

2025

DRAFT SCOPING REPORT

CULTIVATION OF VINEYARD ON PORTION 39 (A
PORTION OF PORTION 6) OF THE FARM
RIETVALLEI NO. 115.

ROBERTSON DIVISION,
WESTERN CAPE PROVINCE

DEADP REF:
16/3/3/6/7/2/B1/14/1462/25

APPLICANT:
GOEDEMOED AGRI (EDMS) BPK

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ACRONYMS

WORD	DEFINITION
CARA	Conservation of Agricultural Resources Act (43 of 1983)
CBA	Critical Biodiversity Area
CRR	Comments and Response Report
DAFF	Department of Forestry and Fisheries
DEA	Department of Environmental Affairs
DEA&DP	Department of Environmental Affairs & Development Planning
DEAT	Department of Environmental Affairs & Tourism
DFFE	Department of Forestry, Fisheries & Environment
DSR	Draft Scoping Report
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioner Association of South Africa
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMP	Environmental Management Programme
ESA	Ecological Support Area
FSR	Final Scoping Report
GN	Government Notice
GN R	Government Notice Regulation
Ha	Hectare
HCS	Hazardous Chemical Substances
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties
IAIAsa	International Association for Impact Assessment South Africa
IFC	International Finance Corporation
MPRDA	Minerals and Petroleum Development Act (28 of 2002)
NCPSDF	Northern Cape Provincial Spatial Development Framework
NEMA	National Environmental Management Act (Act 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act (Act 10 of 2004)
NEMWA	National Environmental Management: Waste Act (Act 59 of 2008)
NERSA	National Energy Regulator of South Africa
NID	Notice of Intent to Develop
NFA	National Forests Act (Act 84 of 1998)
NHRA	National Heritage Resources Act (Act 25 of 1999)
NOI	Notice of Intent
NWA	National Water Act (Act 36 of 1998)
ONA	Other Natural Area
PPP	Public Participation Process
SACAA	South African Civil Aviation Authority
SAHRA	South African Heritage Resources Agency
SACNASP	South African Council for Natural Scientific Professionals

WORD	DEFINITION
SANS	South African National Standard
S&EIR	Scoping & Environmental Impact Report
SDF	Spatial Development Framework
SIA	Social Impact Assessment
WUL	Water Use Licence
WULA	Water Use License Application

DEFINITIONS

WORD	DEFINITION
Environment	The surroundings within which humans exist and that are made up of: (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them: and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being: (xix)
Watercourse	Watercourse means - (i) a river or spring; (ii) a natural channel in which water flows regularly or intermittently; (iii) a wetland, lake or dam into which, or from which, water flows; and (iv) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks,
Pollution	The introduction into the environment of any substance caused by the action of man which has, or results in, significant harmful effects to mankind or the environment. Pollutants include any substances which make the environment less fit in any way for its intended use.
Fauna	Refers to all animals, including insects and micro-organisms.
Flora	Refers to all plant species.
Air quality	The term “air quality” means the state of the air around us
Bunded area	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which forms the perimeter and floor of a compound and provides a barrier to retain liquid. Bunds should be designed to contain spillages and leaks in order to prevent pollution of the receiving environment, bunds are also used for fire protection, product recovery and process isolation.
Waste	Means any substance, whether or not that substance can be reduced, reused, recycled and recovered, that (i) is surplus, unwanted, rejected, discarded, abandoned or disposed of (ii) the generator has no further use of - for the purposes of production, reprocessing or consumption; (iii) that must be treated or disposed of; or (iv) is identified as a waste by the Minister;
Hazardous Waste	Hazardous waste is waste that poses substantial or potential threats to public health or the environment
Hazardous Chemical Substances	Dangerous goods are solids, liquids, or gases that can harm people, other living organisms, property, or the environment. They are often subject to chemical regulations.
Soil	The upper layer of earth in which plants grow, a black or dark brown material typically consisting of a mixture of organic remains, clay, and rock particles.
Heritage Resources	Heritage resources include the following: a) Places, buildings, structures and equipment of cultural significance; b) places to which oral traditions are attached or which are associated with living heritage; c) historical settlements and townscapes; d) landscapes and natural features of cultural significance; e) geological sites of scientific or cultural importance;

WORD	DEFINITION
	f) archaeological and paleontological sites; g) graves and burial grounds, including— i. ancestral graves; ii. royal graves and graves of traditional leaders; iii. graves of victims of conflict; iv. graves of individuals designated by the Minister by notice in the Gazette; v. historical graves and cemeteries; and vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983); h) sites of significance relating to the history of slavery in South Africa; i) movable objects, including— i. objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens; ii. objects to which oral traditions are attached or which are associated with living heritage; iii. ethnographic art and objects; iv. military objects; v. objects of decorative or fine art; vi. objects of scientific or technological interest; and vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section (xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

SUMMARY OF APPLICATION

	PROJECT ASPECT	DESCRIPTION
1	Description of the Activity	The applicant (Goedemoed Agr) intends to develop an agricultural area for the cultivation of grapes and establish a vineyard on part of portion 39 (a portion of portion 6) of the farm Rietvallei 115.
2	Municipality	Cape Winelands District Municipality
3	Competent Authority	Western Cape Department of Environmental Affairs and Development Planning
4	Applicant	Goedemoed Agri (Edms) Bpk
5	Property Details	Part of portion 39 (a portion of portion 6) of the farm Rietvallei 115
6	Size of Properties	75 Hectares
7	Development Footprint	30 Hectares
8	Capacity of Facility	Not Applicable
9	Type of Technology	Traditional Agricultural Farming practices, vehicles and equipment to be utilised
10	Other Infrastructure (e.g. additional infrastructure, details of access roads, extent of areas required for laydown of materials and equipment, etc.)	No additional infrastructure/services required. Existing access roads will be used Existing water right Electricity connected to Eskom

1 INTRODUCTION

The applicant (Goedemoed Agr) intends to develop an agricultural area for the cultivation of grapes and establish a vineyard on part of portion 39 (a portion of portion 6) of the farm Rietvallei 115. The proposed activity is located in Cape Winelands District Municipality in the Western Cape.

The applicant initially proposed to cultivate an area of 19.8 hectares and embarked on a Basic Assessment process for the listed activity. However, with further investigation, the scope increased to potentially cultivate 30 hectares and has changed the scope of the proposed activity to an Environmental Impact Assessment process. Green360 (Pty) Ltd was appointed as the Environmental Assessment Practitioner (EAP) and had conducted public participation and specialist studies as part of the initial process. Due to a change in scope by the applicant, Enviromin Projects (Pty) Ltd has since been appointed by Green 360 as an additional independent EAP Ltd to assist with the EIA process. This new appointment includes the facilitation of a new public participation process, as required.

1.1 EIA PROCESS AND APPROACH

The proposed vineyard cultivation triggers a listed activity in terms of the EIA Regulations, 2014 for the clearance of vegetation and consequently requires a full Scoping and Environmental Impact Assessment (S&EIR) process to be conducted in accordance with these regulations. Section 2.2 provides an explanation of the legal requirements.

The EIA process follows a phased project cycle including the following phases as described further:

- **Screening Phase:**

- Appointment of specialists – provide terms of reference
- Identification of environmental issues and concerns
- Site assessment
- Identification of potential Interested and Affected Parties (I&APs)
- Submission of the Notice of Intent (NOI) to the competent authority

- **Scoping Phase:**

- Compile Draft Scoping Report
- Provide DSR for public review and comment to I&AP
- Submit Final Scoping Report and Plan of study for the EIA to the competent authority for acceptance, inclusive of comments from the public participation process

- **Environmental Impact Assessment Phase**

- Revise and complete specialist assessments

- Compile Draft Environmental Impact Report and Environmental Management Programme (EMPr)
- Provide DEIR for public review and comment to I&AP's
- Finalise EIR and EMPr based on comments from the public participation period

On submission of the Final EI Report to the competent authority, the EIA is reviewed and assessed for issuing of an Environmental Authorisation. The EAP managing the process is required to notify the registered I&APs of the outcome of the decision and inform them of the appeal process.

1.2 SCREENING PHASE

As outlined in Section 1.1, the screening phase identifies any potential environmental issues or concerns that may be raised by any stakeholder through the project initiation. In addition, the screening of the site was undertaken according to the national web-based screening tool of the Department of Forestry, Fisheries and the Environment (DFFE), attached in Appendix 2. The outcome of the Screening Report identifies the potential sensitivities present on the site and recommends the specialist studies required. Refer to Table 8 for verification and motivation of the specialist assessments that must be included in the Scoping and EIA assessment.

1.3 PRE-APPLICATION

A Notice of Intent (NOI) has been prepared for submission on 1 October 2025 to the Western Cape Department of Environmental Affairs and Development Planning. The outcome of this application includes the following:

- Acknowledgement of Receipt
- Reference Number
- Pre-Application Meeting
- Payment of Application Fee

The results of this process will be presented and included in the Final Scoping Report.

1.4 SCOPING PHASE

Specialist assessments have been undertaken the results of these assessments are included in this Draft Scoping Report. The purpose of the Scoping phase includes the following:

- Further identification of stakeholders including various organs of state, surrounding landowners and any other persons;

- Identification of significant issues and/or impacts
- Selection of feasible alternatives required for the EIA Phase
- Determination of Specific Terms of Reference for the specialist studies to be undertaken

The contents of this Draft Scoping Report has been compiled according to the prescribed legal requirements contained in Appendix 2 of the EIA Regulations, 2014 as indicated in **Error! Reference source not found.**Table 1.

Table 1: Legal Requirements of the Content of the Scoping Report

APPENDIX 2 REFERENCE	CONTENT OF SCOPING REPORT IN TERMS OF THE EIA REGULATIONS, 2014 ¹	REFERENCE IN THIS REPORT
(1)(a)	Details of the: - EAP who prepared the report - The expertise of the EAP including CV	Section 1.5 Table 2
(1)(b)	The location of the activity, including: - The 21-digit SG code of each cadastral parcel - Where available, the physical address and farm name - Where the required information in (i) and (ii) is not available, the co-ordinates of the boundary of the property or properties	Section 3.1 Table 5
(1)(c)	A plan which locates the proposed activity or activities applied for at an appropriate scale, if it is: - A linear activity, a description and coordinates of the corridor in which the proposed activities is to be undertaken; or - On land where the property has not been defined, the co-ordinates within which the activity is to be undertaken	Figure 1
(1)(d)	A description of the scope of the proposed activity, including: - All listed and specified activities triggered - A description of the activities to be undertaken, including associated structures and infrastructure	Table 4 Section 2.2 Section 3
(1)(e)	A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process	Section 2.1
(1)(f)	A motivation for the need and desirability for the proposed development including the need and desirability of the activity of the preferred location	Section 4
(1)(g)	A full description of the process followed to reach the proposed preferred activity, site and location of the development footprint within the site including: Details of all alternatives considered	Section 5

¹ GN R 982 of 8 December 2014 (as amended)

APPENDIX 2 REFERENCE	CONTENT OF SCOPING REPORT IN TERMS OF THE EIA REGULATIONS, 2014 ¹	REFERENCE IN THIS REPORT
	ii. Details of the public participation process undertaken in terms of regulation 41 of the EIA Regulations, 2014, including copies of the supporting documents and inputs	Section 6
	iii. Summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them	Final Scoping Report
	iv. The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	Section 7
	v. The impacts and risks which have informed the identification of each alternative, including the nature, significance, consequence, extent, duration and probability of such identified impacts, including the degree to which these impacts: aa. Can be reversed bb. May cause irreplaceable loss of resources; and cc. Can be avoided, managed or mitigated	Section 8.4
	vi. The methodology used in identifying and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives	Section 8.3
	vii. Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects	Section 8.4
	viii. The possible mitigation measures that could be applied and level of residual risk	Section 8.4
	ix. The outcome of the site selection matrix	Section 8.1
	x. If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	Not Applicable
	xi. A concluding statement indicating the preferred alternatives, including preferred location of the activity	Section 9
(1)(h)	A plan of study for undertaking the environmental impact assessment process to be undertaken, including:	Section 8
	i. A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity	Section 5 Section 8.1
	ii. A description of the aspects to be assessed as part of the environmental impact assessment process	Section 8.4
	iii. Aspects to be assessed by specialists	Section 8.2

APPENDIX 2 REFERENCE	CONTENT OF SCOPING REPORT IN TERMS OF THE EIA REGULATIONS, 2014 ¹	REFERENCE IN THIS REPORT
	iv. A description of the proposed method of assessing the environmental impacts, including aspects to be assessed by specialists	Section 8.3
	v. A description of the proposed method of assessing duration and significance	Section 8.3
	vi. An indication of the stages at which the competent authority will be consulted	Section 8.6
	vii. Particulars of the public participation process that will be conducted during the environmental impact assessment process	Section 6 Section 8.5
	viii. A description of the tasks that will be undertaken as part of the environmental impact assessment process	Section 8.6
	ix. Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent if the residual risks that need to be managed and monitored	Section 8.4
(1)(i)	An undertaking under oath or affirmation by the EAP in relation to:	Section 10
	i. The correctness of the information provided in the report	
	ii. The inclusion of comments and inputs from stakeholders and interested and affected parties	
	iii. Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties	
(1)(j)	An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment	
(1)(k)	Where applicable, any specific information required by the competent authority	N/A
(1)(l)	Any other matter required in terms of Section 24(4)(a) and (b) of NEMA ² .	N/A
(2)	Where a government notice gazetted by the minister provides for any protocol or minimum information requirement to be applied to a scoping report, the requirements as indicated in such notice will apply	Section 8.2

1.5 DETAILS OF THE EAP

Green 360 (Pty) Ltd has appointed a representative, Enviromin Projects (Pty) Ltd as the EAP to manage the environmental impact assessment process inclusive of public participation. Enviromin Projects is an established environmental professional company, since 2017 aimed at assisting with environmental

² National Environmental Management Act, Act No. 107 of 1998

management, compliance and administration. The Principle Consultant, Candis Lubbe has 19 years in environmental consulting experience in mining, construction and general industry sectors. Details of the EAP are indicated in Table 2.

Table 2: Details of the EAP

EAP DETAILS	
EAP	Green360 (Pty) Ltd subcontracted Enviromin Projects (Pty) Ltd
EAP Representative	Candis Lubbe
Qualifications	BSc. Hons. Ecology, Environment and Conservation
EAP Registration	2021/3700
Contact Details	Mobile: 084 371 0123 Email: candis@envirominprojects.co.za

2 LEGAL FRAMEWORK

This section provides an overview of the relevant legal documents and guidelines that are considered during the EIA process.

2.1 RELEVANT LEGISLATION, POLICIES AND GUIDELINES

2.1.1 Legislation

Table 3: Legislation relevant to the EIA process

LEGISLATION	SECTIONS	RELATES TO
The Constitution Republic of South Africa (Act No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental Right to environment that is not harmful to health and wellbeing.
National Environmental Management Act (Act 107 of 1998) as amended	Chapter 2	Defines the strategic environmental management goals and objectives of the government. Applies throughout the Republic and to the actions of all organs of state that may significantly affect the environment.
	Chapter 5	Integrated Environmental Management.
	Section 24(a) &(d) &24(5)	Listed activities and Regulations.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
National Environmental Management: Waste Act (Act 59 of 2008)	Section 2	General policy.
	Chapter 2	Defines the national waste management strategy, norms and standards. It emphasises the role of the provincial organ of the state in the implementation of the waste management.
	Chapter 4	The developer or manufacture has a general duty to avoid generation of waste and if not avoided minimise and manage it accordingly.
	Section 16	It is the responsibility of the person/organisation generating the waste to ensure that the waste is

LEGISLATION	SECTIONS	RELATES TO
		treated and disposed of in an environmentally sound manner.
	Section 27	Provision of containers for waste management.
The Conservation of Agricultural Resources Act (Act 43 of 1983)		Provides for the regulation of control over the utilization of the natural agricultural resources in order to promote the maintenance of ecological health of land, combating and preventing erosion and weakening or destruction of water resources, protecting vegetation and
	Section 6	Implementation of control measures to combat weeds, alien and invasive plant species.
	Section 19	Prevention of littering by employees and sub-contractors during construction and the maintenance phases of the project.
National Heritage Resources Act (Act 25 of 1999)	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
National Environmental Management: Air Quality Act (Act 39 of 2004)	Sections 26 -27	Control of fuels
	Section 32	Control of dust
	Section 34	Control of noise
	Section 35	Control of odours
National Water Act (36 of 1998)	Section 22	Permissible Water Use - The Act controls/ regulates the utilization of natural water resources and provides provisions to safe-guard the integrity of these water resources.

LEGISLATION	SECTIONS	RELATES TO
Hazardous Substances Act (Act 15 of 1973) and regulations		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Section 65 and 67	Provides management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act 107 of 1998; the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources. 65. (1) A person may not carry out a restricted activity involving a specimen of an alien species without a permit issued in terms of Chapter 7. (2) A permit referred to in subsection (1) may be issued only after a prescribed assessment of risks and potential impacts on biodiversity is carried out. 67. (1) The Minister may, by notice in the Gazette, publish a list of those alien species in respect of which a permit mentioned in section 65(1) may not be issued. (2) A person may not carry out any restricted activity involving a specimen of an alien species published in terms of subsection (1). (3) The Minister must regularly review a list published in terms of subsection (1).
National Forest Act (Act 84 of 1998) and the National veld and Forest Act (Act 101 of 1998)		The minister may declare: a) A particular tree b) Particular group of trees, c) Particular woodland, or d) Trees belonging to a particular species, to be a protected tree, group of trees, woodland species. No person May- a) Cut, disturbed, damage or destroy any protected tree; or b) Possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except- i) Under a license granted by the minister; or ii) in terms of an exemption form the provision of this subsection published by the minister.
National Road Traffic Act (Act 93 of 1996)		Road safety and transportation.
GN R. 598 National Environmental Management: Biodiversity Act (10/2004): Alien and Invasive Species Regulations, 2014	Section 3	Category 1b Listed Invasive Species (1) Category 1b Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be controlled.

LEGISLATION	SECTIONS	RELATES TO
Minerals and Petroleum Development Act (Act 28 of 2002)	Section 39	Environmental Management Plan for entering borrow pits and legal sourcing of construction fill material.
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Section 41	Finalise provision for rehabilitation.
Occupational Health and Safety Act (Act 85 of 1993)	Section 8	General duties of Employers to their Employees.
	Section 9	General duties of Employers and self-Employed persons to persons other than their employees.
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947)	Sections 3-10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions shall be taken to prevent workers from being exposed to chemical substances in this regard.

2.1.2 Policies and Plans

- White Paper on the National Water Policy for South Africa (1997)
- National Integrated Resource Plan (IRP) (2010) and Update Report (2013)
- The National Development Plan (2012)
- New Urban Agenda (2016)
- 2030 Agenda for Sustainable Development
- 2020 National Ecosystem Biodiversity Targets
- City of Cape Town Climate Change Strategy (2021)
- City of Cape Town Climate Change Action Plan
- City of Cape Town Integrated Development Plan (2022-2027)
- Cape Town's Water Strategy (2019)
- City of Cape Town Municipal Spatial Development Framework (2023)
- City of Cape Town Water Service Development Plan – IDP Water Sector Input Report (2022-2027)
- City of Cape Town Air Quality Management By-law 2016
- Western Cape Provincial Spatial Development Framework (2014)

2.1.3 Guidelines

- Guideline for Environmental Management Plans (June 2005)

- DEA&DP Circular: EADP 0028/2014 on the “One Environmental Management System” and the EIA Regulations (2014)
- DEA&DP Guideline on Public Participation (March 2013)
- DEA&DP Guideline on Alternatives (March 2013)
- DEA&DP Guideline on Need and Desirability (March 2013)
- DEA EIA Guideline Information Document on Need and Desirability (March 2013)
- DEA&DP EIA Guideline Information Document on Alternatives (March 2013)
- DEA&DP EIA Guideline Information Document on Public Participation (March 2013)
- DEA&DP EIA Guideline Information Document on Environmental Management Plans (July 2006)
- DEA&DP Guideline for Determining the Scope of Specialist Involvement (June 2005)
- DEA&DP Guideline for Involving Biodiversity Specialists in EIA processes (June 2005)
- DEA&DP Guideline for Involving Heritage Specialists (June 2005)
- DEA&DP EIA Guideline Information Document on Generic Terms of Reference for EAPs and Project Schedules (March 2013)
- DEA&DP Guideline for the Review of Specialist input into the EIA Processes (June 2005)
- DEA&DP Guideline for Environmental Management Plans (June 2005)

2.2 LISTED ACTIVITIES

The proposed activity triggers several listed activities in terms of the EIA Regulations, 2014, as amended. These activities require authorisation in the form of a granted Environmental Authorisation prior to the commencement of the activities.

Listed activities in GN R 984 require authorisation through a Scoping and EIA process, while listed activities in GN 983 and GN 985 of 2014 require authorisation through Basic Assessment process.

The listed activities applicable to this project are triggered in terms of GN R 983 and GN R 984, therefore they are being assessed in terms of full Scoping and EIA, and are indicated Table 4.

Table 4: Listed Activities Triggered

	Description of the Activity	Relevance
GN R 983 Listing Notice 1		
Activity 12	The development of- (ii) infrastructure or structures with a physical footprint of 100 square metres or more: where such development occurs- (a) within a water course, (c) if no development	The proposed 30 hectares of vineyards will ensure that an area exceeding 100m ² is located within 32 meter of the non-perennial drainage line which is regarded as a watercourse.

	setback line exists, within 32 metres of a watercourse, measures from the edge of a watercourse.	
Activity 19	The infilling, depositing of any material of more than 10 cubic meters into or the dredging or moving of soil, sand pebbles or rock of more than 10 cubic meters from a watercourse.	Development of vineyard will include the following activities that will exceed 10m ³ : - Soil preparation: amending of soil with lime, nitrogen, compost or other additives for PH balance - Soil Ripping: approximately 3 feet depth for vine establishment - Irrigation: installation of minor irrigation equipment for drip irrigation (if applicable) - Trellising: wooden posts at set spaces and heights - Planting: plant vine seedlings
GN R 984 Listing Notice 2		
Activity 15	"The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for a linear activity; or maintenance purposes undertaken in accordance with a maintenance plan".	The proposed vineyards will ensure that an area of 30 hectares of indigenous vegetation will be cleared.
GN R 985 Listing Notice 3		
Activity 14	The development of – (ii) infrastructure or structures with a physical footprint of 10 square metres or more where such development occurs— (A) Within a watercourse- (I) In Western Cape (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional Plans	The proposed 30 hectares of vineyards will ensure the development of infrastructure or structures with a physical footprint exceeding 10 square metres or more where the entire terrestrial assessment area associated falls within a Critical Biodiversity Area two (CBA 2) in accordance with the Western Cape Provincial Spatial Biodiversity Plan.

3 PROJECT DESCRIPTION

3.1 SITE LOCATION

The Subject Property is situated 7 km east of the town Robertson and is located in the Langeberg Local Municipal area that forms part of the Cape Winelands District Municipality in the Western Cape province of South Africa. The property comprises of an existing irrigation farm and farming activities to consisting of vineyards. This is a "bona fide" farm property to be farmed intensively as a vineyard farm. Details of the property description are presented in Table 5 and the location of the property is indicated in Figure 1.

Table 5: Property Description

PROPERTY LOCATION	
Farm Name and Portion	Part of portion 39 (a portion of portion 6) of the farm Rietvallei 115
Application Area	75 Hectares

Magisterial District	Langeberg Local Municipal area that forms part of the Cape Winelands District Municipality in the Western Cape province of South Africa
Distance and Direction to nearest Town	7.0 Km East outside Robertson.
Coordinates (Main Gate)	Latitude: 33°48'36.32"S Longitude: 19°58'6.53"E
SG 21 Code	C06500000000011500000
Property Zoning	Open Space

Portion 39 (a portion of portion 6) of the farm Rietvallei Number 115 – Robertson - Western Cape

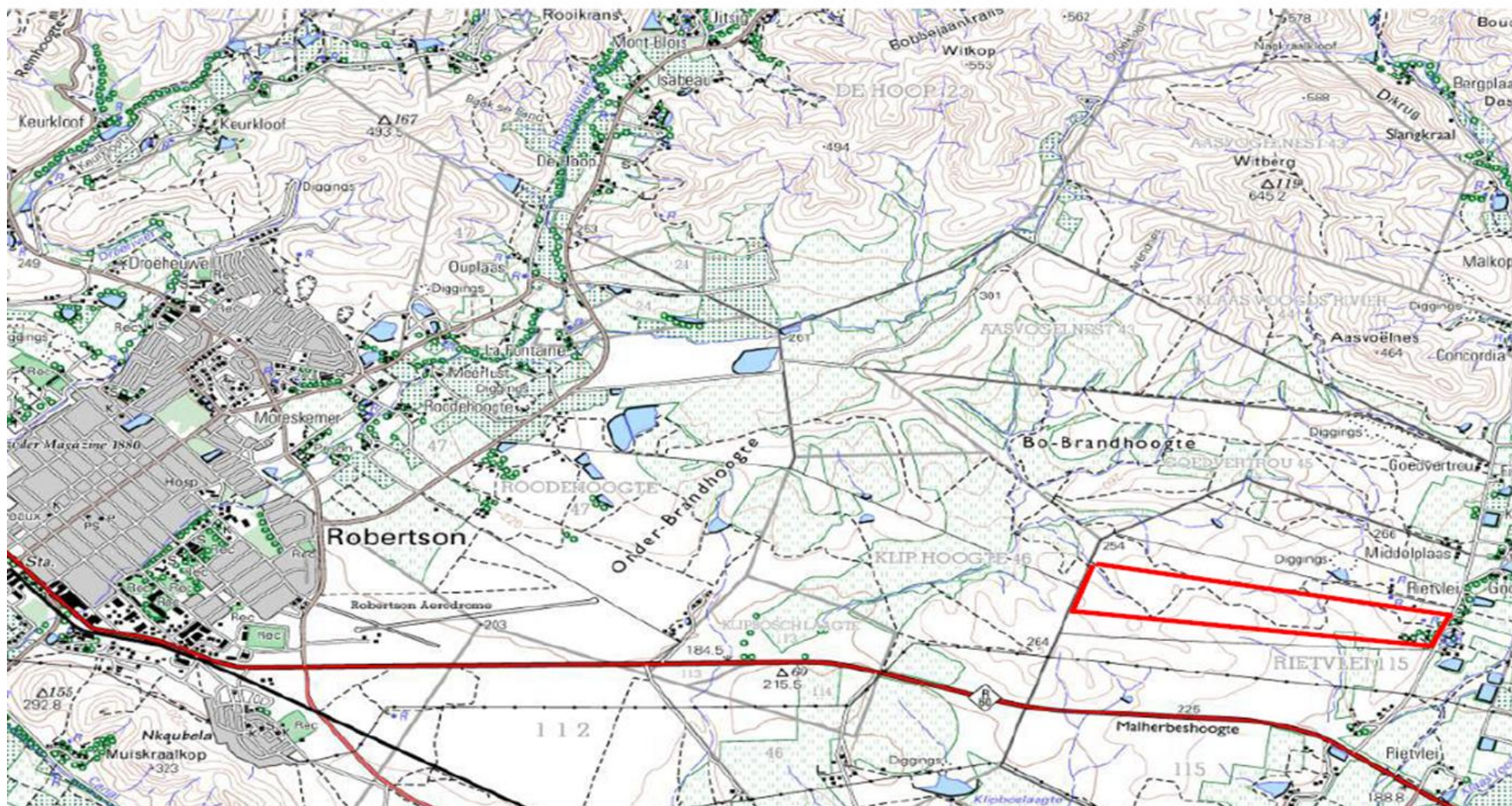
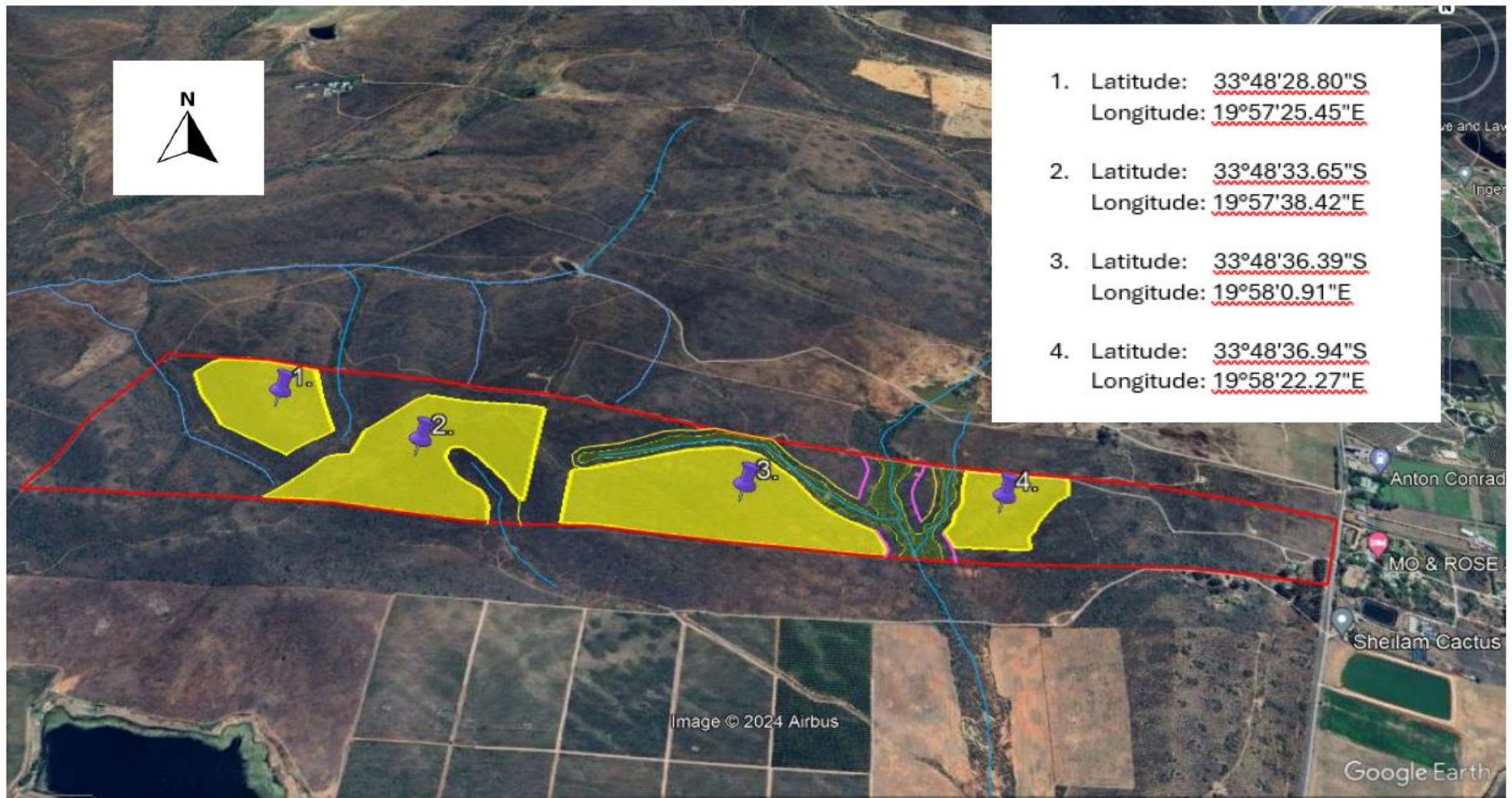


Figure 1: Locality Map

Portion 39 of the farm Rietvallei Number 115, Robertson, Western Cape**Figure 2: Site Development Plan**

Latitude and Longitude coordinates in numeric order as identified in Figure 1 of the site development plan are presented in Table 6.

Table 6: Co-ordinates of the development area

TAG QUADRANTS	Y – COORDINATE	X - COORDINATE
Quadrant 1.	33°48'28.80"S	19°57'25.45"E
Quadrant 2.	33°48'33.65"S	19°57'38.42"E
Quadrant 3.	33°48'36.39"S	19°58'0.91"E
Quadrant 4.	33°48'36.94"S	19°58'22.27"E

3.2 PROJECT DESCRIPTION AND BACKGROUND

The applicant, Goedemoed Agri (Edms) Bpk plan to develop 30.0 hectares of vineyard infrastructure on part of portion 39 (a portion of portion 6) of the farm Rietvallei 115 near Robertson in the Western Cape for which environmental authorisation must be obtained from the Western Cape Department of Environmental Affairs and Development Planning. (DEA&DP). The applicant previously wished to develop ~19hectares of vineyard which required the need for a basic assessment process, and with decision to increase the extent of cultivation, the applicant acknowledges the required process and has opted to follow an Environmental Impact Assessment (EIA) process in accordance with the National Environmental Management Act (Act 107 of 1998) (NEMA).

The total area of the property on portion 39 (a portion of portion 6) of the farm Rietvallei 115 comprises of 75 hectares. The proposed application will entail the clearance of virgin land for agricultural purposes to establish 30.0 hectares of grape vineyards on identified lower sensitive sections of the property as these areas are more feasible for agricultural development with a lower impact on the environment. The proposed area is not considered a greenfield site, however it has been relatively disturbed over the course of 20 years. Figure 6 illustrates the signs of disturbance particularly in the third Quadrant of the site. The western corner consists of high and dense natural vegetation and the non-perennial streams within the property are not included in the application area.

The proposed project site is situated 7 km east of the town Robertson and is located in the Langeberg Local Municipal area that forms part of the Cape Winelands District Municipality in the Western Cape province of South Africa. The proposed project area is intended to be transformed into an irrigation farm and with farming activities of cultivated grape vineyards. This is a "bona fide" farm property to be farmed intensively as a vineyard farm. The landowner of the property is the applicant and has been acquired with the intention of its unique location in relative position to surrounding landuse which is rich in quality agricultural and ideally suitable for the establishment of grape vineyards.



Figure 3: Existing access road infrastructure.



Figure 4: Existing housing infrastructure.

3.2.1 Pre-Construction Phase

The proposed project area is currently set-up for agricultural practices with the following services and structures in place:

Agricultural Area: The immediate and surrounding area is dominated by various vineyard farms as the area is known as one of the most important wine, table grape, and fruit producing areas in South Africa.

Roads: Access roads to the farms are in place and the property and no additional roads are required, refer to Figure 3.

Electricity: the property is already connected to the grid and supplied with Eskom Electricity. No further energy sources are required to support the proposed farming activities. Energy efficient agricultural technology and methods will be used as far as possible to reduce the energy usage

Existing Structures: The property consists of a single housing arrangement situated in the most eastern point of the site next to the existing tar road where access to the property is gained.

3.2.2 Construction Phase

The applicant is committed to utilise the best agricultural technology alternative available to perform agricultural activities in a the most sufficient manner. The most effective agricultural methods and irrigation system will be used to minimise the impact on the environment while saving water usage, refer to Table 7.

Table 7: Non-invasive agricultural practices.

AGRICULTURAL ASPECTS	TECHNICAL PRACTICES
Site Layout	Vineyard site development according to Figure 2 Trellising system with vertical shoot positioning suited for grape varieties
Soil Management	Application of compost and fertilisers Soil Monitoring and testing
Irrigation (Water Management)	Drip irrigation systems (low-flow) computer controlled
Pest and Disease Management	Combination of biological and chemical controls to be utilised
Seasonal	Growth cycles and dormancy Water stress management
Equipment	Mechanical harvesting equipment

	Tractors for ploughing, tilling, spraying and hauling
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Vineyard Development:

The establishment of a vineyard involves the following activities, refer to Figure 5 for an example of layout involving excavation rows, trellising and irrigation.

- **Soil Ripping:** Excavations to be created using soil ripping methods to depth of approximately 3 feet to.
- **Soil Preparation:** Amending of soil with lime, nitrogen, compost of other additives required for PH balance.
- **Irrigation Installation:** installation of minor irrigation equipment during trellising.
- **Trellising:** installation of wooden posts at set spaces and heights



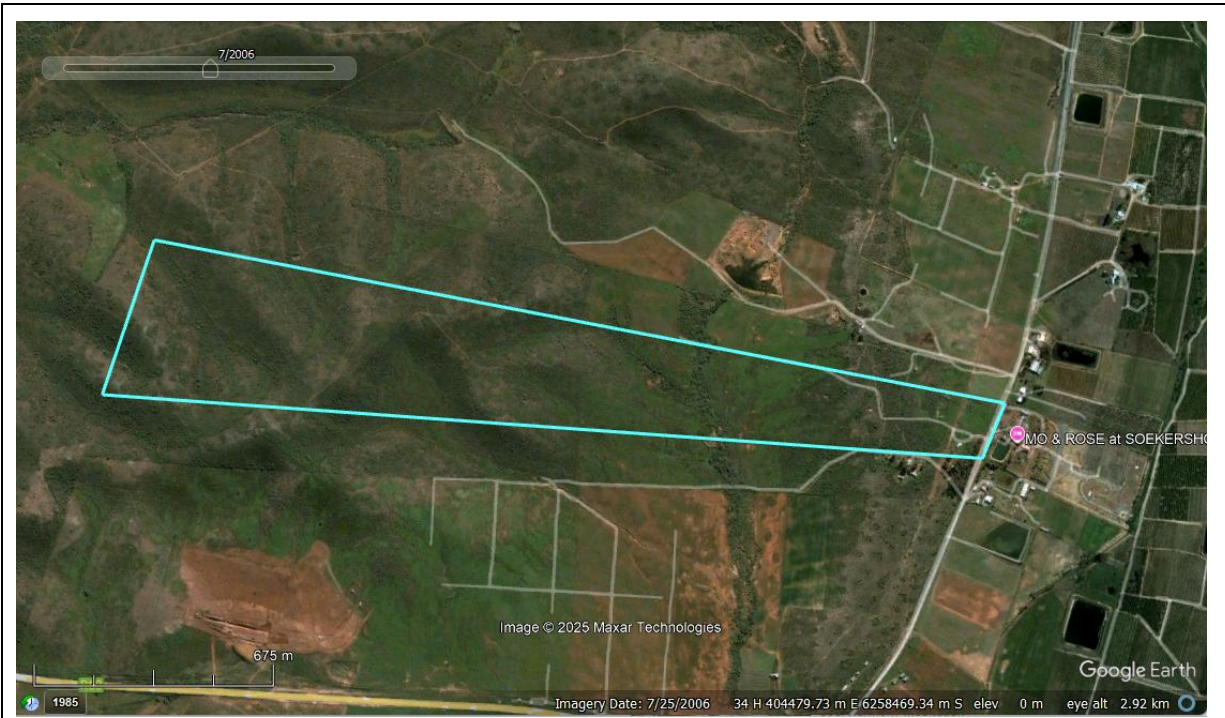
Figure 5: Vineyard Development.

3.2.3 Operational Phase

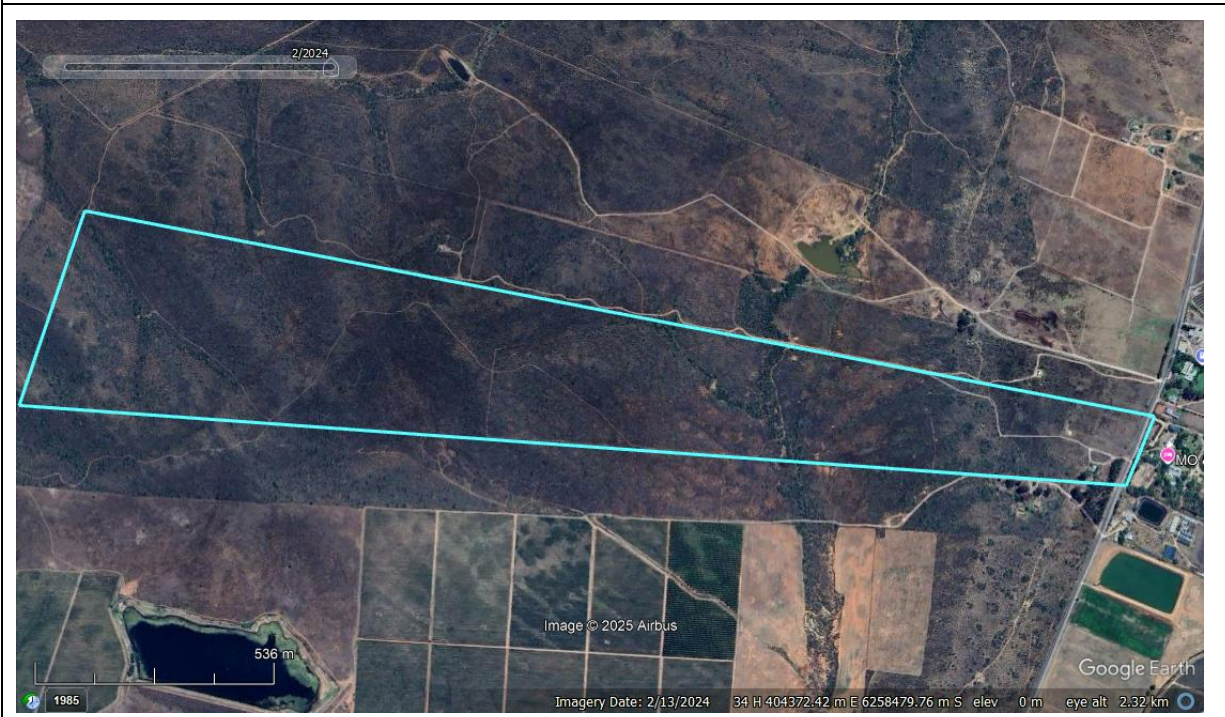
Once vineyards are operational, activities will be undertaken related to agricultural maintenance and upkeep of the development and associated infrastructure and the natural environment. Operational aspects will also provide several employment opportunities to skilled and unskilled workers and will contribute to employment generation and skills transfer in the immediate area and the wider province.

The proposed project area is geographically significant as the area mainly consist of farms and agricultural projects. Agriculture is the largest economic sector of the local Langeberg municipal area,

and the community and business depend on the agricultural economic sector that ensure job security and food production in the area.



Satellite Imagery: 2004



Satellite Imagery: 2024

Figure 6: Satellite imagery over a 20 year period.

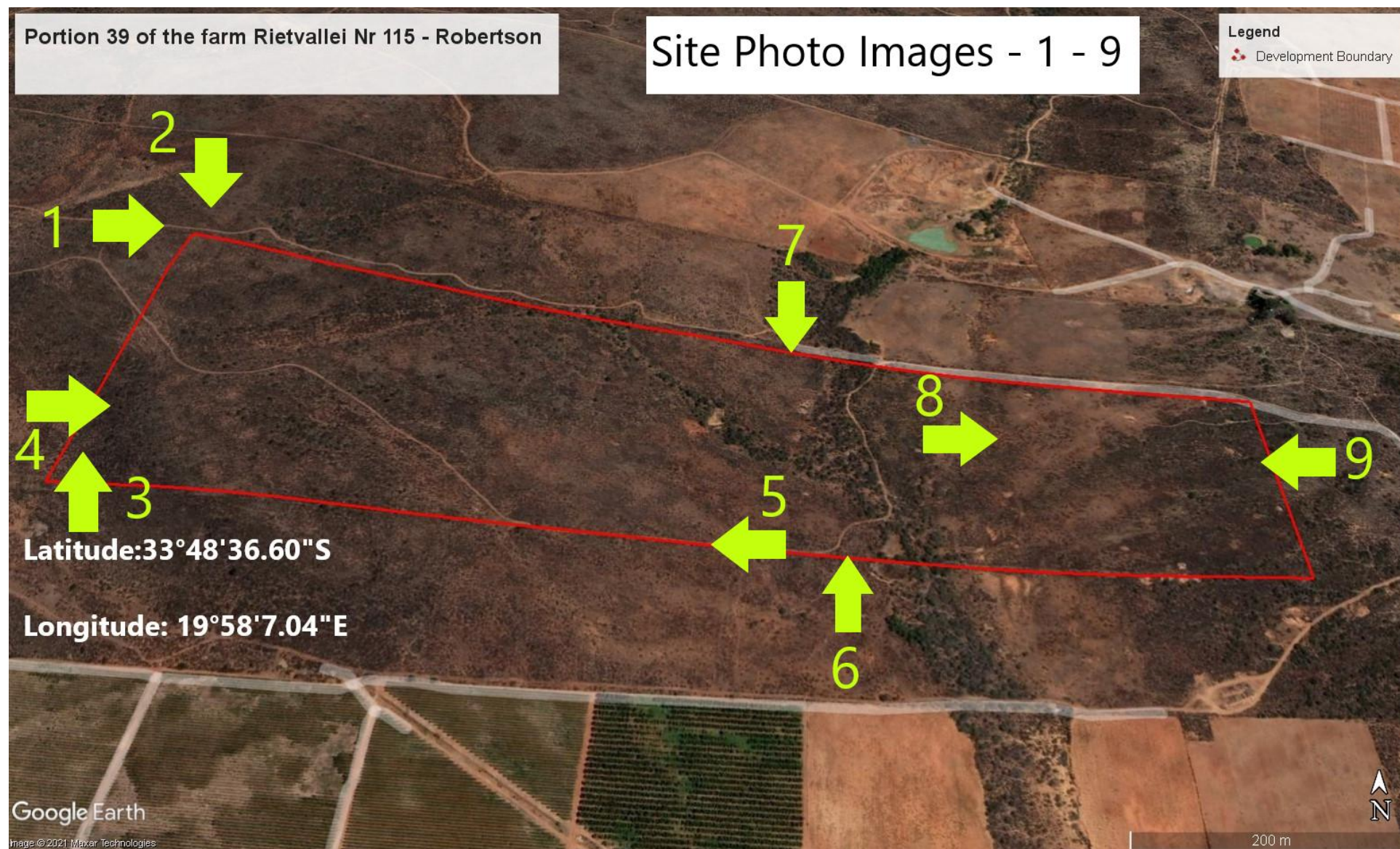


Figure 7: Site Photo Locations.



Figure 8: Site Photos from Various Directions (Locations).

4 NEED AND DESIRABILITY

4.1 Socio-Economic Motivation

Several important factors must be taken into account as motivation for the proposed development. The project is primarily focused on the cultivation of table grape varieties, which is expected to create value-adding opportunities, enhance job creation, and stimulate economic growth. Through targeted agricultural development, the quality of life for all beneficiaries will be improved, particularly through initiatives such as skills transfer, empowerment, and poverty alleviation via wealth creation and long-term sustainability.

4.2 Context of Local Economy

The economy of the Langeberg Local Municipality is principally based on agriculture and tourism. However, both sectors are currently facing overall decline, leading to a reduction in job opportunities and contributing to already high unemployment rates. The decrease in agricultural employment, in particular, presents a significant challenge due to the ongoing economic downturn.

4.3 Long-Term Socio-Economic Benefits

The long-term impact of the project is anticipated to benefit the district by broadening agricultural activities and generating employment opportunities. The continuation of such a development will provide clear advantages through the creation of local jobs, skills development, and contributions towards the reduction of poverty and unemployment within the municipality. The project will not only preserve existing employment but will also introduce new job opportunities for local residents and facilitate ongoing capacity building through skills, experience, and resource development.

4.4 Community Upliftment and Poverty Alleviation

This initiative is regarded as a significant driver of socio-economic advancement, given its immediate and continuous impact on local community upliftment and poverty relief. The positive effects will be felt by project beneficiaries and will extend to the broader community. Retailers and suppliers in the region are also expected to benefit, resulting in wider social gains.

4.5 Job Creation and Economic Diversification

The proposed project will play a crucial role in alleviating poverty by providing income to numerous families in the area. Both permanent and temporary positions will be created, supporting local job creation. Additionally, the diversification of products, including the development of new cultivars, will

help overcome production shortages and provide capital for future investment, thus adding further economic value to the district.

4.6 Consequences of Non-Implementation

If the project does not proceed, both the local community and landowner will lose significant economic benefits, including employment opportunities, revenue streams, and—most importantly—sustainable capacity building for the future. No significant negative impacts are anticipated that could adversely affect the local community as a result of the project.

4.7 Environmental Considerations

While there may be short-term environmental impacts during the construction phase, the project is not expected to cause substantial or lasting environmental harm, provided that agricultural operations and infrastructure development continue responsibly. Measures will be taken to eradicate and control alien and invasive species as part of the project's environmental management.

4.8 Alignment with Local Development Plans

The need and desirability for the project are supported by strong local backing for both the concept and location, as reflected in the Integrated Development Plan (IDP). The proposed development does not present any overriding negative social impacts that would necessitate a “no-go” scenario. Planned investments, the creation of numerous local jobs, and the generation of income will all positively contribute to the socio-economic objectives outlined in the local IDP.

4.9 Broader Societal Benefits

The farm is set to provide both permanent and temporary employment to hundreds of local people. Employees will benefit from skills and technology transfer, as well as the development of management capabilities. The income generated will increase regional economic turnover, delivering benefits for society at large. The establishment of 30 hectares of vineyards will significantly enhance the agricultural potential of the property and, as a result, increase its economic value. Job creation during the operational phase and ongoing capacity building are regarded as substantial socio-economic benefits, further underscoring the need and desirability of the project.

5 ALTERNATIVES

5.1 ACTIVITY ALTERNATIVES

Agriculture, particularly grape cultivation, is the area's main economic driver and is a central focus in Langeberg Municipality's Integrated Development Plan. Alternative land uses are inconsistent with the

relevant IDP and cannot be approved, as they do not align with the Municipality's plan to meet community needs.

5.2 LOCATION ALTERNATIVES

Due to the relatively small size of the subject property, there are limited location options for establishing 30 hectares of table grape infrastructure in an economically feasible manner. The significant ephemeral dry watercourse that crosses the assessment area will remain undisturbed to minimize environmental impact.

The preferred alternative is to develop the remaining open land, as this area has been identified as suitable for further agricultural development with comparatively low anticipated environmental effects. Excluding certain areas from development is not expected to significantly reduce overall impact.

The site selected for the proposed table grape plantations was chosen based on its flat terrain, sparse vegetation, and favorable soil conditions for grape production.

Another option (non-preferred) would involve incorporating high-potential agricultural land within the buffer zone of the ephemeral dry watercourse. While this area has high agricultural potential, its development could have a greater impact on biodiversity within the drainage line. It is recommended that the ephemeral dry watercourse retain its current status, with no development allowed in this zone.

Agriculture depends on land use, and some disturbance of soil and natural vegetation is inherent to farming activities. The establishment of table grape plantations in this area is expected to influence both the local environment and economy.

5.3 TECHNOLOGY ALTERNATIVES

The applicant plans to use current agricultural technology to conduct activities efficiently. Effective methods and irrigation systems will be implemented to help minimise environmental impact and conserve water, such as computer-controlled irrigation and low-flow drip systems. Energy-efficient technologies and practices will be applied when feasible to lower energy consumption. There are no alternative methodologies with respect to the required agricultural practices.

5.4 OPERATIONAL ALTERNATIVES

Once operational, activities will be undertaken related to agricultural maintenance and upkeep of the development and associated infrastructure. Operational aspects will also provide several employment opportunities to skilled and unskilled workers and will contribute to employment generation and skills transfer in the immediate area and the wider province.

5.5 NO-GO ALTERATIONS

The no-go alternative involves maintaining the current status quo, where the area remains undeveloped with low economic value. This option would not cause additional effects on the biophysical environment of the proposed cultivation site. However, it may lead to economic and social implications for the proposed Black Economic Empowerment Farm, the surrounding region, and local businesses.

The project area is geographically characterized by farms and agricultural activities. Agriculture represents the largest economic sector within the local municipal area, providing employment and food production for the community and businesses. If the no-go alternative is chosen, there may be socio-economic impacts on these stakeholders. Input regarding need and desirability suggests local support for the project as indicated in the Integrated Development Plan (IDP). No major adverse impacts are anticipated with the implementation of the proposed project.

5.6 CONCLUSION ON ALTERNATIVES

The proposed project is expected to create both permanent and seasonal employment opportunities following approval, and may contribute to local economic development in the surrounding area. It is anticipated that the environmental impact will be minimal due to the limited fauna and flora present in the region. If the project is not implemented, potential economic benefits such as employment opportunities, revenue generation, and capacity building for local communities and landowners will not be realized.

6 PUBLIC PARTICIPATION

Regulation 41 of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended) outlines the minimum requirements for conducting public participation during an EIA process. This ensures that Interested and Affected Parties (I&APs) have a fair opportunity to engage with and comment on proposed developments.

The Public Participation Process (PPP) is in progress and will be undertaken throughout the entire Impact Assessment process with all stakeholders and Interested and Affected Parties (I & AP's), including the relevant organs of state and competent authority (Department of Environmental Affairs and Development Planning). To fulfil the necessary public participation required as part of the EIA & Scoping Process, the following methods of stakeholder engagement have been conducted to date and attached in Appendix 8.

6.1.1 Newspaper Advertisement

An advertisement was published in the Breederivier Gazette Newspaper on 23 September 2025.

6.1.2 Site Notice Boards

A site notice was placed at the entrance to the property and at the main road turnoff leading to the property on **25 September 2025**.

6.1.3 Written Notifications to Authorities and Neighbours (IAPs)

A Written Notification was compiled and circulated via email to all identified IAPs by email on **26 September 2025**.

6.1.4 Public Meeting

Currently no public meeting has been arranged, however, should members of the public show significant interest then focus group meetings will be arranged to address to accommodate the consultation process. The results of these meetings will be included in the Final Scoping Report and will inform the EIA phase.

6.1.5 Comments Period on Draft Scoping Report

All registered I&AP's have the opportunity to comment on the Draft Scoping Report for a period of 30 days, commencing **1 October to 30 October 2025**. All comments received will be addressed and incorporated into a Public Participation Report which is submitted to the competent authority together with the relevant documents in the Final Scoping Report for submission to the DEA&DP. A copy of the Draft Scoping report is publicly available on www.envirominprojects.co.za

6.1.6 Interested and Affected Parties Register

A register of Interested and Affected Parties was compiled including the following relevant stakeholders:

Local Authorities:

- Langeberg Municipality (Mayor)
- Langeberg Municipality (Manager)
- Cape Winelands District Municipality

Provincial Authorities:

- Heritage Western Cape
- Western Cape Department of Agriculture
- Western Cape Department of Environmental Affairs & Development Planning (Region 1)

National Authorities:

- Department of Agriculture, Land Reform and Rural Development
- Department of Water & Sanitation

Parastatals and NGOs:

- Breede-Gouritz catchment management Agency
- Cape Nature
- Birdlife SA
- South African Weather Services
- African Farmers Association of South Africa

7 BASELINE AND POTENTIAL IMPACTS**7.1 CLIMATE**

Robertson's climate is classified as warm and temperate. Robertson, South Africa, has a relatively dry climate with an average of 427 mm of rainfall annually. Figure 9 depicts the average monthly rainfall per month. The rainfall is fairly consistent throughout the year, with minimal variation between the wettest and driest months. The wettest month is July, with an average of 42 mm, while December is the driest, averaging 29 mm, according to weather and climate data. As an agricultural establishment, activities can be espoused to adapt to climate change in future by establishing more hardened varieties of different crops if required.

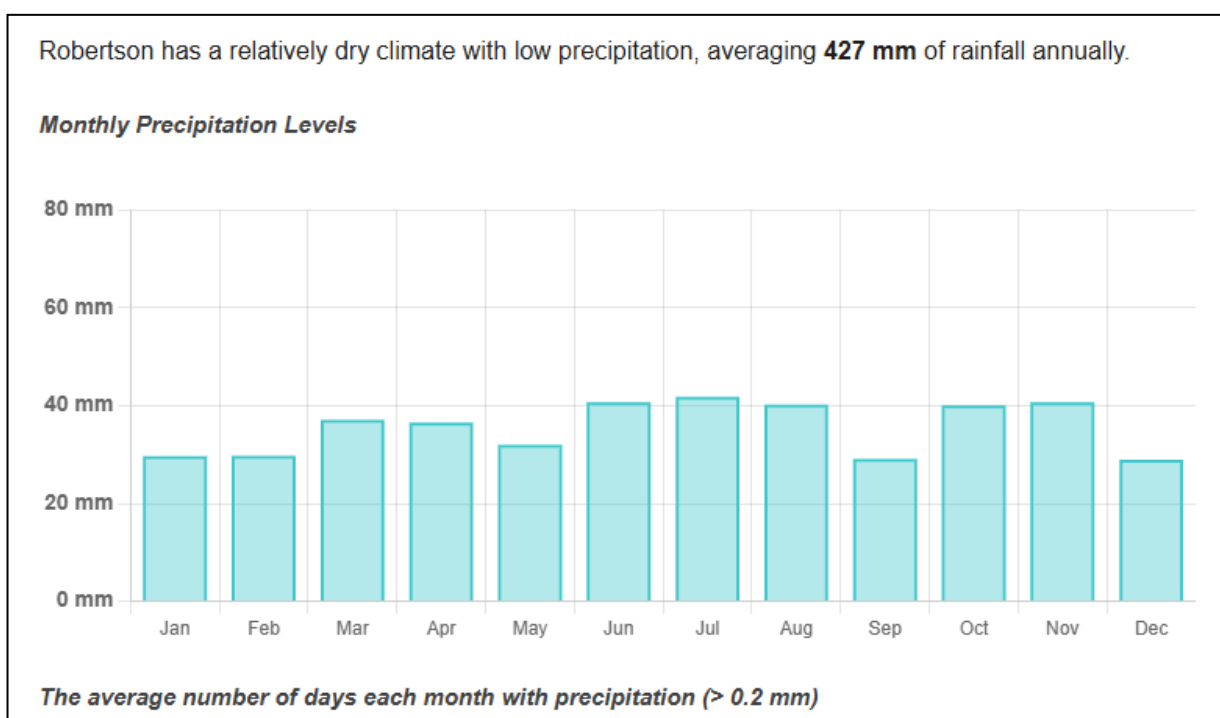
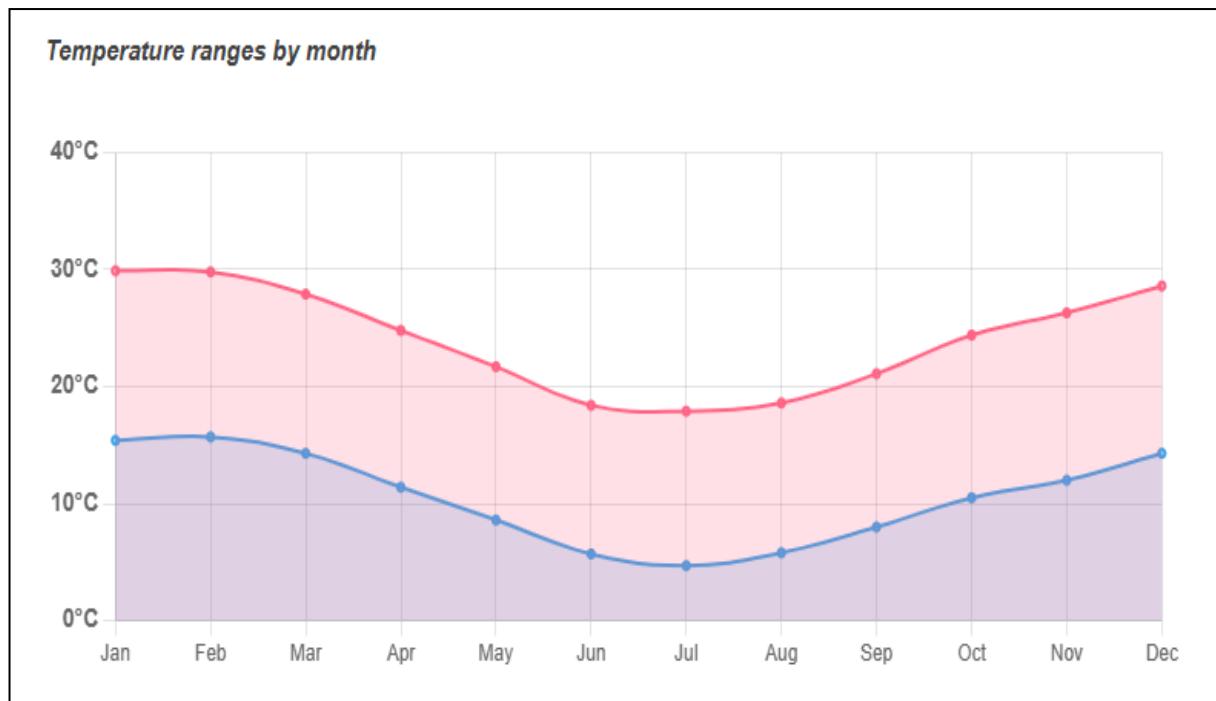


Figure 9: Average Rainfall for Robertson

The average temperature in Robertson, South Africa, varies throughout the year, with the warmest months being January and February, and the coolest months being June and July, refer to Figure 10. The temperature typically ranges from 4°C to 32°C. July, in particular, sees average high temperatures around 16°C and lows around 6°C.

**Figure 10: Average Temperatures for Robertson**

7.2 GEOLOGY AND SOILS

A soil survey was conducted by Agrimotion across the study area on two separate occasions and two reports are made available that covers and evaluate the entire development area and indicates the soil's suitability for perennial crop production. According to the soil analysis study conducted on different soil profile holes on the property, it is evident that medium to high potential agricultural land is available on the farm to ensure sustainable agricultural production.

In general, soils are suited for perennial crop production. The better soils are situated towards the higher-lying, crest positions. Medium potential soils occur along the lower-lying central valley. The predominant soil limitations recorded across the surveyed area include densification, subsoil wetness, free carbonates (alkalinity) and high coarse fraction. Chemical samples were analysed from a representative soil type. Significant chemical limitations analysed were high pH as well as excessive sodium, and magnesium in the subsoil.

Chemical properties may vary considerably and cannot be assumed to be consistent throughout the surveyed area. Limitations can be managed effectively with strategies such as correct soil preparation and appropriate cultivar and/or rootstock selection. Subsurface drainage will not be required, certain

areas may necessitate the construction of ridges. The entire surveyed area is therefore suitable for perennial crop production.

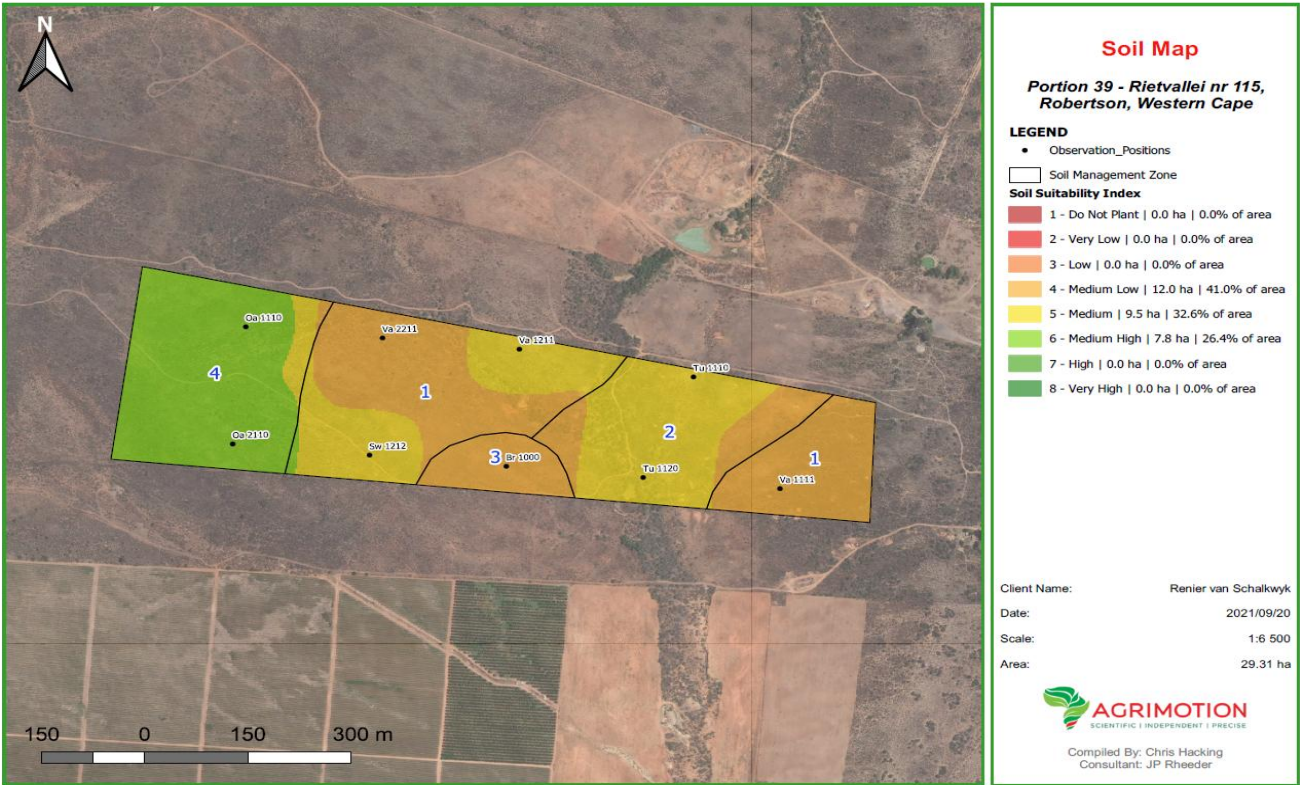


Figure 11: Soil Map.

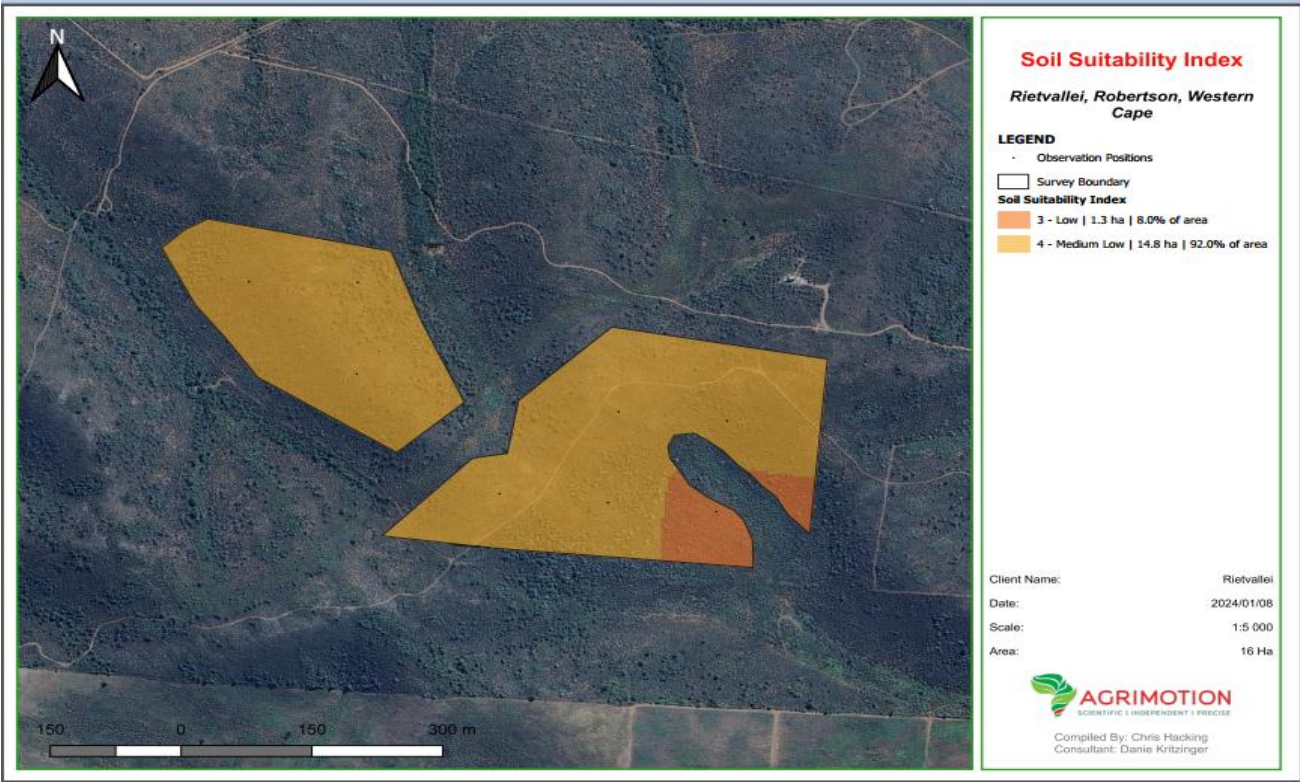


Figure 12: Soil Potential Map.

7.3 TERRESTRIAL BIODIVERSITY

7.4 Vegetation Status

A biodiversity assessment was commissioned as part of the environmental authorisation process being followed for the proposed cultivation of agricultural land. The study area was visited in visited on 7 September 2021 and again on 16 September 2023 which is during the optimal spring flowering season in this strongly winter rainfall region. All perennial plant species were identifiable, and many of the potential bulbs and annuals were also evident and identifiable.

The SA Vegetation Map (Mucina & Rutherford 2006 and 2018 update) shows that most of the original natural vegetation in the study area is Robertson Karoo. Robertson Karoo is currently gazetted as Least Concern on a national basis (DEA 2011), and the latest analysis by Skowno et al (2019), as yet ungazetted, supports this. Breede Alluvium Renosterveld is shown as just entering the southern part of the site, and Breede Shale Renosterveld on the north central part of the site.

Breede Alluvium Renosterveld is currently gazetted as Vulnerable on a national basis (DEA 2011), and has been upgraded to Endangered in the latest analysis by Skowno et al (2019), as yet ungazetted. Breede Shale Renosterveld is currently gazetted as Least Concern on a national basis (DEA 2011), but has been upgraded to Endangered in the latest analysis by Skowno et al (2019), as yet ungazetted.

All perennial plant species were identifiable, and many of the potential bulbs and annuals were also evident and identifiable. There is a low to medium likelihood that certain plant Species of Conservation Concern may have been overlooked due to the inevitable constraints associated with a once-off site visit, notably some of the early and later flowering annuals and bulbs.

The author believes that sufficient information was available to make an accurate assessment of the vegetation and its significance, and the confidence level in the accuracy of the findings is high.

This information was evaluated to identify Alternative 1 as this alternative is likely to have a Medium negative botanical impact overall in the long term after mitigation, whereas Alternative 2 would have a High negative botanical impact in the long term as no biodiversity connective corridors will be in place. Areas of high botanical sensitivity will be impacted by the Alternative 1 development proposal but with the mitigation identified by the specialist and the preferred layout chosen the development will be sustainable. Alternative 1 is likely to have a Medium negative botanical impact overall, whereas Alternative 2 would have a High negative botanical impact. Only small patches (less than 5ha) of high botanical sensitivity will be impacted by the Alternative 1 development proposal.

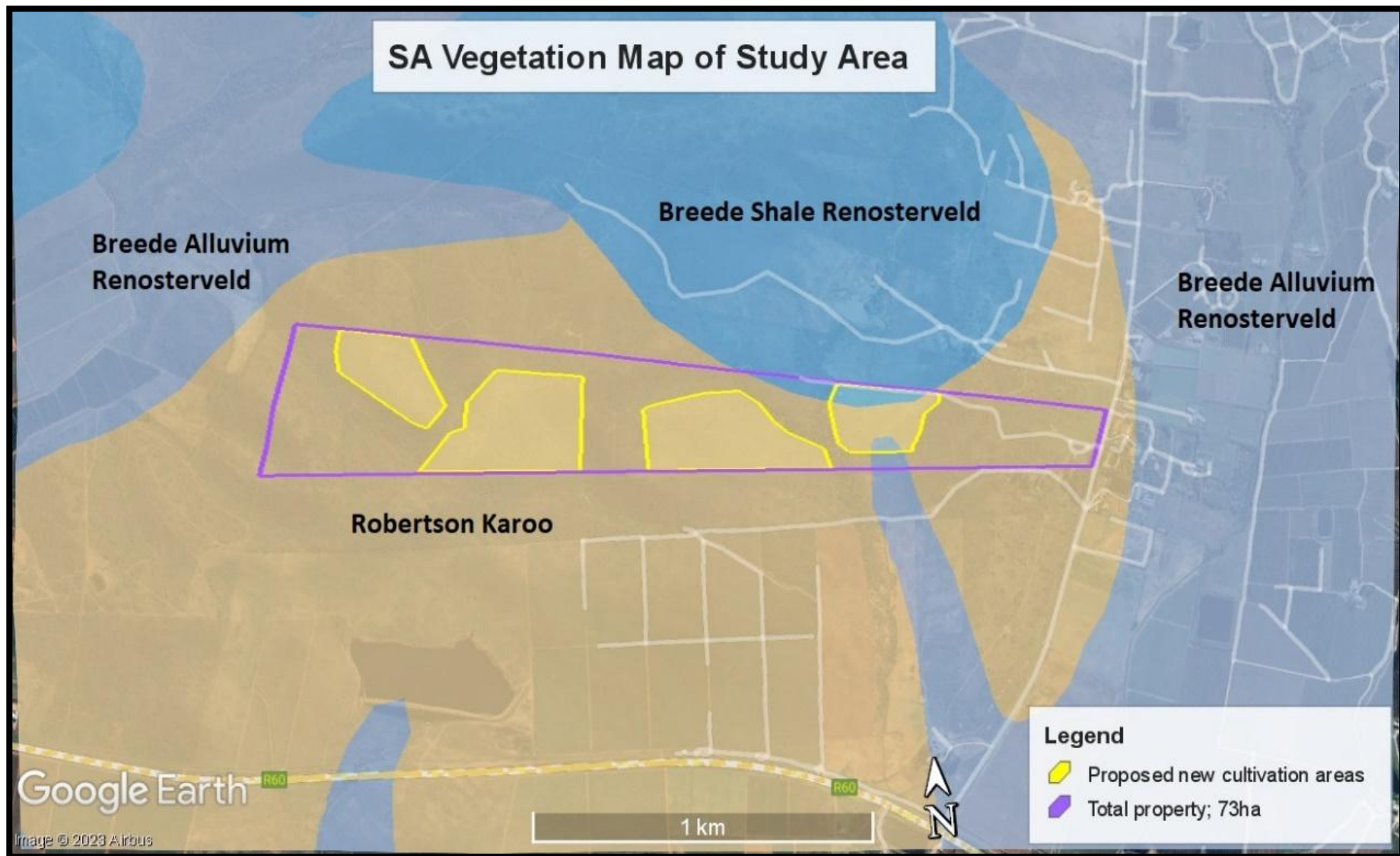


Figure 13: Vegetation Map.

The 2017 Western Cape Biodiversity Spatial Plan Map has mapped priority conservation areas throughout the province, using best available data, and the resultant maps display Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs) and Other Natural Areas (ONAs).

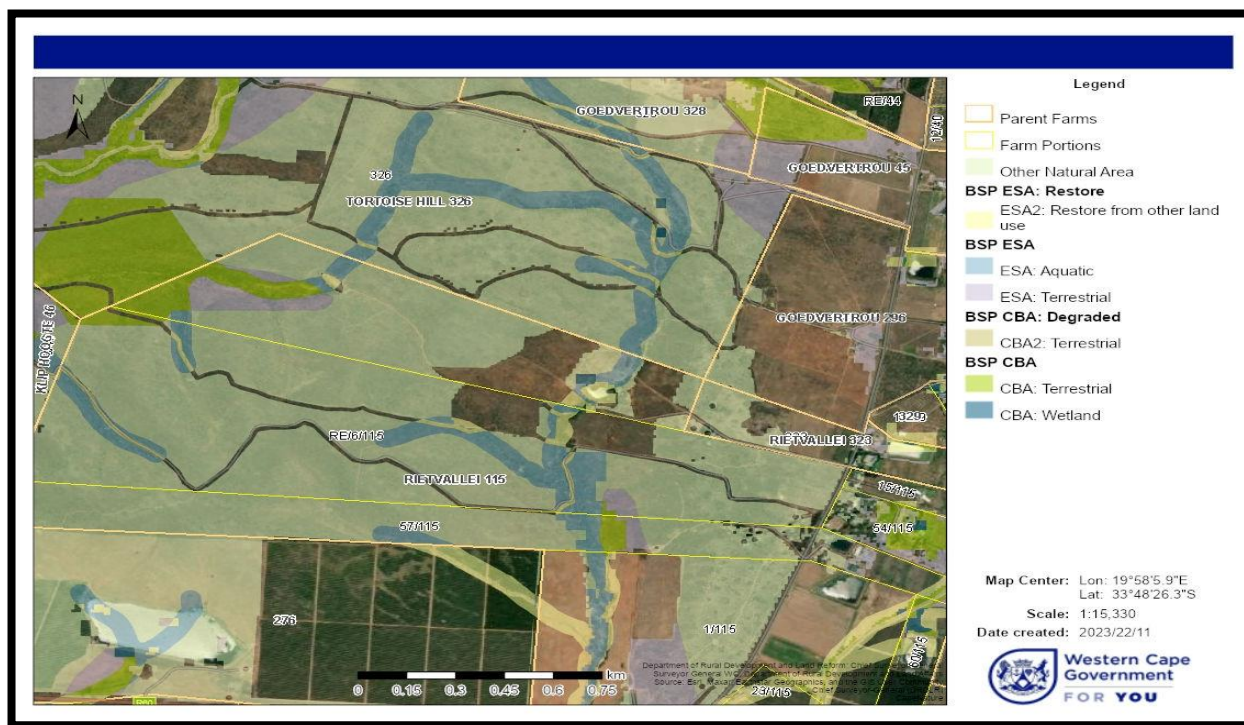


Figure 14: CBA Map.

The **CapeNature Spatial Biodiversity Plan** (Pence 2017), showing that most of the proposed development area is mapped as lower-level ONA (Other Natural Area), but with an aquatic CBA (Critical Biodiversity Area) along the drainage lines, and small terrestrial ESA and CBA.

The upper to middle Breede River valley (Tulbagh to Bonnievale) has a long history as a grape, fruit and vegetable growing area, and much of the low-lying land is now cultivated, and farmers are expanding into the surrounding areas, placing pressure on the remaining areas of suitable habitat.

The CapeNature Spatial Biodiversity Plan (Pence 2017) has mapped terrestrial and aquatic Critical Biodiversity Areas (CBAs) in the region, but only a very small area (<1ha) has been mapped as terrestrial CBA in the study area, but there are extensive aquatic CBAs along the drainage lines which will be buffered out. Most of the study area is mapped as lower-level ONA (Other Natural Area). Some small areas identified as high sensitive areas in the most eastern side and western side of the development area will be affected by the proposed development. The impact will however be manageable on the environment in the area and the overall sustainability of the proposed project will be feasible with the Alternative option 1.

This information was evaluated to identify Alternative 1 as this alternative is likely to have a Medium negative botanical impact overall, whereas Alternative 2 would have a High negative botanical impact. Small patches of terrestrial CBA1 and ESA will be impacted by the Alternative 1 development proposal.

The sensitive CBA areas identified will be buffered out with a 20 m Buffer zone as identified in the Freshwater assessment. Mitigation measures identified by the specialist will be implemented which will minimise the impact on the environment.

7.5 Fauna

The site still supports a largely intact typical Robertson Karoo fauna. The avifauna is currently fairly typical of the region, and it is noted that three Species of Conservation Concern (SoCC) have been recorded foraging in the vicinity of the study area, with one (Blue Crane) seen and photographed only 30m north of the site, and the Southern Black Korhaan seen (but not photographed) on site.

The avian SoCC recorded (pers. obs.) foraging nearby (but not actually on site) are Black Harrier (*Circus maureus*; Regionally Endangered, Globally Vulnerable; Taylor et al 2015) and Blue Crane (*Anthopoides paradiseus*; regionally Near Threatened, Globally Vulnerable). The Southern Black Korhaan (*Afrotis afra*) is Redlisted as Vulnerable regionally and Least Concern globally (Taylor et al 2015), and is likely to be resident on site, and on adjacent natural areas as well. Fynbos bird endemics like Cape Sugarbird (*Promerops cafer*) and Orangebreasted Sunbird (*Anthobaphes violacea*) are absent as they are largely dependent on the diversity of *Protea* and *Erica* species for nectar, none of which are present on site. There are no known confirmed records of threatened mammals, amphibians or reptiles from this particular property, although one or two may be present, but probably in very low numbers.

No tortoises were seen on site, but the region supports large populations of Angulate Tortoise (*Chersina angulata*; Least Threatened) and Leopard Tortoise (*Stigmochelys pardalis*; Least Threatened), and both they can be expected to occur.

Steenbok (*Raphicerus campestris*), Common Duiker (*Sylvicapra grimmia*) and Grysbok (*Raphicerus melanotis*) are probably the most prominent mammals that still occur on site, and it is likely that lynx (*Felis caracal*) is still present as the largest predator.

No threatened butterfly species are likely to occur within the habitat on site (Mecenero et al 2013), but the site may support a moderate diversity of moths and butterflies, in addition to many other insects, some of which could be rare or localised, as insect diversity patterns in the Fynbos region often parallel plant diversity patterns.

Faunal sensitivity is expected to be largely minor as it is usually dependant on available natural habitat which is available in various large areas in the vicinity of the proposed development.

7.6 WATER MANAGEMENT AREAS

7.6.1 Hydrology and Ephemeral Drainage Lines

A freshwater assessment was conducted. The Sensitive Stream A and its tributaries to the west was identified in the freshwater assessment will be buffered out in this preferred alternative option 1 to minimise the impact of the project on the environment. Biodiversity sensitivity found in the eastern half of the property is less sensitive except the water course i.e., Stream A that are crossing the property. This watercourse will however be buffered out (as per the site development Plan) and mitigation measure identified in the site Environmental Management Plan will be implemented to manage the development area. The The study area is located within Quaternary catchment H40L, which falls within the Breede/Gouritz WMA.

Freshwater features found on site include Stream A with its associated tributaries as well as other small drainage lines located towards the west of the development area. Stream A originates on the foothill slopes of the Langeberg Mountain to the north, flowing southwards through the property and further downstream towards the Breede River. The stream would have historically flowed all the way to the Breede River but is currently caught in a large dam just after passing under the R60 and is further downstream completely channelled in an artificial channel towards the river on a different property.

Stream A with its tributaries as well as the other small drainage lines located towards the west of the development area will be buffered out and will not be developed to ensure the water course characteristics are kept intact and that open biodiversity connective areas are left undeveloped to ensure future biodiverse growth on the property and to ensure the impact on the sensitive environment areas are protected. A 20m buffer (Stream A) will be kept during all clearing and development of activities and these areas will strictly be treated as a No-Go area. Furthermore, no new roads will be constructed over the streams, with only existing roads to be used.

From the Specialists field assessment, the drainage lines were defined as to be purely that, small seasonal drainage lines with a low ecological value only directing water for a short time during heavy rain spells.

From a vegetation and biodiversity point of view, the stream A presents high ecological function and is associated with the Robertson Karoo vegetation type. From the 2017 Western Cape Biodiversity Spatial Plan most of the stream is classified as an Ecological Support Area (ESA1 and 2 - Watercourse, Water Source). These areas are not essential for meeting biodiversity targets but play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services. These areas should be maintained in a functional, near-natural state.

Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised.

The IHI assessment compared with the site observations in that the riparian and instream integrity of the stream was found to be in a Natural (riparian) to Largely Natural (instream) state throughout the property. The EIS for the quaternary catchment area H40L is 2,3 (High), which is slightly higher than that found for Stream A (Moderate), and could be attributed to Stream A's ephemeral nature, and thus being less sensitive to especially flow modifications.



Figure 15: Tributaries and Drainage Lines (blue) with Riparian Zones (green).

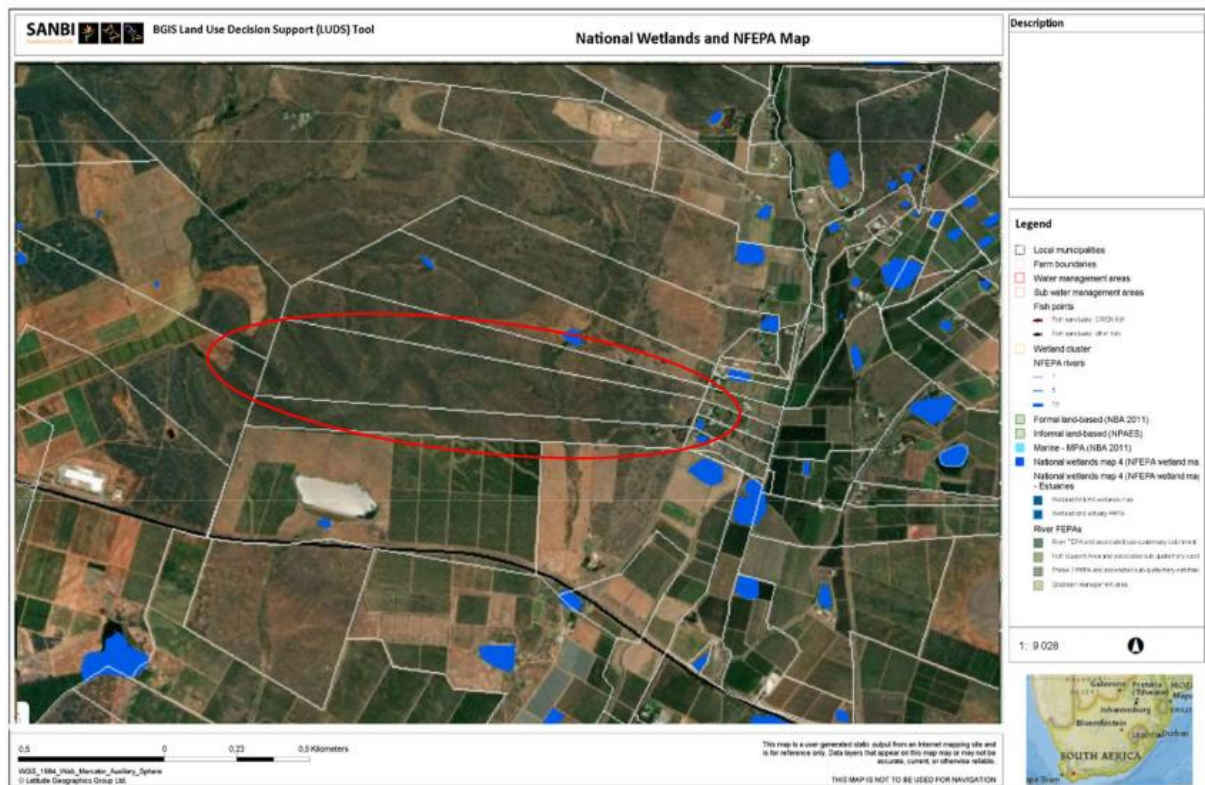


Figure 16: Drainage Line Map.

7.7 WATER MANAGEMENT

The landowner currently has water right included in Appendix 6. **A Water Use Licence Application (WULA) is being applied for concurrently to this EIA by Agri Expert (Pty) Ltd under a separate submission to the Department of Water and Sanitation (DWS).** Additional Water uses are being applied for in terms of Section 21 of the National Water Act (NWA) (Act 36 of 1998) and authorisation will have to be obtained.

Activities listed in terms of Section 21 of the National Water Act (Act 36 of 1998) which require a **Water Use Licence (WUL)** include:

- Section 21(c): impeding or diverting the flow of water in a watercourse
- Section 21(i): altering the bed, banks, course or characteristics of a watercourse.

7.8 SITES WITH ARCHAEOLOGICAL INTEREST

Heritage site survey was undertaken by Dr. Jayson Orton the Archaeologist and Heritage Consultant of ASHA Consulting (Pty) Ltd. No significant impacts to heritage resources were recorded. Therefore, no Heritage study was conducted. The NID was submitted to Heritage Western Cape where it was concluded in their letter dated 1 February 2024 that there is no reason to believe the proposed development will impact on any heritage resources and that no further action is required. Should anything of archaeological significance be uncovered a suitably qualified professional will be contacted to conduct an assessment. No negative impact to the cultural and heritage of the area are foreseen due to the proposed activities to be established.



Figure 17: Paleosensitivity map indicating Low Sensitivity (SAHRIS Extract).

7.9 SOCIAL AND ECONOMICS

7.10 Demographic and Socio-Economic Overview

The economic and social stability of the local community in Robertson is fundamentally underpinned by agriculture and tourism. Both sectors are currently experiencing a general economic downturn. Due to ongoing economic challenges and increasing industrialisation, there has been a significant loss of employment opportunities within the agricultural sector in the Langeberg Municipality. This decline in agricultural employment represents a serious concern for the area. In response, the Langeberg Municipality has commissioned a local economic development strategy as part of its Integrated Development Plan (IDP), identifying the reversal of job losses in agriculture as a strategic priority. Poverty remains a pressing issue in Robertson, where few job opportunities exist, yet the population is comparatively high.

7.10.1 Population and Employment Trends

Langeberg is presently home to approximately 117,450 residents, making it the smallest municipal area within the Cape Winelands District (CWD). The population is projected to rise to 126,018 by 2024, representing an average annual growth rate of 1.8%. Over the past decade, the unemployment rate has shown a consistent upward trend, increasing from 4% in 2008 to 6% in 2010, maintaining this level until 2014, then dropping to 5.2% in 2015 before climbing again to 6.2% in 2018. Despite robust growth of 10.1% in the agriculture, forestry and fishing sector in 2017, the sector faced a contraction of 3.9% in 2018 due to drought conditions. Nevertheless, agriculture, forestry and fishing remained the largest contributors to employment in Langeberg, accounting for 26.7% of jobs in 2017.

7.10.2 Household Financial Health and Poverty

The deteriorating financial position of households and individuals between 2011 and 2015, exacerbated by economic pressures, has led to increased poverty levels. This trend is supported by findings from the Poverty Trends in South Africa report published by Statistics South Africa in 2017. Over the last decade, unemployment in Langeberg has steadily risen, following a similar pattern to the national trend.

7.10.3 Economic Performance

Langeberg records the lowest Regional Gross Domestic Product (GDPR) per capita among the municipalities in the CWD. Economic activity within municipal boundaries is a key indicator of human development and living standards. Over the past ten years, Langeberg's economy grew at an annual average of 2.8%, although this slowed to an estimated 2% per annum between 2014 and 2018.

7.10.4 Provincial Spatial Development Framework (PSDF)

Agriculture is a central element of the Provincial Spatial Development Framework (PSDF) for the district, reflecting the significance of agriculture to Robertson's economy. The proposed development aligns with the PSDF's guiding principles on sustainability and resilience, promoting spatially compact, resource-efficient land use that is compatible with cultural and scenic landscapes. It discourages the conversion of high-potential agricultural land and seeks to avoid compromising ecosystems. The PSDF also encourages developments capable of withstanding shocks such as climate change or economic crises.

Section 3 of the PSDF highlights the Western Cape's economy as being founded on unique spatial assets, especially farming resources. These resources enable the province to be the leading exporter of agricultural commodities in South Africa, with value chains such as agri-processing supporting the industrial sector. The agricultural asset base is significant as it underpins the economy, ensures food security, sustains rural livelihoods and attracts income to the province.

To ensure sustainable resource management, the PSDF identifies several policy objectives: protection of biodiversity and agricultural resources, minimisation of scarce resource consumption (particularly water), and conservation of productive landscapes' unique character.

7.10.5 The Three Pillars of Sustainability

The sustainability of the proposed development is evaluated against the three pillars of sustainability, often referred to as the "triple bottom line":

- **Ecological integrity (health of the planet):** Maintaining ecological wholeness and the ability to support life is fundamental. In the context of the Western Cape, this includes preserving the Cape Floral Kingdom, one of six floral kingdoms globally.
- **Social equity (situation of the people):** Social equity involves ensuring material and spiritual wellbeing, with particular importance placed on redressing historical injustices. Achieving equity is vital for social sustainability in South Africa.
- **Economic efficiency (attainment of prosperity):** Economic sustainability is achieved by optimising benefits while minimising costs, ensuring that economic and human capital do not deplete ecological and social resources beyond sustainable limits. The current project focuses on vineyard crop production, which is expected to add value and create future employment opportunities, supporting the sustainability of the development.

7.10.6 Alignment with the Integrated Development Plan (IDP) of Langeberg Local Municipality

Agriculture is the predominant and most appropriate land use for the area, as reflected in the Langeberg Local Municipality's IDP. Alternative land uses are not consistent with the IDP and do not address the community's needs. Agriculture remains the main contributor to Gross Geographic Product, featuring prominently in the Cape Winelands District Municipality's development objectives. The aim is to expand economic activity, particularly in the agricultural sector, to support mass production for local and regional markets. Farm Rietvallei is designated for agricultural development, with soil analysis confirming the availability of high-potential land for sustainable production. The surrounding area is characterised by agricultural land, vineyards, housing for farm workers, and related infrastructure, making agriculture the most suitable and effective activity for the property.

7.10.7 Food Source Production and Agricultural Profile

The Western Cape's agricultural sector is distinct from other regions in South Africa, largely due to favourable physical resources. The Boland's winter rainfall and the Southern Cape's year-round rain create unique conditions for crop production. The region benefits from stable rainfall and well-developed infrastructure for both input supply and product processing, ensuring production stability.

Agriculture is a key pillar of the Western Cape economy, contributing around 23% of the total value added in South Africa's agricultural sector, despite the province accounting for roughly 14% of the national Gross Domestic Product. The Boland's 80,000 hectares of intensively cultivated and irrigated land are primarily dedicated to deciduous fruit and wine grapes.

In recent years, commodity prices have remained relatively stable and are determined by market supply and demand. Traditional marketing and promotional efforts are not considered necessary. Notably, more than 13.8% of employed Western Cape residents aged 15-65 work in the agricultural sector, highlighting the sector's importance to regional employment and economic stability.

7.11 LAND USE AND LANDSCAPE CHARACTERISTICS

The topography where the established table grape infrastructure is developed is mostly flat as are the topography of the larger geographical Augrabies area. As a result of the flat topography, sandy and rocky soil cover most of the area and little usable surface runoff is generated in the water management area due to the low rainfall in the region.

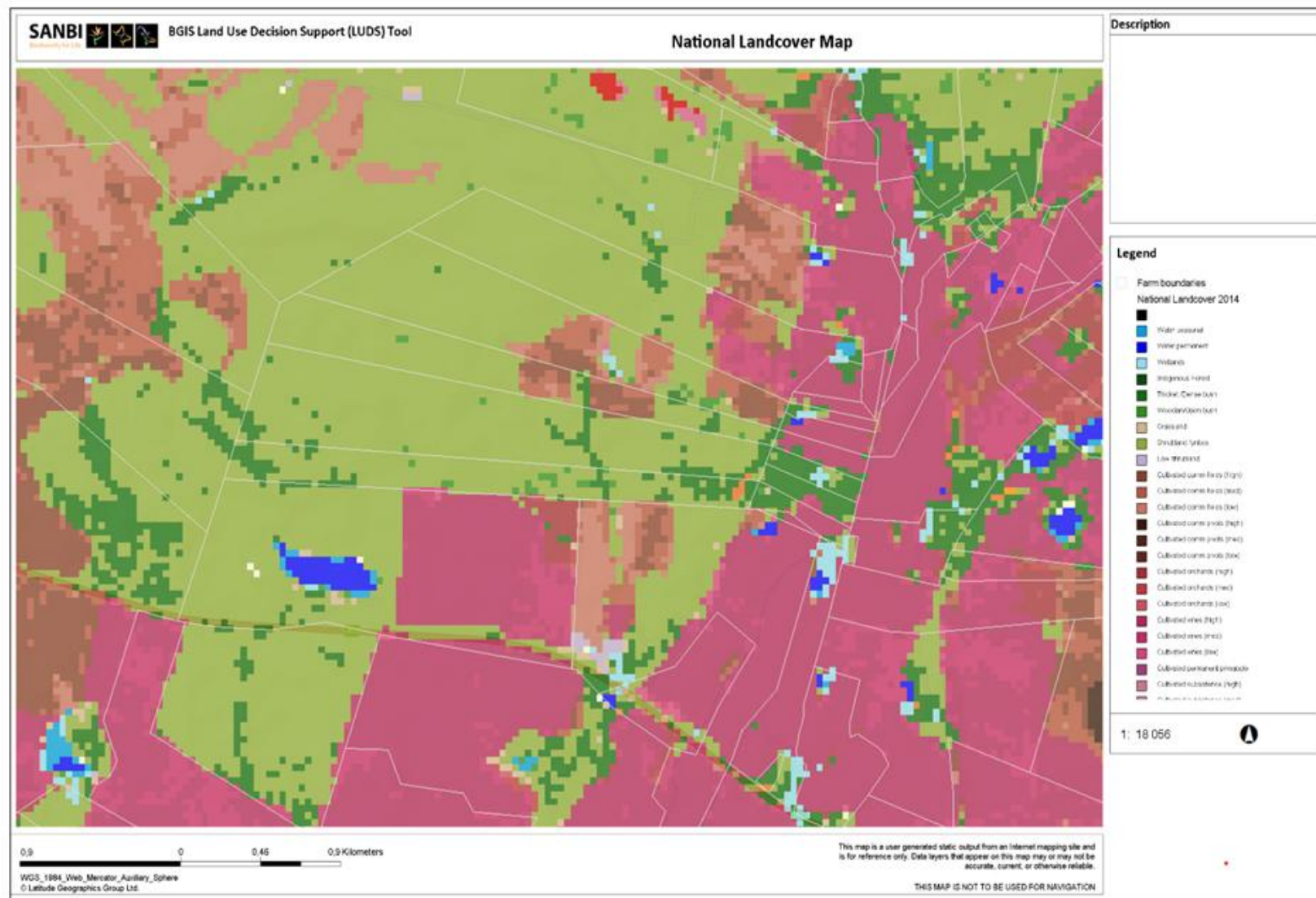


Figure 18: Landcover Map.

The total area of the property on portion 39 (a portion of portion 6) of the farm Rietvallei 115 comprises of 75 hectares. The proposed application will entail the clearance of virgin land for agricultural purposes to establish 30.0 hectares of grape vineyards on identified lower sensitive sections of the property as these areas are more feasible for agricultural development with a lower impact on the environment (Once a Greenfield Site more than 10 years ago). The western corner consists of high and dense natural vegetation and the non-perennial stream in the middle of the property was not considered in the application.

The Subject Property is situated 7 km east of the town Robertson and is located in the Langeberg Local Municipal area that forms part of the Cape Winelands District Municipality in the Western Cape province of South Africa. The property comprises to be an irrigation farm and farming activities to consist of vineyards. This is a "bona fide" farm property to be farmed intensively as a vineyard farm. The involved land for this project is uniquely situated. The land is rich in quality agricultural soil which is greatly suitable for the establishment of grape vineyards.

The immediate and surrounding area is dominated by various vineyard farms as the area is known as one of the most important wine, table grape, and fruit producing areas in South Africa. Access roads to the farms are in place and the property is already connected to the grid and supplied with Eskom Electricity.

The property consists of a single housing arrangement situated in the most eastern point of the site next to the existing tar road where access to the property is gained. an irrigation farm. The immediate area is dominated by various irrigation farms as the area is known as one of the most important wine, table grape, raisin and citrus producing areas in South Africa.

8 PLAN OF STUDY

The objective of the Environmental Impact Assessment process is to, through a detailed consultative process, evaluate and present information on the implications of the proposed established infrastructure. It also aims to formulate mitigation measures that should be implemented to minimise and manage the negative impacts and to promote the positive impacts. This Report also supply the **DEA&DP** with information that can assist the Department in evaluating the proposed project and to make an informed decision based on the information presented.

This Report contains all information as outlined in the EIA-Regulations, 2014 (as amended) and the most relevant information associated with this phase is presented as follows:

- Background Information
- Activity Information
- Description of the receiving environment
- Need and Desirability
- Alternatives
- Impact Assessment, Management, Mitigation and Monitoring Measures
- Assessment Methodologies and Criteria, Gaps in Knowledge, underlying Assumptions and Uncertainties
- Recommendations of the EAP
- Public Participation Process

8.1 DESCRIPTION OF ALTERNATIVES TO BE ASSESSED

Two alternatives are being considered for the proposed project, as indicated in Figure 19. The first option is considered to be the preferred option as it encompasses a larger area. However, the vineyard layout will still take into account the proximity to existing watercourses. The second alternative excludes the east and west parts of the site but will not alleviate the potential impacts and it is not envisaged that the alternative will be necessary for the proposed vineyard cultivation.



Alternative 1



Alternative 2

Figure 19: Map of Alternatives.

8.2 ASPECTS TO BE ASSESSED

Based on the results of the Screening Report, the following specialist studies have been identified for inclusion of the assessment report and must be compiled in terms of the assessment protocols³;

³ gazetted on 20 March 2020 under the notice "Procedures to be followed for the Assessment and Minimum Criteria for Reporting of Identified Environmental Themes In in terms of Section 24(5)(a) and (h) of the National Environmental Management Act, 1998

- Landscape/Visual Impact Assessment
- Archaeological and Cultural Heritage Impact Assessment
- Palaeontology Impact Assessment
- Terrestrial and Aquatic Biodiversity Impact Assessment
- Plant and Animal Species Assessment
- Socio-Economic Assessment

However, a site sensitivity verification was undertaken through the use of:

- A desktop analysis, using satellite imagery;
- A preliminary on-site inspection; and
- Any other available and relevant information.

Based on the outcome of the site assessment, the specialist studies undertaken are listed in Table 6

Table 8: Specialist Studies for inclusion in the Assessment.

REQUIRED SPECIALIST STUDIES	ASSESSMENT CONDUCTED OR REASON WHY IT WAS NOT UNDERTAKEN.
Landscape/Visual Impact Assessment	The proposed activity is the same or similar to the current surrounding landuse: vineyard. The activity is anticipated to blend into the landscape and is not expected to be visually disturbing. Therefore, a landscape and visual assessment is not required.
Archaeological and Cultural Heritage Impact Assessment	A NID was submitted to Heritage Western Cape where it was concluded in their letter dated 1 February 2024 that there is no reason to believe the proposed development will impact on any heritage resources and that no further action is required. Should any aspect of archaeological significance be uncovered a suitably qualified professional will be contacted to conduct an assessment.
Palaeontology Impact Assessment	
Terrestrial and Aquatic Biodiversity Impact Assessment	To meet this requirement, the following specialist studies have been included in the assessment: - Botanical and terrestrial biodiversity assessment of proposed new cultivation on remainder of Ptn 6 of Rietvallei 115, Robertson - Freshwater assessment for the proposed development on portion 39 of the farm Rietvallei 115, Robertson
Plant and Animal Species Assessment	
Socio-Economic Assessment	Although the proposed activity will have impacts on socio-economic aspects, these impacts can be assessed adequately by the EAP without requiring a detailed assessment. Due to limited data (surrounding landowners) would not produce a

REQUIRED SPECIALIST STUDIES	ASSESSMENT CONDUCTED OR REASON WHY IT WAS NOT UNDERTAKEN.
	meaningful result if a quantitative assessment was undertaken. Qualitative assessment of available information can be provided by the EAP in the Assessment Report.
Additional Studies	Although not requested through the Screening Assessment, the following study is required and has been included in the assessment: – Soil Assessment for Rietvallei Robertson, Western Cape

The required level of specialist assessment must be based on the findings of the DFFE screening reports and must comply with the specialist protocols, published in Government Notice 320 of 20 March 2020 or Appendix 6 of the EIA Regulations promulgated under sections 24(5) and 44 of the NEMA, where a specialist assessment is required.

8.3 METHOD OF ASSESSING ENVIRONMENTAL ASPECTS

Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives. This section will focus on the main aspects associated with the development and the associated mitigation measures to be implemented.

The following factors were evaluated when determining the significance of the impacts:

Longevity/ Duration

- **Short term:** The duration of the impact will be over a short period of time.
- **Medium term:** The duration of the impact will be over a medium period of time. Normally not longer than the last phase of the proposed project through implementation of adequate mitigation measures.
- **Long term:** The duration of the impact will be over a long period of time. Normally throughout the operational phase of the proposed project through implementation of adequate mitigation measures.
- **Permanent:** The impact will be permanent and will not even be addressed through implementation of adequate mitigation measures.

Intensity/ Magnitude

- **Low:** Natural processes are not affected or disturbed as a result of the impact.
- **Medium:** Natural processes are affected or disturbed as a result of the impact, however, continues in an altered manner.

- **High:** Natural processes are affected or disturbed in such a manner that it is permanent. Natural processes are ceased as a result of the impact.

Probability

- **Improbable:** The possibility of the impact occurring is very low to negligible.
- **Probable:** The possibility of the impact occurring is still low, however must be taken into account during development of mitigation measures.
- **Highly Probable:** The possibility of the impact occurring is highly likely.
- **Definite:** The possibility of the impact occurring is certain.

Impacts

The predicted impacts are divided into the following categories:

- **Negligible:** The impact is not significant and does not require any mitigation.
- **Low:** The impact has a low significance which may require partial mitigation.
- **Moderate:** The impact is of importance and as a result might have a negative impact on the surrounding environment. Mitigation is therefore required in order to reduce the negative impacts to tolerable levels.
- **High:** The impact is of high importance and as a result might have a major impact on the surrounding environment. Mitigation measures are needed to reduce the negative impacts to tolerable levels is vital in order to make the proposed development feasible.

Table 9: Criteria for Determining Impact Ratings.

Determination of Extent (Scale):	
Site Specific	On site or within 100 m of the site boundary.
Local	The impacted area includes the whole or a measurable portion of the site, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area.
Regional	The impact would affect the broader region (e.g. neighbouring towns) beyond the boundaries of the adjacent properties.
National	The impact would affect the whole country (if applicable).
Determination of Duration:	
Temporary	The impact will be limited to the construction phase.
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 6 months after the completion of the construction phase.
Medium term	The impact will last up to the end of the construction phase, where after it will be entirely negated in a period shorter than 2 years after the completion of construction activities.
Long term	The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter.

Permanent	This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied.
Determination of Probability:	
Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Probable	There is a possibility that the impact will occur to the extent that provisions must therefore, be made.
Highly Probable	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences.
Definite	The impact will take place regardless of any prevention plans.
Determination of Significance (without mitigation):	
No significance	The impact is not substantial and does not require any mitigation action.
Low	The impact is of little importance but may require limited mitigation.
Medium	The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
Medium – High	The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels.
High	The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.
Very High	The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable.
Determination of Significance (with mitigation):	
No significance	The impact will be mitigated to the point where it is regarded to be insubstantial.
Low	The impact will be mitigated to the point where it is of limited importance.
Medium	Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the project, such a persistent impact does not constitute a fatal flaw.
High	Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and, taken within the overall context of the project is considered to be a fatal flaw in the project proposal.
Determination of Reversibility:	
Completely Reversible	The impact is reversible with implementation of minor mitigation measures.
Partly Reversible	The impact is partly reversible but more intense mitigation measures.
Barely Reversible	The impact is unlikely to be reversed even with intense mitigation measures.
Irreversible	The impact is irreversible, and no mitigation measures exist.
Determination of Degree to which an Impact can be Mitigated:	

Can be mitigated	The impact is reversible with implementation of minor mitigation measures
Can be partly mitigated	The impact is partly reversible but more intense mitigation measures.
Can be barely Mitigated	The impact is unlikely to be reversed even with intense mitigation measures
Not able to mitigate	The impact is irreversible, and no mitigation measures exist.
Determination of Loss of Resources:	
No loss of resource	The impact will not result in the loss of any resources.
Marginal loss of resource	The impact will result in marginal loss of resources
Significant loss of resources	The impact will result in significant loss of resources
Complete loss of resources	The impact will result in a complete loss of all resources
Determination of Cumulative Impact:	
Negligible	The impact would result in negligible to no cumulative effects.
Low	The impact would result in insignificant cumulative effects
Medium	The impact would result in minor cumulative effects
High	The impact would result in significant cumulative effects
Determination of Consequence significance:	
Negligible	The impact would result in negligible to no consequences
Low	The impact would result in insignificant consequences
Medium	The impact would result in minor consequences
High	The impact would result in significant consequences

Table 10: Impact Scoring.

ASPECT	DESCRIPTION	WEIGHT
Scale	Local	1
	Site	2
	Regional	3
Duration	Short term	1
	Medium term	3
	Long term	4
	Permanent	5
Magnitude/Severity	Low	2
	Medium	6
	High	8
Probability	Improbable	1
	Probable	2
	Highly Probable	4
	Definite	5
Significance	Sum (Scale, Duration, Magnitude) x Probability	
	Negligible	<20
	Low	<40
	Moderate	<60
	High	>60

Table 11: Significance Rating.

SIGNIFICANCE RATING	
	Sum (Scale, Duration, Magnitude) x Probability
Negligible	Impact is negligible

SIGNIFICANCE RATING	
Low	Impact is low and limited mitigation will be required
Moderate	Impact is moderate and specific mitigation measures will be required
High	Impact is high and extensive mitigation measures will be required.

8.4 ASSESSMENT OF IDENTIFIED IMPACTS

8.4.1 Impacts associated with Alternative 1

Table 12: Impacts: Alternative 1: Vegetation.

Alternative: 1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impact on vegetation
Nature of impact:	Loss of a small area (<1.5ha) of mapped terrestrial ESA1 (Ecological Support Area), and large areas mapped as ONA (Other Natural Area). Small areas of mapped aquatic CBA1 will be lost. Significance of the loss of these categories on site is deemed to be Low – Medium negative significance. Loss of about 30 ha of natural vegetation & less than 1ha of CBA / ESA sensitivity.
Extent and duration of impact:	Local and regional scale, long term to permanent
Consequence of impact or risk:	Negative
Probability of occurrence:	Definite (site)
Degree to which the impact may cause irreplaceable loss of resources:	There would be irreplaceable loss of veg, although relatively minor, Loss of a small area (<1.5ha) of mapped terrestrial ESA1 (Ecological Support Area), and large areas mapped as ONA (Other Natural Area). Small areas of mapped aquatic CBA1 will be lost. Significance of the loss of these categories on site is deemed to be Low – Medium negative significance. Loss of about 30 ha of natural vegetation & less than 1ha of CBA / ESA sensitivity.
Degree to which the impact can be reversed:	Cannot be fully reversed although if fields are eventually abandoned but some of the natural vegetation in the area may very recolonise.
Indirect impacts:	See operational phase impacts
Cumulative impact prior to mitigation:	Low negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High-negative in limited specific areas as identified
Degree to which the impact can be avoided:	Can be avoided if High sensitivity areas are avoided.

Degree to which the impact can be managed:	Impact on areas cannot be managed if developed.
Degree to which the impact can be mitigated:	Nothing can really be done to mitigate the likely impact
Proposed mitigation:	Built into proposal: limit new cultivation to (Alternative 1 vs Alt 2); and maintain required 20 m and 15 m buffers from watercourses. Land not to be further developed after this. Site personnel must undergo Environmental Training and be educated on keeping any vegetation disturbance to a minimum. Harvesting of indigenous flora is strictly forbidden. All woody alien invasive vegetation within any mapped High sensitivity areas, and within 100m of any such areas, must be felled and stump poisoned. Demarcate no-go areas. Only remove trees that are necessary. Blue gums must be cleared in such a way to keep the sense of place as far as possible. This will reduce the visual outcome on the property. Alien plant encroachment must be monitored and prevented as outlined in the EMP; All disturbed and open areas between the agricultural fields must be rehabilitated to the satisfaction of the ECO. All exposed earth should be rehabilitated with suitable vegetation to protect the soil. Vigorous site-specific grasses planted with fertiliser are very effective at covering exposed soil. Necessary rehabilitation measures (e.g., seeding, removing alien plants etc.) should be introduced to ensure species composition reverts to a more natural state (with regards to affected areas). Indigenous vegetation with deep set root systems is advisable to limit soil loss on site. Ripped compacted soil areas to a dept of 250mm and break up clods to ensure proper drainage and water infiltration. Cover these areas with topsoil found on site and/or rehabilitate with new seeding where required. All disturbed and open areas between the agricultural fields must be rehabilitated to the satisfaction of the ECO. Preserve topsoil and subsoil for rehabilitation purposes where available.

	Site management shall ensure that the following rehabilitation takes place prior to final hand-over of the construction site: All structures that will not form part of the permanent structure are to be removed from site. Remove all construction equipment, machinery and surplus materials i.e. spoil/overburden/rubble material from site. Clear all windblown litter and waste. Dispose all general and hazardous waste from site in line with the waste section of the EMP. Remove all containers / bins / site facilities and skips from site. Cancel all applicable service providers. Repair damage to roads / fences caused by construction vehicles. Eradicate all alien invasive species that became established during the construction phase. Rip compacted soil to a depth of > 250mm and break up clods to ensure proper drainage and water infiltration if required. The contractor should commence rehabilitation of exposed soil surfaces as soon as practical after completion of earthworks.
Residual impacts:	Medium; loss of 5ha of High sensitivity habitat and only very small patches (less than 1ha) of terrestrial CBA1 will be impacted by the Alternative 1 development.
Cumulative impact post mitigation:	Medium negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
OPERATIONAL PHASE	
Potential impact and risk:	Habitat fragmentation and loss of current ecological connectivity across site; Loss of a small area (<1.5ha) of mapped terrestrial ESA1 (Ecological Support Area), and large areas mapped as ONA (Other Natural Area). Small areas of mapped aquatic CBA1 will be lost. Possible disruption of optimal ecological fire regime in adjacent natural areas.
Nature of impact:	Ecological processes in surrounding undeveloped areas will be disrupted due to habitat fragmentation; lack of fire in adjacent natural

	areas will lead to reduction in overall species diversity over time.
Extent and duration of impact:	Local too long term
Consequence of impact or risk:	Negative
Probability of occurrence:	Fairly likely
Degree to which the impact may cause irreplaceable loss of resources:	Likely to cause low degree of irreplaceable loss of species and habitat quality.
Degree to which the impact can be reversed:	Loss of ecological connectivity to development can usually be reversed if fields are abandoned and allowed to revert to natural vegetation; natural fire regime can be mimicked by careful revegetation management.
Indirect impacts:	Some of these are indirect impacts in that they will take place on site
Cumulative impact prior to mitigation:	Low - Medium negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be avoided:	Cannot be avoided
Degree to which the impact can be managed:	Fire regime impacts on surrounding areas can be minimised by management.
Degree to which the impact can be mitigated:	Fire regime impacts can be minimised by management, although this is not very likely
Proposed mitigation:	Maintain required 20m buffer from watercourse A; maintain 15m buffer around the tributary to the west of stream A. Remove all invasive aliens, although controlled management fires of surrounding natural areas (on property) every 8-12 years is recommended. All exposed earth should be repeatedly rehabilitated with suitable vegetation to protect the soil. Vigorous site-specific grasses planted with fertiliser are very effective at covering exposed soil. Necessary rehabilitation measures (e.g., seeding, removing alien plants etc.) should be introduced to ensure species composition reverts to a more natural state (with regards to affected areas). Indigenous vegetation with deep set root systems is advisable to limit soil loss on site.
Residual impacts:	Loss of rehabilitation potential of existing disturbed vegetation in development area; no loss of ecological connectivity; habitat fragmentation in region; lack of fire in surrounding areas will have negative botanical impacts over time.

Cumulative impact post mitigation:	Low – Medium negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 13: Impacts: Alternative 1: Soil.

PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact on Soil
Nature of impact:	Disturbances include compaction, physical removal and potential pollution; The exposed soil surfaces have the potential to erode easily if left uncovered which could lead to the loss of vegetation; Potential loss of stockpiled topsoil and other materials if not protected properly; Increased erosion.
Extent and duration of impact:	Medium to long term
Consequence of impact or risk:	Negative
Probability of occurrence:	Definite (site)
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss of resource
Degree to which the impact can be reversed:	Cannot be fully reversed.

Indirect impacts:	Siltation of water streams on site
Cumulative impact prior to mitigation:	Low negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium negative
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Impacts can be managed
Degree to which the impact can be mitigated:	Specific mitigation measures can be implemented
Proposed mitigation:	Soil erosion prevention measures should be implemented such as gabions, sandbags etc. whilst energy dissipaters should be constructed at any temporary surface water flow points. All areas impacted by earth-moving activities should be re-shaped post-construction to ensure natural flow of runoff and to prevent ponding. All exposed earth should be rehabilitated promptly with suitable vegetation to stabilize the soil; and Any exposed earth should be rehabilitated promptly with suitable vegetation to protect the soil. All overburden soil materials must be stockpiled in approved areas identified in the site layout map prior to construction and, where possible, stockpiled soil to be used in reclamation activities.
Residual impacts:	Uncontrolled erosion could affect the integrity of the surrounding area
Cumulative impact post mitigation:	Low-Medium negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low-Medium – negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential Impact on Soil
Nature of impact:	Soil contamination by means of hazardous substances.
Extent and duration of impact:	Short term
Consequence of impact or risk:	Negative
Probability of occurrence:	Fairly likely
Degree to which the impact may cause irreplaceable loss of resources:	Not likely
Degree to which the impact can be reversed:	Can be reversed
Indirect impacts:	Loss of pollutes soil, financial cost to rehabilitate soil
Cumulative impact prior to mitigation:	Low -Medium negative

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-negative
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be definitely be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	No leaking oil or fuel carts may contaminate soil. All tanks and pipes containing fuel or oil must be inspected on a regular basis. All personnel working with fuel must undergo spill kit training. Following a leak or accidental spill, a remediation plan must be compiled and executed. All significant leaks must be reported to the competent authority. All hazardous chemicals should be correctly handled and stored.
Residual impacts:	Loss of soil
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low-Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 14: Impacts: Alternative 1: Freshwater and Aquatic Features.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Contamination of the fresh water and aquatic features and neighbouring properties
Nature of impact:	Negative
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Contamination of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Water quality
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium loss of resources
Degree to which the impact can be reversed:	Partly reversable
Indirect impacts:	Loss of biota Loss of ecosystem functionality
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Loss of ecosystem functionality Ecosystem stress from changes in flow regime.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	An ECO must be appointed to monitor the construction phase and report on the level of compliance with the EA and the EMP. General management measures relating to the management of waste and hazardous substances stated in the EMP must be implemented as and where applicable, in consultation with the ECO. Pollution Management:

	No pollution of surface water or ground water resources may occur due to any activity on the site. No water runoff from any premises containing waste, or water containing waste emanating from construction activities may be discharged into the environment. Polluted stormwater must be contained on the site. Cement batching / mixing may not take place directly on the soil surface, it must be done on an impervious lining that will prevent cement particles from contaminating the soil. General Waste Management: Dedicated waste bins or skips must be provided on site and kept in a demarcated area on an impermeable surface. Separate waste bins/skips must be provided for recyclable waste, general waste and hazardous waste. Recovered building rubble & green waste may be stockpiled on the ground within the site camp, or in separate skips until removal. Waste must be placed in the appropriate waste bins/skips/stockpiles. Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins. Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust. Waste bins/skips must be regularly emptied and must not be allowed to overflow. Construction workers must be instructed not to litter and to place all waste in the appropriate waste bins provided on site. The Contractor must ensure that all workers on site are familiar with the correct waste disposal procedures to be followed. Disposal of waste to landfill must be undertaken in accordance with the National Environmental Management: Waste Act. All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility.
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Pollution Management – hydrocarbons (oil, fuel etc.)

Vehicles and machinery must be in good working order and

must be regularly inspected for leaks.

If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair

Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp.

Drip trays, tarpaulin or suitable impermeable layer must be laid down prior to undertaking repairs.

Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips.

Drip trays must be utilised during decanting of hazardous

substances and when refilling chemical/ fuel storage tanks.

Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/lubricant, or where there is risk of leakage/spillage.

Where feasible, fuel tanks should be elevated so that leaks are easily detected.

A spill kit to neutralise/treat spills of fuel/ oil/ lubricants must be available on site, and workers must be educated on how to utilise the spill kit. Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste.

Pollution Management – Ablution facilities

Chemical toilets should be kept at the site camp, on a level surface and secured from blowing over.

Toilets must be located well outside of any storm water drainage lines and may not be linked to the storm water drainage system in any way.

Chemical toilets must be regularly emptied and the waste disposed of at an appropriate wastewater disposal/ treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.

Pollution Management – Hazardous Substances

Any hazardous substances (materials, fuels, other chemicals etc.) that may be required on site must be stored according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure. Material Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases.

Hazardous chemicals and fuels should be stored on bunded, impermeable surfaces with sufficient capacity to hold at least 110% of the capacity of the storage tanks.

Pollution management – agricultural herbicides, pesticides used.

All hazardous substances (herbicides, pesticides etc.) that may be used for agricultural purposes during the implementation and operational phase of agricultural plantations must be correctly and safely stored and applied according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Neighbouring Properties must be taken into account when herbicides and pesticides are applied, and possible chemical drifting must be assessed before application

(Proposed development footprint are isolated towards the East and Western side).

Weather conditions must be assessed prior to herbicide and pesticide application.

Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible

	and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases. Agricultural herbicides, pesticides should be stored in a bunded area.
Residual impacts:	If all mitigation measures are effectively implemented minimal residual impacts are expected
Cumulative impact post mitigation:	Negligible – the proposed mitigation measure, if implemented correctly will mitigate the potential cumulative impacts to an acceptable level.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – negative
OPERATIONAL PHASE	
Potential impact and risk:	Contamination of the freshwater features i.e., Stream A and Tributary stream and on site.
Nature of impact:	Negative
Extent and duration of impact:	Site and Temporary to medium term (dependant on the contaminant source and extent)
Consequence of impact or risk:	High Contamination of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss of resources
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Loss of biota Loss of ecosystem functionality
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-high
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Operational Pollution Management:

	No pollution of surface water or ground water resources may occur due to any operational activity on the site. No water runoff from any premises containing waste, or water containing waste emanating from construction activities may be discharged into the environment. Polluted stormwater must be contained on the site. Cement batching / mixing if any during the operational phase, may not take place directly on the soil surface, it must be done on an impervious lining that will prevent cement particles from contaminating the soil. Operational General Waste Management: Dedicated waste bins or skips must be provided on site and kept in a demarcated area on an impermeable surface. Separate waste bins/skips must be provided for recyclable waste, general waste and hazardous waste. Recovered building rubble & green waste may be stockpiled on the ground within the site camp, or in separate skips until removal. Waste must be placed in the appropriate waste bins/skips/stockpiles. Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins. Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust. Waste bins/skips must be regularly emptied and must not be allowed to overflow. Operational personnel must be instructed not to litter and to place all waste in the appropriate waste bins provided on site. Disposal of waste to landfill must be undertaken in accordance with the National Environmental Management:
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	Waste Act, All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility Operational Pollution Management – hydrocarbons (oil, fuel etc.) Vehicles and machinery must be in good working order And must be regularly inspected for leaks. If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair. Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp. Drip trays, tarpaulin or suitable impermeable layer must be laid down prior to undertaking repairs. Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips. Drip trays must be utilised during decanting of hazardous substances and when refilling chemical/ fuel storage tanks. Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/lubricant, or where there is risk of leakage/spillage. Where feasible, fuel tanks should be elevated so that leaks are easily detected. A spill kit to neutralise/treat spills of fuel/ oil/ lubricants must be available on site, and workers must be educated on how to utilise the spill kit. Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste. Operational Pollution Management – Ablution facilities
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Ablution facilities should be available on the property.

Toilets must be located well outside of any storm water drainage lines and may not be linked to the storm water drainage system in any way.

Chemical toilets must be regularly emptied and the waste disposed of at an appropriate wastewater disposal/treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.

Operational Pollution Management – Hazardous Substances.

Any hazardous substances (materials, fuels, other chemicals etc.) that may be required on site must be stored according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Material Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases.

Hazardous chemicals and fuels should be stored on bunded, impermeable surfaces with sufficient capacity to hold at least 110% of the capacity of the storage tanks.

Operational Pollution management – agricultural herbicides, pesticides used.

All hazardous substances (herbicides, pesticides etc.) that may be used for agricultural purposes during the implementation and operational phase of agricultural plantations must be correctly and safely stored and applied according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Neighbouring Properties must be taken into account when herbicides and pesticides are applied, and possible chemical drifting must be

	assessed before application (Proposed development footprint are isolated towards the East and West side). Weather conditions must be assessed prior to herbicide and pesticide application. Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases. Agricultural herbicides, pesticides should be stored in a bunded area.
Residual impacts:	None Expected
Cumulative impact post mitigation:	None Expected
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 15: Impacts: Alternative 1: Streamflow Modifications.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Stream Flow Modifications
Nature of impact:	Negative
Extent and duration of impact:	Site and temporary
Consequence of impact or risk:	Medium Stream deflection from berms Change in stream flow dynamics Water quality
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Increased stream flow directly down stream of activity Ecosystem stress from changes in flow regime
Cumulative impact prior to mitigation:	High- significant
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High Negative
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Limit new cultivation to (Alternative 1); and maintain required 20 m and 15 m buffers from watercourses. Construction should preferably take place during the drier summer months when flow in the streams and run off from the surrounding land is low. Rehabilitated and re-vegetate areas with appropriate vegetation as soon as construction activities are completed. Contaminated runoff from the construction sites should be prevented from directly entering downstream water features. Appropriate stormwater / surface water management measures must be put in place before construction commences and maintained throughout the lifetime of the development. Soil erosion prevention measures must be implemented such as gabions, sand bags etc. whilst energy dissipaters must be constructed at any surface water outflow points.

	All areas impacted by earth-moving activities must be re-shaped post-construction to ensure natural flow of runoff and to prevent ponding; Appropriate silt control mechanisms must be installed around all soil excavations. Should any excavations require dewatering, this is to occur through an adequately designed silt trap prior to discharge. Sandbag berms will be placed at regular intervals on all steep slopes and on the trench line before and after backfilling in order to minimise erosion and the discharge of contaminated stormwater runoff onto water courses; Temporary restriction of watercourses required during construction, must take place during the dry season; No material may be stored for longer than 24-hours within the working area within watercourses. Materials sufficient for the day's work may only be allowed within the working area within the watercourse; Construction in close proximity outside the buffer areas of watercourses must be monitored on a weekly basis.
Residual impacts:	Increase in flow velocity through the structures as they will be cleared of built up sediment and rocks
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
OPERATIONAL PHASE	
Potential impact and risk:	Stream Flow Modifications of the drainage lines on the property
Nature of impact:	Negative
Extent and duration of impact:	Site – Temporary
Consequence of impact or risk:	Low Sedimentation in streams on site. Change in stream flow dynamics. Water quality
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible

Indirect impacts:	Stream flow fluctuations in the vicinity of the drainage lines Ecosystem stress from changes in flow regime
Cumulative impact prior to mitigation:	High – significant
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Re-vegetate areas with appropriate vegetation as soon as construction activities are complete, and it must be monitored. Vegetation should include the plant diversity currently existing in Stream A and should be monitored. Temporary structures (berms and access) created to prevent channelizing and deflecting of the identified streams. All rehabilitated and revegetated areas should be monitored for the following 2 years, ensuring the establishment of good plant biodiversity. Only keep to exiting access road. Don't create any additional access roads on the property and in the vicinity of the watercourses. Not any activities to take place in the vicinity of the water course stream A.
Residual impacts:	Stream flow fluctuations Ecosystem stress from changes in flow regime.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	
Nature of impact:	Not Applicable
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 16: Impacts: Alternative 1: Noise.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Noise generated by construction activities
Nature of impact:	Negative
Extent and duration of impact:	Site – Temporary
Consequence of impact or risk:	Negligible Disruption to surrounding land users during the construction phase
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Not reversible
Indirect impacts:	Noise pollution and disruptions to sense of place to surrounding land users – although properties are some distances away from each other due the size of farm in the area.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed by only allowing certain unavoidable noise impacts
Degree to which the impact can be mitigated:	Can be mitigated by implementing mitigation measures that can reduce noise during construction.
Proposed mitigation:	The use of suitable and effective silencing devices should be made available for plant and equipment that would otherwise cause a noise level exceeding 85 dBA.

	All machinery must be in a good working condition in order to avoid excessive noise. Appropriate directional and intensity settings are to be maintained on all hooters and sirens. No amplified music or shouting shall be allowed on site. Construction activities to take place only during normal working hours.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant - Low
OPERATIONAL PHASE	
Potential impact and risk:	Noise generated by operational farming activities
	Negative
Extent and duration of impact:	Site – Long term
Consequence of impact or risk:	Negligible Disruption to surrounding land users during operations on the farm
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Not reversible
Indirect impacts:	Noise pollution and disruptions to sense of place to Surrounding land users – although properties are some distances away from each other due the size of farm in the area, not any severe noise area expected with farming activities.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed by only allowing certain unavoidable noise impacts
Degree to which the impact can be mitigated:	Can be mitigated by implementing mitigation measures that can reduce noise during construction.
Proposed mitigation:	The use of suitable and effective silencing devices should be made available for plant and equipment that would otherwise cause a noise level exceeding 85 dBA. All machinery must be in a good working condition in order to avoid excessive noise.

	Appropriate directional and intensity settings are to be maintained on all hooters and sirens. No amplified music or shouting shall be allowed on site. Operational activities to take place only during normal working hours.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant - Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 17: Impacts: Alternative 1: Fauna.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impact on fauna
Nature of impact:	Negative
Extent and duration of impact:	Site, nearby and surrounding area – Temporary
Consequence of impact or risk:	Negligible Disruption to fauna in the area during the construction phase
Probability of occurrence:	Probable

Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of fauna will occur.
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Fauna in the wild found on the site might move further away to neighbouring areas due to the increase of human activities during the construction phase.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed -Identify sensitive areas of fauna prior to construction works; Keep open corridor areas identified untouched.
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Identify sensitive fauna prior to construction works; No hunting is permitted on-site or the surrounding areas; Any personnel found to be poaching in the area should be subjected to a disciplinary hearing. The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place. Natural veld situated in-between the proposed lands must not be impacted upon and must be left in situ. Existing roads and farm tracks in close proximity to the proposed project area must be used during construction. Keep open corridor areas identified untouched.
Residual impacts:	Low – Medium; fauna will move out of the direct area of construction due to activities in operation.
Cumulative impact post mitigation:	Low - negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential impact on fauna
Nature of impact:	Negative

Extent and duration of impact:	Site, nearby and surrounding area – Temporary
Consequence of impact or risk:	Negligible Disruption to fauna in the area during the operational phase will be much less than during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of fauna will occur.
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Fauna in the wild found on the site that might have moved further away to neighbouring areas due to the increase of human activities during the construction phase will return during the operational phase as activities will not be so intense. Newly established plantations will also create a new habitat for various fauna and Avifauna.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed -Identify sensitive areas of fauna
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Identify sensitive faunal areas during operations and stay clear of these areas as far as possible. No hunting is allowed. Any personnel found to be poaching in the area should be subjected to a disciplinary hearing; and, Soil erosion must be monitored. The project operational footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place. Natural veld situated in-between the proposed lands must not be impacted upon and must be left in situ. Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
Residual impacts:	Low – Medium; fauna will move into new habitats created by the agricultural plantations.
Cumulative impact post mitigation:	Low - negligible

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – negligible
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 18: Impacts: Alternative 1: Fire Risk.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential risk of Fire
Nature of impact:	Negative Increase risk of fires during the development / construction phase.
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Loss of fauna, flora Loss, damage to property Loss of human life
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium loss of resources
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Disruption to ecosystem in the area.
Cumulative impact prior to mitigation:	Loss of ecosystem functionality

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Enclosed fires should only be allowed within fire-safe demarcated areas. No wood may be collected for the purpose of fires on-site. Cigarette butts may not be thrown onto the ground but must be placed in suitable cigarette but receptacles and disposed of correctly. Designated smoking areas with suitable receptacles for disposal. No vegetation and waste shall be burned on site. In case of an emergency the contact details of the local fire and emergency services must be readily available and shall be displayed on site. Contractors must ensure that basic fire-fighting equipment and suitably qualified/experienced personal are available on site at all times, as per the specifications defined by the health and safety representative/consultant. Fire extinguishers shall be placed at all working areas including where hazardous substances are kept. The fire risk on site must be included in the environmental induction training prior to commencement of construction and must be included in toolbox talks.
Residual impacts:	Loss of existing natural vegetation and fauna found in the development area; loss of ecological connectivity; habitat fragmentation in region. Financial loss.
Cumulative impact post mitigation:	Low- medium - Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium - Negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential risk of Fire
Nature of impact:	Negative Increase risk of fires during the operational phase activities
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High

	Loss of fauna, flora Loss, damage to property Loss of human life
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium or permanent loss of resources i.e. environment can and property, equipment etc..
Degree to which the impact can be reversed:	Environment can be partly reversable over time. Damage to machinery, equipment and infrastructure will lost, but can be replaced.
Indirect impacts:	Disruption to ecosystem in the area. Financial Loss.
Cumulative impact prior to mitigation:	Loss of ecosystem functionality Loss of fauna, flora Loss, damage to property Loss of human life
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Enclosed fires should only be allowed within fire-safe demarcated areas. No wood may be collected for the purpose of fires on-site. Cigarette butts may not be thrown onto the ground but must be placed in suitable cigarette but receptacles and disposed of correctly. Designated smoking areas with suitable receptacles for disposal. No vegetation and waste shall be burned on site. In case of an emergency the contact details of the local fire and emergency services must be readily available and shall be displayed on site. Fire extinguishers shall be placed at all working areas including where hazardous substances are kept. Personnel must be adequately trained in the handling of firefighting equipment. No open fires are permitted anywhere on site.

	No fires will be permitted for heating or cooking purposes on site. All equipment must have at least one firefighting extinguisher. Fuel and chemicals must be stored in an area that is acceptable for the client.
Residual impacts:	Loss of existing natural vegetation and fauna found in the development area; loss of ecological connectivity; habitat fragmentation in region. Financial loss
Cumulative impact post mitigation:	Medium - Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 19: Impacts: Alternative 1: Visual Aspects.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Visual Impact
Nature of impact:	Negative
Extent and duration of impact:	Site, nearby surrounding area – Long term

Consequence of impact or risk:	Disruption of sense of place in the area due to construction activities, machinery, materials, and site camp establishment.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Aesthetical disruptions to the sense of place to the surrounding land users due to construction activities.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Implementation of the construction EMP Good Housekeeping should be practiced in and around the site, laydown areas, waste areas and stockpile areas should be kept neat and organized. Prohibit excessive signage outside the site camp. No uncontained waste should be allowed on and around the site, all waste must be placed in closed waste receptacles immediately upon production. Limit site clearing to within the minimum footprint required for construction Ensure that the existing trees that will be retained are fenced off and not damaged during construction. Implement fines, if necessary. Control erosion immediately to prevent visual scarring of the landscape. Control dust using the appropriate dust suppression techniques. Construction to occur only during daytime. Any night-time work must be approved in consultation with the surrounding landowners. Only remove trees that are necessary.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Visual Impact

Nature of impact:	Once operational, the proposed development is likely to impact on the visual character of the site as agriculture is overwhelmingly practised in the area and the project will fit in with the surrounding activities.
Extent and duration of impact:	Site, nearby surrounding area – Long term
Consequence of impact or risk:	None
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Aesthetical changes to the sense of place to the surrounding land due to operational activities taking place.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Any disturbed area sites should be rehabilitated as soon as possible. Keep the sense of place of the agricultural development established.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	

Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 20: Impacts: Alternative 1: Heritage.

Alternative: 1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impacts on Heritage
Nature of impact:	Damage to or destruction of newly identified heritage resources.
Extent and duration of impact:	Negative -long term
Consequence of impact or risk:	Loss or damage to or destruction of newly identified heritage resources.
Probability of occurrence:	Negligible Disruption to heritage resources in the area during the construction phase is not planned as not any resources were identified during the site investigation conducted.
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Potential loss of historical resources.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated -Identify sensitive areas prior to project kick off (Not any found on Site).
Proposed mitigation:	Heritage Act requires that all operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities. Training must be undertaken to inform all Employees of the potential impact the development might have on heritage resources. Should any Heritage sites be exposed during construction, all work on the site must be stopped immediately and ECO must be informed. The ECO will then contact South African Heritage Resources Authority (SAHRA) and the heritage

	specialist. Construction may only recommence once the authority issues an instruction to do so. Not any sensitive heritage resources were however identified during the site investigation conducted.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low Negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential impacts on Heritage
Nature of impact:	Damage to or destruction of newly identified resources found during operations.
Extent and duration of impact:	Negative -long term
Consequence of impact or risk:	Loss or damage to or destruction of newly identified heritage resources.
Probability of occurrence:	Negligible Disruption to heritage resources in the area during the operational phase is not assumed. Not any sensitive heritage resources were identified during the site investigation conducted.
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Degree to which the impact can be reversed:	Reversible – though no irreplaceable loss of heritage resources is assumed.
Indirect impacts:	Potential loss of historical resources.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated -Identify sensitive areas prior to project kick off, however, not any sensitive heritage resources were however identified during the site investigation conducted.
Proposed mitigation:	Heritage Act requires that all operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities. Should any Heritage sites be exposed during the operational phase, all work must be stopped immediately and SAHRA should be notified.
Residual impacts:	None expected

Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 21: Impacts: Alternative 1: Cement Work.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Concrete Batching and Cement Work
Nature of impact:	Negative Cement powder has a high pH, spillage of dry cement powder and concrete slurry will affect both soil and water pH adversely. Careless handling of cement products resulting in spillages can have detrimental effects on the surrounding environment. Concrete Batching Plant
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Contamination of watercourse Deterioration of water quality Contamination of soil

	Water quality
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium loss of resources
Degree to which the impact can be reversed:	Partly reversable
Indirect impacts:	Disruption to ecosystem on site.
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	A designated wash out area must be provided for the excess sludge produces during concrete mixing. No mixing of cement is allowed on bare ground, mortar boards or similar structures must be used. No concrete mixing and storing of cement are allowed near any of the water features on site. Area will be identified by the ECO. Empty cement bags should be disposed of as hazardous waste and/or Empty cement bags can be washed out with water in an enclosed container where the clean cement bags can be disposed of as general waste. Grey water generated during the cleaning of cement bags are polluted and can be used for further concrete mixing purposes on site only. Storage of cement shall only occur at designated storage areas. Excess concrete (homeless concrete) generated can be re-used in open foundations and/or to be utilized to construct concrete building blocks. Excess concrete (homeless concrete) generated that cannot be re-used must be disposed of accordingly as per the waste management requirements. Housekeeping to take place on a daily basis.
Residual impacts:	If all mitigation measures are effectively implemented no residual impacts are expected

Cumulative impact post mitigation:	Negligible/None – the proposed mitigation measure, if Implemented correctly will completely mitigate the potential cumulative impacts.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Concrete Batching and Cement Work
Nature of impact:	Insignificant- not any concrete work will take place during the operational phase.
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	Low Contamination of watercourse Deterioration of water quality Contamination of soil Water quality
Probability of occurrence:	Not planned
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Reversible if necessary
Indirect impacts:	Disruption to environment on site.
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	If anticipated: A designated wash out area must be provided for the excess sludge produces during concrete mixing. No mixing of cement is allowed on bare ground, mortar boards or similar structures must be used. No concrete mixing and storing of cement are allowed near any of the water features on site. Area will be identified by the ECO.

	Empty cement bags should be disposed of as hazardous waste and/or Empty cement bags can be washed out with water in an enclosed container where the clean cement bags can be disposed of as general waste. Grey water generated during the cleaning of cement bags are polluted and can be used for further concrete mixing purposes on site only. Storage of cement shall only occur at designated storage areas. Excess concrete (homeless concrete) generated can be re-used in open foundations and/or to be utilized to construct concrete building blocks. Excess concrete (homeless concrete) generated that cannot be re-used must be disposed of accordingly as per the waste management requirements. Housekeeping to take place on a daily basis.
Residual impacts:	If all mitigation measures are effectively implemented no residual impacts are expected
Cumulative impact post mitigation:	Negligible/None – the proposed mitigation measure, if implemented correctly will completely mitigate the potential cumulative impacts.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant - Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	

Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 22: Impacts: Alternative 1: Socio-Economic Activities.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact on Socio Economic Activities
Nature of impact:	Positive
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Increased socio-economic conditions due to job creation. Skills development of the local community through employment opportunities. Possible economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Upliftment of the local community An increase in economic growth of the Rietvallei farm will provide work for more than 61 employees. Income generated from this development will increase the economic turnover in the region and will have benefits for the society in general. Increase in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Better Quality of life for labourers are uplifted Capital influx for households, surrounding business Skills development
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	Inform the surrounding communities and general public of the proposed activity as soon as

	possible. Such notification has been conducted through the Public Participation Process. Local people should be employed where possible; Were practically possible. Previously disadvantaged individuals should be provided preference with regards to employment opportunities and A Community Liaison Officer could assist in raising any concerns / complaints noted by the affected community to the Construction Team.
Residual impacts:	Skills development and knowledge gained.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Potential Impact on Socio Economic Activities – job creation
Nature of impact:	Positive
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Increased socio-economic conditions due to job creation. Skills development of the local community through employment opportunities. Economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the operational phase. Upliftment of the local community An increase in economic growth on the Rietvallei farm will provide work for more than 61 employees. Income generated from this development will increase the economic turnover in the region and will have benefits for the society in general. Increase in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Better Quality of life for labourers and families Capital influx for households, surrounding business Skills development and knowledge gained.
Cumulative impact prior to mitigation:	Low

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	Local people should be employed where possible. Previously disadvantaged individuals should be provided preference with regards to employment opportunities. Skills development during the operational phase must take place
Residual impacts:	Skills development and knowledge gained.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 23: Impacts: Alternative 1: Traffic.

Alternative:1	
PLANNING, DESIGN AND DEVELOPMENT PHASE	

Potential impact and risk:	Traffic – Movement of construction vehicles could cause inconvenience to neighbouring residents
Nature of impact:	Negative
Extent and duration of impact:	Local and short term
Consequence of impact or risk:	Disrupt local traffic flow
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	None
Indirect impacts:	None
Cumulative impact prior to mitigation:	Very low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Unavoidable
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Low – can be mitigated
Proposed mitigation:	All construction vehicles need to adhere to traffic laws The speed of vehicles must be strictly controlled to avoid dangerous conditions for all road users Adequate signage must be established where required All vehicles and equipment must be kept in a good working condition. Vehicles and construction worker to keep on designated access routes and within identified demarcated areas.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Increase in traffic due to development
Nature of impact:	Negative
Extent and duration of impact:	Local – Long term
Consequence of impact or risk:	Increased traffic in the area
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	None
Indirect impacts:	None
Cumulative impact prior to mitigation:	Low

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Unavoidable
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Adequate signage. Keep to existing farm roads.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 24: Impacts: Alternative 1: No-Go: Socio-Economic.

Alternative 1: No-Go Option	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact/implications on Socio Economic Activities if the development is not implemented.
Nature of impact:	Negative

Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Loss of Increased socio-economic conditions due to loss in job creation opportunities. Loss of Skills development of the local community through employment opportunities. Loss of economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Loss of the Upliftment opportunities of the local community Loss of an increase in economic growth as the Rietvallei farm will provide work for more 61 employees. Loss of Income generated from this development will decrease the economic turnover in the region and will have no benefits for the society in general. Loss in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Loss of the opportunity to better the Quality of life for labourers Loss of capital influx for households, surrounding business Loss of Skills development opportunities
Cumulative impact prior to mitigation:	high
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation can be implemented if the development is not implemented.
Residual impacts:	Loss of Skills development and knowledge that can be gained. Loss of better lives to communities.
Cumulative impact post mitigation:	high
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high

OPERATIONAL PHASE	
Potential impact and risk:	Potential Impact/implications on Socio Economic Activities if the development is not implemented.
Nature of impact:	Negative
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Loss of Increased socio-economic conditions due to loss in job creation opportunities. Loss of Skills development of the local community through employment opportunities. Loss of economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Loss of the Upliftment opportunities of the local community Loss of an increase in economic growth as the Rietvallei farm will provide work for more 61 employees. Loss of Income generated from this development will decrease the economic turnover in the region and will have no benefits for the society in general. Loss in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Loss of the opportunity to better the Quality of life for labourers Loss of capital influx for households, surrounding business Loss of Skills development opportunities
Cumulative impact prior to mitigation:	high
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation can be implemented if the development is not implemented.

Residual impacts:	Loss of Skills development and knowledge that can be gained. Loss of better lives to communities.
Cumulative impact post mitigation:	high
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

8.4.2 Impacts Associated with Alternative 2

Table 25: Impacts: Alternative 2: Vegetation.

Alternative :2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impact on vegetation
Nature of impact:	Loss of about 30ha of High sensitivity vegetation & 5ha of high sensitivity CBA (Critical Biodiversity Area) along the drainage lines, and small section of terrestrial ESA.
Extent and duration of impact:	Local and regional scale, long term to permanent
Consequence of impact or risk:	Negative
Probability of occurrence:	Definite (site)

Degree to which the impact may cause irreplaceable loss of resources:	The affected area would have irreplaceable loss, given that Loss of about 25ha of High sensitivity vegetation & 5ha of high sensitivity CBA (Critical Biodiversity Area) along the drainage lines, and small section of terrestrial ESA found in the Stream A watercourse.
Degree to which the impact can be reversed:	Cannot be reversed. Although if fields are eventually abandoned some of the natural vegetation in the area may very recolonise.
Indirect impacts:	See operational phase impacts
Cumulative impact prior to mitigation:	High negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Can be avoided if the High sensitivity watercourse defined as Stream A are avoided.
Degree to which the impact can be managed:	Impact on areas cannot be managed if developed.
Degree to which the impact can be mitigated:	Nothing can really be done to mitigate the likely impact
Proposed mitigation:	Site personnel must undergo Environmental Training and be educated on keeping any vegetation disturbance to a minimum. Harvesting of indigenous flora is strictly forbidden. All alien invasive vegetation gum within any mapped High sensitivity areas, and within 100m of any such areas, must be felled and stump poisoned. Demarcate no-go areas. Only remove trees that are necessary. Blue gum trees must be cleared in such a way to keep the sense of place as far as possible. Alien plant encroachment must be monitored and prevented as outlined in the EMP. All disturbed and open areas between the agricultural fields must be rehabilitated to the satisfaction of the ECO. All exposed earth should be rehabilitated with suitable vegetation to protect the soil. Vigorous site-specific grasses planted with fertiliser are very effective at covering exposed soil.

	Necessary rehabilitation measures (e.g. seeding, removing alien plants etc.) should be introduced to ensure species composition reverts to a more natural state (with regards to affected areas) where required. Indigenous vegetation with deep set root systems is advisable to limit soil loss on site. Ripped compacted soil areas to a dept of 250mm and break up clods to ensure proper drainage and water infiltration. Cover these areas with topsoil found on site and/or rehabilitate with new seeding where required. Preserve topsoil and subsoil for rehabilitation purposes where available. Site management shall ensure that the following rehabilitation takes place prior to final hand-over of the construction site: All structures that will not fall part of the permanent structure are to be removed from site. Remove all construction equipment, machinery and surplus materials i.e. spoil/overburden/rubble material from site. Clear all windblown litter and waste. Dispose all general and hazardous waste from site in line with the waste section of the EMP. Remove all containers / bins / site facilities and skips from site. Cancel all applicable service providers. Repair damage to roads / fences caused by construction vehicles. Eradicate all alien invasive species that became established during the construction phase. Rip compacted soil to a depth of > 250mm and break up clods to ensure proper drainage and water infiltration if required. The contractor should commence rehabilitation of exposed soil surfaces as soon as practical after completion of earthworks.
Residual impacts:	High; loss of 30ha of High sensitivity habitat
Cumulative impact post mitigation:	High negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
OPERATIONAL PHASE	

Potential impact and risk:	Habitat fragmentation and loss of current ecological connectivity across site; possible disruption of optimal ecological fire regime in adjacent natural areas.
Nature of impact:	Ecological processes in surrounding undeveloped areas will be disrupted due to habitat fragmentation; lack of fire in adjacent natural areas will lead to reduction in overall species diversity over time.
Extent and duration of impact:	Long term
Consequence of impact or risk:	Negative
Probability of occurrence:	Likely
Degree to which the impact may cause irreplaceable loss of resources:	Likely to cause a high degree of irreplaceable loss of species and habitat quality
Degree to which the impact can be reversed:	Loss of ecological connectivity to development can usually be reversed if fields are abandoned and allowed to revert to natural vegetation; natural fire regime can be mimicked by careful management. Impact on Ecological areas in and around the Stream A water course cannot be reserved.
Indirect impacts:	Some of these are indirect impacts in that they will take place on site.
Cumulative impact prior to mitigation:	High-negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-negative
Degree to which the impact can be avoided:	Cannot be avoided
Degree to which the impact can be managed:	Fire regime impacts on surrounding areas can be minimised by management.
Degree to which the impact can be mitigated:	Fire regime impacts can be minimised by management, although this is not very likely.
Proposed mitigation:	All exposed earth should be rehabilitated with suitable vegetation to protect the soil. Vigorous grasses planted with fertiliser are very effective at covering exposed soil. Necessary rehabilitation measures (e.g. seeding, removing alien plants etc.) should be introduced to ensure species composition reverts to a more natural state (with regards to affected areas). Indigenous vegetation with deep set root systems is advisable to limit soil loss on site.
Residual impacts:	Loss of rehabilitation potential of existing disturbed vegetation in development area; loss

	of 5ha of high sensitivity CBA and ESA; habitat fragmentation in region; lack of fire in surrounding areas will have negative botanical impacts over time.
Cumulative impact post mitigation:	Medium negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 26: Impacts: Alternative 2: Soil.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact on Soil
Nature of impact:	Disturbances include compaction, physical removal and potential pollution. The exposed soil surfaces have the potential to erode easily if left uncovered which could lead to the loss of vegetation; Potential loss of stockpiled topsoil and other materials if not protected properly; Increased erosion.
Extent and duration of impact:	Medium to long term

Consequence of impact or risk:	Negative
Probability of occurrence:	Definite (site)
Degree to which the impact may cause irreplaceable loss of resources:	Great loss of resource
Degree to which the impact can be reversed:	Cannot be reversed.
Indirect impacts:	Siltation of water streams on site
Cumulative impact prior to mitigation:	Medium negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Can be avoided – Alternative 1 to be followed
Degree to which the impact can be managed:	Impacts can be managed
Degree to which the impact can be mitigated:	Specific mitigation measures can be implemented
Proposed mitigation:	Soil erosion prevention measures should be implemented such as gabions, sandbags etc. whilst energy dissipaters should be constructed at any surface water outflow points. All areas impacted by earth-moving activities should be re-shaped post-construction to ensure natural flow of runoff and to prevent ponding. All exposed earth should be rehabilitated promptly with suitable vegetation to stabilize the soil; and Any exposed earth should be rehabilitated promptly with suitable vegetation to protect the soil. All overburden soil materials must be stockpiled in approved areas prior to construction and, where possible, stockpiled soil to be used in reclamation activities.
Residual impacts:	Uncontrolled erosion by water run-off could affect the integrity of the surrounding area
Cumulative impact post mitigation:	Medium negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium–High negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential Impact on Soil
Nature of impact:	Soil contamination by means of hazardous substances.
Extent and duration of impact:	Short term
Consequence of impact or risk:	Negative
Probability of occurrence:	Fairly likely

Degree to which the impact may cause irreplaceable loss of resources:	Not likely
Degree to which the impact can be reversed:	Can be reversed
Indirect impacts:	Loss of pollutes soil, financial cost to rehabilitate soil
Cumulative impact prior to mitigation:	Low-Medium negative
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	No leaking oil or fuel carts may contaminate soil. All tanks and pipes containing fuel or oil must be inspected on a regular basis. All personnel working with fuel must undergo spill kit training. Following a leak or accidental spill, a remediation plan must be compiled and executed. All significant leaks must be reported to the competent authority. All hazardous chemicals should be correctly handled and stored.
Residual impacts:	Loss of soil
Cumulative impact post mitigation:	Low negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 27: Impacts: Alternative 2: Freshwater Features.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Contamination of the freshwater features on site
Nature of impact:	Negative
Extent and duration of impact:	Temporary and Long-term
Consequence of impact or risk:	High Contamination / deterioration of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Water quality
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	High loss of resources
Degree to which the impact can be reversed:	Not reversable
Indirect impacts:	Loss of biota Loss of ecosystem functionality
Cumulative impact prior to mitigation:	Contamination / Deterioration of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Loss of ecosystem functionality Ecosystem stress from changes in flow regime.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided – Alternative option 1 to be implemented
Degree to which the impact can be managed:	Cannot be fully managed
Degree to which the impact can be mitigated:	Cannot be completely mitigated
Proposed mitigation:	General management measures relating to the

management of waste and hazardous substances stated in the EMP must be implemented as and where applicable, in consultation with the ECO.

Pollution Management:

No pollution of surface water or ground water resources may occur due to any activity on the site.

No water runoff from any premises containing waste, or water containing waste emanating from construction activities may be discharged into the environment. Polluted stormwater must be contained on the site.

Cement batching / mixing may not take place directly on the soil surface, it must be done on an impervious lining that will prevent cement particles from contaminating the soil.

General Waste Management:

Dedicated waste bins or skips must be provided on site and kept in a demarcated area on an impermeable surface.

Separate waste bins/skips must be provided for recyclable waste, general waste and hazardous waste.

Recovered building rubble & green waste may be stockpiled on the ground within the site camp, or in separate skips until removal.

Waste must be placed in the appropriate waste bins/skips/stockpiles.

Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins. Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust.

Waste bins/skips must be regularly emptied and must not be allowed to overflow.

Construction workers must be instructed not to litter and to place all waste in the appropriate waste bins provided on site.

The Contractor must ensure that all workers on site are familiar with the correct waste disposal procedures to be followed.

	Disposal of waste to landfill must be undertaken in accordance with the National Environmental Management: Waste Act. All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility Pollution Management – hydrocarbons (oil, fuel etc.) Vehicles and machinery must be in good working order and must be regularly inspected for leaks. If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair. Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp. Drip trays, tarpaulin or suitable impermeable layer must be laid down prior to undertaking repairs. Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips. Drip trays must be utilised during decanting of hazardous substances and when refilling chemical/ fuel storage tanks. Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/ lubricant, or where there is risk of leakage/spillage. Where feasible, fuel tanks should be elevated so that leaks are easily detected. A spill kit to neutralise/treat spills of fuel/ oil/ lubricants must be available on site, and workers must be educated on how to utilise the spill kit. Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste. Pollution Management – Ablution facilities
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Chemical toilets should be kept at the site camp, on a level surface and secured from blowing over.

Toilets must be located well outside of any water drainage lines.

Chemical toilets must be regularly emptied and the waste disposed of at an appropriate wastewater disposal/ treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.

Pollution Management – Hazardous Substances

Any hazardous substances (materials, fuels, other chemicals etc.) that may be required on site must be stored according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Material Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site.

Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases.

Hazardous chemicals and fuels should be stored on bunded, impermeable surfaces with sufficient capacity to hold at least 110% of the capacity of the storage tanks.

Pollution management – agricultural herbicides, pesticides used.

Pollution management – agricultural herbicides, pesticides Used:

All hazardous substances (herbicides, pesticides etc.) that may be used for agricultural purposes during the construction phase of agricultural plantations must be correctly and safely stored and applied according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Neighbouring Properties must be taken into account when herbicides and pesticides are

	applied, and possible chemical drifting must be assessed before application. Weather conditions must be assessed prior to herbicide and pesticide application. Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases. Agricultural herbicides, pesticides should be stored in a bunded area.
Residual impacts:	If all mitigation measures are effectively implemented no residual impacts are expected
Cumulative impact post mitigation:	Negligible/None – the proposed mitigation measure, if implemented correctly will completely mitigate the potential cumulative impacts.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium negative
OPERATIONAL PHASE	
Potential impact and risk:	Contamination of the freshwater features on site
Nature of impact:	Negative
Extent and duration of impact:	Site and Temporary to long term.
Consequence of impact or risk:	High Contamination of watercourse features Deterioration of water quality Contamination of soil Loss of fauna and flora
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Definite loss of resources
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Loss of biota Loss of ecosystem functionality
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of fauna and flora Loss of ecosystem functionality Pollution/ contamination to neighbouring properties

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Operational Pollution Management: No pollution of surface water or ground water resources may occur due to any activity on the site. No water runoff from any premises containing waste, or water containing waste emanating from construction activities may be discharged into the environment. Polluted stormwater must be contained on the site. Cement batching / mixing may not take place directly on the soil surface, it must be done on an impervious lining that will prevent cement particles from contaminating the soil. Operational General Waste Management: Dedicated waste bins or skips must be provided on site and kept in a demarcated area on an impermeable surface. Separate waste bins/skips must be provided for recyclable waste, general waste and hazardous waste. Recovered building rubble & green waste may be stockpiled on the ground within the site camp, or in separate skips until removal. Waste must be placed in the appropriate waste bins/skips/stockpiles. Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins. Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust. Waste bins/skips must be regularly emptied and must not be allowed to overflow. Operational personnel must be instructed not to litter and to place all waste in the appropriate waste bins provided on site. Disposal of waste to landfill must be undertaken in accordance with the National Environmental Management: Waste Act

	All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility Operational Pollution Management – hydrocarbons (oil, fuel etc.) Vehicles and machinery must be in good working order and must be regularly inspected for leaks. If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair. Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp. Drip trays, tarpaulin or suitable impermeable layer must be laid down prior to undertaking repairs. Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips. Drip trays must be utilised during decanting of hazardous substances and when refilling chemical/ fuel storage tanks. Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/ lubricant, or where there is risk of leakage/spillage. Where feasible, fuel tanks should be elevated so that leaks are easily detected. A spill kit to neutralise/treat spills of fuel/ oil/ lubricants must be available on site, and workers must be educated on how to utilise the spill kit. Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste. Operational Pollution Management – Ablution facilities Ablution facilities should be available on the property. Toilets must be located well outside of any water drainage Lines in any way.
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Chemical toilets must be regularly emptied and the waste disposed of at an appropriate wastewater disposal/treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.

Operational Pollution Management – Hazardous Substances

Any hazardous substances (materials, fuels, other chemicals etc.) that may be required on site must be stored according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure.

Material Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used onsite. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases.

Hazardous chemicals and fuels should be stored on bunded, impermeable surfaces with sufficient capacity to hold at least 110% of the capacity of the storage tanks.

Operational Pollution management – agricultural herbicides, pesticides used

All hazardous substances (herbicides, pesticides etc.) that may be used for agricultural purposes during the implementation and operational phase of agricultural plantations must be correctly and safely stored and applied according to the manufacturers' product-storage requirements, which may include a covered, waterproof bunded housing structure. Neighbouring Properties must be taken into account when herbicides and pesticides are applied, and possible chemical drifting must be assessed before application.

Weather conditions must be assessed prior to herbicide and pesticide application.

Safety Data Sheets (SDSs) shall be readily available on site for all chemicals and hazardous substances to be used on site.

	Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases. Agricultural herbicides, pesticides should be stored in a bunded area.
Residual impacts:	None Expected
Cumulative impact post mitigation:	None Expected
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 28: Impacts: Alternative 2: Streamflow Modifications.

Alternative :2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Stream Flow Modifications of the Stream A drainage lines on the property
Nature of impact:	Negative
Extent and duration of impact:	Site and Long-term
Consequence of impact or risk:	High Sedimentation in down streams on site. Change in stream flow dynamics.

	Water quality
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	Loss of resource
Degree to which the impact can be reversed:	Reversible – Alternative 1 to be followed.
Indirect impacts:	Ecosystem stress from changes in flow regime Water quality Stream flow fluctuations in the vicinity of the drainage lines
Cumulative impact prior to mitigation:	High-significant
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High negative
Degree to which the impact can be avoided:	Can be avoided – Alternative 1
Degree to which the impact can be managed:	Can be partially managed
Degree to which the impact can be mitigated:	Can be partially mitigated
Proposed mitigation:	Construction should preferably take place during the drier summer months when flow in the streams and run off from the surrounding land is low. Temporary structures (berms and access) must be created in such a way to prevent channelizing and deflecting of the streams. All disturbed stream areas applicable to stream A, should be rehabilitated and re-vegetated with appropriate vegetation as soon as construction activities are complete. Contaminated runoff from the construction sites should be prevented from directly entering downstream water features. Appropriate stormwater / surface water management measures must be put in place before construction commences and maintained throughout the lifetime of the development. Soil erosion prevention measures must be implemented such as gabions, sandbags etc. whilst energy dissipaters must be constructed at any surface water flow points. All areas impacted by earth-moving activities must be re-shaped post-construction to ensure natural flow of runoff and to prevent ponding. Appropriate silt control mechanisms must be installed around all soil excavations.

	Should any excavations require dewatering, this is to occur through an adequately designed silt trap prior to discharge. Sandbag berms will be placed at regular intervals on all steep slopes and on the trench line before and after backfilling in order to minimise erosion and the discharge of contaminated stormwater runoff onto water courses. Temporary restriction of watercourses required during construction, must take place during the dry season. No material may be stored for longer than 24-hours within the working area within watercourses. Materials sufficient for the day's work may only be allowed within the working area within the stream A watercourse. Construction within watercourse must be monitored on a weekly basis.
Residual impacts:	Increase in flow velocity through the structures as they will be cleared of built-up sediment and rocks
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium-High Negative
OPERATIONAL PHASE	
Potential impact and risk:	Stream Flow Modifications of the Stream A drainage lines on the property
Nature of impact:	Negative
Extent and duration of impact:	Site – Long-term
Consequence of impact or risk:	Medium Sedimentation in stream A on site. Change in stream flow dynamics. Water quality
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	loss of resource
Degree to which the impact can be reversed:	Partially reversable
Indirect impacts:	Stream flow fluctuations in the vicinity of stream A Ecosystem stress from changes in flow regime
Cumulative impact prior to mitigation:	High – Insignificant
Significance rating of impact prior to mitigation	High Negative

(e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	Can be avoided – Alternative 1 to be followed
Degree to which the impact can be managed:	Can be partially managed
Degree to which the impact can be mitigated:	Can be partially mitigated
Proposed mitigation:	The stream A area should be rehabilitated and re-vegetated with appropriate vegetation as soon as construction activities are complete. Vegetation should include the plant diversity currently existing in Stream A. Temporary structures (berms and access) must be created in such a way to prevent channelizing and deflecting of the identified streams. All rehabilitated and revegetated areas should be monitored for the following 2 years, ensuring the establishment of good plant biodiversity.
Residual impacts:	Stream flow fluctuations in the vicinity of the dams Ecosystem stress from changes in flow regime.
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium Negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
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Table 29: Impacts: Alternative 2: Noise.

Alternative :2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Noise generated by construction activities
Nature of impact:	Negative
Extent and duration of impact:	Site – Temporary
Consequence of impact or risk:	Negligible Disruption to surrounding land users during the construction phase
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Not reversible
Indirect impacts:	Noise pollution and disruptions to sense of place to surrounding land users – although properties are some distances away from each other due the size of farm in the aera.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed by only allowing certain unavoidable noise impacts
Degree to which the impact can be mitigated:	Can be mitigated by implementing mitigation measures that can reduce noise during construction.
Proposed mitigation:	The use of suitable and effective silencing devices should be made available for plant and equipment that would otherwise cause a noise level exceeding 85 dBA. All machinery must be in a good working condition in order to avoid excessive noise. Appropriate directional and intensity settings are to be maintained on all hooters and sirens. No amplified music or shouting shall be allowed on site. Construction activities to take place only during normal working hours.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Noise generated by operational farming activities
	Negative
Extent and duration of impact:	Site – Long term
Consequence of impact or risk:	Negligible Disruption to surrounding land users during operations on the farm
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Not reversible
Indirect impacts:	Noise pollution and disruptions to sense of place to surrounding land users – although properties are some distances away each other due the size of farm in the area, not any severe noise area expected with farming activities.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed by only allowing certain unavoidable noise impacts
Degree to which the impact can be mitigated:	Can be mitigated by implementing mitigation measures that can reduce noise during construction.
Proposed mitigation:	The use of suitable and effective silencing devices should be made available for plant and equipment that would otherwise cause a noise level exceeding 85 dBA. All machinery must be in a good working condition in order to avoid excessive noise. Appropriate directional and intensity settings are to be maintained on all hooters and sirens. No amplified music or shouting shall be allowed on site. Operational activities to take place only during normal working hours.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant -low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 30: Impacts: Alternative 2: Fauna.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impact on fauna
Nature of impact:	Negative
Extent and duration of impact:	Site, nearby and surrounding area – Temporary
Consequence of impact or risk:	Negligible Disruption to fauna in the area during the construction phase
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of fauna will occur.
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Fauna in the wild found on the site might move further away to neighbouring areas due to the increase of human activities during the construction phase.
Cumulative impact prior to mitigation:	Low

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed -Identify sensitive areas of fauna prior to construction works;
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Identify sensitive fauna prior to construction works; No hunting is permitted on-site or the surrounding areas; Any personnel found to be poaching in the area should be subjected to a disciplinary hearing; and, Soil erosion must be monitored, and any scars must be repaired. The project construction footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place. Natural veld situated in-between the proposed lands must not be impacted upon and must be left in situ. Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
Residual impacts:	Low – Medium; fauna will move out of the direct area of construction due to activities in operation.
Cumulative impact post mitigation:	Low - negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium – negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential impact on fauna
Nature of impact:	Negative
Extent and duration of impact:	Site, nearby and surrounding area – Temporary
Consequence of impact or risk:	Negligible Disruption to fauna in the area during the operational phase will be much less than during the construction phase.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No irreplaceable loss of fauna will occur.
Degree to which the impact can be reversed:	Reversible

Indirect impacts:	Fauna in the wild found on the site that might have moved further away to neighbouring areas due to the increase of human activities during the construction phase will return during the operational phase as activities will not be so intense. Newly established plantations will also create a new habitat for various fauna and Avifauna.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed -Identify sensitive areas of fauna
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Identify sensitive faunal areas during operations and stay clear of these areas as far as possible. No hunting is allowed. Any personnel found to be poaching in the area should be subjected to a disciplinary hearing; and, Soil erosion must be monitored, and any scars must be repaired. The project operational footprint must be kept as small as practicably possible to reduce the actual surface impact on vegetation and no unnecessary/unauthorised footprint expansion into the surrounding areas may take place. Natural veld situated in-between the proposed lands must not be impacted upon and must be left in situ. Existing roads and farm tracks in close proximity to the proposed project area must be used during construction.
Residual impacts:	Low – Medium; fauna will move into new habitats created by the agricultural plantations.
Cumulative impact post mitigation:	Low - negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	

Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential risk of Fire
Nature of impact:	Negative Increase risk of fires during the development / construction phase.
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Loss of fauna, flora Loss, damage to property Loss of human life
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium loss of resources
Degree to which the impact can be reversed:	Partly reversable
Indirect impacts:	Disruption to ecosystem in the area.
Cumulative impact prior to mitigation:	Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Enclosed fires should only be allowed within fire-safe demarcated areas.

	No wood may be collected for the purpose of fires on-site. Cigarette butts may not be thrown onto the ground but must be placed in suitable cigarette but receptacles and disposed of correctly. Designated smoking areas with suitable receptacles for disposal. No vegetation and waste shall be burned on site. In case of an emergency the contact details of the local fire and emergency services must be readily available and shall be displayed on site. Contractors must ensure that basic fire-fighting equipment and suitably qualified/experienced personal are available on site at all times, as per the specifications defined by the health and safety representative/consultant. Fire extinguishers shall be placed at all working areas including where hazardous substances are kept. The fire risk on site must be included in the environmental induction training prior to commencement of construction and must be included in toolbox talks.
Residual impacts:	Loss of existing sensitive vegetation, fauna in the development area; loss of associated CBA and ESA areas; minor loss of ecological connectivity; habitat fragmentation in region
Cumulative impact post mitigation:	Low- medium - Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium - Negative
OPERATIONAL PHASE	
Potential impact and risk:	Potential risk of Fire
Nature of impact:	Negative Increase risk of fires during the operational phase activities
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Loss of fauna, flora Loss, damage to property Loss of human life
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium or permanent loss of resources i.e. environment can and property, equipment etc

Degree to which the impact can be reversed:	Environment can be partly reversible over time. Damage to machinery, equipment and infrastructure will be lost, but can be replaced.
Indirect impacts:	Disruption to ecosystem in the area. Financial Loss.
Cumulative impact prior to mitigation:	Loss of ecosystem functionality Loss of fauna, flora Loss, damage to property Loss of human life
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Enclosed fires should only be allowed within fire-safe demarcated areas. No wood may be collected for the purpose of fires on-site. Cigarette butts may not be thrown onto the ground but must be placed in suitable cigarette but receptacles and disposed of correctly. Designated smoking areas with suitable receptacles for disposal. No vegetation and waste shall be burned on site. In case of an emergency the contact details of the local fire and emergency services must be readily available and shall be displayed on site. Fire extinguishers shall be placed at all working areas including where hazardous substances are kept. Personnel must be adequately trained in the handling of firefighting equipment. No open fires are permitted anywhere on site. No fires will be permitted for heating or cooking purposes on site. All equipment must have at least one firefighting extinguisher. Fuel and chemicals must be stored in an area that is acceptable for the client.
Residual impacts:	Loss of existing sensitive vegetation, fauna in the development area; loss of associated CBA and ESA areas;

	minor loss of ecological connectivity; habitat fragmentation in region. Financial loss
Cumulative impact post mitigation:	Medium - Negative
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low - Negative
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 31: Impacts: Alternative 2: Visual.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Visual Impact
Nature of impact:	Negative
Extent and duration of impact:	Site, nearby surrounding area – Long term
Consequence of impact or risk:	Disruption of sense of place in the area due to construction activities, machinery, materials, and site camp establishment.
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible

Indirect impacts:	Aesthetical disruptions to the sense of place to the surrounding land users due to construction activities.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Implementation of the construction EMP Good Housekeeping should be practiced in and around the site, laydown areas, waste areas and stockpile areas should be kept neat and organized. Prohibit excessive signage outside the site camp. No uncontained waste should be allowed on and around the site, all waste must be placed in closed waste receptacles immediately upon production. Limit site clearing to within the minimum footprint required for construction Control erosion immediately to prevent visual scarring of the landscape. Control dust using the appropriate dust suppression techniques. Construction to occur only during daytime. Any night-time work must be approved in consultation with the surrounding landowners. Only remove trees that are necessary. Blue gum plantation/trees must be cleared in such a way to keep the sense of place as far as possible.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
OPERATIONAL PHASE	
Potential impact and risk:	Visual Impact
Nature of impact:	Once operational, the proposed development is likely to impact on the visual character of the site as agriculture is overwhelmingly practised in the area and the project will fit in with the surrounding activities.
Extent and duration of impact:	Site, nearby surrounding area – Long term
Consequence of impact or risk:	None
Probability of occurrence:	Definite

Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Reversible
Indirect impacts:	Aesthetical changes to the sense of place to the surrounding land due to operational activities taking place.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Any disturbed area sites should be rehabilitated as soon as possible
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 32: Impacts: Alternative 2: Heritage.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential impacts on Heritage
Nature of impact:	Damage to or destruction of possible heritage resources. Not any indicated in the site assessment conducted by specialist.
Extent and duration of impact:	Negative -long term
Consequence of impact or risk:	Loss or damage to or destruction of possible heritage resources.
Probability of occurrence:	Negligible Disruption to heritage resources in the area during the construction phase is not planned.
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Degree to which the impact can be reversed:	Reversible – though no irreplaceable loss of heritage is planned
Indirect impacts:	Potential loss of historical resources.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Site assessment conducted by Heritage specialist. Heritage Act requires that all operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities. All sensitive areas must be barricaded as no-go areas. Training must be undertaken to inform all Employees of the potential impact the development might have on heritage resources. Should any Heritage sites be exposed during construction, all work on the site must be stopped immediately and ECO must be informed. The ECO will then contact South African Heritage Resources Authority (SAHRA) and the heritage specialist. Construction may only recommence once the authority issues an instruction to do so.

Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Potential impacts on Heritage
Nature of impact:	Damage to or destruction of newly identified resources found during operations.
Extent and duration of impact:	Negative -long term
Consequence of impact or risk:	Loss or damage to or destruction of newly identified heritage resources.
Probability of occurrence:	Negligible Disruption to heritage resources in the area during the operational phase is not assumed.
Degree to which the impact may cause irreplaceable loss of resources:	Marginal loss
Degree to which the impact can be reversed:	Reversible – though no irreplaceable loss of heritage resources is assumed.
Indirect impacts:	Potential loss of historical resources.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	Heritage Act requires that all operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities. Should any Heritage sites be exposed during the operational phase, all work must be stopped immediately and SAHRA should be notified.
Residual impacts:	None expected
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Insignificant - low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	

Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 33: Impacts: Alternative 2: Cement Work.

Alternative :2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Concrete Batching and Cement Work
Nature of impact:	Negative Cement powder has a high pH, spillage of dry cement powder and concrete slurry will affect both soil and water pH adversely. Careless handling of cement products resulting in spillages can have detrimental effects on the surrounding environment. Concrete Batching Plant
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	High Contamination of watercourse Deterioration of water quality Contamination of soil Water quality
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	Medium loss of resources
Degree to which the impact can be reversed:	Partly reversable
Indirect impacts:	Disruption to ecosystem on site.
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil

	Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	A designated wash out area must be provided for the excess sludge produces during concrete mixing. No mixing of cement is allowed on bare ground, mortar boards or similar structures must be used. No concrete mixing and storing of cement are allowed near any of the water features on site. Area will be identified by the ECO. Empty cement bags should be disposed of as hazardous waste and/or Empty cement bags can be washed out with water in an enclosed container where the clean cement bags can be disposed of as general waste. Grey water generated during the cleaning of cement bags are polluted and can be used for further concrete mixing purposes on site only. Storage of cement shall only occur at designated storage areas. Excess concrete (homeless concrete) generated can be re-used in open foundations and/or to be utilized to construct concrete building blocks. Excess concrete (homeless concrete) generated that cannot be re-used must be disposed of accordingly as per the waste management requirements. Housekeeping to take place on a daily basis.
Residual impacts:	If all mitigation measures are effectively implemented no residual impacts are expected
Cumulative impact post mitigation:	Negligible/None – the proposed mitigation measure, if implemented correctly will completely mitigate the potential cumulative impacts
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	

Potential impact and risk:	Concrete Batching and Cement Work
Nature of impact:	Insignificant- not any concrete work will take place during the operational phase.
Extent and duration of impact:	Site, temporary
Consequence of impact or risk:	Low Contamination of watercourse Deterioration of water quality Contamination of soil Water quality
Probability of occurrence:	Not planned
Degree to which the impact may cause irreplaceable loss of resources:	Low
Degree to which the impact can be reversed:	Reversible if necessary
Indirect impacts:	Disruption to environment on site.
Cumulative impact prior to mitigation:	Contamination of watercourse Deterioration of water quality Contamination of soil Loss of ecosystem functionality
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	If anticipated: A designated wash out area must be provided for the excess sludge produces during concrete mixing. No mixing of cement is allowed on bare ground, mortar boards or similar structures must be used. No concrete mixing and storing of cement are allowed near any of the water features on site. Area will be identified by the ECO. Empty cement bags should be disposed of as hazardous waste and/or Empty cement bags can be washed out with water in an enclosed container where the clean cement bags can be disposed of as general waste. Grey water generated during the cleaning of cement bags are polluted and can be used for further concrete mixing purposes on site only. Storage of cement shall only occur at designated storage areas.

	Excess concrete (homeless concrete) generated can be re-used in open foundations and/or to be utilized to construct concrete building blocks. Excess concrete (homeless concrete) generated that cannot be re-used must be disposed of accordingly as per the waste management requirements. Housekeeping to take place on a daily basis.
Residual impacts:	If all mitigation measures are effectively implemented no residual impacts are expected
Cumulative impact post mitigation:	Negligible/None – the proposed mitigation measure, if implemented correctly will completely mitigate the potential cumulative impacts
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 34: Impacts: Alternative 2: Socio-Economic Activities.

Alternative:2	
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PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact on Socio Economic Activities
Nature of impact:	Positive
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Increased socio-economic conditions due to job creation. Skills development of the local community through employment opportunities. Possible economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Upliftment of the local community. An increase in economic growth. Rietvallei farm will provide work for more than 61 Employees. Income generated from this development will increase the economic turnover in the region and will have benefits for the society in general. Increase in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Better Quality of life for labourers are uplifted Capital influx for households, surrounding business Skills development
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	Inform the surrounding communities and general public of the proposed activity as soon as possible. Such notification has been conducted through the Public Participation Process. Local people should be employed where possible; Were practically possible. Previously disadvantaged individuals should be provided preference with regards to employment opportunities and

	A Community Liaison Officer could assist in raising any concerns / complaints noted by the affected community to the Construction Team.
Residual impacts:	Skills development and knowledge gained.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Potential Impact on Socio Economic Activities – job creation
Nature of impact:	Positive
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Increased socio-economic conditions due to job creation. Skills development of the local community through employment opportunities. Economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the operational phase. Upliftment of the local community. An increase in economic growth of the Rietvallei farm will provide work for more than 61 Employees. Income generated from this development will increase the economic turnover in the region and will have benefits for the society in general. Increase in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Better Quality of life for labourers and families Capital influx for households, surrounding business Skills development and knowledge gained.
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A

Proposed mitigation:	Local people should be employed where possible. Previously disadvantaged individuals should be provided preference with regards to employment opportunities. Skills development during the operational phase must take place
Residual impacts:	Skills development and knowledge gained.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 35: Impacts: Alternative 2: Traffic.

Alternative:2	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Traffic – Movement of construction vehicles could cause inconvenience to neighbouring residents
Nature of impact:	Negative
Extent and duration of impact:	Local and short term
Consequence of impact or risk:	Disrupt local traffic flow

Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	None
Indirect impacts:	None
Cumulative impact prior to mitigation:	Very low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Unavoidable
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Low – can be mitigated
Proposed mitigation:	All construction vehicles need to adhere to traffic laws The speed of vehicles must be strictly controlled to avoid dangerous conditions for all road users Adequate signage must be established where required All vehicles and equipment must be kept in a good working condition Vehicles and construction worker to keep on designated access routes and within identified demarcated areas
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
OPERATIONAL PHASE	
Potential impact and risk:	Increase in traffic due to development
Nature of impact:	Negative
Extent and duration of impact:	Local – Long term
Consequence of impact or risk:	Increased traffic in the area
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	None
Indirect impacts:	None
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Unavoidable

Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Adequate road signage. Keep farm roads in good condition
Residual impacts:	None
Cumulative impact post mitigation:	Very low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Very Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 36: Impacts: Alternative 2: Socio-Economic Activities.

Alternative 2: No-Go Option	
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Potential Impact/implications on Socio Economic Activities if the development is not implemented.
Nature of impact:	Negative
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Loss of Increased socio-economic conditions due to loss in job creation opportunities.

	Loss of Skills development of the local community through employment opportunities. Loss of economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Loss of the Upliftment opportunities of the local community Loss of an increase in economic growth as the Rietvallei farm will provide work for more than 61 Employees. Loss of Income generated from this development will decrease the economic turnover in the region and will have no benefits for the society in general. Loss in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Loss of the opportunity to better the Quality of life for labourers. Loss of capital influx for households, surrounding business Loss of Skills development opportunities.
Cumulative impact prior to mitigation:	high
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation can be implemented if the development is not implemented.
Residual impacts:	Loss of Skills development and knowledge that can be gained. Loss of better lives to communities.
Cumulative impact post mitigation:	high
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
OPERATIONAL PHASE	

Potential impact and risk:	Potential Impact/implications on Socio Economic Activities if the development is not implemented.
Nature of impact:	Negative
Extent and duration of impact:	Local and wider area – Temporary to long term
Consequence of impact or risk:	Loss of Increased socio-economic conditions due to loss in job creation opportunities. Loss of Skills development of the local community through employment opportunities. Loss of economic benefits to local suppliers of building materials as goods and services may be purchased from these entities during the construction phase. Loss of the Upliftment opportunities of the local community Loss of an increase in economic growth as the Rietvallei farm will provide work for more than 61 Employees. Loss of Income generated from this development will decrease the economic turnover in the region and will have no benefits for the society in general. Loss in food production
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	Loss of the opportunity to better the Quality of life for labourers Loss of capital influx for households, surrounding business Loss of Skills development opportunities
Cumulative impact prior to mitigation:	high
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	No mitigation can be implemented if the development is not implemented.
Residual impacts:	Loss of Skills development and knowledge that can be gained. Loss of better lives to communities.
Cumulative impact post mitigation:	high

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	high
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Not Applicable
Nature of impact:	
Extent and duration of impact:	
Consequence of impact or risk:	
Probability of occurrence:	
Degree to which the impact may cause irreplaceable loss of resources:	
Degree to which the impact can be reversed:	
Indirect impacts:	
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	
Degree to which the impact can be mitigated:	
Proposed mitigation:	
Residual impacts:	
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	

Table 37: Impacts: Alternative 2: No-Go: Biological.

Alternative 2: No – Go Option	
PLANNING, DESIGN, DEVELOPMENT & OPERATIONAL PHASE	
Potential impact and risk:	Biological Impacts
Nature of impact:	The “no-go” option should always be considered as an alternative. The “No-go” alternative entails maintaining the status quo.
Extent and duration of impact:	Study Area, Long Term
Consequence of impact or risk:	None
Probability of occurrence:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Degree to which the impact can be reversed:	N/A
Indirect impacts:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation	None

(e.g. Low, Medium, Medium-High, High, or Very-High)	
Degree to which the impact can be avoided:	N/A
Degree to which the impact can be managed:	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Residual impacts:	N/A
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	N/A

8.5 PUBLIC PARTICIPATION

Refer to Section 6 for details of public participation that been undertaken to date.

8.5.1 Public Participation in the Scoping Phase

During the formal Scoping Phase, all registered Interested and Affected Parties (I&APs) will receive written notification regarding the public comment period and the availability of the Draft Scoping Report (this report), including details on its location as well as guidance on submission timelines and procedures for written comments. All I&APs, including key state departments and parastatal organisations, will be allocated a 30-day period —**1 October to 31 October 2025**—to submit their feedback. Should there be significant interest in the project, a focus group meeting will be arranged to present the Scoping Report and address stakeholder queries.

All written submissions will be consolidated and addressed within a comprehensive Comments and Responses Report, prepared by the EIA team, which consists of the Applicant, Environmental Assessment Practitioners, and appointed Specialists. The Scoping Report will be updated to include amendments or additional information stemming from the received comments. The Comments and Responses Report will form part of the Final Scoping Report (FSR), which will subsequently be submitted to the DEA&DP for review. Upon acceptance of the Scoping Report, the project will proceed to the EIA phase.

8.5.2 Public Participation in the Impact Assessment Phase

Once the Final Scoping Report has been accepted, Draft EIA Report will be compiled. All registered I&APs will be notified of the public comment period and the availability of the Draft EIA Report for a 30-day period. A public meeting may be held to present the findings of the Draft EIR and address any queries. Written comments will be responded to in a detailed Comments and Responses Report. The Draft EIR shall be revised to reflect feedback received. The Final EIR, inclusive of the Comments and Responses Report, will be submitted to the DEA&DP for review and decision-making. Upon the DEA&DP issuing a

decision on the application, all registered I&APs will be informed in writing of the outcome. This notification will also clearly outline the process and timeframes for lodging appeals.

8.6 TASKS TO BE UNDERTAKEN IN THE EIA PHASE

The following tasks are proposed to be undertaken during the EIA Phase:

- The site/development layout is to be finalised and informed by information that has arisen during the PPP and any new data becoming available.
- Specialist reports will be updated and finalised in accordance with the terms of reference provided in Section 3 and comply with Appendix 6 of the NEMA 2014 EIA Regulations (as amended).
- Where required, consultation with relevant authorities and stakeholders will be undertaken.
- The EIA will be drafted in accordance with Appendix 3 of the 2014 EIA Regulations (GN R982 of 2014, as amended).
- The Draft EIR will be circulated for a 30-day public comment period.
- The Draft EIR will be finalised based on input received during the public comment period, and responses will be included in the comments and responses report and appended.
- The Final EIR, inclusive of the updated public participation report, will be submitted to the competent authority (EDTEA) for decision-making.
- Following the 107-day decision-making period, all registered I&APs will be notified of the decision and their right to appeal.

9 CONCLUSION

In conclusion, although the area is located in a CBA area 2, no other environmental fatal flaws were identified during the pre-liminary Impact Assessment Phase. All impacts can be mitigated to an expectable level. An approval of this impact assessment report is therefore recommended.

The key findings of the Impact Assessment can be summarised as follows:

The surrounding area is mainly characterised by farming activities. Although the proposed project area is of ecological significance due to the area being located in a CBA area 2, the development will have a low impact on biodiversity and the potential impacts can be mitigated to acceptable levels.

The proposed project area (prior to the development) are regarded as being of little economic significance/value. However, the proposed development will add to the economic value of the area and will increase and benefit the local community.

10 DECLARATION OF EAP

I, CANDIS LUBBE

EAP Registration Number:

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as the appointed EAP hereby declare/affirm that:

- my EAP Registration is current and up to date, and will inform the proponent and Department if the registration should lapse;
- the information provided or to be provided as part of this form, is true and correct;
- I have disclosed/will disclose, to the Proponent, the specialist (if any), the competent authority and registered interested and affected parties, all material information that have or may have the potential to influence the determination of the applicability of the EIA Regulations with respect to the proposed development;
- I have ensured/will ensure the inclusion of inputs and recommendations from any specialists in respect of the checklist, where relevant;
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014;
- I am aware of my general duty of care in terms of Section 28 of the NEMA; and
- I am aware that it is an offence in terms of Section 24F of the NEMA should the proponent commence with a listed activity prior to obtaining an Environmental Authorisation.
- The requirements as stipulated in the plan of study for undertaking in the environmental impact assessment will be implemented.



Signature of the EAP:

28 SEPTEMBER 2025

Date:

ENVIROMIN PROJECTS (PTY) LTD

Name of company (if applicable):



11 REFERENCES

- 1) Conservation of Agricultural Resources Act (Act 43 of 1983)
- 2) DEA. 2010. Draft Guideline on the Need and Desirability in terms of the EIA Regulations of 2010. Integrated
- 3) Environmental Management Guideline Series 9, Government Notice 792 of 2012, Department of Environmental Affairs, Pretoria.
- 4) DEA&DP. 2013a. Guideline on Need and Desirability, EIA Guideline and Information Document Series.
- 5) Western Cape Department of Environmental Affairs & Development Planning (DEA&DP).
- 6) DEA&DP. 2013b. Guideline on Alternatives, EIA Guideline and Information Document Series. Western Cape
- 7) Department of Environmental Affairs & Development Planning (DEA&DP).
- 8) Mucina, L. & Rutherford, M.C. (eds.) 2006. The Vegetation of South Africa, Lesotho and Swaziland. Strelitzia
- 9) South African National Biodiversity Institute, Pretoria.
- 10) National Development Plan - 2030
- 11) National Environmental Management Act (Act 107 of 1998)
- 12) National Environmental Management Act (Act 107 of 1998); Environmental Impact Assessment Regulations, 2014
- 13) National Environmental Management: Biodiversity Act (Act 10 of 2004)
- 14) National Environmental Management: Waste Act (Act 59 of 2008)
- 15) National Forests Act (Act 84 of 1998)
- 16) National Heritage Resources Act (Act 25 of 1999)
- 17) National Water Act (Act 36 of 1998)

12 APPENDICES

Appendix 1: Curriculum Vitae (CV) of EAP

Appendix 2: Screening Report & Site Verification Report

Appendix 3: Site Development Plan

Appendix 4: Specialist Studies

Appendix 4: Specialist Studies

Appendix 4.: Soil Analysis Report

Appendix 4: NID - Heritage

Appendix 7: Water Use Rights

Appendix 8: Public Participation (Advert, Notifications, Site Notices. IAP Register and Comment and Response Report & Correspondence).

Appendix 9: Project Schedule