PROVINCE**  
REPUBLIC OF SOUTH AFRICA

Building 4, Aqua Street, Riverside Park, Mbombela, 1200, Mpumalanga Province, P.O Box 266, Mbombela, 1200  
Tel: +27 (013) 759 4000

Litiko Letekulima, Kutfutukiswa  
Kwetindzawo Tasemakhaya, Temhlaba  
Netesimondzawo

Departement van Landbou,  
Landelike Ontwikkeling,  
Grond en Ongewing Sake

umNyango weZelimo  
UkuThuthukiswa kweNdawo zemaKhaya,  
INarha neeNdaba zeBhoduluko

**Enquiries : T. Sithole**  
**Telephone : 082 7373 400**  
**Reference : 1/3/1/16/1E-427**

Mr. Ralf Kalwa  
Rhengu Environmental Services  
P O Box 1046  
**Malelane**  
**1320**

Email : [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)

Dear Sir,

**DRAFT SCOPING REPORT: CLEARANCE OF INDIGENOUS VEGETATION FOR THE PURPOSE OF CULTIVATION OF ORCHARDS ON PORTION 17 & 21 OF THE FARM NAUDES RUST 272 JU, LOWS CREEK, CITY OF MBOMBELA**

The draft scoping report which was submitted by you in respect of the abovementioned application and received by the department on the 10 February 2023 refers. The Department has considered the content of the report and has the following comments:

1. The Plan of Study for undertaking the environmental impact assessment process must comply with Appendix 2 of the EIA Regulations, paragraph 2(i).
2. The Plan of Study for undertaking the environmental impact assessment process must include terms of reference of all specialist studies.
3. All relevant sections of Mpumalanga Tourism and Parks Agency, including the aquatic unit, must be registered as I&APs and must be provided with the opportunity to review and comment on all reports, including the terms of reference for ecological, avi-faunal and aquatic studies.
4. The final Scoping Report must provide proof of compliance with Regulation 40(3).

You are reminded of the requirements of Regulation 21(1), and that if such requirements are not met the application will lapse in terms Regulation 45.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Sincerely,

**MR. XE. NKOSI**  
**DEPUTY DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT**

**DATE:** 01/03/2023





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Kwelindzawo Tasemakhaya, Temhisba  
Netesimondzawo

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umNyango weZelimo  
UkuThuthukiswa kweNdlawo zemaKhaya,  
INarha neeNdaba zeBhoduluto

Enquiries: T. Sithole  
Telephone: 082 7373 400  
Reference: 1/3/1/16/1E-427

Ralf Kalwa  
Rhengu Environmental Services  
P.O. Box 1046  
**Malelane**  
**1320**

Email: rhengu@mweb.co.za

Dear Sir,

**FINAL SCOPING REPORT: CLEARANCE OF INDIGENOUS VEGETATION FOR THE PURPOSE  
OF CULTIVATION OF ORCHARDS ON PORTION 17 & 21 OF THE FARM NAUDES RUST 272  
JU, LOWS CREEK, CITY OF MBOMBELA**

We confirm having received the final scoping report which was submitted by you in respect of the above mentioned application on 22 March 2023.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully,

**MR. XE. NKOSI**  
**DEPUTY DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT**  
DATE: 23/03/2023







Building 4, Aqua Street, Riverside Park, Mbombela, 1200, Mpumalanga Province, P.O Box 266, Mbombela, 1200  
Tel: +27 (013) 759 4000

Uliko Lelukulima, Kufufukisiwa  
Kwetindzawo Tasemakhaya, Temhlaba  
Netesimondzawo

Departement van Landbou,  
Landelike Ontwikkeling,  
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INarha neeNdaba zeBhoduluko

Enquiries : T. Sithole  
Telephone : 082 7373 400  
Reference : 1/3/16/1E-427

Ralf Kalwa  
Rhengu Environmental Services  
P.O. Box 1046  
**Malelane**  
**1320**

Email: rhengu@mweb.co.za

Dear Sir,

**FINAL SCOPING REPORT: CLEARANCE OF INDIGENOUS VEGETATION FOR THE PURPOSE OF CULTIVATION OF ORCHARDS ON PORTION 17 & 21 OF THE FARM NAUDES RUST 272 JU, LOWS CREEK, CITY OF MBOMBELA**

The scoping report and plan of study for environmental impact assessment which was submitted by you in respect of the abovementioned application and received by the Department on 22 March 2023 has been accepted by the Department. You may proceed with undertaking the environmental impact assessment in accordance with the tasks that are outlined in the plan of study for environmental impact assessment, subject to the following:

1. The final EIAR must provide proof that all potential and registered I&AP's, including Organs of State were provided with an opportunity to comment on the draft EIAR and that all I&AP's were provided with access to and an opportunity to comment on the draft scoping report following the submission of the application form as per Regulation 40(3).

You are reminded of the requirements of Regulation 23, and that if such requirements are not met, then this application will lapse in terms of Regulation 45. Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Sincerely,

**MR. XE. NKOSI**  
**DEPUTY DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT**  
**DATE:** 28/08/2023





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iNatha neeNdaba zeBhoduluko

Enquiries : T. Sithole  
Telephone : 082 7373 400  
Reference : 1/3/1/16/1E-427

Mr. Raif Kalwa  
Rhengu Environmental Services  
P O Box 1046  
Malelane  
1320

Email : [rhengu@mweb.co.za](mailto:rhengu@mweb.co.za)

Dear Sir,

**DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT: CLEARANCE OF INDIGENOUS VEGETATION FOR THE PURPOSE OF CULTIVATION OF ORCHARDS ON PORTION 17 & 21 OF THE FARM NAUDES RUST 272 JU, LOWS CREEK, CITY OF MBOMBELA**

The draft environmental impact assessment report which was submitted by you in respect of the abovementioned application and received by the Department on 18 April 2023 refers. The Department has considered the content of the report, and has the following comments:

1. An explanation for each activity applied for will need to be included in the final EIAR, with a description of the extent to which authorisation is required for each one. Maximum thresholds will need to be supplied eg. how much indigenous vegetation will be removed for the proposed development?
2. The final EIAR must include an issues and response report, as well as copies of and responses to comments received from all I&APs.
3. MTPA must be provided an opportunity to comment on the draft EIAR, in respect of both aquatic and terrestrial matters which have been addressed, and include copies of such correspondence in the final EIAR.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Sincerely,

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MR. X. NKOSI  
DEPUTY DIRECTOR: ENVIRONMENTAL IMPACT MANAGEMENT  
DATE: \_\_\_\_\_



**Response to DARDLEA:**

1. 21 ha of indigenous natural vegetation will be removed.
2. An Issues and Responses Report is included in Appendix 2.
3. As per personal communication with Mr Johan Eksteen (Head: Biodiversity MTPA) an ecologist is allocated to each project and he/she will ensure that the comments (if any) are collated from all responsible officials.

**APPENDIX 4:**  
**SUPPORTIVE DOCUMENTATION**

**4.1. TITLE DEEDS**

**4.2. LAND CLAIM DOCUMENTS**

**4.3. WATER RIGHTS, VERIFICATION PROCESS AND PERMITS**

**4.4. SPECIALIST STUDIES:**

**4.4.1. SOILS- AND AGRICULTURAL POTENTIAL REPORT**

**4.4.2. ECOLOGICAL ASSESSMENT: TERRESTRIAL AND AQUATIC SYSTEMS**

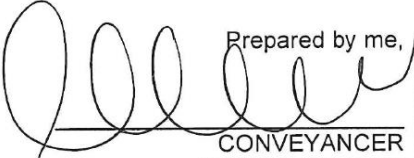
**4.4.3. HERITAGE IMPACT ASSESSMENT REPORT**

**4.1. TITLE DEEDS OF APPLICANT PROPERTIES**

100

VILJOEN WAGNER INC  
41 EHMKE STREET  
NELSPRUIT  
1200  
Docex 58 Nelspruit

TEELREG
STAMP DUTY R.....
FOOI
FEES R..... 6111.00

Prepared by me,  
  
 CONVEYANCER  
**NADINE VILJOEN**  
 M27661

T 000004739 / 2022

### DEED OF TRANSFER

BE IT HEREBY MADE KNOWN:



NICOLA JOAN MICHAU (M36651)

THAT ~~NADINE VILJOEN (M27661)~~

appeared before me, REGISTRAR OF DEEDS **MPUMALANGA at Nelspruit**, he/she,  
the said Appearer, being duly authorised thereto by a Power of Attorney granted to  
him/her by

**RAMBRANDT BOERDERY PROPRIETARY LIMITED**  
Registration Number 2016/359721/07

dated 31 May 2022  
and signed at NELSPRUIT  
VILJOEN WAGNER INC

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AND the said Appearer declared that his/her principal had on **23 April 2022** truly and legally sold by Private Treaty and that he/she, the said Appearer in his/her capacity aforesaid, did, by these presents cede and transfer to and on behalf of:

**K2022332092 (SOUTH AFRICA) PROPRIETARY LIMITED**  
**Registration Number 2022/332092/07**

its successors in title or assigns in full and free property:

1. PORTION 21 (A PORTION OF PORTION 19) OF THE FARM NAUDES RUST 272  
 REGISTRATION DIVISION J.U.  
 PROVINCE OF MPUMALANGA

IN EXTENT: 57,1250 (FIFTY SEVEN COMMA ONE TWO FIVE ZERO) Hectares

FIRST registered by Certificate of Registered Title T100113/2005 with Diagram SG No 8070/2002 annexed thereto and held by Deed of Transfer T1829/2017

SUBJECT TO THE FOLLOWING CONDITIONS:

- A. 1. The Remaining Extent of Portion D of the farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring as such 152,2269 hectares (whereof portion of the property held hereunder represented by the figure A1, B1, C1, K, D1, E1, middle of Louws Creek x,y,R,R,A1 on the annexed Diagram L G No. A933/90 forms a part is ENTITLED to the following:-

The owner of the property is entitled to a servitude in perpetuity over Portion 1 of Portion D of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 202,1306 hectares transferred under Deed of Transfer No. 15778/1937, of the right to choose and make use of a machinery site of sufficient size at any spot on the bank on the Kaap River on the said Portion 1 of Portion D, for the purpose of the erection of pumping machinery; and to lay therefrom a pipe line over the servient tenement to the dominant tenement, for use in the withdrawal from the Kaap River aforesaid of such quantity of water as the owner of the dominant tenement may be entitled to as riparian owner of the Kaap River aforesaid.

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- B. 1. The Remaining Extent of Portion E of the farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring as such 636,7882 hectares, of which that portion of the property hereby held indicated by the figure A B C D E F G H J K L w middle of Louws Creek E1 D1 K C1 B1 A1 S T U A on the annexed Diagram LG No. A 933/90 forms a part is ENTITLED to the following:
- (i) The owner of the said property is entitled to a servitude in perpetuity over Portion 1 of Portion E of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 95,9426 hectares, transferred under Deed of Transfer No. 15778/1937 of the right to choose and make use of machinery site of sufficient size at any spot on the bank of the Kaap River on the said Portion 1 of Portion E of the purpose of erection of pumping machinery: and to lay therefrom a pipe line over the servient tenement to the dominant tenement, for use in the withdrawal from the Kaap River aforesaid of such quantity of water as the owner of the dominant tenement may be entitled as riparian owner of the Kaap River aforesaid.
- (ii) By Notarial Deed No. 602/1940-S dated the 14<sup>th</sup> March 1940, the property held hereunder is entitled to a right of way 15.74 meters wide over Portion B of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 101, 6762 hectares, will more fully appear from copy of the said Notarial Deed annexed to the aforesaid Crown Grant No. 77/1936.
- C. The owners of the Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring as such 786,4364 hectares, of which that portion of the property hereby indicated by the figure A B C D E F G H J K L w middle of Louws Creek po no mo fo ko jo hogo fo eo do co bo ao S T U A on the annexed Diagram LG No. A933.90 forms a portion, are ENTITLED to the following: -
- (a) The owner of Portion 7 (a Portion of portion 8) of the farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 1,7001 hectares, held under Deed of Transfer No. 28590/53 dated 7<sup>th</sup> December 1953, shall not be entitled without the written consent of the owners of the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST

272, Registration Division J.U., measuring as such 786,4364 hectares, to carry on or permit any other person or company to carry on upon the said Portion 7 any trade or business other than that of a Motor Garage and Service Station.

- (b) The owner of the said Portion 7 shall not be entitled to the use of any share of the water of Louws Creek whether normal flow or surplus water other than for domestic purposes; such rights to the use of water from the said Lows Creek, for secondary and tertiary purposes as would otherwise attach to the said Portion 7 shall be retained by and vested in the owners of the said Remaining Extent of the Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 786,4364 hectares.

D. The Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring such 666,9711 hectares of which that portion of the property hereby held indicated by the figure A B C D E F G H J K L w middle of Louws Creek po no mo lo ko jo ho go fo eo do co bo ao S T U A on the annexed diagram LG No. A933/90 forms a portion is ENTITLED and SUBJECT to the following:-

- (a) The owners of Portion 10 called VALLEY VIEW FARM (a portion of portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., measuring 119,4652 hectares, as held under Deed of Transfer NO. 18795/1954, dated 29<sup>th</sup> July 1954, shall not be entitled without the written consent of the owners of the Remaining Extent of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 hectares or their successors in title to carry on upon the said Portion 10 any trade or business requiring the issue of a General Dealers and/or Retail Butchers Licence in terms of the Licences Consolidated Act and any amendment thereof.
- (b) (i) The water furrow traversing the said Portion 10 and indicated by the line lettered "water furrow" on Diagram SG No.A1442/54 annexed to the said Deed of Transfer No 18795/1954, shall be and remain for the joint use of the owners of the said Portion 10 and the owners of the Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U.,

measuring as such 666,9711 hectares, and the owners of the said Portion 10 shall bear and be responsible for the payment of one-fourth of the cost of maintaining, repairing and cleaning of such water furrow from its point of intake upon the public stream called Louws Creek to its point of exist from the said Portion 10.

- (ii) In respect of such water furrow the said Portion 10 shall be subject to a servitude of Aqueduct in favour of the owners of the Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring 666,9711 hectares, and on the other hand the owners of the said Portion 10 shall be entitled to a Servitude of Aqueduct in respect of the said water furrow n so far as it traverses the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 hectares.

- E. The Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 359,6879 hectares of which that portion of the property hereby held indicated by the figure A B C D E F G H J K L w middle of Louws Creek po no mo lo ko jo ho go foe o do co boa o S T U A on the annexed Diagram LG No. A933/90 forms a portion, are ENTITLED to the following:-

The owner of Portion 11 (a portion of portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., measuring 307,2832 hectares, as held under Deed of Transfer No. 31089/1954 dated 21<sup>st</sup> November 1954 shall not be entitled without the written consent of the owners of the Remaining extent of the said Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 359,6879 hectares of their successors in title, to carry on upon the said Portion 11 any trade or business requiring the issue of a General Dealer and, or Retail Butchers Licence in terms of the Licence Consolidated Act and any amendment thereof.

- F. The owners of the Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 357,3616 hectares of which that portion of the property hereby held indicating by the figure A B C D E F G H J K L

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w middle of Louws Creek po no mo lo ko jo ho go fo eo do co bo ao S T U A on the annexed Diagram LG No. A933/90 forms a portion, are ENTITLED to the following:-

- (a) The owner of Portion 12 (a portion of portion 8) of the farm NAUDES RUST 272, Registration Division J.U., measuring 23263 hectares, held under Deed of Transfer No. 15376,1957 , dated 26<sup>th</sup> June 1957, shall not be entitled without the written consent of the owners of the said Remaining Extent of the said Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 357,3616 hectares, to carry on upon the said upon the said Portion 12 any trade or business other than that of a Motor Garage and Service Station.
- (b) The owner of the said Portion 12 shall not be entitled to the use of any share of the water of Louws Creek whether normal flow or surplus water other than domestic purposes: such rights to the use of water from the said Louws Creek for secondary and tertiary purposes as would otherwise attach to the said Portion 12 shall be retained by the vested in the owners of the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 367, 3616 hectares.
- G. The former Portion 10 called VALLEY VIEW FARM (a portion of portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., indicated by the figure S ao bo co eo fo go ho jo ko lo mo no po x y R S on the annexed Diagram LG No. A933/90 is SUBJECT to the following:-

SUBJECT to a right in perpetuity to convey water across the said property by means of pipes and furrows in a servitude area 9,45 metres wide as indicated on the annexed diagram L.G. No. A933/90 by the figure h curved line g'.f'. f.g.curved line h.h', the north-eastern boundary whereof is situate 6,30 metres north of the line h', middle of canal g".f" and the figure c.d. curved line u.u'. curved line d'.c'.c. the northern boundary whereof is situate 3,15 metres north of the line c".d" curved line u" in favour of the LOUWS CREEK IRRIGATION BOARD, as will more fully appear from Notarial Deed No. K731/73-S dated 18<sup>th</sup> August 1972. .

- H. The former Remaining Extent of portion 8 of the said NAUDES RUST 272, Registration Division J.U., measuring as such 126.5668 hectares of which that portion of the property hereby held indicated by the figure A B C D E F G H J K L w middle of Louws Creek po no mo lo ko jo ho go fo eo do co bo ao S T U A on the annexed Diagram LG No A933/90 forms a portion, is SUBJECT to the following:-

By Notarial Deed No. 1808/1973-S dated 22<sup>nd</sup> June 1973 the said property is subject to a right in perpetuity to convey water over the said property in a servitude area 9.45 metres wide as indicated on the annexed Diagram LG No. A933/90 by the figure b curved line a.a, curved line b'.b the western boundary whereof is situate 3.15 metres west of the line b, middle of canal a, and by the figure u.e.e'.u'.u the northern boundary whereof is situate 3.15 metres north of the line u" e" in favour of the LOUWS CREEK IRRIGATION BOARD, as will more fully appear from the said Notarial Deed No.1808/1973-S.

- I. Die hierinvermelde eiendom is onderhewig aan twee ewigdurende serwitute oor die eiendom vir installering, oprigting en gebruik van pyplyn en werke en die reg om dit te patroleer, inspekteer ensovoorts, ook 'n tydelike serwituut vir die duur van die konstruksie van die pyplyn en werke binne die tydelike serwituut gebied, ten gunste van SASOL soos meer volledig sal blyk uit gemelde Notariële Akte No.K002201/2003S gedateer 1 JULIE 2002.

AND FURTHER SUBJECT to such conditions as are mentioned or referred to in the aforesaid Deed/s.

2. PORTION 17 OF THE FARM NAUDES RUST 272  
REGISTRATION DIVISION J.U.  
PROVINCE OF MPUMALANGA

IN EXTENT: 360,5925 (THREE HUNDRED AND SIXTY COMMA FIVE NINE TWO FIVE) Hectares

FIRST registered by Certificate of Consolidated Title T14649/1981, with diagram annexed thereto and held by Deed of Transfer T1892/2017

SUBJECT to the following conditions:

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Form E





A. 1. The remaining Extent of Portion E of the farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring as such 636,7882 Hectares (whereof portion of the property hereby transferred represented by the figure A B x c middle of Louws Creek d E F G b a J K L A on Diagram L G No. A. 5145/80 annexed to Certificate of Consolidated Title No. 14649/1981, dated this day, forms a part) is ENTITLED to the following: -

- i. The owner of the said property is entitled to a servitude in perpetuity over Portion 1 of Portion E of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 95,9426 Hectares transferred under Deed of Transfer No. 15778/1937, of the right to choose and make use of a machinery site of sufficient size at any spot on the bank of the Kaap River on the said Portion 1 of Portion E for the purpose of erection of pumping machinery; and to lay therefrom a pipe line over the servient tenement to the dominant tenement, for use in the withdrawal from the Kaap River aforesaid of such quantity of water as the owner of the dominant tenement may be entitled to as riparian owner of the Kaap River aforesaid.
- ii. By Notarial Deed No. 602/1940-S dated the 14<sup>th</sup> of March, 1940, the property hereby transferred is ENTITLED to a right-of-way 15,74 metres wide over Portion B of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, measuring 101,6762 Hectares, as will more fully appear from copy of the said Notarial Deed annexed to the aforesaid Crown Grant No. 77/1936.

B. 2. The former Remaining Extent of Portion D of the farm NAUDES Rust 272, Registration Division J.U., Transvaal, measuring as such 152,2269 Hectares, (whereof portion of the property hereby transferred represented by the figure lettered a b H a on Diagram L G No. A. 5145/80 annexed to the said Certificate of Consolidated Title No. T. 14649/1981, dated this day, forms a part) is ENTITLED to the following: -

The owner of the said property is entitled to a servitude in perpetuity over Portion 1 of Portion D of the said farm NAUDES RUST 272, Registration Division J.U., measuring 202,1306 Hectares, transferred under Deed of Transfer No. 15778/1937, of the right to choose and make use of a machinery site of sufficient



size at any spot on the bank of the Kaap River on the said Portion 1 of Portion D for the purpose of the erection of pumping machinery; and to lay therefrom a pipe line over the servient tenement to the dominant tenement, for use in the withdrawal from the Kaap River aforesaid of such quantity of water as the owner of the dominant tenement may be entitled to as riparian owner of the Kaap River aforesaid.

C. The owners of the Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., MEASURING AS SUCH 786,4364 Hectares (whereof the property hereby transferred forms a portion) are ENTITLED to the following: -

(a) The owner of Portion 7 (a Portion of Portion 8) of the farm NAUDES RUST 272, Registration Division J.U., measuring 1,7001 Hectares, held under Deed of Transfer No. 28590/1953 dated 7<sup>th</sup> December 1953, shall not be entitled without the written consent of the owners of the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 786,4364 Hectares, to carry on or permit any other person or company to carry on upon the said Portion 7 any trade or business other than that of a Motor Garage and Service Station.

(b) The owner of the said Portion 7 shall not be entitled to the use of any share of the water of Louws Creek whether normal flow or surplus water other than for domestic purposes; such rights to use of water from the said Louws Creek for secondary and tertiary purposes as would otherwise attach to the said Portion 7 shall be retained by and vested in the owners of the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 786,4364 Hectares.

D. The Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 Hectares (whereof the property hereby transferred forms a portion) is ENTITLED and SUBJECT to the following: -

(a) The owners of Portion 10, called VALLEY VIEW FARM (a Portion of Portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., measuring 119,4652 Hectares, as held under Deed of Transfer No. 18795/1954, dated 29<sup>th</sup>

)



July, 1954, shall not be entitled without the written consent of the Owners of the Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 Hectares, or their successors-in-title to carry on upon the said Portion 10 any trade or business requiring the issue of a General Dealers and/or Retail Butchers Licence in terms of the Licences Consolidated Act and any amendment thereof.

- (b) (i) The waterfurrow traversing the said Portion 10 and indicating by the line lettered "water-furrow" on Diagram S.G.No.A. 1442/54 annexed to the said Deed of Transfer No. 18795/1954, shall be and remain for the joint use of the Owners of the said Portion 10 and the Owners of the Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 Hectares, and the Owners of the said Portion 10 shall bear and be responsible for the payment of one-fourth of the cost of maintaining, repairing and cleaning of such waterfurrow from its point of intake upon the public stream called Louws Creek to its point of exit, from the said Portion 10.
- (ii) In respect of such waterfurrow the said Portion 10 shall be subject to a Servitude of Aqueduct in favour of the Owners of the Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 Hectares, and on the other hand the Owners of the said Portion 10 shall be entitled to a Servitude of Aqueduct in respect of the said waterfurrow in so far as it traverses the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST 272, Registration Division J.U., measuring as such 666,9711 Hectares.

- E. The Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 359,6879 Hectares (whereof the property indicated on Diagram L G No. A. 5145/80 annexed to Certificate of Consolidated Title No. T 14649/1981, dated this day; by the figure x c middle of Louws Creek d e f g h j k l y forms a part) is ENTITLED to the following: -

The owner of Portion 11 (a Portion of Portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., measuring 307,2832 Hectares, as held under Deed of Transfer No. 31089/1954, dated 21<sup>st</sup> November 1954, shall not be entitled without the written consent of the Owners of the Remaining Extent



of the said Portion 8 of the said farm NAUDES RUST, measuring as such 359,6879 Hectares, or their successors in title, to carry on upon the said Portion 11 any trade or business requiring the issue of a General Dealers and/or Retail Butchers Licence in terms of the Licences Consolidated Act and any amendment thereof.

F. The owners of the Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 357,3616 Hectares (whereof that portion of the property hereby transferred indicated on Diagram L G No. A. 5145/80 annexed to Certificate of Consolidated Title No. T. 14649/1981, dated this day, by the figure x c middle of Louws Creek d E F G H J K L y x forms part) are ENTITLED to the following: -

(a) The owner of Portion 12 (a Portion of Portion 8) of the said farm NAUDES RUST, measuring 2,3263 Hectares, held under Deed of Transfer No, 15376/1957, dated 26<sup>th</sup> June 1957, shall not be entitled without the written consent of the owners of the said Remaining Extent of the said Portion 8 of the said farm NAUDE'S RUST, measuring as such 357,3616Hectares, to carry on or permit any other person or company to carry on upon the said Portion 12 any trade or business other than that of a Motor Garage and Service Station.

(b) The owner of the said Portion 12 shall not be entitle to the use of any share of the water Louws Creek whether normal flow or surplus water other that for domestic purposes; such rights to the use of water from the said Louws Creek for secondary and tertiary purposes as would otherwise attach to the said Portion 12 shall be retained by and vested in the owners of the said Remaining Extent of the said Portion 8 of the farm NAUDES RUST, measuring as such 357,3616 Hectares.

G. The former Portion 11 (a Portion of Portion 8) of the said farm NAUDES RUST 272, Registration Division J.U., Transvaal, (indicated on Diagram L G No. A. 5145/80 annexed to Certificate of Consolidated Title No. T. 14649/1981, dated this day, by the figure A B x y L A which comprises a portion of the property hereby transferred) is SUBJECT to the following: -

(a) By Notarial Deed No. 1066/1965-S registered on 20<sup>th</sup> August, 1965, the right has been granted to ELECTRICITY SUPPLY COMMISSION to convey electricity






over the said property, the middle line of which servitude is indicated on the diagram L.G.Nr.A. 5145/80 annexed to the said Certificate of Consolidated Title No. T. 14649/1981 by the line e f g, together with ancillary rights and subject to the conditions as will more fully appear on reference to the said Notarial Deed.

- (b) By virtue of Notarial Deed of Servitude No. 195/1973-S dated 23<sup>rd</sup> October, 1972, the said property is subject to a Servitude for the conveyance of water by means of pipes and furrows underground or on the surface 9,45 metres wide as indicated on the diagram L.G.Nr.A. 5145/80 annexed to the said Certificate of Consolidated Title No. T. 14649/1981 by the figure p' curved line q' r' curved line s' s'' curved line r'' q'' curved line p'' p', the northern boundary whereof is situate 3, 15 metres north of the line p middle of canal q r middle of canal s, in favour of THE LOUWS CREEK IRRIGATION BOARD as will more fully appear from the said Notarial Deed.

- H. The former Remaining Extent of Portion 8 of the said farm NAUDES RUST 272, Registration Division J.U., measuring as such 126,5668 Hectares (of which that portion of the property hereby transferred indicated on the diagram L.G.Nr.A.5145/80

annexed to the said Certificate of Consolidated Title No. T. 14649/1981 by the figure x c middle of Louws Creek d E F G H J K L y x forms a portion) is SUBJECT to the following: -

By Notarial Deed No. 1808/1973-S dated the 22<sup>nd</sup> June 1973, the said property is subject to a right in perpetuity to convey water over the said property in a servitude area 9,45 metres wide as indicated on the diagram L.G.No.A. 5145/80 annexed to the said Certificate of Consolidated Titel No. 14649/1981 by figure t' u' v' curved line w' w'' curved line v'' u'' t'' t', the northern boundary whereof is situated 3,15 metres north of the line t u v middle of canal w, in favour of The Louws Creek Irrigation Board and as will more fullyt appear from reference to the said Notarial Deed.

- I. Endossement in terme van Art 9(3)bis van die Wet op die Adverteer langs en toebou van Paaie 1940 (wet 21 van 1940);  
Vergunning is verleen vir die oprigting van 'n kliniek en kraamsaal, nie nader as onderskeidelik 24 meter en 81 meter gemeet vanaf die middellyn van provinsiale pad P10-2 nie.Die binnegemelde eienaar moet die betrokke geboue geheel, sonder vergoeding en op sy koste moet verwyder of sloop indien die grond waarop dit staan



vir padboudoeleindes benodig word, soos meer volledig sal blyk uit aansoek by geliaseer by BC 35356/92.

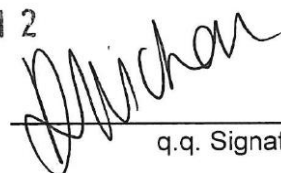
AND FURTHER SUBJECT to such conditions as are mentioned or referred to in the aforesaid Deed.

WHEREFORE the Appearer, renouncing all the right, title and interest which the said **RAMBRANDT BOERDERY PROPRIETARY LIMITED** heretofore had to the premises, did, in consequence also acknowledge them, to be entirely dispossessed of, and disentitled to, the same; and that, by virtue of these presents, the said **K2022332092 (SOUTH AFRICA) PROPRIETARY LIMITED**, its successors in title or assigns now is and henceforth shall be entitled thereto, conformably to local custom, the State, however, reserving its rights, and finally acknowledging the purchase price of the property hereby transferred to be the sum of **R23 000 000,00 (TWENTY THREE MILLION RAND)**.

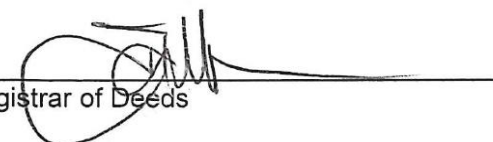
IN WITNESS WHEREOF I, the said Registrar of Deeds together with the Appearer, have subscribed to these presents, and have caused the Seal of Office to be affixed thereto.

THUS DONE AND EXECUTED at the Office of the REGISTRAR OF DEEDS **MPUMALANGA at Nelspruit** on

2022 -08- 12

  
 \_\_\_\_\_  
 q.q. Signature of Appearer

In my presence:

  
 \_\_\_\_\_  
 Registrar of Deeds

## **4.2. LAND CLAIM DOCUMENTS**



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: MPUMALANGA  
 18 Bell Street, Bell Tower building, Restitution House, Nelspruit | Private Bag X11330 Nelspruit, 1290  
 Tel: (013) 752 4054 | Fax: (013) 752 5410

ENQUIRY: VK KHOZA  
 EL: 013 752 4054  
 DATE: 22/11/2022

**EHMKELAW ATTORNEYS**  
 ATTENTION: NADINE VILJOEN


RE: YOUR ENQUIRY: LAND RESTITUTION CLAIM AGAINST THE FOLLOWING PROPERTY IN  
 TERMS OF THE RESTITUTION OF LAND RIGHTS ACT NO.22 OF 1994

**DETAILS OF PROPERTY DESCRIPTION**

Property Description	Comments
Province of Mpumalanga Magisterial District:  Property: Ptn 21( Ptn of ptn 19) & Ptn 17 of the farm Naude Rust 272	According to our Database, there are currently no registered Land Claims which were lodged against the mentioned properties.

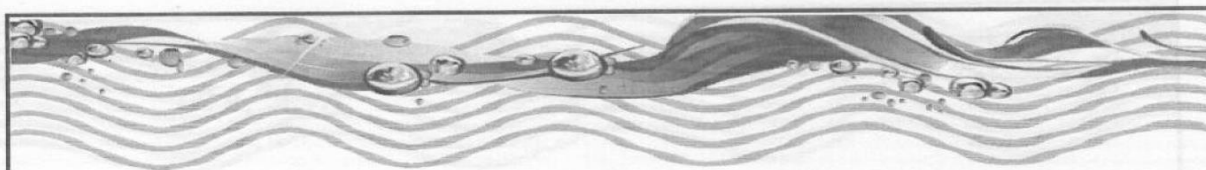
1. We refer to your letter received on **16 November 2022** regarding an enquiry to a Restitution claim against the above property.
2. We advise that there is no claim lodged against the property.
3. **TAKE NOTICE that** land claims are lodged with the office of the Commission in accordance with the historical and or present property descriptions of the dispossessed properties and therefore may not match the current property description as described in your correspondence in respect of the above-mentioned properties. However, if the historical description of any of the above property has changed since 1913, or you are aware of any other local or official name by which it was then described or currently known, kindly supply us with such information to enable us to search further.
4. **TAKE NOTICE FURTHER THAT** while the Regional Land Claims Commission: Mpumalanga has taken reasonable care to ensure the accuracy of the above-mentioned information, the Commission cannot be held accountable if, through the process of further on- going investigation, additional information may be found that contradicts paragraph 2 above.

Yours Faithfully

  
 \_\_\_\_\_  
 PT MR. E. S. NKOSI  
 CHIEF DIRECTOR  
 OFFICE OF REGIONAL LAND CLAIMS COMMISSION  
 DATE 22/11/22



**APPENDIX 4.3.**  
**WATER RIGHTS, VERIFICATION PROCESS AND PERMITS**



Suite 801, 8<sup>th</sup> Floor  
The MAXSA Building  
13 Streak Street  
Mbombela

Private Bag X11214  
Mbombela  
1200

Tel 013 753 9000  
Fax 013 753 2786



Enquiries: Verification Office  
Reference: 272JU/17  
E-mail: [verification@iucma.co.za](mailto:verification@iucma.co.za)

Claasen Cornelis Johannes  
PO Box 75  
Lows Creek  
1302  
[naudesrustboerdery@absamail.co.za](mailto:naudesrustboerdery@absamail.co.za)

**FORMER INKOMATI WATER MANAGEMENT AREA, WITHIN THE INKOMATI-USUTHU WATER MANAGEMENT AREA**

**LOUW'S CREEK IRRIGATION BOARD**

**NAUDES RUST272, JU, PORTION 17, SIZE 360.5925 ha: DECLARATION OF WATER USE AS AN EXISTING LAWFUL WATER USE IN TERMS OF SECTION 33(2) OF THE NATIONAL WATER ACT, 1998 (ACT 36 OF 1998)**

Under Section 33(2) of the National Water Act, 1998 (Act 36 of 1998) ["the Act"], the following volume(s) are declared as existing lawful water use(s) on the above mentioned property:

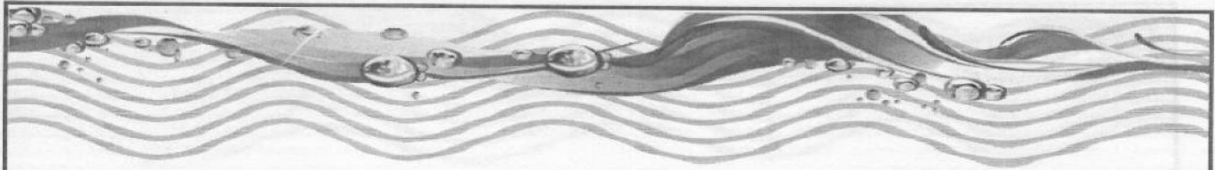
<i>Type of water use</i>	<i>Volume (m<sup>3</sup>/annum)</i>
<b>Taking of water for irrigation purposes</b>	<b>719,400.00</b>
<b>Taking of water for non-irrigation purposes</b>	
<b>Storing of water</b>	

This use may be continued with under Section 34(1) subject to any existing conditions or obligations attached to the use until a licence replaces it.

In terms of Section 148(1)(e) of the Act you may appeal against this declaration to the Water Tribunal within 30 (thirty) days from the date of this letter. The Water Tribunal can be contacted as follows:

The Registrar of the Water Tribunal, Mr Robert Mabe  
Water Tribunal  
Private Bag X316  
Pretoria  
0001

Tel: 012 336 7034  
E-Mail: [maber@dws.gov.za](mailto:maber@dws.gov.za)



A copy of the appeal must be submitted to this office

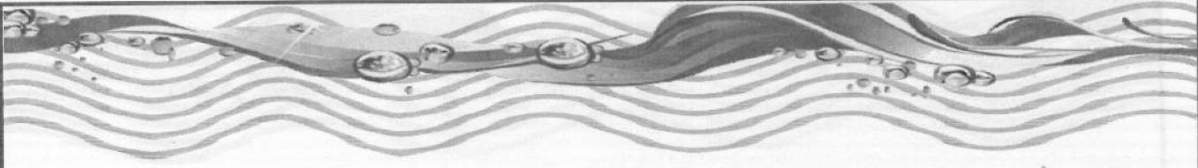

The Inkomati-Usuthu Catchment Management Agency (IUCMA) will amend your registration certificate or the registration certificate of the applicable Water Management Institution to reflect the above details. If an appeal is lodged, the certificate may be amended again depending on the outcome of the appeal.

Yours faithfully

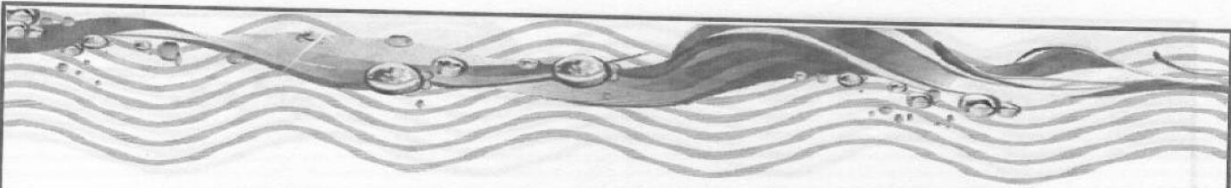
**Dr THOMAS GYEDU-ABABIO**

**CHIEF EXECUTIVE OFFICER**

**DATE: 11/3/2016**


										
Suite 801, 8 <sup>th</sup> Floor The MAXSA Building 13 Streak Street Mbombela	Private Bag X11214 Mbombela 1200	Tel 013 753 9000 Fax 013 753 2786								
										
		Enquiries: Verification Office Reference: 272JU/21 E-mail: <a href="mailto:verification@iucma.co.za">verification@iucma.co.za</a>								
Viljoen, Petrus Johannes PO Box 45 Lows Creek 1302 Pietviljoen42@gmail.com										
<b>FORMER INKOMATI WATER MANAGEMENT AREA, WITHIN THE INKOMATI-USUTHU WATER MANAGEMENT AREA</b>										
<b>LOUW'S CREEK IRRIGATION BOARD</b>										
<b>NAUDES RUST272, JU, PORTION 21, SIZE 57.1250 ha: DECLARATION OF WATER USE AS AN EXISTING LAWFUL WATER USE IN TERMS OF SECTION 33(2) OF THE NATIONAL WATER ACT, 1998 (ACT 36 OF 1998)</b>										
Under Section 33(2) of the National Water Act, 1998 (Act 36 of 1998) ["the Act"], the following volume(s) are declared as existing lawful water use(s) on the above mentioned property:										
<table border="1"> <thead> <tr> <th><i>Type of water use</i></th> <th><i>Volume (m<sup>3</sup>/annum)</i></th> </tr> </thead> <tbody> <tr> <td><b>Taking of water for irrigation purposes</b></td> <td><b>59,400.00</b></td> </tr> <tr> <td><b>Taking of water for non-irrigation purposes</b></td> <td></td> </tr> <tr> <td><b>Storing of water</b></td> <td></td> </tr> </tbody> </table>			<i>Type of water use</i>	<i>Volume (m<sup>3</sup>/annum)</i>	<b>Taking of water for irrigation purposes</b>	<b>59,400.00</b>	<b>Taking of water for non-irrigation purposes</b>		<b>Storing of water</b>	
<i>Type of water use</i>	<i>Volume (m<sup>3</sup>/annum)</i>									
<b>Taking of water for irrigation purposes</b>	<b>59,400.00</b>									
<b>Taking of water for non-irrigation purposes</b>										
<b>Storing of water</b>										
This use may be continued with under Section 34(1) subject to any existing conditions or obligations attached to the use until a licence replaces it.										
In terms of Section 148(1)(e) of the Act you may appeal against this declaration to the Water Tribunal within 30 (thirty) days from the date of this letter. The Water Tribunal can be contacted as follows:										
The Registrar of the Water Tribunal, Mr Robert Mabe Water Tribunal Private Bag X316 Pretoria 0001										
Tel: 012 336 7034 E-Mail: <a href="mailto:maber@dws.gov.za">maber@dws.gov.za</a>										
<hr/> M TP Nyakane-Maluka (Chairperson)   Mr MS Mthembu (Deputy Chairperson)   Dr JB Molwantwa   Dr PE Molokwane   Ms SD Wiggins Mr PA Shabangu   Mr PJ Venter   Mr JM Mathebula   Dr TK Gyedu-Ababio (Ex-Officio)										





A copy of the appeal must be submitted to this office

The Inkomati-Usuthu Catchment Management Agency (IUCMA) will amend your registration certificate or the registration certificate of the applicable Water Management Institution to reflect the above details. If an appeal is lodged, the certificate may be amended again depending on the outcome of the appeal.

Yours faithfully

**Dr THOMAS GYEDU-ABABIO**

**CHIEF EXECUTIVE OFFICER**

**DATE: 11/3/2016**


The use may be restricted with water Section 24(1) subject to any existing conditions or obligations attached to the use with a license required.

(b) In terms of Section 18(1)(f) of the Act you may appeal against the decision to the Water Tribunal within 30 days from the date of the latter. The Water Tribunal can be contacted as follows:

The Registrar of the Water Tribunal, Mr Robert Mokoena  
 Water Tribunal  
 Private Bag X378  
 Pietermaritzburg  
 6001  
 Tel: 012 338 7004  
 E-Mail: mababio@wma.gov.za

**4.4. SPECIALIST STUDIES:**  
**APPENDIX 4.4.1.**  
**SOILS AND AGRICULTURAL POTENTIAL REPORT**

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SOIL REPORT: PORTIONS 17 & 21  
OF NAUDES RUST, MPUMALANGA

---

PREPARED FOR

RHENGU ENVIRONMENTAL SERVICES

FEBRUARY 2023

IE Smit

+27 71 513 8172

Mataffin Macadamia

Mataffin

Mbombela

1201



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Mataffin Macadamia  
Mataffin  
Mbombela  
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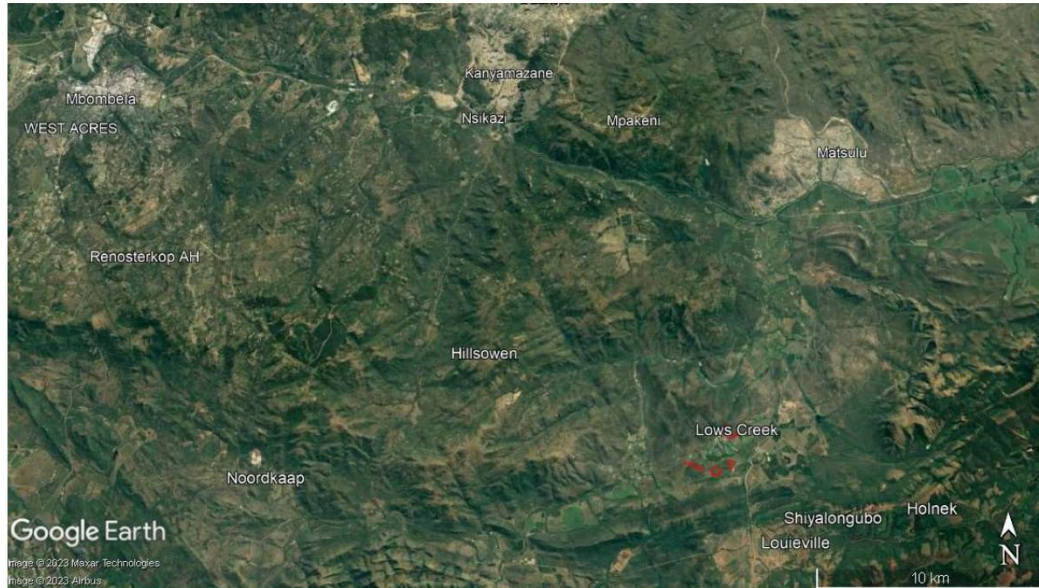
## BACKGROUND

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IE Smit was tasked by Rhengu Environmental Services to conduct a Soil Assessment for the Environmental Authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (“NEMA”), Environmental Impact Assessment (“EIA”) Regulations, 2014. As per GN960 of 2019, read with Section 24(5)(a) of the NEMA, an Environmental Screening Report (ESR) was generated for the application using the National Web-based Screening Tool. The ESR classifies the area as being of High sensitivity for the *Agricultural* theme.

The Agro-Ecosystem Assessment is reported according to the protocol for the specialist assessment and minimum report content requirements for the environmental impacts on agricultural resources (GN320 of 2020).

Rhengu Environmental Services has been appointed by La Prosperita Agricultura (Pty) Ltd to facilitate the authorization of bush clearing of four areas for the potential development and subsequent operation of orchards, near Low’s Creek in the Mpumalanga province (Figure 1).



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Mataffin  
Mbombela  
1201

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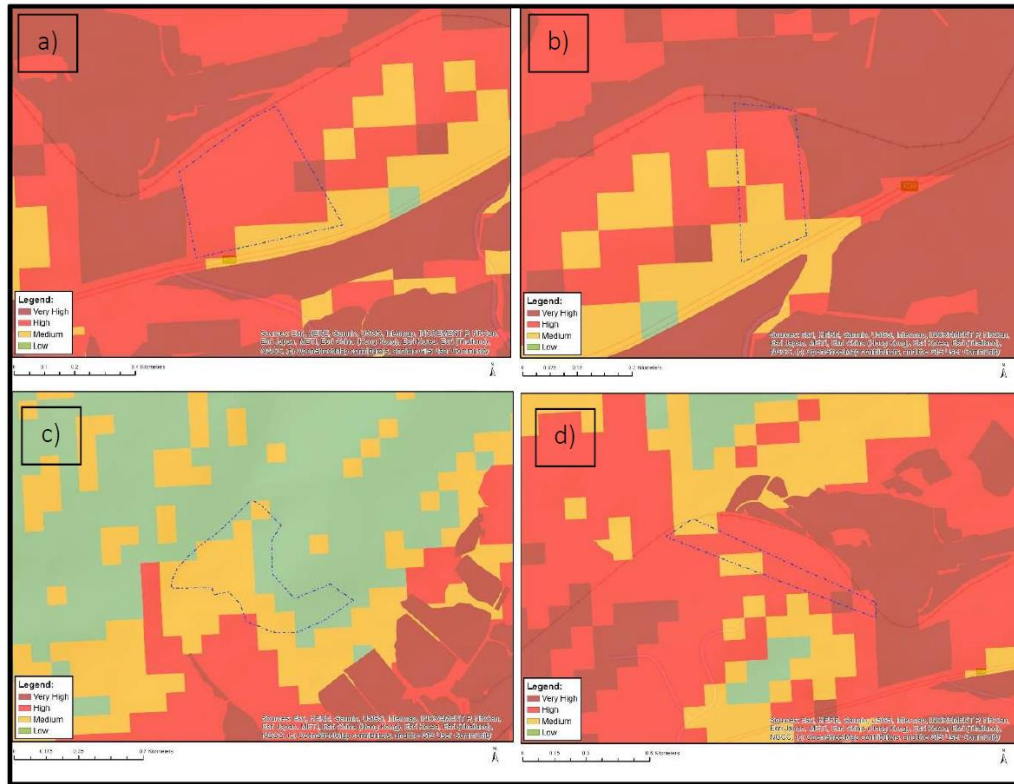
FIGURE 1: LOCATION OF THE STUDY AREA IN THE MPUMALANGA PROVINCE FOR A) AREA 1, B) AREA 2, C) AREA 3 AND D) AREA 4.

---

### ENVIRONMENTAL SCREENING TOOL

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The Environmental Screening Report (ESR) classifies most of the area as having a high agricultural sensitivity to very high agricultural sensitivity (Figure 2). Agricultural sensitivity is based on a land capability (Land class 6-10) and land-use, which involves the modification and management of the natural environment of which crop cultivation on moderate or higher land capability is considered high.



Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
Very High	Land capability;11. High/12. High-Very high/13. High-Very high/14. Very high/15. Very high
Very High	Horticulture / Viticulture;Land capability;09. Moderate-High/10. Moderate-High

FIGURE 2: RESULTS OF THE SCREENING TOOL FOR A) AREA 1, B) AREA 2, C) AREA 3 AND D) AREA 4.

### ASSUMPTIONS

1. Production figures and crops planted were negligible, due to the fact that the areas in question are currently not cultivated. At the time of writing, no agricultural production of any kind has occurred at the specific sites in question.



## METHODOLOGY

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### DESKTOP STUDY

---

A desktop study was being conducted to determine the climate, agricultural potential, soil erosion sensitivity, topography, vegetation, and land-use from the best available sources.

- Climate and soil erosivity from (Climate-data.org, 2021)
- Agricultural potential from the Land Type Survey data (1972-2006).
- Topography from the SRTM 30m Digital Elevation Model (DEM).
- Land-use from South African National Land Cover (Geo Terra Image, 2018).
- Natural vegetation will be determined from the Vegetation Map of South Africa, Lesotho and Swaziland (South African National Biodiversity Institute, 2006- 2018).

### FIELD VISIT

---

The field survey was conducted on the 3<sup>rd</sup> of February 2023. During the field survey soil observations made with a tractor-loader-backhoe (TLB) and were all logged using a GPS.

- The soils were described and classified according to the Soil Classification Working Group (2018).
- Visual observations of potential land degradation, crops and different land-uses were made. The data was compared to the soils data from the land type survey and the agricultural capability.

### IMPACT ASSESSMENT

---

The stepped approach used is provided below:

Step 1: The different aspects of the proposed project are identified along with the associated environmental and social impacts which may occur during each phase of the project.

Step 2: Assess the consequence of the impact by providing a numerical score for each of the following factors using the ranking scales in Table 1.

- Extent;
- Duration;
- Severity;
- Reversibility.

The consequence is determined using the sum of the extent, duration, severity, and reversibility variables. The maximum value of points (SP) is 25.

Step 3: Assess the likelihood of the impact by providing a numerical score for each of the following factors using the ranking scales.

- Probability of the impact.

The likelihood is determined using the probability frequency variables. The maximum value of points (SP) is 5.

Step 4: Once these factors are ranked for each impact, the significance points are calculated by using the formula below.

$$\text{SP (Significant Points)} = \text{Consequence (Extent + Duration + Severity + Reversibility)} \times \text{Likelihood (Probability)}$$

Step 5: Mitigation measures for each impact are determined as part of the impact assessment, and the above approach is repeated to determine the significance of each impact post-mitigation.

TABLE 1: VARIABLES WITH EACH CATEGORY SCORE

CONSEQUENCE		Extent (Magnitude) of the Impact	SP
	Site specific	Limited to a specific part of the farm boundary.	1
	Project area	Limited to within the farm boundary.	2
	Local	Within a 5km radius of the farm boundary.	3
	Regional	Beyond a 5km radius of the farm boundary.	4
	National	Widespread, far beyond the project area.	5
		Duration of the Impact	
	Immediate	One day to one month.	1
	Short term	One month to one year.	2
	Medium term	One year to ten years.	3
	Long term	Ten years to thirty-one years. Ceases with operational life (31 years for this specific project).	4
	Post Closure/Permanent	Impact occurs beyond lifespan of the project.	5
		Severity of the Impact	
	Minor	Non-harmful. Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are not affected.	2
	Low	Potentially harmful. Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are negligibly altered.	4

	Medium	Slightly harmful. Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are slightly altered.	6
	High	Significantly Harmful. Impacts affect the environmental in such a way that natural, cultural and/or social functions and processes are notably altered.	8
	Very High	Extremely harmful. Impacts affect the environmental in such a way that natural, cultural and/or social functions and processes are severely altered.	10
	Reversibility of the Impact		
	Complete reversible	The impact is reversible without any mitigation measures and management measures.	1
	Nearly completely reversible	The impact is reversible without any significant mitigation and management measures. Some time and resources are required.	2
	Partly reversible	The impact is only reversible with the implementation of mitigation and management measures. Substantial time and resources required.	3
	Nearly irreversible	The impact can only marginally be reversed with the implantation of significant mitigation and management measures. Significant time and resources required to ensure impact is on a controllable level.	4
	Irreversible	The impact is irreversible.	5
Likelihood	Probability of impact		
	None	0% chance of the impact occurring.	0
	Improbable	The possibility of the impact materializing is very low. 1% to 9% chance of occurrence.	1



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Low Probability	Impact not expected to occur, but conceivable; 10% to 30% chance of occurrence; and Circumstances rarely encountered.	2
Medium Probability	Impact may occur sometimes; 31 – 60% chance of occurrence; Circumstances occasionally encountered.	3
High probability	Impact will probably occur; 61 – 90% chance of occurrence; Circumstances frequently encountered;	4
Almost Certain	91 -100% chance of occurrence.	5

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### Significance Level

Using the impact assessment as described by Table 1, the significance of the activities impact may be determined. The maximum value is 125 significant points. The significance level of the impact could therefore be rated as either Very High (VH), High (H), Medium (M), Low (L), or Very Low (VL) on the following basis in Table 2:

TABLE 2:SIGNIFICANCE LEVELS

<b>Very Low</b>	<b>Negligible impact which does not require further mitigation.</b>	<b>SP ≤25</b>
<b>Low</b>	<b>Acceptable impact for which mitigation is desirable but not essential.</b> The impact by itself is insufficient even in combination with other low impacts to prevent the implementation of the project. These impacts will result in either positive or negative medium to short term effects on the social and/or natural environment.	<b>SP 26 - 50</b>
<b>Medium</b>	<b>An important impact which requires mitigation.</b> The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment.	<b>SP 51 - 75</b>
<b>High</b>	<b>A serious impact, if not mitigated, may prevent the implementation of the project.</b> These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &/or social) environment and result in severe negative or beneficial effects.	<b>SP 76 - 100</b>
<b>Very High</b>	<b>A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project.</b> The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe negative or very beneficial effects.	<b>SP 101 - 125</b>

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## DESKTOP RESULTS

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### ELEVATION

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The study area is large and dominates the terrain morphological unit (TMU) 3 and 4 positions in the landscape (See TMU in Appendix 2), with the elevation of the study areas being between 550 to 450 meters above sea level (m.a.s.l.).

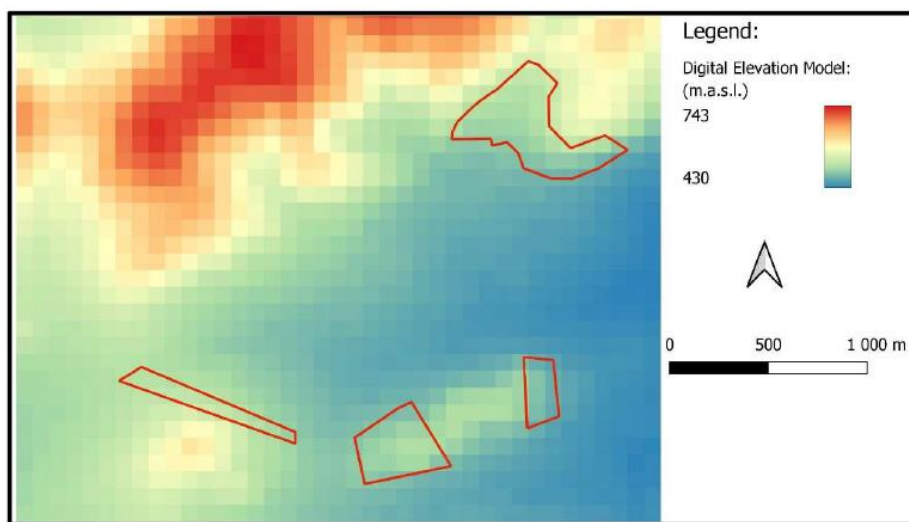


FIGURE 3: ELEVATION OF THE STUDY AREA.

## SLOPE

The four study areas are relatively hilly and mountainous, typical of the slopes of the Barberton, Lows Creek area (Figure 4). The very steep slopes of the study areas, in excess of 15 percent pose a threat for erosion. The slopes below 15 percent are favourable for the creation of cultivated orchards, dependant on the soil suitability.

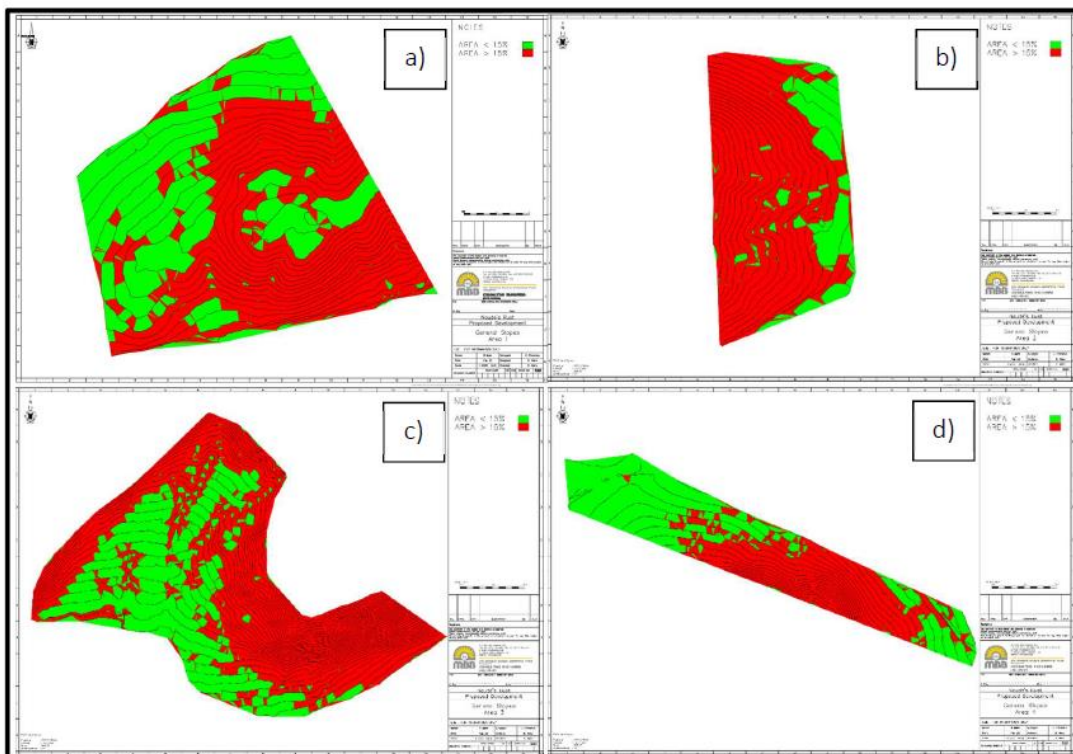


FIGURE 4: SLOPE OF THE STUDY AREA FOR A) AREA 1, B) AREA 2, C) AREA 3 AND D) AREA 4.



## LAND TYPE INFORMATION

A land type is an area with similar climate, geology and soil distribution patterns and therefore gives a good spatial representation of homogenous areas. Area 1,2 and 4 are situated in land type Ea74, and Area 3 is situated in land types Ae106 and Ib158 (Figure 5 & Appendix 2). Ea land types are dominated by clayey soils with melanic and vertic topsoils presents as well as red structured, pedocutanic and prismatic subsoils. Ib land types were delineated where rock outcrops comprise >60% of the land type, but less than 80%. Ae land types comprise of freely drained, red, eutrophic, apedal soils comprise >40% of the land type (yellow soils comprise <10%).

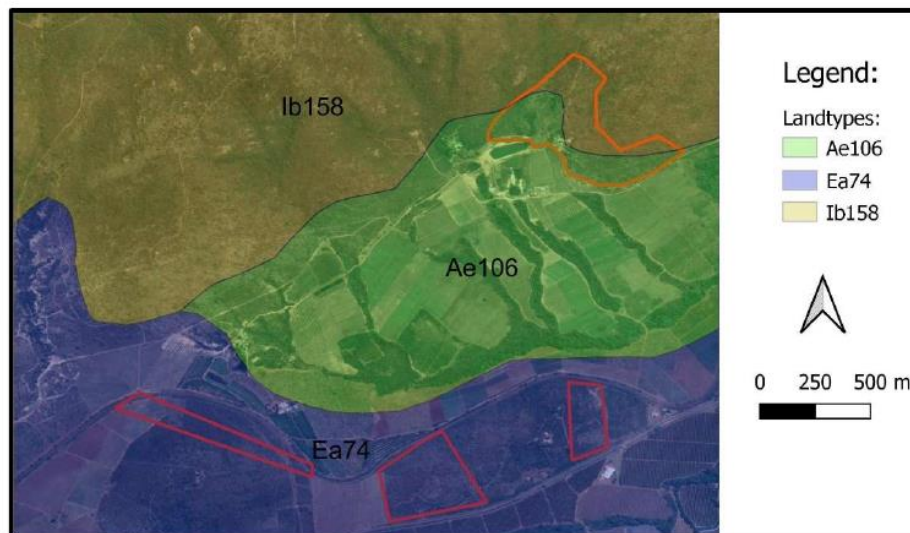


FIGURE 5: LAND TYPES OCCURRING IN THE STUDY AREA (LAND TYPE SURVEY STAFF, 1972-2002).

## GEOLOGY

The geology of the study area predominantly consists of greenstone belts and acid and intermediate extrusives of the Onverwacht Formation, while the northern parts of the study consist of tonalitic and trondhjemitic gneiss (Figure 6).

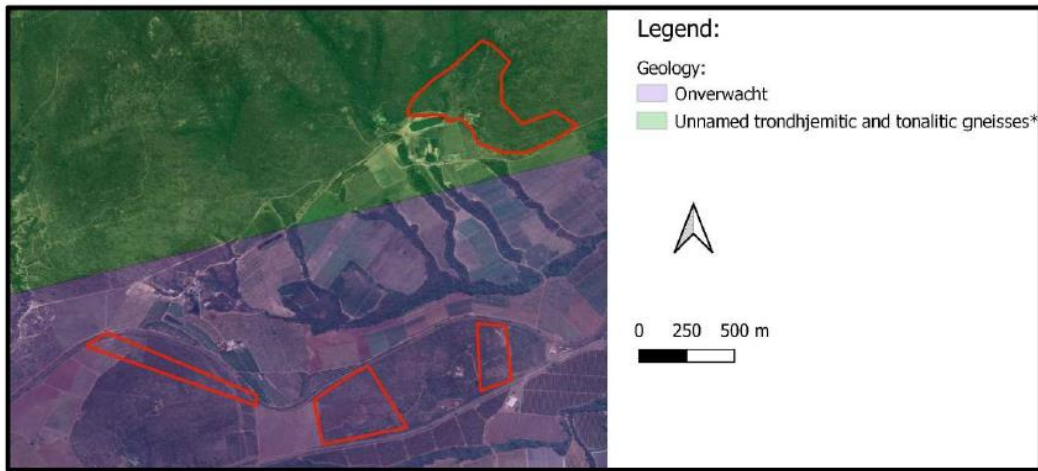


FIGURE 6: GEOLOGICAL MAP OF THE SURVEY AREA (COUNCIL OF GEOSCIENCE, 2007).

CLIMATE

The climate is warm and temperate, which is typical of the lowveld of South Africa. It is classified as Cwb region (Köppen and Geiger) which is characterized by dry winters and warm wet summers. This is reflected in the high summer and low winter temperatures, and that most rainfall occurs in the summer (Figure 7 & Table 1). This is supported by Schulze (2007), as the area is classified as semi-arid and a rainfall average of 600-800 mm (Figure 8).

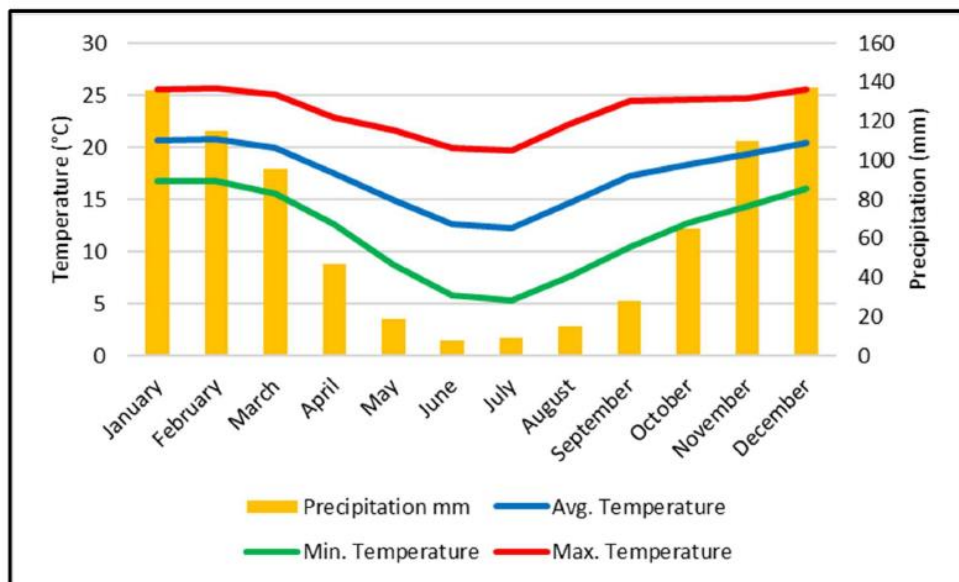


FIGURE 7: MONTHLY PRECIPITATION AND TEMPERATURE FOR THE SURVEY AREA (CLIMATE-DATA.ORG, 2022).

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TABLE 1: SELECTED CLIMATOLOGICAL ATTRIBUTES FOR THE STUDY SITE (CLIMATE-DATA.ORG, 2022)

	January	February	March	April	May	June	July	August	September	October	November	December
<b>Avg. Temperature</b>	20.7 °C	20.8 °C	19.9 °C	17.5 °C	14.9 °C	12.6 °C	12.3 °C	14.7 °C	17.3 °C	18.4 °C	19.3 °C	20.4 °C
<b>Min. Temperature</b>	16.8 °C	16.8 °C	15.6 °C	12.6 °C	8.7 °C	5.8 °C	5.3 °C	7.7 °C	10.5 °C	12.8 °C	14.4 °C	16.1 °C
<b>Max. Temperature</b>	25.5 °C	25.7 °C	25.1 °C	22.9 °C	21.7 °C	19.9 °C	19.7 °C	22.3 °C	24.4 °C	24.6 °C	24.7 °C	25.6 °C
<b>Precipitation mm</b>	136	115	96	47	19	8	9	15	28	65	110	137
<b>Humidity</b>	76%	75%	73%	72%	63%	58%	54%	52%	54%	64%	72%	75%
<b>Rainy days</b>	13	11	10	6	3	1	1	2	4	9	12	13
<b>avg. Sun hours</b>	6.3	6.6	6.9	6.9	8.1	8.1	8.0	8.1	7.8	6.7	6.4	6.7



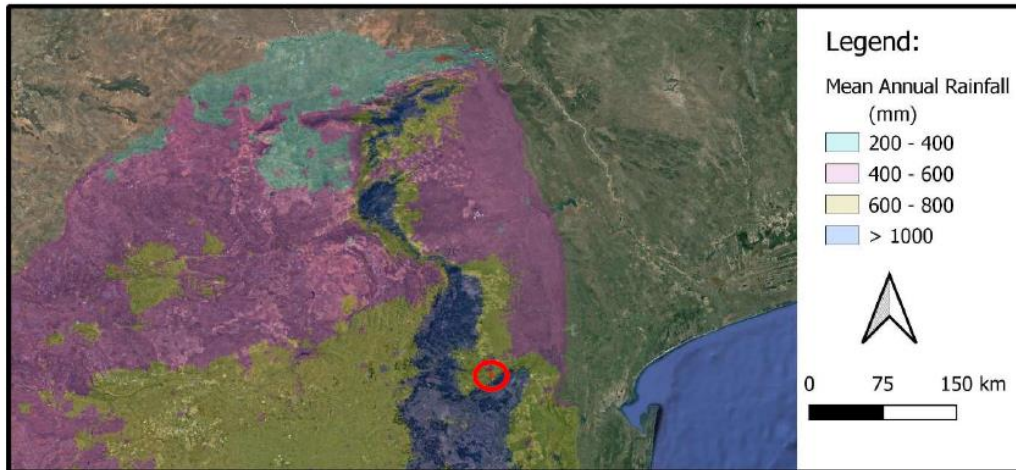


FIGURE 8: MEAN ANNUAL RAINFALL OF THE SITE AND SURROUNDING AREA (SCHULZE, 2007).

VEGETATION, CURRENT LAND-USE, AND AGRICULTURAL ACTIVITIES

The vegetation according to South African National Biodiversity Institute (2006 - 2018), is dominated by Granite Lowveld and Malelane Mountain Bushveld (Figure 9).



FIGURE 9: VEGETATION MAP OF THE SITE (SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE, 2006- 2018).

The land cover of the area is dominated by contiguous indigenous forests, thickets and dense woodland as described by the South African National Land-Cover 2018 (SANLC 2018) (GeoTerraImage, 2018) and captured in Table 4.



FIGURE 10: SOUTH AFRICA NATIONAL LAND-COVER (SANLC, 2018).

TABLE 2: LEGEND TO FIGURE 10 AND DESCRIPTION OF THE DOMINANT LANDUSE IN THE STUDY AREAS AND SURROUNDING LANDUSES.

No.	Class Name	Class Definition
1	Contiguous (indigenous) Forest	Dense to contiguous cover, natural indigenous tree forests, with canopy cover exceeding 35% - 75%, and canopy heights exceeding 2.5 metres. Typically represented by natural forests and dense tall thickets.
2	Contiguous Low Forest & Thicket	Natural tall woody vegetation communities, with canopy cover ranging between 35 - 75%, and canopy heights not exceeding 2.5 metres. Typically represented by dense bush, dense woodland and thicket communities.
3	Dense Forest & Woodland	Natural tall woody vegetation communities, with canopy cover ranging between 35 - 75%, and canopy heights exceeding 2.5 metres. Typically represented by dense bush, dense woodland and thicket communities.
4	Open Woodland	Natural tall woody vegetation communities, with canopy cover ranging between 10 - 35%, and canopy heights exceeding 2.5 metres. Typically represented by open woodland communities.
13	Natural Grassland	Natural and/or semi-natural indigenous grasslands, typically devoid of any significant tree or bush cover, and where the grassland component is typically dominant over any adjacent bare ground exposure. Typically, representative of low, grass-dominated vegetation communities in the Grassland and Savanna Biomes.



19	Artificial Dams	Man-constructed artificial inland waterbodies, ranging from small farm dams to large reservoirs, and if image-detectable, large irrigation canals. The spatial extent of classified water is the cumulative extent of all image-detectable water surfaces from all available images used in the production of the NLC dataset; which is comparable to the annual maximum extent. Note that the occurrence of rooted or floating emergent aquatic vegetation that covers the water surface may influence the area of image-detected open water.
32	Cultivated Commercial Permanent Orchards	Active or recently active cultivated permanent orchards, which receive permanent irrigation. Within the lowveld setting these orchards primarily consist of Macadamia, Avocado, Banana, Papaya and Litchi orchards as well as a variety of citrus species.
36	Cultivated Commercial Sugarcane Non-Pivot	Active or recently active cultivated sugarcane field which do not receive pivot irrigation. Commercial sugarcane is prevalent in the warm lowveld climate, especially on stable soils of basalt, diabase or green belt origin.
42	Fallow Land & Old Fields	Fallow land and old field which were historically developed and cultivated, but which has fallen into disuse or awaiting cultivation and been overgrown by trees.
43	Fallow Land & Old Fields	Fallow land and old field which were historically developed and cultivated, but which has fallen into disuse or awaiting cultivation and been overgrown by dense bush and potentially creates areas of bush encroachment.
47	Residential Formal	Built-up areas primarily containing formally planned and constructed residential structures and associated utilities. The surface is predominantly vegetated by tall trees exceeding 2.5 m in length.
48	Residential Formal	Built-up areas primarily containing formally planned and constructed residential structures and associated utilities. The surface is predominantly vegetated by dense bush less than 2.5 m tall.
49	Residential Formal (low veg / grass)	Built-up areas primarily containing formally planned and constructed residential structures and associated utilities. The dominant vegetation (in gardens etc) is grass and/or low shrub based.
50	Residential Formal (Bare)	Built-up areas primarily containing formally planned and constructed residential structures and associated utilities. The surface is predominantly non-vegetated. This class therefore has the closest spatial representation to all formal residential structures and associated hard-surface footprints.

## LAND CAPABILITY

As a first step to determining the actual land capability of the study sites, the national land capability map (DAFF, 2016) was used to determine the agricultural sensitivity of the area as used by the in the environmental screening tool. The land capability of the study sites ranged from Very Low (Land class 1) to High-Very High (Land class 13) This was a nationwide classification and was refined using the soil map created for the study sites. The low land capability in the map is associated with steep slopes in the mountainous areas of the landscape, where shallow soils restrict the land capability (Figure 11). The desktop study was updated when any Land-use changes were identified during the field study.

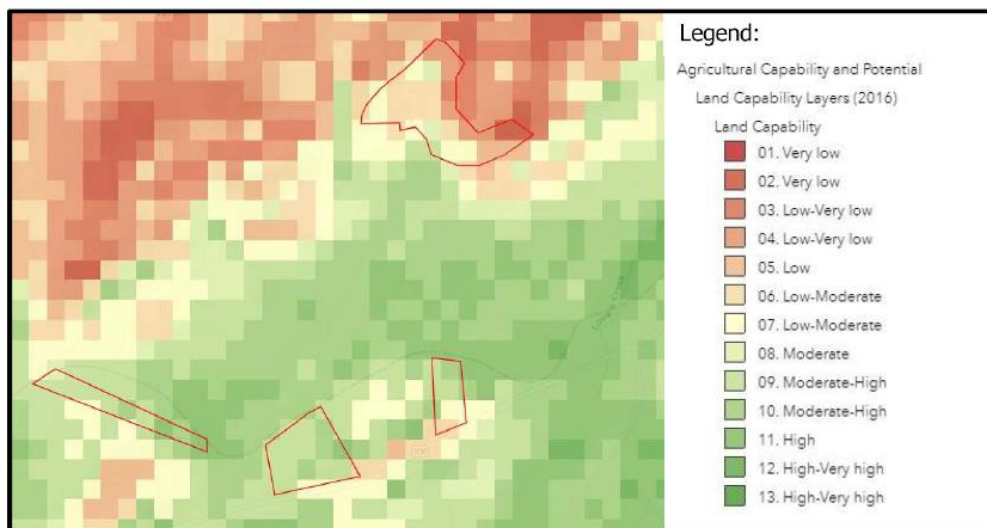


FIGURE 11: LAND CAPABILITY FOR STUDY AREA (DAF)

## SOILS

### SOIL SURVEY

Soil is a non-renewable resource with high conservation importance and is necessary for the production of high value agricultural produce at large scales. Soils therefore need to be protected, because the potential of soils to produce crops is dependent on its depth, structure, texture, and sequence of soil horizons.

The opposite of soil preservation is soil degradation, which involves the removal of soil, and alteration or damage to soil and soil-forming processes, usually due to human activity. Stripping of vegetation will impact negatively on soil formation, natural weathering processes, moisture levels, soil stability, humus levels, and biological activity. It is therefore essential that where it occurs, it be preserved and protected or upgraded to improve the agricultural potential of the property in question by adding to the countries agricultural output and supplying the creation of jobs.

A total of 15 observations were made during the study (Figure 12) which were used to create the soil and land capability map. The description of the soil types and the associated land capability are presented Table 3. The details of each observation are found in Appendix 3.

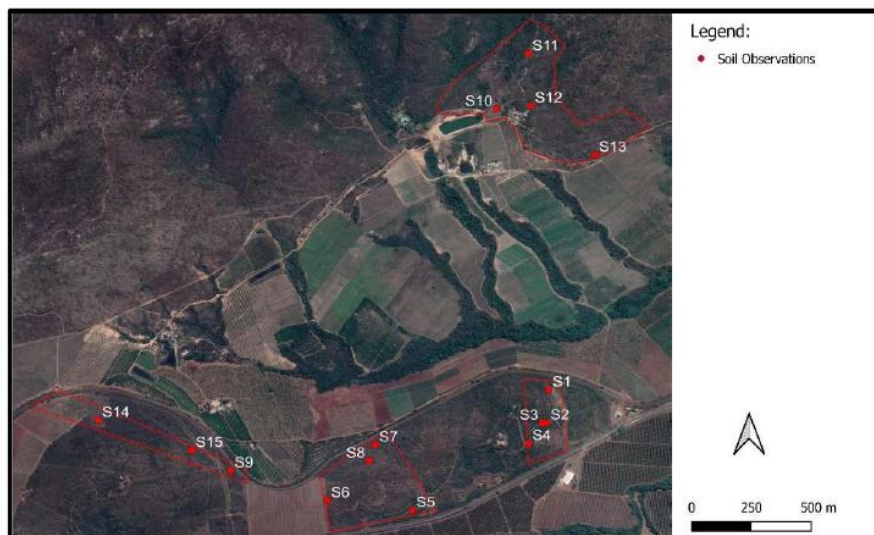


FIGURE 12: LOCATION OF SOIL OBSERVATIONS ON THE STUDY SITES.

The process of soil formation is primarily driven by 5 factors, namely the soil forming factors, including, parent material, topography, time, organisms, and climate. The study areas are so closely situated that organisms, climate and time are relatively constant between the four different study sites. However, the internal topography and parent material of these study areas do vary, resulting in different soils of different agricultural capability being present at different positions in the landscape. The soil depths of the study area vary from shallow (dominated by the Mispah and Glenrosa soil forms) to relatively deep soils (dominated by the Nkonkoni and Hutton soil forms).

Generally, the topsoil of the study areas was dark, most likely due to higher levels of organic carbon in these soils. All topsoils were classified as Orthic topsoils. Orthic horizons are mineral horizons occurring at the surface that have been subjugated to various intensities of weathering and biological activity. These topsoils accommodate a wide range of properties that reflect a wide range of soil forming. Orthic horizons are topsoils which do not classify as a peat, organic, melanic, vertic or humic topsoil, although may be darkened by the accumulation of humified organic matter.

Subsoils primarily contained a weak structure and a sandy-loam texture, which are common amongst soils found in a temperate climate and of parent materials with large amounts of quartz. Red apedal, pedocutanic and hard plinthic subsoils were present in the different study sites.

Red apedal horizons have defined red colours and has a structure weaker than moderate in the moist state. Essentially uniform, the red pigmentation is due to the presence of evenly distributed hematite, which even when it is not necessarily the dominant iron oxide present, typically indicates well aerated soil conditions in warm climates. The apedal or weak structure forms in sandy textured soils, while within clay textured soil it results either from the low activity, non-swelling clay minerals or from a soil moisture regime lacking severe desiccation. These horizons may experience only short durations of saturation, while at greater depths soil saturation may last for longer periods.

Pedocutanic subsoils are a moderately to strongly structured subsoil horizons, with distinct to prominent cutans on the ped surfaces and a sandy clay loam to clay texture. A clear textural contrast exists between the sandier topsoil and pedocutanic subsoil as the clay particles of the topsoil is often transferred to the pedocutanic subsoil through the process of illuviation. Soil peds commonly exhibit brown to dark brown matrix colours while yellowish to brown colour variation is permitted within the ped interiors.



The hard plinthite is an indurated horizon of iron and manganese oxides to form a continuous, or near continuous sheet. It commonly has a concretionary structure with prominent concretions cemented together. Grey matrix colours can fill the pore spaces between individual concretions. These subsoils correlate well with soil-hillslope hydrology, where it commonly occurs at the inflection point of low to higher slope gradients where soil water exits soil profiles above impervious horizons and occurs in semi-arid to sub-humid climates.

Six different soil forms were classified in the different study sites, which include Hutton, Nkonkoni, Mispah, Glenrosa, Swartland and Wasbank soil forms (Table 5). Following an analysis of the different soil forms at different positions in the landscape, the less steep slopes at TMU 4 (footslope) and TMU 5 (valley bottom) positions contain the deeper well drained soils which possess higher land capabilities. At these terrain positions which contain low slope values, soils have undergone more chemical weathering than their upslope counterparts. These soils are therefore more developed, containing deeper subsoil and total profile depths as well as having a more friable lithic horizon compared to Mispah and Glenrosa soils at upslope terrain positions.

The lithic horizon of the Nkonkoni, Swartland and Glenrosa soil forms were saprolithic. Saprolithic subsoils are defined as containing highly weathered material with a friable to slightly hard consistence lacking the hardness of the original rock, but with distinct affinities in respect of crystalline structure and recognizable remnant morphology of the underlying parent rock. These saprolithic horizons could potentially be ripped adding to the additional depth for root development.

This is important for agricultural potential because the depth of soil will determine root penetration and water holding capacity. The depths of the Hutton and Nkonkoni soils reached 1400-1600 mm whilst the Mispah and Glenrosa soil forms only reaching a fraction of that at 400 mm in depth.

TABLE 3: DESCRIPTION OF SOIL ASSOCIATION UNITS

Soil type	Characteristics	Land Capability
Nkonkoni (Nk)	Dark topsoil, Red apedal subsoil between 500-1000 mm which were primarily aluvic, with a small number of luvic soils present. Soil depths ranging from 1200-1800 mm, with a deep saprolithic C-horizon, with no signs of wetness at either A/B or B/C interfaces, indicating soils are well drained.	10
Mispah (Ms)	Dark topsoils of 100-200 mm in depth followed by impermeable hard rock outcroppings. These soils were typical of steep slopes where limited paedogenesis has been allowed to occur.	2
Swartland (Sw)	Dark topsoils ranging in 100-200 mm in depth. Pedocutanic subsoils ranging from 400-600 mm in depth, with an increase in clay between topsoil and subsoils horizons with clear cutanic structures in the subsoil. Saprolithic C- horizons are present without any signs of wetness.	8
Wasbank (Wa)	Chromic topsoil ranging in 100-200 mm in depth. Followed by a shallow albic horizon of 200-400 mm and a luvic hard plinthic C-horizon. Water will not freely drain through this soil profile, but rather accumulate in the albic horizon and move laterally along a gradient. This, coupled with the high clay hard plinthic soils, do not warrant a high land capability.	3
Hutton (Hu)	Dark topsoil was found in the Hutton soils of the study area ranging from 100-200 mm in depth. The Red apedal had a weak structure, free drained and a soil depth of 1200 mm. These soils are classified as high potential high land capability soils.	10
Glenrosa (Gs)	Dark topsoils ranging in 100-200 mm in depth. Water would drain through the Saprolithic horizon. However, total soil depths were between 100-600 mm, the difference in depth was mainly due to degree of weathering in the lithic horizon. The Glenrosa had a low land capability due to shallow depths but yield maps can identify higher weathered and therefore higher land capability.	3



FIGURE 13: PHOTOGRAPHS OF SELECTED SOIL TYPES FOUND IN THE DIFFERENT STUDY AREAS; A-SWARTLAND SOIL FORM WITH A DARK ORTHIC HORIZON AND SAPROLITHIC C-HORIZON; B- SHALLOW WASBANK SOIL FORM WITH A HARD PLINTHIC C-HORIZON; C- A DEEP HUTTON WITH A LUVIC RED APEDAL SUBSOIL; D- A NCONKONI SOIL FORM.



**AREA 1: SOIL MAP AND LAND CAPABILITY**

The actual land capability of the study site varied from the broad national land capability map based on infield soil observations (DAFF, 2016). Area 1 contains shallow Mispah (Ms) and Glenrosa (Gs) soils on the steep slopes, which results in a Very Low land capability. However, the less steep slopes (below 15 percent) is dominated by Nkononi (Nk) soils, which contains Moderate to High land capability values and is situated in the north and north west of the study site.



FIGURE 14: SOIL FORMS OF THE STUDY AREA.



FIGURE 15: LAND CAPABILITY OF THE STUDY AREA.

Therefore, Area 4 contains 4ha of high potential agricultural soil which is suitable for development for irrigation purposes with a Moderate and Moderate to High land capability.



AREA 2: SOIL MAP AND LAND CAPABILITY

The actual land capability of the study site varied from the broad national land capability map based on infield soil observations (DAFF, 2016). Area 2 contains shallow Mispah (Ms) and Glenrosa (Gs) soils on the steep slopes in accordance with Area 1, which results in a Very Low land capability. However, the less steep slopes (below 15 percent) is dominated by Nkononi (Nk) soils also in accordance with the soil observations of Area 1. These less steep slopes contains Moderate to High land capability values and is situated in the far east of the study site.



FIGURE 8: SOIL FORMS OF THE STUDY AREA.

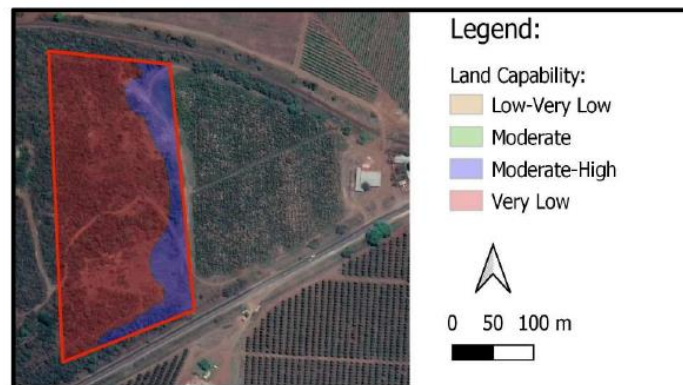


FIGURE 17: LAND CAPABILITY OF THE STUDY AREA.

Therefore, Area 2 contains 1.3ha of high potential agricultural soil which is suitable for development for irrigation purposes with a Moderate and Moderate to High land capability.

AREA 3 SOIL MAP AND LAND CAPABILITY

The actual land capability of the study site varied from the broad national land capability map based on infield soil observations (DAFF, 2016). Area 3 contains shallow Mispah (Ms) and Glenrosa (Gs) on the steep slope, which is in accordance with Area 1 and Area 2. These shallow soils results in a Very Low land capability. Once again, he less steep slopes are dominated by Hutton (Hu) soils, which contains Moderate to High land capability values and is situated in the center of the study site. In the south of the study site Wasbank (Wa) soils are also found which result in Low to Very Low land capability values. Infield assessment of the vegetation and soil distribution pattern was used to differentiate between Wasbank and Hutton soils.



FIGURE 18: SOIL FORMS OF THE STUDY AREA.

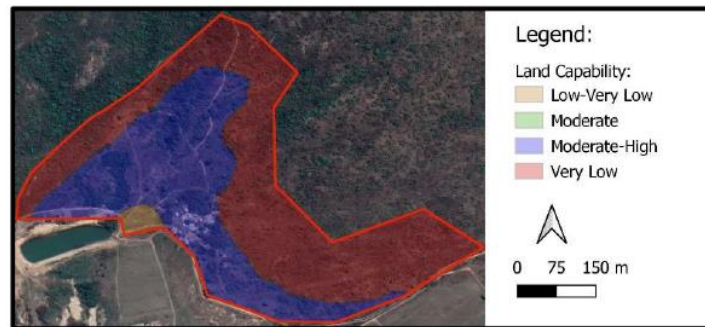


FIGURE 19: LAND CAPABILITY OF THE STUDY AREA.

Therefore, Area 3 contains 10.8ha of high potential agricultural soil which is suitable for development for irrigation purposes with a Moderate and Moderate to High land capability.

#### AREA 4: SOIL MAP AND LAND CAPABILITY

The actual land capability of the study site varied from the broad national land capability map based on infield soil observations (DAFF, 2016). Area 4 contains shallow Mispah (Ms) and Glenrosa (Gs) soils on the steep slopes, in accordance with similar soils on similar terrain positions in Area 1, Area 2 and Area 3. These Mispah and Glenrosa soil results in a Very Low land capability, based on their limited rooting and water holding potential. However, the less steep slopes (below 15 percent) is dominated by Swartland (Sw) soils, which contains Moderate land capability values and is situated in the far east and far west of the study site.



FIGURE 20: SOIL FORMS OF THE STUDY AREA.



FIGURE 21: LAND CAPABILITY OF THE STUDY AREA.

The major difference between Area 4 and the rest of the study areas is apparent in the subsoils, where pedocutanic subsoils, which are more clayey than apedal soils, are present. The difference in subsoil clays is most likely due to subtle differences in the parent material between Area 4 and the other study sites. These higher clay contents should translate to soils with higher CEC values as shown in the chemical analyses, meaning slightly more fertile soils but also soil which are slightly more susceptibility to waterlogged conditions.



Therefore, Area 4 contains 4ha of high potential agricultural soil which is suitable for development for irrigation purposes with a Moderate and Moderate to High land capability.

### CHEMICAL RESULTS

Soil fertility is the capacity of the soil to support plant growth. It is the component of overall soil productivity that deals with its available nutrient status, and its ability to provide nutrients out of its own reserves and through external applications for crop production. The level of soil fertility results from the inherent characteristics of the soil and the interactions that occur between the soil and fertilization management practices.

The chemical properties (Table 5) of representative soils were sampled, analysed, and discussed. The position of the samples is shown in Figure 22.

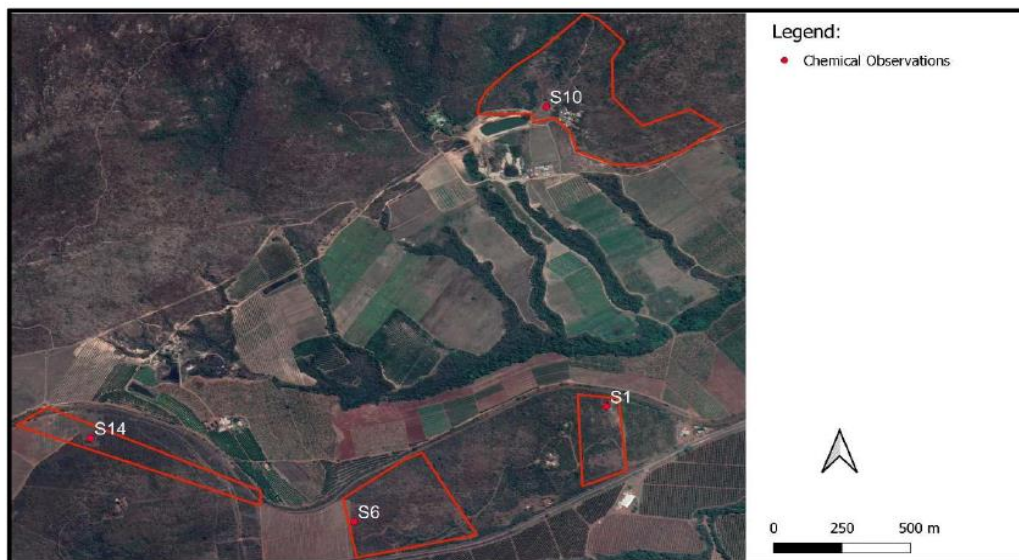


FIGURE 22: POSITION OF THE SAMPLES TAKEN DURING THE STUDY.

The pH is slightly acidic and ranges from 4.66 (acidic) to 6.48 (slightly acidic), indicating that salinity is not a high risk according to the pH values (Table 4). The pH values can be altered from a fertility perspective.



TABLE 4: GENERAL CLASSIFICATION OF SALINE AND SODIC SOILS (CHHABRA, 1996)

Classification	pH <sub>w</sub>	EC (mS m <sup>-1</sup> )	SAR	ESP (%)
Slightly saline	< 8.5	200 – 400	< 13	< 15
Saline	< 8.5	> 400	< 13	< 15
Sodic	> 8.5	< 400	> 13	> 15
Saline-Sodic	< 8.5	> 400	> 13	> 15

The Cation Exchange Capacity (CEC) is generally moderate (6.4-22.1 cmol(+)/kg), indicating the soils, although relatively fertile, will still require good fertilizer management.

TABLE 5: SELECTED CHEMICAL PROPERTIES FOR MODAL SOIL PROFILES

Sample	Soil Form	Diagnostic	pH	P	CEC	Na	K	Ca	Mg
		Horizon	KCl	mg/kg (Ambic 1)	cmol (+)/kg	mg/kg	mg/kg	mg/kg	mg/kg
S6	Nkonkoni	Orthic A	6.48	178.5	6.4	47	130	1039	82
S1	Nkonkoni	Orthic A	5.49	23.3	12.4	45	202	1783	333
S10	Wasbank	Orthic A	6.13	10.6	22.1	62	134	3559	448
S14	Swartland	Orthic A	4.66	9.9	14.5	52	113	1813	595

Clay percentages are generally low, likely more due to the properties of the parent materials rather than an indication of illuviation. The clay content is highest for the topsoils of the Swartland soil form.

TABLE 6: PARTICLE SIZE DISTRIBUTION OF MODAL SOIL PROFILES

Sample	Soil Form	Diagnostic	Clay (%)	Silt (%)	Sand (%)	C (%)
S6	Nkonkoni	Orthic A	6	5	89	0.13
S1	Nkonkoni	Orthic A	16	15	69	0.63
S10	Wasbank	Orthic A	24	19	57	1.63
S14	Swartland	Orthic A	35	11	54	0.67

The laboratory results indicate that the chemical parameters are manageable, provided there are sufficient external drainage. The texture results (Table 6) show that S6 has a loamy-sand texture, S1 has a sandy-loam texture, S10 has a sandy-clay-loam texture and S14 also has a sandy-clay-loam texture. The results indicate that these soils are indeed well drained as well as possessing a good chemical fertility basis.

The Nkonkoni chemical samples are also representative of the Hutton soils as these soils are only different in terms of the depth of the subsoil red apedal horizon, with the Hu soils possessing a deep red apedal horizon whereas the Nkonkoni comprises of a shallower red

apedal subsoil and a lithic C-horizon. Therefore, these results correspond well with assigned land capability of the different soils in the study areas.

### SOIL EROSION

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Soil erosion is a natural process that, without disturbance, would equilibrate with the rate of weathering in a stable area. Any development that destroys the natural protective canopy of vegetation speeds up the process of soil erosion. Soil properties determine the erodibility of soils and their ability to support vegetation and this needs to be understood in assessing the potential for erosion and the suitability for the proposed establishment of a vineyard. Soils susceptible to water erosion are normally silty, are weakly structured, have low organic contents, and have poor internal drainage.

The types of erosion can include:

- Wind erosion is highly visible and generally much more severe.
- Sheet erosion (water erosion), which is almost invisible.
- Rill erosion occurs during heavy rains when small rills form over areas making farming difficult.
- Gully erosion makes gullies, sometimes impossible to cross with farm machinery.
- Ephemeral erosion occurs in a natural depression and differs from gully erosion in that the area can be crossed by farm machinery.

Wind erosion is very selective and is capable of carrying the finest particles, primarily organic matter, clay, and loam, for significant distances. The more structured and the coarser the soil, the less susceptible the soil is to wind erosion. The effect of wind erosion on the soil will also depend on the combination of the soil properties as mentioned above, together with the wind speed. The higher the wind speed, the more energy is available to erode soils with even coarse, structured particles.

The intensity of wind erosion on soils is dependent on various physical factors related to the soil such as surface roughness, slope, protective soil cover (such as vegetation cover), the water content of the soil, stability of dry soil aggregates, and stability of soil crust. Additionally, factors related to wind such as wind velocity, duration of the wind, and angle of incidence, together with the aforementioned physical properties of the soil will determine the effect of wind erosion on the soil.

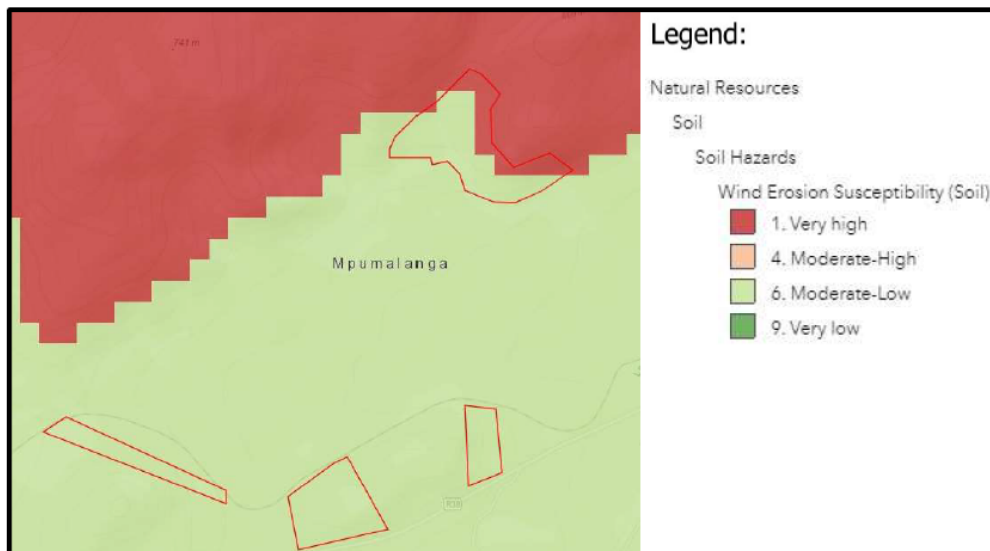


FIGURE 23: THE WIND EROSION SUSPECTIBILITY OF THE DIFFERNET STUDY SITES (AGIS COMPREHENSIVE ATLAS).

Wind erosion control is carried out on two fronts: reducing wind speed at ground level, and increasing soil cohesion, thus improving soil resistance to wind. There are a few mitigation measures, according to Roose (1996) that can be implemented to prevent wind erosion, and these include:

1. Increase soil cohesion through:
  - Applying organic matter in the surface horizons will improve soil structure.
  - Supplementary irrigation to allow favourable tillage conditions and establish plant cover before windy seasons.
2. Increase the roughness of the soil surface:
  - Cropping techniques that leave large clods on the soil surface or ridges perpendicular to the direction of the prevailing wind - although ridges must not be more than 40 cm high or the wind will lop off their tops, thus speeding up erosion. Ridging is a prime example of increasing the roughness of the soil surface as well as improving the volume of soil available to supply nutrients and store water for the crop.
  - Leaving crop residues in the fields.
3. Increase plant cover:

- Wind-speed can also be cut by increasing plant density. However, developing agricultural land with irrigated horticultural crops naturally provides additional plant cover in the cultivation rows. Cover crops and leaving crop residues in the fields aids in the mitigation of erosion losses.

#### 4. Windbreaks:

- Their role is twofold: they cut wind speed to reduce both evaporation and wind erosion. Shade cloth or tree stands can be established. The effect of cutting wind speed by 20% is operative over an area 10 to 12 times the height of the barrier before and behind it.
- This protection depends on the permeability of the wind-break, for relative impermeability reduced speed more, but over a smaller area. According to Heusch (1988), if the speed is cut too much by very close planting, the temperature rises, and crops are scorched along the windbreak.
- In principle; wind-breaks reduce evapotranspiration by up to 20% (although the water consumption of the wind-break itself can offset this positive effect), hence the attraction of windbreaks around irrigated crops.

Area 1,2 and 4 are all considered to be classified as Moderate to Low in terms of susceptibility for wind erosion. These results are in agreement with the results of the soil survey, where dark topsoils were observed containing high levels of soil aggregation and structure of a weak nature. The high levels of calcium and magnesium cations in the soil also further the flocculation of soil particles and add to the moderately low levels of potential wind erosion. Area 3 is mostly classified as Moderate to Low in terms of susceptibility for wind erosion, however, on the northern steep slopes above 15 percent, the soils do possess a Very high susceptibility for wind erosion. It should therefore be advised to not remove natural vegetation above a slope of 15 percent in Area 3.

Soil loss due to water erosion reduces potential agricultural yields and reduces land productivity. Managing soil and water resources is the best practice to prevent soil from being washed away. Bare soils are very vulnerable to water erosion, and steep slopes and long, uninterrupted slopes are especially prone to water erosion. Silty soils, soils with low organic matter, and soils with an impermeable subsoil layer are also more susceptible to water erosion.

Area 1,2 and 4 are all considered to be classified as Moderate to Low in terms of susceptibility for water erosion. Area 3 is mostly classified as Moderate to Low in terms of susceptibility for water erosion, however, on the northern steep slopes above 15 percent, the soils do possess



a Moderate susceptibility for water erosion. It should therefore be advised to not remove natural vegetation above a slope of 15 percent in Area 3.

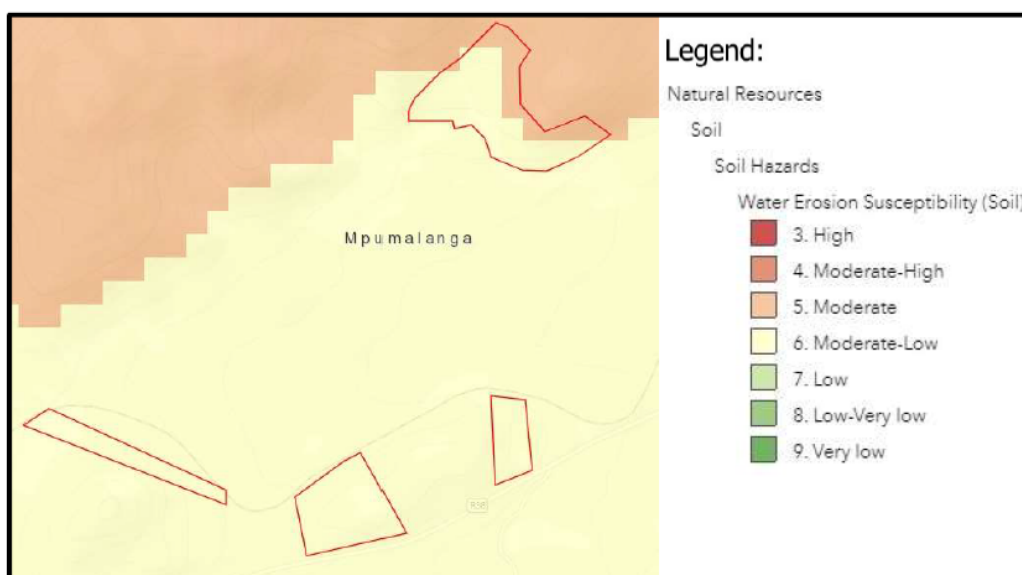


FIGURE 24: THE WATER EROSION SUSPECTIBILITY OF THE DIFFERENT STUDY SITES (AGIS COMPREHENSIVE ATLAS).

During the field visit no erosion was noted in any of the study areas. The soils in the study areas are stable, structured and well aggregated based on infield observations and chemical analyses. Therefore, a low risk of major erosion losses is present, and it is the opinion of the author that impact of erosion is limited and with proper soil management the risk of increased erosion is low.

#### SOIL REHABILITATION POST CLEARING AND EROSION MANAGEMENT

The clearing of vegetation and development of agricultural land should take place simultaneously within 2-4 months, preferably at the end of winter and start of spring depending on the type of crop being planted. The amount of time the topsoil is completely exposed without vegetation to the processes of erosion should be minimized. The time of year when rainfall and wind speeds are at their lowest should coincide with development, which should therefore fall between August and November. According to the soil report the soils will facilitate good drainage so excessive water erosion is unlikely. Wind erosion should be a concern of the developer. Once developed, the topsoil should be covered as soon as possible by vegetation to mitigate any potential erosion losses. This can be achieved by establishing

native grass species between cultivated rows. The vegetation between and in the rows should be routinely cut and left in place on top of the soil surface to further protect the soil from erosion and create conducive conditions for topsoil formation.

The removal of natural vegetation should not occur on steep slopes, using slopes of 15 percent as guideline. The greater the slope, the more susceptible soils are to erosion. The soils above 15 percent are fairly shallow and therefore have a limited water storage capacity. Although steep slopes already increased the likelihood of topsoil erosion through overland flow of water, once the water storage capacity of these soils are saturated additional overland flow is certain to occur.

Without mitigation, the soils will be exposed to the processes of erosion for long periods of time leading to the loss of fertile topsoils. With the described mitigation measures the direct impact of development should be very low.

Impact of water and wind erosion:

	Clearing (No mitigation)	Weight	Clearing (With mitigation)	Weight	Development (No mitigation)	Weight	Development (With mitigation)	Weight
Extent	Site specific	1	Site specific	1	Site specific	1	Site specific	1
Duration	Short Term	1	Short Term	1	Long term	4	Long term	4
Intensity	Medium	6	Low	4	Medium-High	7	Medium	6
Reversibility	Complete reversible	1	Complete reversible	1	Nearly completely reversible	2	Nearly completely reversible	2
Probability	Medium Probability	3	Low Probability	2	High probability	4	Medium Probability	3
Status	Negative		Negative		Negative		Negative	

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1201

Confidence	High		High		High		High	
Significance		12		9		18		16
Extent to which impacts can be reversed	All negative impacts can be successfully mitigated and reversed through soil management and irrigation scheduling.							

### CURRENT LAND USE

The current land use is very similar to the SANLC 2018 (GeoTerralmage, 2018), which indicated that the area is dominated by contiguous dense forests and dense woodland thickets. Land cover is one of the parameters used in the screening tool to classify the sensitivity of the area. The most significant changes to land uses would be the removal of natural vegetation for the potential development of irrigated orchards.

### CURRENT EMPLOYMENT FIGURES

Because the current land use does not support the employment of any permanent or casual employees, no potential loss of job opportunities can be foreseen, instead, potential bush clearing and subsequent development of orchards would facilitate the creation of additional permanent and casual job opportunities in the short-, medium- and long-term.

### CONCLUSION AND RECOMMENDATIONS

The topsoil and subsoil horizons consist of soil textures ranging from loamy-sand to sandy-clay-loam and therefore will facilitate good drainage. Most of the soils below 15 percent in slope are classified as high-potential irrigation soils with Moderate and Moderate to High land capability values. The soil texture results confirm the morphological interpretations and good drainage is expected on the soils. This totals to 20.9ha of land suitable for agricultural purposes.

The laboratory results indicate that the chemical parameters are manageable with relatively fertile topsoils. Good soil fertility and irrigation management should be practiced.

It is recommended that the removal of natural vegetation should not exceed the boundary of the soils which are suitable for agricultural purposes. The impact of soil erosion at the different study sites are negligible as long effective soil management and irrigation practices are applied.

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It is the specialist's opinion that the proposed development sites are of high agricultural sensitivity and that the development of the proposed sites will have a significantly impact. However, the potential addition of 20.9ha of high value agricultural land would have a net positive effect. The income generated per hectare would be very high and a large number of additional jobs in the short and medium term would be generated on land which is currently not yielding any.

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## REFERENCES

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## APPENDIX 1: SPECIALIST CV

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### EDWARD SMIT

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#### EDUCATION

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PhD Soil Science	University of the Free State	2022-
M.Sc. Soil Science	University of the Free State	2021
B.Sc. Soil Science	University of the Free State	2019
Matric certificate	Oakdale Agricultural High School	2015

#### PROFESSIONAL AFFILIATIONS

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- SACNASP- Candidate Nat Sci
- Member of the Soil Science Society of South Africa

#### WORK EXPERIENCE

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- Private Consultant / Soil Scientist- January 2020 - Present
- University of the Free State/ Assistant Researcher- January 2022- Present

#### PUBLICATIONS

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Total Consultancy projects: 10

Total peer reviewed publications: 1

Most relevant:

Smit, I.E. & van Tol, J. J., 2022. Impacts of Soil Information on Process-Based Hydrological Modelling in the Upper Goukou Catchment, South Africa, *Water* 2022, 14(3), 407

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PROF JOHAN VAN TOL

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EDUCATION

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PhD Soil Science	University of the Free State	2011
M.Sc. Agric Soil Science	University of the Free State	2008
B.Sc. Agric (Hon)	University of the Free State	2007
B.Sc. Agric	University of the Free State	2006
Matric certificate	Transvalia High School	2002

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PROFESSIONAL AFFILIATIONS

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- SACNASP- Pri Nat Sci 400274/13
- Council Member of the Soil Science Society of South Africa
- Member of the Soil Classification Work Group
- Member of South African Soil Surveyors Organisation

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WORK EXPERIENCE

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- University of the Free State / Associate Professor: 2016 - Present
- Digital Soils Africa / Soil Scientist: 2015 – Present
- University of Fort Hare / Senior Lecturer: 2011 - 2016
- University of the Free State / Researcher: 2007 - 2011
- University of the Free State/ Assistant Researcher- January 2011- December 2015

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MOST RELEVANT PUBLICATIONS

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Total consultancy projects: 71

Total peer reviewed publications: 56

Van Tol, J.J., 2020. Hydropedology in South Africa: advances, applications and research opportunities. *South African Journal of Plant and Soil*.  
<https://doi.org/10.1080/02571862.2019.1640300>

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Van Tol, J.J. & Lorentz, S.A., 2018 Hydropedological interpretation of soil distribution patterns to characterise groundwater/surface-water interactions. *Vadose Zone Journal*. <https://doi:10.2136/vzj2017.05.0097>

Van Tol, J.J., Lorentz, S.A., van Zijl, G.M. & Le Roux, P.A.L., 2018. The contribution of hydropedological assessments to the availability and sustainable water, for all (SDG#6). *In* Lal, R., Horn, R. & Kosaki, T. (eds). Soil and Sustainable Development Goals. Catena-Schweizerbart, Stuttgart.

#### SPECIALIST DECLARATION

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I, Edward Smit, declare that –

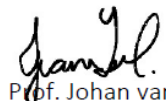
- I act as the independent specialist in this application;
- I regard the information contained in this report to be true and correct;
- I do not have a conflict of interest in this project;
- I will conduct the work relating to the project in an objective manner.



Edward Smit  
MSc Soil Science  
Cand Nat Sci

I, Johan van Tol, declare that –

- I act as the independent specialist in this application;
- I regard the information contained in this report to be true and correct;
- I do not have a conflict of interest in this project;
- I will conduct the work relating to the project in an objective manner.



Prof. Johan van Tol  
PhD Soil Science  
Pri Nat Sci 400274/13



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APPENDIX 2: LAND TYPE

**LAND TYPE / LANDTIPE** ..... : Ae106  
**CLIMATE ZONE / KLIMAATSONE** ..... : 1010S  
**Area / Oppervlakte** ..... : 15730 ha  
 Estimated area unavailable for agriculture  
*Beraamde oppervlakte onbesikbaar vir landbou* : 50 ha

Occurrence (maps) and areas / *Voorkoms (kaarte) en oppervlakte* :  
 2530 Barberton (15730 ha)

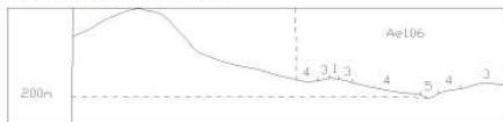
Inventory by / *Inventaris deur* :  
 J L Schoeman

Modal Profiles / *Modale profiele* :  
 P895 P897 P898

Terrain unit / <i>Terreineenheid</i> .....	1	3	4	5	
% of land type / % van landtipe .....	10	20	65	5	
Area / <i>Oppervlakte (ha)</i> .....	1573	3146	10224	786	
Slope / <i>Helling (%)</i> .....	0 - 4	1 - 4	1 - 2	0 - 2	
Slope length / <i>Hellingslengte (m)</i> .....	250 - 600	100 - 500	100 - 800	20 - 100	
Slope shape / <i>Hellingsvorm</i> .....	Y	Y	X	X	
MB0, MB1 (ha) .....	1022	2202	9202	786	<b>Depth limiting material</b>
MB2 - MB4 (ha) .....	551	944	1022	0	

Soil series or land classes <i>Grondseries of landklasse</i>	Depth <i>Diepte (mm)</i>	MB:					Total <i>Totaal</i>		Clay content % <i>Klei-inhoud %</i>				Texture <i>Tekstuur</i>		<i>Diepte-beperkende materiaal</i>			
			ha	%	ha	%	ha	%	A	E	B21	Hor	Class / <i>Klas</i>					
Shorrocks Hu36	500-1200+	0	629	40	1258	40	3578	35	79	10	5545	35.3	12-30		15-35	B	meSaLm-SaCILm	so,sl
Longlands Lo21, Albany Lo22, Veldrif Kd11, Mkambati Kd14	500-900	0			315	10	2045	20	236	30	2595	16.5	5-15	5-15	20-35	A	meSa-SaLm	sp,ge
Trevanian Gs17, Platt Gs14, Mispah Ms10	300-500	2	551	35	944	30	1022	10			2517	16.0	10-25			A	LmmeSa-SaCILm	lc,R
Makatini Hu37, Marikana Hu38	400-900	1	157	10	315	10	1534	15	39	5	2045	13.0	30-50		35-60	B	SaCl-CI	so,sl
Glendale Sd21, Shortlands Sd22	500-900	1	79	5	157	5	1022	10	79	10	1337	8.5	35-55		35-60	B	SaCl-CI	so
Bonheim Bo41, Rasheni Bo21, Arcadia Ar40	>1200	1					1022	10	79	10	1101	7.0	35-55		35-60	A	SaCl-CI	
Mangano Hu33, Zwartfontein Hu34	600-1200+	0	157	10	157	5					315	2.0	8-15		8-15	B	fi/meSa-SaLm	sl,R
Leeufontein Oa16, Jozini Oa36	>1200	0							275	35	275	1.8	15-25		20-30	B	fi/meSaCILm	

**Terrain type / *Terreintipe*** : A2  
 Terrain form sketch / *Terreinvormskets*



For an explanation of this table consult LAND TYPE INVENTORY (table of contents)  
*Ter verduideliking van hierdie tabel kyk LANDTIPE - INVENTARIS (inhoudsopgawe)*

**Geology:** Potassic gneiss and migmatite (Nelspruit Suite); diabase.

**Geologie:** Kaliumhoudende gneis en migmatiet (Suite Nelspruit); diabaas.

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**LAND TYPE / LANDTIPE** ..... : **Ea74**  
**CLIMATE ZONE / KLIMAATSONE** ..... : 1101S  
**Area / Oppervlakte** ..... : 10217 ha  
 Estimated area unavailable for agriculture  
*Beraamde oppervlakte onbesikbaar vir landbou* : 150 ha

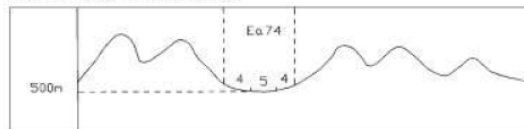
<b>Terrain unit / Terreineenheid</b> .....	:	4	5
% of land type / % van landtipe .....	:	50	50
<b>Area / Oppervlakte (ha)</b> .....	:	5108	5108
<b>Slope / Helling (%)</b> .....	:	4 - 12	0 - 4
<b>Slope length / Hellinglengte (m)</b> .....	:	50 - 300	100 - 500
<b>Slope shape / Hellingvorm</b> .....	:	X	X
<b>MB0, MB1 (ha)</b> .....	:	5108	4598
<b>MB2 - MB4 (ha)</b> .....	:	0	511

Occurrence (maps) and areas / *Voorkoms (kaarte) en oppervlakte* :  
 2530 Barberton (10217 ha)

Inventory by / *Inventaris deur* :  
 J L. Schoeman  
 Modal Profiles / *Modale profiele* :  
 None / Geen

Soil series or land classes <i>Gronseries of landklasse</i>	Depth <i>Diepte</i>		ha		%		Total <i>Totaal</i>	Clay content % <i>Klei-inhoud %</i>				Texture <i>Tekstuur</i>		Depth limiting material <i>Diepte-beperkende materiaal</i>
	(mm)	MB	ha	%	ha	%		ha	%	A	E	B21	Hor	
Glendale Sd21, Shortlands Sd22	900-1200+	0	1788	35	1532	30	3321	32.5	30-45		35-60	B	SaCl-CILm-Cl	so,sl
Makatini Hu37, Doveton Hu27, Marikana Hu38	900-1200+	0	1277	25	1532	30	2810	27.5	30-45		35-60	B	SaCl-CILm-Cl	so,sl
Glendale Sd21	400-900	1	1532	30			1533	15.0	30-45		35-60	B	SaCl-CILm-Cl	so
Bonheim Bo41	>1200	0			1022	20	1022	10.0	30-45		40-55	A	SaCILm-Cl	
Msinga Hu26, Shorrocks Hu36	900-1200+	0	511	10	511	10	1022	10.0	25-30		25-35	B	fiSaCILm	so,sl
Stream beds/Stroombeddings		4			511	10	511	5.0						

**Terrain type / Terreintipe** : A2  
 Terrain form sketch / *Terreinvoormskets*



For an explanation of this table consult LAND TYPE INVENTORY (table of contents)  
*Ter verduideliking van hierdie tabel kyk LANDTIPE - INVENTARIS (inhoudsopgawe)*

**Geology:** Mafic and ultramafic schists and lavas, banded ironstone and chert of the Tjakastad Group (Onverwacht Formation, Barberton Sequence).

**Geologie:** Mafiese en ultramafiese skiste en lavas, gestreepte ystersteen en chert van die Groep Tjakastad (Formasie Onverwacht, Opeenvolging Barberton).

Mataffin Macadamia  
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**LAND TYPE / LANDTIPE** : Ib158  
**CLIMATE ZONE / KLIMAATZONE** : 1097S  
 Area / Oppervlakte : 13734 ha  
 Estimated area unavailable for agriculture  
 Beraamde oppervlakte onbeskikbaar vir landbou : 50 ha

Occurrence (maps) and areas / Voorkoms (kaarte) en oppervlakte :  
 2530 Barberton (13734 ha)

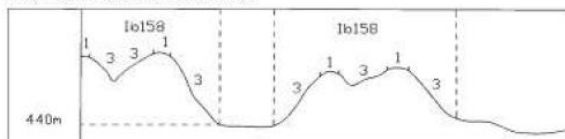
Inventory by / Inventaris deur :  
 J L Schoeman  
 Modal Profiles / Modale profiele :  
 None / Geen

<b>Terrain unit / Terreineenheid</b> .....	1	3	5
% of land type / % van landtipe .....	13	85	2
Area / Oppervlakte (ha) .....	1785	11674	275
Slope / Helling (%) .....	12 - 40	15 - 100	6 - 40
Slope length / Hellinglengte (m) .....	10 - 100	20 - 200	5 - 50
Slope shape / Hellingvorm .....	Y	Y-Z	X
MB0, MB1 (ha) .....	0	0	55
MB2 - MB4 (ha) .....	1785	11674	220

**Depth limiting material**

Soil series or land classes Grondseries of landklasse	Depth Diepte		ha %		ha %		Total Totaal		Clay content % Klei-inhoud %				Texture Tekstuur	Diepte-beperkende materiaal	
	(mm)	MB:	ha	%	ha	%	ha	%	A	E	B21	Hor	Class / Klas		
Soil-rock complex Grond-rotskompleks:															
Rock/Rots	4	:	1428	80	7004	60	82	30	8515	62.0					
Grovedale Cf30, Kusasa Cf31	100-600	2	178	10	1167	10	28	10	1373	10.0	5-15	5-10	A	coSa-LmSa	lc
Mispah Ms10	100-300	3	178	10	1167	10	28	10	1373	10.0	5-15		A	coSa-LmSa	R
Portsmouth Hu35, Shorrocks Hu36	200-400	2			1167	10	55	20	1222	8.9	5-15	8-20	B	LmcoSa-SaLm	R,so
Glenrosa Gs15, Paardeberg Gs12	100-400	3			1167	10	28	10	1195	8.7	5-15		A	coSa-LmSa	lc
Sandveld Fw12	900-1200+	1					55	20	55	0.4	5-12		A	coSa-LmSa	R

**Terrain type / Terreintipe** : D5  
 Terrain form sketch / Terreinvormskets



For an explanation of this table consult LAND TYPE INVENTORY (table of contents)  
 Ter verduideliking van hierdie tabel kyk LANDTIPE - INVENTARIS (inhoudsopgawe)

**Geology:** Potassic gneiss, migmatite and biotite granite of Swazian age.

**Geologie:** Kaliumhoudende gneis, migmatiet en biotietgraniet van Swazium ouderdom.

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Mbombela  
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### APPENDIX 3: OBSERVATIONS

Longitude	Latitude	Observation	Soil form	Horizon	Depth (cm)	Elevation (m)	Land Capability
31.2795333333	-25.6460433333	S1	Nkonkoni	Orthic	10	478.8	10
				Red Apedal	40		
				Lithic	50		
31.2794383333	-25.6474	S2	Glenrosa	Orthic	15	477.9	3
				Lithic	20		
31.2808216667	-25.647585	S3	Glenrosa	Orthic	20	243.4	3
				Lithic	20		
31.2785066667	-25.6483166667	S4	Mispah	Orthic	15	523.8	2
				Hard Rock	-		
31.2738616667	-25.650985	S5	Mispah	Orthic	15	506.4	2
				Hard Rock	-		
31.2703233333	-25.6505833333	S6	Nkonkoni	Orthic	15	508.5	10
				Red Apedal	30		
				Lithic	40		
31.2723216667	-25.6483016667	S7	Nkonkoni	Orthic	15	493.2	10
				Red Apedal	70		
				Lithic	50		
31.2720593065	-25.6489523149	S8	Nkonkoni	Orthic	15	497.5	10
				Red Apedal	35		
				Lithic	30		
31.2663033333	-25.6493466667	S9	Swartland	Orthic	15	502.1	8
				Pedocutanic	40		
				Lithic	50		
31.27736	-25.6345483333	S10	Wasbank	Orthic	10	508.3	3
				Albic	20		

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							Mattafin
							Mbombela
							1201
				Hard Plinthic	80		
31.2786866667	-25.6322716667	S11	Hutton	Orthic	20	536.4	10
				Red Apedal	120		
31.2787983333	-25.634405	S12	Mispah	Orthic	15	529.1	2
				Hard Rock	-		
31.2814383333	-25.636515	S13	Hutton	Orthic	-	485.5	10
				Red Apedal	-		
31.2608	-25.647295	S14	Swartland	Orthic	10		
				Pedocutanic	70	534.8	8
				Lithic	50		
31.2646883333	-25.6485266667	S15	Glenrosa	Orthic	15	541	3
				Lithic	40		



